

## **DATA PACKAGE**

GENERAL CHEMISTRY  
METALS

**PROJECT NAME : USACE NAB SEDIMENT PROJECT 25**

**US ARMY CORP OF ENGINEERS**

**2 Hopkins Plaza**

**Baltimore, MD - 21201**

**Phone No: 1-800-434-0988**

**ORDER ID : Q2085**

**ATTENTION : Kendall Rosenberg**



**Laboratory Certification ID # 20012**



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## Cover Page

**Order ID :** Q2085

**Project ID :** USACE NAB Sediment Project 25

**Client :** US Army Corp of Engineers

### Lab Sample Number

Q2085-01  
Q2085-02  
Q2085-03  
Q2085-04  
Q2085-05  
Q2085-06  
Q2085-07  
Q2085-08

### Client Sample Number

SC-4-SED-051525  
SC-3-SED-051525  
SC-2-SED-051525  
SC-1-SED-051625  
SC-1-SED-051625MS  
SC-1-SED-051625MSD  
SC-COMP-SED-051625  
DUPE-1-SC

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

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

Date: 6/3/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

## **CASE NARRATIVE**

### **US Army Corp of Engineers**

**Project Name: USACE NAB Sediment Project 25**

**Project # N/A**

**Order ID # Q2085**

**Test Name: Mercury, Metals ICP-Group**

#### **A. Number of Samples and Date of Receipt:**

8 Solid samples were received on 05/20/2025.

#### **B. Parameters:**

According to the Chain of Custody document, the following analyses were requested: Ammonia, Mercury, Metals Group2, Metals ICP-Group, Phosphorus, Total, TKN and TOC. This data package contains results for Mercury, Metals ICP-Group.

#### **C. Analytical Techniques:**

The analysis of Metals ICP-Group was based on method 6020B, digestion based on method 3050 (soils). The analysis and digestion of Mercury was based on method 7471B.

#### **D. QA/ QC Samples:**

The Holding Times were met for all analysis.

The Blank Spike met requirements for all samples.

The Duplicate (SC-1-SED-051625DUP) analysis met criteria for all samples except for Antimony and Zinc due to sample matrix interference.

The Matrix Spike (SC-1-SED-051625MS) analysis met criteria for all samples except for Aluminum, Arsenic, Iron and Silver due to Chemical Interference during digestion process.

The Matrix Spike Duplicate (SC-1-SED-051625MSD) analysis met criteria for all samples except for Aluminum, Arsenic, Iron and Silver due to Chemical Interference during digestion process.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

The Serial Dilution met criteria for all samples.

#### **E. Additional Comments:**

The Post Digest Spike (SC-1-SED-051625A) analysis met criteria for all samples except for Aluminum, Arsenic, Iron and, Silver, due to unknown chemical interferences of matrix with the addition of spike amount after digestion and before analysis, matrix has suppression effect during addition of spike.

Collision cell is being used to remove potential interferences. The analytes Na, Mg, Al, K, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As are being analyzed with collision cell and analytes Be, B, Ca, Ti, Se, Sr, Zr, Mo, Ag, Cd, Sn, Sb, Ba, Tl, Pb, U are being analyzed with Non-Collision Cell. Helium gas is used for the Collision Cell analysis.



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Signature\_\_\_\_\_



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

## **CASE NARRATIVE**

**US Army Corp of Engineers**

**Project Name: USACE NAB Sediment Project 25**

**Project # N/A**

**Order ID # Q2085**

**Test Name: Ammonia, Phosphorus, Total, TKN, TOC**

### **A. Number of Samples and Date of Receipt:**

8 Solid samples were received on 05/20/2025.

### **B. Parameters:**

According to the Chain of Custody document, the following analyses were requested: Ammonia, Mercury, Metals Group2, Metals ICP-Group, Phosphorus, Total, TKN and TOC. This data package contains results for Ammonia, Phosphorus, Total, TKN, TOC.

### **C. Analytical Techniques:**

The analysis of TOC was based on method 9060A, The analysis of Phosphorus-Total was based on method 365.3, The analysis of TKN was based on method SM4500 N Org B or C and The analysis of Ammonia was based on method SM4500-NH3.

### **D. QA/ QC Samples:**

The Holding Times were met for all analysis.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike (SC-4-SED-051525MS) analysis met criteria for all samples except for Phosphorus, Total due to matrix interference.

The Matrix Spike Duplicate (SC-4-SED-051525MSD) analysis met criteria for all samples except for Phosphorus, Total due to matrix interference.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

### **E. Additional Comments:**

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I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature\_\_\_\_\_

## DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

|           |                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>J</b>  | Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).                                                                                                                                                                                  |
| <b>U</b>  | Indicates the analyte was analyzed for, but not detected.                                                                                                                                                                                                                                                                                                                     |
| <b>ND</b> | Indicates the analyte was analyzed for, but not detected                                                                                                                                                                                                                                                                                                                      |
| <b>E</b>  | Indicates the reported value is estimated because of the presence of interference                                                                                                                                                                                                                                                                                             |
| <b>M</b>  | Indicates Duplicate injection precision not met.                                                                                                                                                                                                                                                                                                                              |
| <b>N</b>  | Indicates the spiked sample recovery is not within control limits.                                                                                                                                                                                                                                                                                                            |
| <b>S</b>  | Indicates the reported value was determined by the Method of Standard Addition (MSA).                                                                                                                                                                                                                                                                                         |
| <b>*</b>  | Indicates that the duplicate analysis is not within control limits.                                                                                                                                                                                                                                                                                                           |
| <b>+</b>  | Indicates the correlation coefficient for the MSA is less than 0.995.                                                                                                                                                                                                                                                                                                         |
| <b>D</b>  | Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.                                                                                                                                                                                                                                       |
| <b>M</b>  | Method qualifiers<br>“P” for ICP instrument<br>“PM” for ICP when Microwave Digestion is used<br>“CV” for Manual Cold Vapor AA<br>“AV” for automated Cold Vapor AA<br>“CA” for MIDI-Distillation Spectrophotometric<br>“AS” for Semi -Automated Spectrophotometric<br>“C” for Manual Spectrophotometric<br>“T” for Titrimetric<br>“NR” for analyte not required to be analyzed |
| <b>OR</b> | Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.                                                                                                                                                                                                                                                              |
| <b>Q</b>  | Indicates the LCS did not meet the control limits requirements                                                                                                                                                                                                                                                                                                                |
| <b>H</b>  | Sample Analysis Out Of Hold Time                                                                                                                                                                                                                                                                                                                                              |

## APPENDIX A

### QA REVIEW GENERAL DOCUMENTATION

Project #: Q2085

Completed

For thorough review, the report must have the following:

#### GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

#### COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

#### CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

#### ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SOHIL JODHANI

Date: 06/03/2025

## LAB CHRONICLE

|                 |                           |                   |                               |
|-----------------|---------------------------|-------------------|-------------------------------|
| <b>OrderID:</b> | Q2085                     | <b>OrderDate:</b> | 5/20/2025 11:40:33 AM         |
| <b>Client:</b>  | US Army Corp of Engineers | <b>Project:</b>   | USACE NAB Sediment Project 25 |
| <b>Contact:</b> | Kendall Rosenberg         | <b>Location:</b>  | L41                           |

| LabID           | ClientID                  | Matrix      | Test             | Method | Sample Date     | Prep Date | Anal Date | Received        |
|-----------------|---------------------------|-------------|------------------|--------|-----------------|-----------|-----------|-----------------|
| <b>Q2085-01</b> | <b>SC-4-SED-051525</b>    | <b>SOIL</b> |                  |        | <b>05/15/25</b> |           |           | <b>05/20/25</b> |
|                 |                           |             | Mercury          | 7471B  |                 | 05/27/25  | 05/29/25  |                 |
|                 |                           |             | Metals ICP-Group | 6020B  |                 | 05/21/25  | 05/21/25  |                 |
| <b>Q2085-02</b> | <b>SC-3-SED-051525</b>    | <b>SOIL</b> |                  |        | <b>05/15/25</b> |           |           | <b>05/20/25</b> |
|                 |                           |             | Mercury          | 7471B  |                 | 05/27/25  | 05/29/25  |                 |
|                 |                           |             | Metals ICP-Group | 6020B  |                 | 05/21/25  | 05/21/25  |                 |
| <b>Q2085-03</b> | <b>SC-2-SED-051525</b>    | <b>SOIL</b> |                  |        | <b>05/15/25</b> |           |           | <b>05/20/25</b> |
|                 |                           |             | Mercury          | 7471B  |                 | 05/27/25  | 05/29/25  |                 |
|                 |                           |             | Metals ICP-Group | 6020B  |                 | 05/21/25  | 05/21/25  |                 |
| <b>Q2085-04</b> | <b>SC-1-SED-051625</b>    | <b>SOIL</b> |                  |        | <b>05/16/25</b> |           |           | <b>05/20/25</b> |
|                 |                           |             | Mercury          | 7471B  |                 | 05/27/25  | 05/29/25  |                 |
|                 |                           |             | Metals ICP-Group | 6020B  |                 | 05/21/25  | 05/21/25  |                 |
| <b>Q2085-07</b> | <b>SC-COMP-SED-051625</b> | <b>SOIL</b> |                  |        | <b>05/16/25</b> |           |           | <b>05/20/25</b> |
|                 |                           |             | Mercury          | 7471B  |                 | 05/27/25  | 05/29/25  |                 |
|                 |                           |             | Metals ICP-Group | 6020B  |                 | 05/21/25  | 05/21/25  |                 |
| <b>Q2085-08</b> | <b>DUPE-1-SC</b>          | <b>SOIL</b> |                  |        | <b>05/16/25</b> |           |           | <b>05/20/25</b> |
|                 |                           |             | Mercury          | 7471B  |                 | 05/27/25  | 05/29/25  |                 |
|                 |                           |             | Metals ICP-Group | 6020B  |                 | 05/21/25  | 05/21/25  |                 |

**Hit Summary Sheet**  
**SW-846**

**SDG No.:** Q2085 **Order ID:** Q2085  
**Client:** US Army Corp of Engineers **Project ID:** USACE NAB Sediment Project 25

| Sample ID                          | Client ID       | Matrix | Parameter | Concentration | C | MDL    | LOD   | RDL  | Units |
|------------------------------------|-----------------|--------|-----------|---------------|---|--------|-------|------|-------|
| <b>Client ID : SC-4-SED-051525</b> |                 |        |           |               |   |        |       |      |       |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Aluminum  | 2200          |   | 0.37   | 1.04  | 2.08 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Arsenic   | 3.41          |   | 0.012  | 0.026 | 0.10 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Barium    | 4.16          |   | 0.034  | 0.13  | 1.04 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Beryllium | 0.28          |   | 0.033  | 0.078 | 0.10 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Cadmium   | 0.052         | J | 0.019  | 0.078 | 0.10 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Calcium   | 281           |   | 4.98   | 19.8  | 52.0 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Chromium  | 5.17          |   | 0.027  | 0.052 | 0.21 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Cobalt    | 1.35          |   | 0.0090 | 0.026 | 0.10 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Copper    | 2.71          |   | 0.068  | 0.10  | 0.21 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Iron      | 6160          |   | 0.96   | 1.30  | 5.20 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Lead      | 3.40          |   | 0.033  | 0.078 | 0.10 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Magnesium | 790           |   | 2.01   | 19.8  | 52.0 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Manganese | 32.7          |   | 0.035  | 0.052 | 0.10 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Nickel    | 3.00          |   | 0.045  | 0.078 | 0.10 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Potassium | 383           |   | 3.99   | 19.8  | 52.0 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Sodium    | 2000          |   | 7.30   | 26.0  | 52.0 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Thallium  | 0.034         | J | 0.015  | 0.052 | 0.10 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Vanadium  | 9.05          |   | 0.011  | 0.026 | 0.52 | mg/Kg |
| Q2085-01                           | SC-4-SED-051525 | SOIL   | Zinc      | 11.5          |   | 0.094  | 0.16  | 0.52 | mg/Kg |
| <b>Client ID : SC-3-SED-051525</b> |                 |        |           |               |   |        |       |      |       |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Aluminum  | 6540          |   | 0.42   | 1.18  | 2.36 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Arsenic   | 5.41          |   | 0.014  | 0.029 | 0.12 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Barium    | 27.4          |   | 0.039  | 0.15  | 1.18 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Beryllium | 0.25          |   | 0.038  | 0.088 | 0.12 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Cadmium   | 0.078         | J | 0.021  | 0.088 | 0.12 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Calcium   | 268           |   | 5.64   | 22.4  | 58.9 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Chromium  | 13.6          |   | 0.031  | 0.059 | 0.24 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Cobalt    | 2.29          |   | 0.011  | 0.029 | 0.12 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Copper    | 8.56          |   | 0.077  | 0.12  | 0.24 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Iron      | 10100         |   | 1.08   | 1.47  | 5.89 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Lead      | 6.12          |   | 0.038  | 0.088 | 0.12 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Magnesium | 1660          |   | 2.27   | 22.4  | 58.9 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Manganese | 52.8          |   | 0.040  | 0.059 | 0.12 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Nickel    | 6.71          |   | 0.051  | 0.088 | 0.12 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Potassium | 899           |   | 4.52   | 22.4  | 58.9 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Sodium    | 1860          |   | 8.27   | 29.5  | 58.9 | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Thallium  | 0.058         | J | 0.016  | 0.059 | 0.12 | mg/Kg |

### Hit Summary Sheet SW-846

**SDG No.:** Q2085 **Order ID:** Q2085  
**Client:** US Army Corp of Engineers **Project ID:** USACE NAB Sediment Project 25

| Sample ID                          | Client ID       | Matrix | Parameter | Concentration | C | MDL    | LOD   | RDL   | Units |
|------------------------------------|-----------------|--------|-----------|---------------|---|--------|-------|-------|-------|
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Vanadium  | 19.3          |   | 0.013  | 0.029 | 0.59  | mg/Kg |
| Q2085-02                           | SC-3-SED-051525 | SOIL   | Zinc      | 24.3          |   | 0.11   | 0.18  | 0.59  | mg/Kg |
| <b>Client ID : SC-2-SED-051525</b> |                 |        |           |               |   |        |       |       |       |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Aluminum  | 608           |   | 0.36   | 0.99  | 1.99  | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Arsenic   | 0.70          |   | 0.012  | 0.025 | 0.099 | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Barium    | 7.12          |   | 0.033  | 0.12  | 0.99  | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Beryllium | 0.050         | J | 0.032  | 0.074 | 0.099 | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Calcium   | 160           |   | 4.76   | 18.9  | 49.6  | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Chromium  | 1.88          |   | 0.026  | 0.050 | 0.20  | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Cobalt    | 0.51          |   | 0.0090 | 0.025 | 0.099 | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Copper    | 1.19          |   | 0.065  | 0.099 | 0.20  | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Iron      | 987           |   | 0.91   | 1.24  | 4.96  | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Lead      | 1.95          |   | 0.032  | 0.074 | 0.099 | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Magnesium | 306           |   | 1.92   | 18.9  | 49.6  | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Manganese | 11.7          |   | 0.034  | 0.050 | 0.099 | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Nickel    | 0.98          |   | 0.043  | 0.074 | 0.099 | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Potassium | 168           |   | 3.81   | 18.9  | 49.6  | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Sodium    | 1520          |   | 6.97   | 24.8  | 49.6  | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Thallium  | 0.017         | J | 0.014  | 0.050 | 0.099 | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Vanadium  | 1.64          |   | 0.011  | 0.025 | 0.50  | mg/Kg |
| Q2085-03                           | SC-2-SED-051525 | SOIL   | Zinc      | 6.76          |   | 0.089  | 0.15  | 0.50  | mg/Kg |
| <b>Client ID : SC-1-SED-051625</b> |                 |        |           |               |   |        |       |       |       |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Aluminum  | 3290          |   | 0.37   | 1.01  | 2.03  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Antimony  | 2.12          |   | 0.046  | 0.076 | 0.20  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Arsenic   | 2.49          |   | 0.012  | 0.025 | 0.10  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Barium    | 7.23          |   | 0.033  | 0.13  | 1.01  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Beryllium | 0.24          |   | 0.032  | 0.076 | 0.10  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Cadmium   | 0.097         | J | 0.018  | 0.076 | 0.10  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Calcium   | 430           |   | 4.85   | 19.3  | 50.7  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Chromium  | 5.35          |   | 0.026  | 0.051 | 0.20  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Cobalt    | 1.94          |   | 0.0090 | 0.025 | 0.10  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Copper    | 3.71          |   | 0.066  | 0.10  | 0.20  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Iron      | 6010          |   | 0.93   | 1.27  | 5.07  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Lead      | 4.25          |   | 0.032  | 0.076 | 0.10  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Magnesium | 1020          |   | 1.96   | 19.3  | 50.7  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Manganese | 50.7          |   | 0.034  | 0.051 | 0.10  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Nickel    | 4.38          |   | 0.044  | 0.076 | 0.10  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Potassium | 620           |   | 3.89   | 19.3  | 50.7  | mg/Kg |
| Q2085-04                           | SC-1-SED-051625 | SOIL   | Sodium    | 2270          |   | 7.11   | 25.3  | 50.7  | mg/Kg |

### Hit Summary Sheet SW-846

SDG No.: Q2085

Order ID: Q2085

Client: US Army Corp of Engineers

Project ID: USACE NAB Sediment Project 25

| Sample ID                             | Client ID          | Matrix | Parameter | Concentration | C | MDL    | LOD   | RDL   | Units |
|---------------------------------------|--------------------|--------|-----------|---------------|---|--------|-------|-------|-------|
| Q2085-04                              | SC-1-SED-051625    | SOIL   | Thallium  | 0.062         | J | 0.014  | 0.051 | 0.10  | mg/Kg |
| Q2085-04                              | SC-1-SED-051625    | SOIL   | Vanadium  | 7.42          |   | 0.011  | 0.025 | 0.51  | mg/Kg |
| Q2085-04                              | SC-1-SED-051625    | SOIL   | Zinc      | 27.3          |   | 0.091  | 0.15  | 0.51  | mg/Kg |
| <b>Client ID : SC-COMP-SED-051625</b> |                    |        |           |               |   |        |       |       |       |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Aluminum  | 3100          |   | 0.37   | 1.04  | 2.08  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Arsenic   | 3.24          |   | 0.012  | 0.026 | 0.10  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Barium    | 7.49          |   | 0.034  | 0.13  | 1.04  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Beryllium | 0.23          |   | 0.033  | 0.078 | 0.10  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Cadmium   | 0.083         | J | 0.019  | 0.078 | 0.10  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Calcium   | 326           |   | 4.97   | 19.7  | 51.9  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Chromium  | 6.49          |   | 0.027  | 0.052 | 0.21  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Cobalt    | 1.78          |   | 0.0090 | 0.026 | 0.10  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Copper    | 4.06          |   | 0.068  | 0.10  | 0.21  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Iron      | 6670          |   | 0.96   | 1.30  | 5.19  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Lead      | 3.57          |   | 0.033  | 0.078 | 0.10  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Magnesium | 1020          |   | 2.00   | 19.7  | 51.9  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Manganese | 47.1          |   | 0.035  | 0.052 | 0.10  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Nickel    | 4.03          |   | 0.045  | 0.078 | 0.10  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Potassium | 546           |   | 3.99   | 19.7  | 51.9  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Sodium    | 2280          |   | 7.29   | 26.0  | 51.9  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Thallium  | 0.071         | J | 0.015  | 0.052 | 0.10  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Vanadium  | 9.66          |   | 0.011  | 0.026 | 0.52  | mg/Kg |
| Q2085-07                              | SC-COMP-SED-051625 | SOIL   | Zinc      | 16.3          |   | 0.093  | 0.16  | 0.52  | mg/Kg |
| <b>Client ID : DUPE-1-SC</b>          |                    |        |           |               |   |        |       |       |       |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Aluminum  | 2170          |   | 0.34   | 0.93  | 1.86  | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Arsenic   | 1.74          |   | 0.011  | 0.023 | 0.093 | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Barium    | 8.35          |   | 0.031  | 0.12  | 0.93  | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Beryllium | 0.15          |   | 0.030  | 0.070 | 0.093 | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Cadmium   | 0.046         | J | 0.017  | 0.070 | 0.093 | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Calcium   | 246           |   | 4.46   | 17.7  | 46.5  | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Chromium  | 4.20          |   | 0.024  | 0.047 | 0.19  | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Cobalt    | 1.78          |   | 0.0080 | 0.023 | 0.093 | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Copper    | 2.73          |   | 0.060  | 0.093 | 0.19  | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Iron      | 4240          |   | 0.86   | 1.16  | 4.65  | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Lead      | 2.85          |   | 0.030  | 0.070 | 0.093 | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Magnesium | 838           |   | 1.80   | 17.7  | 46.5  | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Manganese | 35.8          |   | 0.032  | 0.047 | 0.093 | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Nickel    | 3.54          |   | 0.040  | 0.070 | 0.093 | mg/Kg |
| Q2085-08                              | DUPE-1-SC          | SOIL   | Potassium | 375           |   | 3.57   | 17.7  | 46.5  | mg/Kg |

**Hit Summary Sheet**  
**SW-846**

|                 |                           |                    |                               |
|-----------------|---------------------------|--------------------|-------------------------------|
| <b>SDG No.:</b> | Q2085                     | <b>Order ID:</b>   | Q2085                         |
| <b>Client:</b>  | US Army Corp of Engineers | <b>Project ID:</b> | USACE NAB Sediment Project 25 |

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL   | LOD   | RDL   | Units |
|-----------|-----------|--------|-----------|---------------|---|-------|-------|-------|-------|
| Q2085-08  | DUPE-1-SC | SOIL   | Sodium    | 2230          |   | 6.53  | 23.3  | 46.5  | mg/Kg |
| Q2085-08  | DUPE-1-SC | SOIL   | Thallium  | 0.039         | J | 0.013 | 0.047 | 0.093 | mg/Kg |
| Q2085-08  | DUPE-1-SC | SOIL   | Vanadium  | 4.78          |   | 0.010 | 0.023 | 0.47  | mg/Kg |
| Q2085-08  | DUPE-1-SC | SOIL   | Zinc      | 14.4          |   | 0.084 | 0.14  | 0.47  | mg/Kg |



# SAMPLE DATA

## Report of Analysis

|                   |                               |                 |          |
|-------------------|-------------------------------|-----------------|----------|
| Client:           | US Army Corp of Engineers     | Date Collected: | 05/15/25 |
| Project:          | USACE NAB Sediment Project 25 | Date Received:  | 05/20/25 |
| Client Sample ID: | SC-4-SED-051525               | SDG No.:        | Q2085    |
| Lab Sample ID:    | Q2085-01                      | Matrix:         | SOIL     |
| Level (low/med):  | low                           | % Solid:        | 75.7     |

| Cas       | Parameter | Conc. | Qua. | DF | MDL    | LOD   | LOQ / CRQL | Units(Dry Weight) | Prep Date      | Date Ana.      | Ana Met. | Prep Met. |
|-----------|-----------|-------|------|----|--------|-------|------------|-------------------|----------------|----------------|----------|-----------|
| 7429-90-5 | Aluminum  | 2200  | N    | 1  | 0.37   | 1.04  | 2.08       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-36-0 | Antimony  | 0.078 | U*   | 1  | 0.047  | 0.078 | 0.21       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-38-2 | Arsenic   | 3.41  | N    | 1  | 0.012  | 0.026 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-39-3 | Barium    | 4.16  |      | 1  | 0.034  | 0.13  | 1.04       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-41-7 | Beryllium | 0.28  |      | 1  | 0.033  | 0.078 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-43-9 | Cadmium   | 0.052 | J    | 1  | 0.019  | 0.078 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-70-2 | Calcium   | 281   |      | 1  | 4.98   | 19.8  | 52.0       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-47-3 | Chromium  | 5.17  |      | 1  | 0.027  | 0.052 | 0.21       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-48-4 | Cobalt    | 1.35  |      | 1  | 0.0090 | 0.026 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-50-8 | Copper    | 2.71  |      | 1  | 0.068  | 0.10  | 0.21       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7439-89-6 | Iron      | 6160  | N    | 1  | 0.96   | 1.30  | 5.20       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7439-92-1 | Lead      | 3.40  |      | 1  | 0.033  | 0.078 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7439-95-4 | Magnesium | 790   |      | 1  | 2.01   | 19.8  | 52.0       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7439-96-5 | Manganese | 32.7  |      | 1  | 0.035  | 0.052 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7439-97-6 | Mercury   | 0.013 | U    | 1  | 0.0090 | 0.013 | 0.016      | mg/Kg             | 05/27/25 13:44 | 05/29/25 12:02 | 7471B    |           |
| 7440-02-0 | Nickel    | 3.00  |      | 1  | 0.045  | 0.078 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-09-7 | Potassium | 383   |      | 1  | 3.99   | 19.8  | 52.0       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7782-49-2 | Selenium  | 0.47  | U    | 1  | 0.29   | 0.47  | 0.52       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-22-4 | Silver    | 0.052 | UN   | 1  | 0.027  | 0.052 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-23-5 | Sodium    | 2000  |      | 1  | 7.30   | 26.0  | 52.0       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-28-0 | Thallium  | 0.034 | J    | 1  | 0.015  | 0.052 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-62-2 | Vanadium  | 9.05  |      | 1  | 0.011  | 0.026 | 0.52       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |
| 7440-66-6 | Zinc      | 11.5  | *    | 1  | 0.094  | 0.16  | 0.52       | mg/Kg             | 05/21/25 10:20 | 05/21/25 16:54 | 6020B    | SW3050    |

|               |               |                 |            |        |
|---------------|---------------|-----------------|------------|--------|
| Color Before: | Brown         | Clarity Before: | Texture:   | Medium |
| Color After:  | Yellow        | Clarity After:  | Artifacts: |        |
| Comments:     | Metals Group2 |                 |            |        |

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 N = Spiked sample recovery not within control limits

## Report of Analysis

|                   |                               |                 |          |
|-------------------|-------------------------------|-----------------|----------|
| Client:           | US Army Corp of Engineers     | Date Collected: | 05/15/25 |
| Project:          | USACE NAB Sediment Project 25 | Date Received:  | 05/20/25 |
| Client Sample ID: | SC-3-SED-051525               | SDG No.:        | Q2085    |
| Lab Sample ID:    | Q2085-02                      | Matrix:         | SOIL     |
| Level (low/med):  | low                           | % Solid:        | 73.8     |

| Cas       | Parameter | Conc. | Qua. | DF | MDL    | LOD   | LOQ / CRQL | Units(Dry Weight) | Prep Date      | Date Ana.      | Ana Met. | Prep Met. |
|-----------|-----------|-------|------|----|--------|-------|------------|-------------------|----------------|----------------|----------|-----------|
| 7429-90-5 | Aluminum  | 6540  | N    | 1  | 0.42   | 1.18  | 2.36       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-36-0 | Antimony  | 0.088 | U*   | 1  | 0.053  | 0.088 | 0.24       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-38-2 | Arsenic   | 5.41  | N    | 1  | 0.014  | 0.029 | 0.12       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-39-3 | Barium    | 27.4  |      | 1  | 0.039  | 0.15  | 1.18       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-41-7 | Beryllium | 0.25  |      | 1  | 0.038  | 0.088 | 0.12       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-43-9 | Cadmium   | 0.078 | J    | 1  | 0.021  | 0.088 | 0.12       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-70-2 | Calcium   | 268   |      | 1  | 5.64   | 22.4  | 58.9       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-47-3 | Chromium  | 13.6  |      | 1  | 0.031  | 0.059 | 0.24       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-48-4 | Cobalt    | 2.29  |      | 1  | 0.011  | 0.029 | 0.12       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-50-8 | Copper    | 8.56  |      | 1  | 0.077  | 0.12  | 0.24       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7439-89-6 | Iron      | 10100 | N    | 1  | 1.08   | 1.47  | 5.89       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7439-92-1 | Lead      | 6.12  |      | 1  | 0.038  | 0.088 | 0.12       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7439-95-4 | Magnesium | 1660  |      | 1  | 2.27   | 22.4  | 58.9       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7439-96-5 | Manganese | 52.8  |      | 1  | 0.040  | 0.059 | 0.12       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7439-97-6 | Mercury   | 0.013 | U    | 1  | 0.0090 | 0.013 | 0.016      | mg/Kg             | 05/27/25 13:44 | 05/29/25 12:05 | 7471B    |           |
| 7440-02-0 | Nickel    | 6.71  |      | 1  | 0.051  | 0.088 | 0.12       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-09-7 | Potassium | 899   |      | 1  | 4.52   | 22.4  | 58.9       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7782-49-2 | Selenium  | 0.53  | U    | 1  | 0.33   | 0.53  | 0.59       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-22-4 | Silver    | 0.059 | UN   | 1  | 0.031  | 0.059 | 0.12       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-23-5 | Sodium    | 1860  |      | 1  | 8.27   | 29.5  | 58.9       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-28-0 | Thallium  | 0.058 | J    | 1  | 0.016  | 0.059 | 0.12       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-62-2 | Vanadium  | 19.3  |      | 1  | 0.013  | 0.029 | 0.59       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |
| 7440-66-6 | Zinc      | 24.3  | *    | 1  | 0.11   | 0.18  | 0.59       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:32 | 6020B    | SW3050    |

|               |               |                 |            |        |
|---------------|---------------|-----------------|------------|--------|
| Color Before: | Brown         | Clarity Before: | Texture:   | Medium |
| Color After:  | Yellow        | Clarity After:  | Artifacts: |        |
| Comments:     | Metals Group2 |                 |            |        |

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N = Spiked sample recovery not within control limits

## Report of Analysis

|                   |                               |                 |          |
|-------------------|-------------------------------|-----------------|----------|
| Client:           | US Army Corp of Engineers     | Date Collected: | 05/15/25 |
| Project:          | USACE NAB Sediment Project 25 | Date Received:  | 05/20/25 |
| Client Sample ID: | SC-2-SED-051525               | SDG No.:        | Q2085    |
| Lab Sample ID:    | Q2085-03                      | Matrix:         | SOIL     |
| Level (low/med):  | low                           | % Solid:        | 79.3     |

| Cas       | Parameter | Conc. | Qua. | DF | MDL    | LOD   | LOQ / CRQL | Units(Dry Weight) | Prep Date      | Date Ana.      | Ana Met. | Prep Met. |
|-----------|-----------|-------|------|----|--------|-------|------------|-------------------|----------------|----------------|----------|-----------|
| 7429-90-5 | Aluminum  | 608   | N    | 1  | 0.36   | 0.99  | 1.99       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-36-0 | Antimony  | 0.074 | U*   | 1  | 0.045  | 0.074 | 0.20       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-38-2 | Arsenic   | 0.70  | N    | 1  | 0.012  | 0.025 | 0.099      | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-39-3 | Barium    | 7.12  |      | 1  | 0.033  | 0.12  | 0.99       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-41-7 | Beryllium | 0.050 | J    | 1  | 0.032  | 0.074 | 0.099      | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-43-9 | Cadmium   | 0.074 | U    | 1  | 0.018  | 0.074 | 0.099      | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-70-2 | Calcium   | 160   |      | 1  | 4.76   | 18.9  | 49.6       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-47-3 | Chromium  | 1.88  |      | 1  | 0.026  | 0.050 | 0.20       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-48-4 | Cobalt    | 0.51  |      | 1  | 0.0090 | 0.025 | 0.099      | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-50-8 | Copper    | 1.19  |      | 1  | 0.065  | 0.099 | 0.20       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7439-89-6 | Iron      | 987   | N    | 1  | 0.91   | 1.24  | 4.96       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7439-92-1 | Lead      | 1.95  |      | 1  | 0.032  | 0.074 | 0.099      | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7439-95-4 | Magnesium | 306   |      | 1  | 1.92   | 18.9  | 49.6       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7439-96-5 | Manganese | 11.7  |      | 1  | 0.034  | 0.050 | 0.099      | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7439-97-6 | Mercury   | 0.012 | U    | 1  | 0.0080 | 0.012 | 0.015      | mg/Kg             | 05/27/25 13:44 | 05/29/25 12:07 | 7471B    |           |
| 7440-02-0 | Nickel    | 0.98  |      | 1  | 0.043  | 0.074 | 0.099      | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-09-7 | Potassium | 168   |      | 1  | 3.81   | 18.9  | 49.6       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7782-49-2 | Selenium  | 0.45  | U    | 1  | 0.28   | 0.45  | 0.50       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-22-4 | Silver    | 0.050 | UN   | 1  | 0.026  | 0.050 | 0.099      | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-23-5 | Sodium    | 1520  |      | 1  | 6.97   | 24.8  | 49.6       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-28-0 | Thallium  | 0.017 | J    | 1  | 0.014  | 0.050 | 0.099      | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-62-2 | Vanadium  | 1.64  |      | 1  | 0.011  | 0.025 | 0.50       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |
| 7440-66-6 | Zinc      | 6.76  | *    | 1  | 0.089  | 0.15  | 0.50       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:35 | 6020B    | SW3050    |

|               |               |                 |            |        |
|---------------|---------------|-----------------|------------|--------|
| Color Before: | Brown         | Clarity Before: | Texture:   | Medium |
| Color After:  | Yellow        | Clarity After:  | Artifacts: |        |
| Comments:     | Metals Group2 |                 |            |        |

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N = Spiked sample recovery not within control limits

## Report of Analysis

|                   |                               |                 |          |
|-------------------|-------------------------------|-----------------|----------|
| Client:           | US Army Corp of Engineers     | Date Collected: | 05/16/25 |
| Project:          | USACE NAB Sediment Project 25 | Date Received:  | 05/20/25 |
| Client Sample ID: | SC-1-SED-051625               | SDG No.:        | Q2085    |
| Lab Sample ID:    | Q2085-04                      | Matrix:         | SOIL     |
| Level (low/med):  | low                           | % Solid:        | 70.5     |

| Cas       | Parameter | Conc. | Qua. | DF | MDL    | LOD   | LOQ / CRQL | Units(Dry Weight) | Prep Date      | Date Ana.      | Ana Met. | Prep Met. |
|-----------|-----------|-------|------|----|--------|-------|------------|-------------------|----------------|----------------|----------|-----------|
| 7429-90-5 | Aluminum  | 3290  | N    | 1  | 0.37   | 1.01  | 2.03       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-36-0 | Antimony  | 2.12  | *    | 1  | 0.046  | 0.076 | 0.20       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-38-2 | Arsenic   | 2.49  | N    | 1  | 0.012  | 0.025 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-39-3 | Barium    | 7.23  |      | 1  | 0.033  | 0.13  | 1.01       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-41-7 | Beryllium | 0.24  |      | 1  | 0.032  | 0.076 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-43-9 | Cadmium   | 0.097 | J    | 1  | 0.018  | 0.076 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-70-2 | Calcium   | 430   |      | 1  | 4.85   | 19.3  | 50.7       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-47-3 | Chromium  | 5.35  |      | 1  | 0.026  | 0.051 | 0.20       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-48-4 | Cobalt    | 1.94  |      | 1  | 0.0090 | 0.025 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-50-8 | Copper    | 3.71  |      | 1  | 0.066  | 0.10  | 0.20       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7439-89-6 | Iron      | 6010  | N    | 1  | 0.93   | 1.27  | 5.07       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7439-92-1 | Lead      | 4.25  |      | 1  | 0.032  | 0.076 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7439-95-4 | Magnesium | 1020  |      | 1  | 1.96   | 19.3  | 50.7       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7439-96-5 | Manganese | 50.7  |      | 1  | 0.034  | 0.051 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7439-97-6 | Mercury   | 0.014 | U    | 1  | 0.010  | 0.014 | 0.017      | mg/Kg             | 05/27/25 13:44 | 05/29/25 12:10 | 7471B    |           |
| 7440-02-0 | Nickel    | 4.38  |      | 1  | 0.044  | 0.076 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-09-7 | Potassium | 620   |      | 1  | 3.89   | 19.3  | 50.7       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7782-49-2 | Selenium  | 0.46  | U    | 1  | 0.28   | 0.46  | 0.51       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-22-4 | Silver    | 0.051 | UN   | 1  | 0.026  | 0.051 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-23-5 | Sodium    | 2270  |      | 1  | 7.11   | 25.3  | 50.7       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-28-0 | Thallium  | 0.062 | J    | 1  | 0.014  | 0.051 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-62-2 | Vanadium  | 7.42  |      | 1  | 0.011  | 0.025 | 0.51       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |
| 7440-66-6 | Zinc      | 27.3  | *    | 1  | 0.091  | 0.15  | 0.51       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:39 | 6020B    | SW3050    |

|               |               |                 |            |        |
|---------------|---------------|-----------------|------------|--------|
| Color Before: | Brown         | Clarity Before: | Texture:   | Medium |
| Color After:  | Yellow        | Clarity After:  | Artifacts: |        |
| Comments:     | Metals Group2 |                 |            |        |

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N = Spiked sample recovery not within control limits

## Report of Analysis

|                   |                               |                 |          |
|-------------------|-------------------------------|-----------------|----------|
| Client:           | US Army Corp of Engineers     | Date Collected: | 05/16/25 |
| Project:          | USACE NAB Sediment Project 25 | Date Received:  | 05/20/25 |
| Client Sample ID: | SC-COMP-SED-051625            | SDG No.:        | Q2085    |
| Lab Sample ID:    | Q2085-07                      | Matrix:         | SOIL     |
| Level (low/med):  | low                           | % Solid:        | 73.5     |

| Cas       | Parameter | Conc. | Qua. | DF | MDL    | LOD   | LOQ / CRQL | Units(Dry Weight) | Prep Date      | Date Ana.      | Ana Met. | Prep Met. |
|-----------|-----------|-------|------|----|--------|-------|------------|-------------------|----------------|----------------|----------|-----------|
| 7429-90-5 | Aluminum  | 3100  | N    | 1  | 0.37   | 1.04  | 2.08       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-36-0 | Antimony  | 0.078 | U*   | 1  | 0.047  | 0.078 | 0.21       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-38-2 | Arsenic   | 3.24  | N    | 1  | 0.012  | 0.026 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-39-3 | Barium    | 7.49  |      | 1  | 0.034  | 0.13  | 1.04       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-41-7 | Beryllium | 0.23  |      | 1  | 0.033  | 0.078 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-43-9 | Cadmium   | 0.083 | J    | 1  | 0.019  | 0.078 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-70-2 | Calcium   | 326   |      | 1  | 4.97   | 19.7  | 51.9       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-47-3 | Chromium  | 6.49  |      | 1  | 0.027  | 0.052 | 0.21       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-48-4 | Cobalt    | 1.78  |      | 1  | 0.0090 | 0.026 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-50-8 | Copper    | 4.06  |      | 1  | 0.068  | 0.10  | 0.21       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7439-89-6 | Iron      | 6670  | N    | 1  | 0.96   | 1.30  | 5.19       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7439-92-1 | Lead      | 3.57  |      | 1  | 0.033  | 0.078 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7439-95-4 | Magnesium | 1020  |      | 1  | 2.00   | 19.7  | 51.9       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7439-96-5 | Manganese | 47.1  |      | 1  | 0.035  | 0.052 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7439-97-6 | Mercury   | 0.013 | U    | 1  | 0.0090 | 0.013 | 0.016      | mg/Kg             | 05/27/25 13:44 | 05/29/25 12:48 | 7471B    |           |
| 7440-02-0 | Nickel    | 4.03  |      | 1  | 0.045  | 0.078 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-09-7 | Potassium | 546   |      | 1  | 3.99   | 19.7  | 51.9       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7782-49-2 | Selenium  | 0.47  | U    | 1  | 0.29   | 0.47  | 0.52       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-22-4 | Silver    | 0.052 | UN   | 1  | 0.027  | 0.052 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-23-5 | Sodium    | 2280  |      | 1  | 7.29   | 26.0  | 51.9       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-28-0 | Thallium  | 0.071 | J    | 1  | 0.015  | 0.052 | 0.10       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-62-2 | Vanadium  | 9.66  |      | 1  | 0.011  | 0.026 | 0.52       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |
| 7440-66-6 | Zinc      | 16.3  | *    | 1  | 0.093  | 0.16  | 0.52       | mg/Kg             | 05/21/25 10:20 | 05/21/25 17:56 | 6020B    | SW3050    |

|               |               |                 |            |        |
|---------------|---------------|-----------------|------------|--------|
| Color Before: | Brown         | Clarity Before: | Texture:   | Medium |
| Color After:  | Yellow        | Clarity After:  | Artifacts: |        |
| Comments:     | Metals Group2 |                 |            |        |

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
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\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N = Spiked sample recovery not within control limits

## Report of Analysis

|                   |                               |                 |          |
|-------------------|-------------------------------|-----------------|----------|
| Client:           | US Army Corp of Engineers     | Date Collected: | 05/16/25 |
| Project:          | USACE NAB Sediment Project 25 | Date Received:  | 05/20/25 |
| Client Sample ID: | DUPE-1-SC                     | SDG No.:        | Q2085    |
| Lab Sample ID:    | Q2085-08                      | Matrix:         | SOIL     |
| Level (low/med):  | low                           | % Solid:        | 76.2     |

| Cas       | Parameter | Conc. | Qua. | DF | MDL    | LOD   | LOQ / CRQL | Units(Dry Weight) | Prep Date      | Date Ana.      | Ana Met. | Prep Met. |
|-----------|-----------|-------|------|----|--------|-------|------------|-------------------|----------------|----------------|----------|-----------|
| 7429-90-5 | Aluminum  | 2170  | N    | 1  | 0.34   | 0.93  | 1.86       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-36-0 | Antimony  | 0.070 | U*   | 1  | 0.042  | 0.070 | 0.19       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-38-2 | Arsenic   | 1.74  | N    | 1  | 0.011  | 0.023 | 0.093      | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-39-3 | Barium    | 8.35  |      | 1  | 0.031  | 0.12  | 0.93       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-41-7 | Beryllium | 0.15  |      | 1  | 0.030  | 0.070 | 0.093      | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-43-9 | Cadmium   | 0.046 | J    | 1  | 0.017  | 0.070 | 0.093      | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-70-2 | Calcium   | 246   |      | 1  | 4.46   | 17.7  | 46.5       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-47-3 | Chromium  | 4.20  |      | 1  | 0.024  | 0.047 | 0.19       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-48-4 | Cobalt    | 1.78  |      | 1  | 0.0080 | 0.023 | 0.093      | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-50-8 | Copper    | 2.73  |      | 1  | 0.060  | 0.093 | 0.19       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7439-89-6 | Iron      | 4240  | N    | 1  | 0.86   | 1.16  | 4.65       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7439-92-1 | Lead      | 2.85  |      | 1  | 0.030  | 0.070 | 0.093      | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7439-95-4 | Magnesium | 838   |      | 1  | 1.80   | 17.7  | 46.5       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7439-96-5 | Manganese | 35.8  |      | 1  | 0.032  | 0.047 | 0.093      | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7439-97-6 | Mercury   | 0.013 | U    | 1  | 0.0090 | 0.013 | 0.016      | mg/Kg             | 05/27/25 13:44 | 05/29/25 12:50 | 7471B    |           |
| 7440-02-0 | Nickel    | 3.54  |      | 1  | 0.040  | 0.070 | 0.093      | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-09-7 | Potassium | 375   |      | 1  | 3.57   | 17.7  | 46.5       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7782-49-2 | Selenium  | 0.42  | U    | 1  | 0.26   | 0.42  | 0.47       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-22-4 | Silver    | 0.047 | UN   | 1  | 0.024  | 0.047 | 0.093      | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-23-5 | Sodium    | 2230  |      | 1  | 6.53   | 23.3  | 46.5       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-28-0 | Thallium  | 0.039 | J    | 1  | 0.013  | 0.047 | 0.093      | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-62-2 | Vanadium  | 4.78  |      | 1  | 0.010  | 0.023 | 0.47       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |
| 7440-66-6 | Zinc      | 14.4  | *    | 1  | 0.084  | 0.14  | 0.47       | mg/Kg             | 05/21/25 10:20 | 05/21/25 18:00 | 6020B    | SW3050    |

|               |               |                 |            |        |
|---------------|---------------|-----------------|------------|--------|
| Color Before: | Brown         | Clarity Before: | Texture:   | Medium |
| Color After:  | Yellow        | Clarity After:  | Artifacts: |        |
| Comments:     | Metals Group2 |                 |            |        |

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

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N = Spiked sample recovery not within control limits



# METAL CALIBRATION DATA



**H**

**Metals**

- 2a -

**INITIAL AND CONTINUING CALIBRATION VERIFICATION**

**Client:** US Army Corp of Engineers **SDG No.:** Q2085

**Contract:** USAR03 **Lab Code:** CHEM **Case No.:** Q2085 **SAS No.:** Q2085

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M  | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|------------|---------------|---------------------------|----|------------------|------------------|---------------|
| CCV76     | Mercury | 4.83           | 5.0        | 97            | 90 - 110                  | CV | 05/29/2025       | 11:22            | LB135943      |
| CCV77     | Mercury | 5.09           | 5.0        | 102           | 90 - 110                  | CV | 05/29/2025       | 12:25            | LB135943      |
| CCV78     | Mercury | 5.16           | 5.0        | 103           | 90 - 110                  | CV | 05/29/2025       | 13:01            | LB135943      |
| CCV79     | Mercury | 5.26           | 5.0        | 105           | 90 - 110                  | CV | 05/29/2025       | 13:19            | LB135943      |

## Metals

- 2a -

### INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: US Army Corp of Engineers      SDG No.: Q2085

Contract: USAR03      Lab Code: CHEM      Case No.: Q2085      SAS No.: Q2085

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

| Sample ID | Analyte   | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-----------|----------------|------------|---------------|---------------------------|---|------------------|------------------|---------------|
| ICV01     | Aluminum  | 470            | 500        | 94            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Antimony  | 197            | 200        | 98            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Arsenic   | 198            | 200        | 99            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Barium    | 99.2           | 100        | 99            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Beryllium | 106            | 100        | 106           | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Cadmium   | 101            | 100        | 101           | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Calcium   | 1880           | 2000       | 94            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Chromium  | 101            | 100        | 100           | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Cobalt    | 105            | 100        | 105           | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Copper    | 108            | 100        | 108           | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Iron      | 1970           | 2000       | 98            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Lead      | 203            | 200        | 102           | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Magnesium | 1170           | 1200       | 97            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Manganese | 101            | 100        | 101           | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Nickel    | 111            | 110        | 101           | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Potassium | 1930           | 2000       | 97            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Selenium  | 207            | 200        | 104           | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Silver    | 47.6           | 50.0       | 95            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Sodium    | 1940           | 2000       | 97            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Thallium  | 206            | 210        | 98            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Vanadium  | 98.6           | 100        | 99            | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |
|           | Zinc      | 212            | 200        | 106           | 90 - 110                  | P | 05/21/2025       | 14:30            | LB135886      |

**Metals**

- 2a -

**INITIAL AND CONTINUING CALIBRATION VERIFICATION**

**Client:** US Army Corp of Engineers **SDG No.:** Q2085  
**Contract:** USAR03 **Lab Code:** CHEM **Case No.:** Q2085 **SAS No.:** Q2085  
**Initial Calibration Source:** EPA  
**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte   | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-----------|----------------|------------|---------------|---------------------------|---|------------------|------------------|---------------|
| LLICV01   | Aluminum  | 19.8           | 20.0       | 99            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Antimony  | 1.96           | 2.0        | 98            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Arsenic   | 1.00           | 1.0        | 100           | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Barium    | 9.67           | 10.0       | 97            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Beryllium | 1.14           | 1.0        | 114           | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Cadmium   | 0.90           | 1.0        | 90            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Calcium   | 476            | 500        | 95            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Chromium  | 1.99           | 2.0        | 100           | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Cobalt    | 1.07           | 1.0        | 107           | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Copper    | 2.14           | 2.0        | 107           | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Iron      | 49.5           | 50.0       | 99            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Lead      | 0.83           | 1.0        | 83            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Magnesium | 500            | 500        | 100           | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Manganese | 0.91           | 1.0        | 91            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Nickel    | 0.93           | 1.0        | 93            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Potassium | 478            | 500        | 96            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Selenium  | 4.91           | 5.0        | 98            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Silver    | 1.08           | 1.0        | 108           | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Sodium    | 506            | 500        | 101           | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Thallium  | 0.93           | 1.0        | 93            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Vanadium  | 4.86           | 5.0        | 97            | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |
|           | Zinc      | 5.18           | 5.0        | 104           | 80 - 120                  | P | 05/21/2025       | 14:33            | LB135886      |

**Metals**

- 2a -

**INITIAL AND CONTINUING CALIBRATION VERIFICATION**

**Client:** US Army Corp of Engineers **SDG No.:** Q2085  
**Contract:** USAR03 **Lab Code:** CHEM **Case No.:** Q2085 **SAS No.:** Q2085  
**Initial Calibration Source:** EPA  
**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte   | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-----------|----------------|------------|---------------|---------------------------|---|------------------|------------------|---------------|
| CCV01     | Aluminum  | 50400          | 50000      | 101           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Antimony  | 501            | 500        | 100           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Arsenic   | 506            | 500        | 101           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Barium    | 2570           | 2500       | 103           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Beryllium | 529            | 500        | 106           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Cadmium   | 504            | 500        | 101           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Calcium   | 239000         | 250000     | 96            | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Chromium  | 523            | 500        | 105           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Cobalt    | 513            | 500        | 102           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Copper    | 5060           | 5000       | 101           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Iron      | 131000         | 125000     | 104           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Lead      | 2600           | 2500       | 104           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Magnesium | 246000         | 250000     | 98            | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Manganese | 5190           | 5000       | 104           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Nickel    | 473            | 500        | 95            | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Potassium | 133000         | 125000     | 106           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Selenium  | 495            | 500        | 99            | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Silver    | 492            | 500        | 98            | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Sodium    | 240000         | 250000     | 96            | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Thallium  | 524            | 500        | 105           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Vanadium  | 535            | 500        | 107           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
|           | Zinc      | 5180           | 5000       | 104           | 90 - 110                  | P | 05/21/2025       | 14:51            | LB135886      |
| CCV02     | Aluminum  | 50400          | 50000      | 101           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Antimony  | 506            | 500        | 101           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Arsenic   | 500            | 500        | 100           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Barium    | 2570           | 2500       | 103           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Beryllium | 530            | 500        | 106           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Cadmium   | 508            | 500        | 102           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Calcium   | 240000         | 250000     | 96            | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Chromium  | 523            | 500        | 105           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Cobalt    | 513            | 500        | 102           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Copper    | 5080           | 5000       | 102           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Iron      | 130000         | 125000     | 104           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Lead      | 2590           | 2500       | 104           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |

**Metals**

- 2a -

**INITIAL AND CONTINUING CALIBRATION VERIFICATION**

**Client:** US Army Corp of Engineers **SDG No.:** Q2085

**Contract:** USAR03 **Lab Code:** CHEM **Case No.:** Q2085 **SAS No.:** Q2085

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte   | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-----------|----------------|------------|---------------|---------------------------|---|------------------|------------------|---------------|
| CCV02     | Magnesium | 249000         | 250000     | 99            | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Manganese | 5130           | 5000       | 103           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Nickel    | 471            | 500        | 94            | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Potassium | 131000         | 125000     | 105           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Selenium  | 492            | 500        | 98            | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Silver    | 494            | 500        | 99            | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Sodium    | 242000         | 250000     | 97            | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Thallium  | 518            | 500        | 104           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Vanadium  | 526            | 500        | 105           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
|           | Zinc      | 5260           | 5000       | 105           | 90 - 110                  | P | 05/21/2025       | 15:59            | LB135886      |
| CCV03     | Aluminum  | 48500          | 50000      | 97            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Antimony  | 493            | 500        | 99            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Arsenic   | 480            | 500        | 96            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Barium    | 2500           | 2500       | 100           | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Beryllium | 525            | 500        | 105           | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Cadmium   | 488            | 500        | 98            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Calcium   | 235000         | 250000     | 94            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Chromium  | 503            | 500        | 101           | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Cobalt    | 485            | 500        | 97            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Copper    | 4870           | 5000       | 98            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Iron      | 124000         | 125000     | 99            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Lead      | 2530           | 2500       | 101           | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Magnesium | 238000         | 250000     | 95            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Manganese | 4950           | 5000       | 99            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Nickel    | 451            | 500        | 90            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Potassium | 127000         | 125000     | 102           | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Selenium  | 488            | 500        | 98            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Silver    | 484            | 500        | 97            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Sodium    | 234000         | 250000     | 94            | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Thallium  | 511            | 500        | 102           | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Vanadium  | 504            | 500        | 101           | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
|           | Zinc      | 4990           | 5000       | 100           | 90 - 110                  | P | 05/21/2025       | 16:57            | LB135886      |
| CCV04     | Aluminum  | 50300          | 50000      | 101           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Antimony  | 505            | 500        | 101           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |

## Metals

- 2a -

### INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: US Army Corp of Engineers SDG No.: Q2085  
Contract: USAR03 Lab Code: CHEM Case No.: Q2085 SAS No.: Q2085  
Initial Calibration Source: EPA  
Continuing Calibration Source: PLASMA-PURE

| Sample ID | Analyte   | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-----------|----------------|------------|---------------|---------------------------|---|------------------|------------------|---------------|
| CCV04     | Arsenic   | 497            | 500        | 99            | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Barium    | 2570           | 2500       | 103           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Beryllium | 545            | 500        | 109           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Cadmium   | 503            | 500        | 101           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Calcium   | 239000         | 250000     | 96            | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Chromium  | 537            | 500        | 108           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Cobalt    | 521            | 500        | 104           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Copper    | 5030           | 5000       | 101           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Iron      | 132000         | 125000     | 105           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Lead      | 2590           | 2500       | 103           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Magnesium | 250000         | 250000     | 100           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Manganese | 5240           | 5000       | 105           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Nickel    | 476            | 500        | 95            | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Potassium | 135000         | 125000     | 108           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Selenium  | 495            | 500        | 99            | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Silver    | 494            | 500        | 99            | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Sodium    | 234000         | 250000     | 94            | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Thallium  | 516            | 500        | 103           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Vanadium  | 536            | 500        | 107           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |
|           | Zinc      | 5130           | 5000       | 103           | 90 - 110                  | P | 05/21/2025       | 18:04            | LB135886      |

**Metals**

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**CRDL STANDARD FOR AA & ICP**

**Client:** US Army Corp of Engineers **SDG No.:** Q2085  
**Contract:** USAR03 **Lab Code:** CHEM **Case No.:** Q2085 **SAS No.:** Q2085  
**Initial Calibration Source:** \_\_\_\_\_  
**Continuing Calibration Source:** \_\_\_\_\_

| Sample ID  | Analyte   | Result<br>ug/L | True Value<br>ug/L | %<br>Recovery | Acceptance<br>Window (%R) | M  | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|------------|-----------|----------------|--------------------|---------------|---------------------------|----|------------------|------------------|---------------|
| <b>CRI</b> | Aluminum  | 19.8           | 20.0               | 99            | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Antimony  | 1.93           | 2.0                | 96            | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Arsenic   | 0.95           | 1.0                | 95            | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Barium    | 9.45           | 10.0               | 94            | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Beryllium | 1.13           | 1.0                | 113           | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Cadmium   | 0.83           | 1.0                | 83            | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Calcium   | 475            | 500                | 95            | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Chromium  | 2.03           | 2.0                | 102           | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Cobalt    | 1.08           | 1.0                | 108           | 50 - 150                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Copper    | 2.16           | 2.0                | 108           | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Iron      | 51.0           | 50.0               | 102           | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Lead      | 0.83           | 1.0                | 83            | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Magnesium | 525            | 500                | 105           | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Manganese | 1.05           | 1.0                | 105           | 50 - 150                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Nickel    | 0.95           | 1.0                | 95            | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Potassium | 502            | 500                | 100           | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Selenium  | 4.84           | 5.0                | 97            | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Silver    | 1.05           | 1.0                | 105           | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Sodium    | 521            | 500                | 104           | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Thallium  | 0.93           | 1.0                | 93            | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Vanadium  | 5.02           | 5.0                | 100           | 70 - 130                  | P  | 05/21/2025       | 15:00            | LB135886      |
|            | Zinc      | 5.25           | 5.0                | 105           | 50 - 150                  | P  | 05/21/2025       | 15:00            | LB135886      |
| <b>CRA</b> | Mercury   | 0.22           | 0.2                | 109           | 70 - 130                  | CV | 05/29/2025       | 11:38            | LB135943      |



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,  
Fax : 908 789 8922

**Metals**

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**INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY**

|                  |                                  |                        |                             |                      |                  |              |          |                          |                          |                       |
|------------------|----------------------------------|------------------------|-----------------------------|----------------------|------------------|--------------|----------|--------------------------|--------------------------|-----------------------|
| <b>Client:</b>   | <u>US Army Corp of Engineers</u> |                        |                             |                      | <b>SDG No.:</b>  | <u>Q2085</u> |          |                          |                          |                       |
| <b>Contract:</b> | <u>USAR03</u>                    | <b>Lab Code:</b>       | <u>CHEM</u>                 |                      | <b>Case No.:</b> | <u>Q2085</u> |          |                          | <b>SAS No.:</b>          | <u>Q2085</u>          |
|                  |                                  |                        |                             |                      |                  |              |          |                          |                          |                       |
| <b>Sample ID</b> | <b>Analyte</b>                   | <b>Result<br/>ug/L</b> | <b>Acceptance<br/>Limit</b> | <b>Conc<br/>Qual</b> | <b>LOD</b>       | <b>CRQL</b>  | <b>M</b> | <b>Analysis<br/>Date</b> | <b>Analysis<br/>Time</b> | <b>Run<br/>Number</b> |
| <b>ICB21</b>     | Mercury                          | 0.20                   | +/-0.20                     | U                    | 0.16             | 0.20         | CV       | 05/29/2025               | 11:20                    | LB135943              |

**Metals**

- 3a -

**INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY**

**Client:** US Army Corp of Engineers **SDG No.:** Q2085  
**Contract:** USAR03 **Lab Code:** CHEM **Case No.:** Q2085 **SAS No.:** Q2085

| Sample ID | Analyte | Result<br>ug/L | Acceptance<br>Limit | Conc<br>Qual | LOD  | CRQL | M  | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|---------------------|--------------|------|------|----|------------------|------------------|---------------|
| CCB76     | Mercury | 0.20           | +/-0.20             | U            | 0.16 | 0.20 | CV | 05/29/2025       | 11:27            | LB135943      |
| CCB77     | Mercury | 0.20           | +/-0.20             | U            | 0.16 | 0.20 | CV | 05/29/2025       | 12:30            | LB135943      |
| CCB78     | Mercury | 0.20           | +/-0.20             | U            | 0.16 | 0.20 | CV | 05/29/2025       | 13:04            | LB135943      |
| CCB79     | Mercury | 0.20           | +/-0.20             | U            | 0.16 | 0.20 | CV | 05/29/2025       | 13:22            | LB135943      |

# Metals

- 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: US Army Corp of Engineers SDG No.: Q2085  
Contract: USAR03 Lab Code: CHEM Case No.: Q2085 SAS No.: Q2085

| Sample ID | Analyte   | Result<br>ug/L | Acceptance<br>Limit | Conc<br>Qual | LOD  | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-----------|----------------|---------------------|--------------|------|------|---|------------------|------------------|---------------|
| ICB01     | Aluminum  | 20.0           | +/-20.0             | U            | 10.0 | 20.0 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Antimony  | 2.00           | +/-2.00             | U            | 0.25 | 2.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Arsenic   | 1.00           | +/-1.00             | U            | 0.25 | 1.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Barium    | 10.0           | +/-10.0             | U            | 1.25 | 10.0 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Beryllium | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Cadmium   | 1.00           | +/-1.00             | U            | 0.50 | 1.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Calcium   | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 14:37            | LB135886      |
|           | Chromium  | 2.00           | +/-2.00             | U            | 0.75 | 2.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Cobalt    | 1.00           | +/-1.00             | U            | 0.25 | 1.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Copper    | 2.00           | +/-2.00             | U            | 1.50 | 2.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Iron      | 50.0           | +/-50.0             | U            | 25.0 | 50.0 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Lead      | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Magnesium | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 14:37            | LB135886      |
|           | Manganese | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Nickel    | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Potassium | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 14:37            | LB135886      |
|           | Selenium  | 5.00           | +/-5.00             | U            | 4.50 | 5.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Silver    | 1.00           | +/-1.00             | U            | 0.50 | 1.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Sodium    | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 14:37            | LB135886      |
|           | Thallium  | 1.00           | +/-1.00             | U            | 0.50 | 1.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Vanadium  | 5.00           | +/-5.00             | U            | 0.25 | 5.00 | P | 05/21/2025       | 14:37            | LB135886      |
|           | Zinc      | 5.00           | +/-5.00             | U            | 1.50 | 5.00 | P | 05/21/2025       | 14:37            | LB135886      |

# Metals

- 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: US Army Corp of Engineers SDG No.: Q2085  
Contract: USAR03 Lab Code: CHEM Case No.: Q2085 SAS No.: Q2085

| Sample ID | Analyte   | Result<br>ug/L | Acceptance<br>Limit | Conc<br>Qual | LOD  | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-----------|----------------|---------------------|--------------|------|------|---|------------------|------------------|---------------|
| CCB01     | Aluminum  | 20.0           | +/-20.0             | U            | 10.0 | 20.0 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Antimony  | 2.00           | +/-2.00             | U            | 0.25 | 2.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Arsenic   | 1.00           | +/-1.00             | U            | 0.25 | 1.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Barium    | 10.0           | +/-10.0             | U            | 1.25 | 10.0 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Beryllium | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Cadmium   | 1.00           | +/-1.00             | U            | 0.50 | 1.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Calcium   | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 14:57            | LB135886      |
|           | Chromium  | 2.00           | +/-2.00             | U            | 0.75 | 2.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Cobalt    | 1.00           | +/-1.00             | U            | 0.25 | 1.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Copper    | 2.00           | +/-2.00             | U            | 1.50 | 2.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Iron      | 50.0           | +/-50.0             | U            | 25.0 | 50.0 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Lead      | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Magnesium | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 14:57            | LB135886      |
|           | Manganese | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Nickel    | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Potassium | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 14:57            | LB135886      |
|           | Selenium  | 5.00           | +/-5.00             | U            | 4.50 | 5.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Silver    | 0.080          | +/-1.00             | J            | 0.50 | 1.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Sodium    | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 14:57            | LB135886      |
|           | Thallium  | 1.00           | +/-1.00             | U            | 0.50 | 1.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Vanadium  | 5.00           | +/-5.00             | U            | 0.25 | 5.00 | P | 05/21/2025       | 14:57            | LB135886      |
|           | Zinc      | 5.00           | +/-5.00             | U            | 1.50 | 5.00 | P | 05/21/2025       | 14:57            | LB135886      |
| CCB02     | Aluminum  | 20.0           | +/-20.0             | U            | 10.0 | 20.0 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Antimony  | 2.00           | +/-2.00             | U            | 0.25 | 2.00 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Arsenic   | 1.00           | +/-1.00             | U            | 0.25 | 1.00 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Barium    | 10.0           | +/-10.0             | U            | 1.25 | 10.0 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Beryllium | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Cadmium   | 1.00           | +/-1.00             | U            | 0.50 | 1.00 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Calcium   | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 16:05            | LB135886      |
|           | Chromium  | 2.00           | +/-2.00             | U            | 0.75 | 2.00 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Cobalt    | 1.00           | +/-1.00             | U            | 0.25 | 1.00 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Copper    | 2.00           | +/-2.00             | U            | 1.50 | 2.00 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Iron      | 50.0           | +/-50.0             | U            | 25.0 | 50.0 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Lead      | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Magnesium | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 16:05            | LB135886      |
|           | Manganese | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Nickel    | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 16:05            | LB135886      |
|           | Potassium | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 16:05            | LB135886      |
|           | Selenium  | 5.00           | +/-5.00             | U            | 4.50 | 5.00 | P | 05/21/2025       | 16:05            | LB135886      |

# Metals

- 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

| Client: <u>US Army Corp of Engineers</u> |                       | SDG No.: <u>Q2085</u>  |                       |              |      |      |   |                  |                  |               |
|------------------------------------------|-----------------------|------------------------|-----------------------|--------------|------|------|---|------------------|------------------|---------------|
| Contract: <u>USAR03</u>                  | Lab Code: <u>CHEM</u> | Case No.: <u>Q2085</u> | SAS No.: <u>Q2085</u> |              |      |      |   |                  |                  |               |
| Sample ID                                | Analyte               | Result<br>ug/L         | Acceptance<br>Limit   | Conc<br>Qual | LOD  | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
| CCB02                                    | Silver                | 1.00                   | +/-1.00               | U            | 0.50 | 1.00 | P | 05/21/2025       | 16:05            | LB135886      |
|                                          | Sodium                | 500                    | +/-500                | U            | 190  | 500  | P | 05/21/2025       | 16:05            | LB135886      |
|                                          | Thallium              | 1.00                   | +/-1.00               | U            | 0.50 | 1.00 | P | 05/21/2025       | 16:05            | LB135886      |
|                                          | Vanadium              | 5.00                   | +/-5.00               | U            | 0.25 | 5.00 | P | 05/21/2025       | 16:05            | LB135886      |
|                                          | Zinc                  | 5.00                   | +/-5.00               | U            | 1.50 | 5.00 | P | 05/21/2025       | 16:05            | LB135886      |
| CCB03                                    | Aluminum              | 20.0                   | +/-20.0               | U            | 10.0 | 20.0 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Antimony              | 2.00                   | +/-2.00               | U            | 0.25 | 2.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Arsenic               | 1.00                   | +/-1.00               | U            | 0.25 | 1.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Barium                | 10.0                   | +/-10.0               | U            | 1.25 | 10.0 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Beryllium             | 1.00                   | +/-1.00               | U            | 0.75 | 1.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Cadmium               | 1.00                   | +/-1.00               | U            | 0.50 | 1.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Calcium               | 500                    | +/-500                | U            | 190  | 500  | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Chromium              | 2.00                   | +/-2.00               | U            | 0.75 | 2.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Cobalt                | 1.00                   | +/-1.00               | U            | 0.25 | 1.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Copper                | 2.00                   | +/-2.00               | U            | 1.50 | 2.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Iron                  | 50.0                   | +/-50.0               | U            | 25.0 | 50.0 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Lead                  | 1.00                   | +/-1.00               | U            | 0.75 | 1.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Magnesium             | 500                    | +/-500                | U            | 190  | 500  | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Manganese             | 1.00                   | +/-1.00               | U            | 0.75 | 1.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Nickel                | 1.00                   | +/-1.00               | U            | 0.75 | 1.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Potassium             | 500                    | +/-500                | U            | 190  | 500  | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Selenium              | 5.00                   | +/-5.00               | U            | 4.50 | 5.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Silver                | 1.00                   | +/-1.00               | U            | 0.50 | 1.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Sodium                | 500                    | +/-500                | U            | 190  | 500  | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Thallium              | 1.00                   | +/-1.00               | U            | 0.50 | 1.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Vanadium              | 5.00                   | +/-5.00               | U            | 0.25 | 5.00 | P | 05/21/2025       | 17:28            | LB135886      |
|                                          | Zinc                  | 2.43                   | +/-5.00               | J            | 1.50 | 5.00 | P | 05/21/2025       | 17:28            | LB135886      |
| CCB04                                    | Aluminum              | 20.0                   | +/-20.0               | U            | 10.0 | 20.0 | P | 05/21/2025       | 18:16            | LB135886      |
|                                          | Antimony              | 2.00                   | +/-2.00               | U            | 0.25 | 2.00 | P | 05/21/2025       | 18:16            | LB135886      |
|                                          | Arsenic               | 1.00                   | +/-1.00               | U            | 0.25 | 1.00 | P | 05/21/2025       | 18:16            | LB135886      |
|                                          | Barium                | 10.0                   | +/-10.0               | U            | 1.25 | 10.0 | P | 05/21/2025       | 18:16            | LB135886      |
|                                          | Beryllium             | 1.00                   | +/-1.00               | U            | 0.75 | 1.00 | P | 05/21/2025       | 18:16            | LB135886      |
|                                          | Cadmium               | 1.00                   | +/-1.00               | U            | 0.50 | 1.00 | P | 05/21/2025       | 18:16            | LB135886      |
|                                          | Calcium               | 500                    | +/-500                | U            | 190  | 500  | P | 05/21/2025       | 18:16            | LB135886      |
|                                          | Chromium              | 2.00                   | +/-2.00               | U            | 0.75 | 2.00 | P | 05/21/2025       | 18:16            | LB135886      |
|                                          | Cobalt                | 1.00                   | +/-1.00               | U            | 0.25 | 1.00 | P | 05/21/2025       | 18:16            | LB135886      |
|                                          | Copper                | 2.00                   | +/-2.00               | U            | 1.50 | 2.00 | P | 05/21/2025       | 18:16            | LB135886      |
|                                          | Iron                  | 50.0                   | +/-50.0               | U            | 25.0 | 50.0 | P | 05/21/2025       | 18:16            | LB135886      |
|                                          | Lead                  | 1.00                   | +/-1.00               | U            | 0.75 | 1.00 | P | 05/21/2025       | 18:16            | LB135886      |

**Metals**

- 3a -

**INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY**

**Client:** US Army Corp of Engineers **SDG No.:** Q2085  
**Contract:** USAR03 **Lab Code:** CHEM **Case No.:** Q2085 **SAS No.:** Q2085

| Sample ID | Analyte   | Result<br>ug/L | Acceptance<br>Limit | Conc<br>Qual | LOD  | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-----------|----------------|---------------------|--------------|------|------|---|------------------|------------------|---------------|
| CCB04     | Magnesium | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 18:16            | LB135886      |
|           | Manganese | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 18:16            | LB135886      |
|           | Nickel    | 1.00           | +/-1.00             | U            | 0.75 | 1.00 | P | 05/21/2025       | 18:16            | LB135886      |
|           | Potassium | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 18:16            | LB135886      |
|           | Selenium  | 5.00           | +/-5.00             | U            | 4.50 | 5.00 | P | 05/21/2025       | 18:16            | LB135886      |
|           | Silver    | 1.00           | +/-1.00             | U            | 0.50 | 1.00 | P | 05/21/2025       | 18:16            | LB135886      |
|           | Sodium    | 500            | +/-500              | U            | 190  | 500  | P | 05/21/2025       | 18:16            | LB135886      |
|           | Thallium  | 1.00           | +/-1.00             | U            | 0.50 | 1.00 | P | 05/21/2025       | 18:16            | LB135886      |
|           | Vanadium  | 5.00           | +/-5.00             | U            | 0.25 | 5.00 | P | 05/21/2025       | 18:16            | LB135886      |
|           | Zinc      | 5.00           | +/-5.00             | U            | 1.50 | 5.00 | P | 05/21/2025       | 18:16            | LB135886      |

**Metals**  
**- 3b -**  
**PREPARATION BLANK SUMMARY**

**Client:** US Army Corp of Engineers

**SDG No.:** Q2085

**Instrument:** CV1

| Sample ID         | Analyte | Result<br>(mg/Kg) | Acceptance<br>Limit | Conc<br>Qual         | LOD<br>mg/Kg | CRQL<br>mg/Kg   | M  | Analysis<br>Date  | Analysis<br>Time  | Run      |
|-------------------|---------|-------------------|---------------------|----------------------|--------------|-----------------|----|-------------------|-------------------|----------|
| <b>PB168173BL</b> |         | <b>SOLID</b>      |                     | <b>Batch Number:</b> |              | <b>PB168173</b> |    | <b>Prep Date:</b> | <b>05/27/2025</b> |          |
|                   | Mercury | 0.014             | <0.014              | U                    | 0.011        | 0.014           | CV | 05/29/2025        | 11:55             | LB135943 |

**Metals**  
**- 3b -**  
**PREPARATION BLANK SUMMARY**

**Client:** US Army Corp of Engineers

**SDG No.:** Q2085

**Instrument:** P8

| Sample ID         | Analyte      | Result<br>(mg/Kg) | Acceptance<br>Limit | Conc<br>Qual         | LOD<br>mg/Kg    | CRQL<br>mg/Kg | M | Analysis<br>Date  | Analysis<br>Time  | Run      |
|-------------------|--------------|-------------------|---------------------|----------------------|-----------------|---------------|---|-------------------|-------------------|----------|
| <b>PB168105BL</b> | <b>SOLID</b> |                   |                     | <b>Batch Number:</b> | <b>PB168105</b> |               |   | <b>Prep Date:</b> | <b>05/21/2025</b> |          |
|                   | Aluminum     | 2.00              | <2.00               | U                    | 1.00            | 2.00          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Antimony     | 0.20              | <0.20               | U                    | 0.075           | 0.20          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Arsenic      | 0.10              | <0.10               | U                    | 0.025           | 0.10          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Barium       | 1.00              | <1.00               | U                    | 0.13            | 1.00          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Beryllium    | 0.10              | <0.10               | U                    | 0.075           | 0.10          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Cadmium      | 0.10              | <0.10               | U                    | 0.075           | 0.10          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Calcium      | 50.0              | <50.0               | U                    | 19.0            | 50.0          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Chromium     | 0.20              | <0.20               | U                    | 0.050           | 0.20          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Cobalt       | 0.10              | <0.10               | U                    | 0.025           | 0.10          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Copper       | 0.20              | <0.20               | U                    | 0.10            | 0.20          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Iron         | 5.00              | <5.00               | U                    | 1.25            | 5.00          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Lead         | 0.10              | <0.10               | U                    | 0.075           | 0.10          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Magnesium    | 50.0              | <50.0               | U                    | 19.0            | 50.0          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Manganese    | 0.10              | <0.10               | U                    | 0.050           | 0.10          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Nickel       | 0.10              | <0.10               | U                    | 0.075           | 0.10          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Potassium    | 50.0              | <50.0               | U                    | 19.0            | 50.0          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Selenium     | 0.50              | <0.50               | U                    | 0.45            | 0.50          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Silver       | 0.10              | <0.10               | U                    | 0.050           | 0.10          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Sodium       | 50.0              | <50.0               | U                    | 25.0            | 50.0          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Thallium     | 0.10              | <0.10               | U                    | 0.050           | 0.10          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Vanadium     | 0.50              | <0.50               | U                    | 0.025           | 0.50          | P | 05/21/2025        | 16:45             | LB135886 |
|                   | Zinc         | 0.50              | <0.50               | U                    | 0.15            | 0.50          | P | 05/21/2025        | 16:45             | LB135886 |

**Metals**  
- 4 -  
**INTERFERENCE CHECK SAMPLE**

**Client:** US Army Corp of Engineers **SDG No.:** Q2085  
**Contract:** USAR03 **Lab Code:** CHEM **Case No.:** Q2085 **SAS No.:** Q2085  
**ICS Source:** EPA **Instrument ID:** P8

| Sample ID      | Analyte   | Result<br>ug/L | True Value<br>ug/L | %<br>Recovery | Low<br>Limit<br>(ug/L) | High<br>Limit<br>(ug/L) | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|----------------|-----------|----------------|--------------------|---------------|------------------------|-------------------------|------------------|------------------|---------------|
| <b>ICSA01</b>  | Aluminum  | 89700          | 100000             | 90            | 0                      | 0                       | 05/21/2025       | 14:40            | LB135886      |
|                | Antimony  | 1.07           | 1.5                | 71            | -2.5                   | 5.5                     | 05/21/2025       | 14:40            | LB135886      |
|                | Arsenic   | 0.29           | 0.1                | 290           | -1.9                   | 2.1                     | 05/21/2025       | 14:40            | LB135886      |
|                | Barium    | 1.41           | 1.2                | 118           | -18.8                  | 21.2                    | 05/21/2025       | 14:40            | LB135886      |
|                | Beryllium | 0.30           |                    |               | -2                     | 2                       | 05/21/2025       | 14:40            | LB135886      |
|                | Cadmium   | 0.46           | 0.7                | 66            | -1.3                   | 2.7                     | 05/21/2025       | 14:40            | LB135886      |
|                | Calcium   | 97000          | 100000             | 97            | 0                      | 0                       | 05/21/2025       | 14:40            | LB135886      |
|                | Chromium  | 19.4           | 21.0               | 92            | 17                     | 25                      | 05/21/2025       | 14:40            | LB135886      |
|                | Cobalt    | 1.15           | 1.0                | 115           | -1                     | 3                       | 05/21/2025       | 14:40            | LB135886      |
|                | Copper    | 7.56           | 8.0                | 94            | 4                      | 12                      | 05/21/2025       | 14:40            | LB135886      |
|                | Iron      | 97200          | 100000             | 97            | 0                      | 0                       | 05/21/2025       | 14:40            | LB135886      |
|                | Lead      | 4.23           | 4.0                | 106           | 2                      | 6                       | 05/21/2025       | 14:40            | LB135886      |
|                | Magnesium | 93600          | 100000             | 94            | 0                      | 0                       | 05/21/2025       | 14:40            | LB135886      |
|                | Manganese | 7.15           | 7.0                | 102           | 5                      | 9                       | 05/21/2025       | 14:40            | LB135886      |
|                | Nickel    | 5.29           | 6.0                | 88            | 4                      | 8                       | 05/21/2025       | 14:40            | LB135886      |
|                | Potassium | 97200          | 100000             | 97            | 0                      | 0                       | 05/21/2025       | 14:40            | LB135886      |
|                | Selenium  | 0.090          | 0.3                | 30            | -9.7                   | 10                      | 05/21/2025       | 14:40            | LB135886      |
|                | Silver    | 0.050          |                    |               | -2                     | 2                       | 05/21/2025       | 14:40            | LB135886      |
|                | Sodium    | 97600          | 100000             | 98            | 0                      | 0                       | 05/21/2025       | 14:40            | LB135886      |
|                | Thallium  | 0.14           |                    |               | -2                     | 2                       | 05/21/2025       | 14:40            | LB135886      |
|                | Vanadium  | 0.14           | 0.5                | 28            | -9.5                   | 10.5                    | 05/21/2025       | 14:40            | LB135886      |
|                | Zinc      | 10.7           | 11.0               | 98            | 1                      | 21                      | 05/21/2025       | 14:40            | LB135886      |
| <b>ICSAB01</b> | Aluminum  | 88900          | 100000             | 89            | 0                      | 0                       | 05/21/2025       | 14:43            | LB135886      |
|                | Antimony  | 20.2           | 22.0               | 92            | 18                     | 26                      | 05/21/2025       | 14:43            | LB135886      |
|                | Arsenic   | 20.7           | 19.0               | 109           | 16.2                   | 21.9                    | 05/21/2025       | 14:43            | LB135886      |
|                | Barium    | 21.3           | 22.0               | 97            | 2                      | 42                      | 05/21/2025       | 14:43            | LB135886      |
|                | Beryllium | 21.7           | 19.0               | 114           | 16.2                   | 21.9                    | 05/21/2025       | 14:43            | LB135886      |
|                | Cadmium   | 19.4           | 20.0               | 97            | 17                     | 23                      | 05/21/2025       | 14:43            | LB135886      |
|                | Calcium   | 95500          | 100000             | 96            | 0                      | 0                       | 05/21/2025       | 14:43            | LB135886      |
|                | Chromium  | 39.6           | 40.0               | 99            | 34                     | 46                      | 05/21/2025       | 14:43            | LB135886      |
|                | Cobalt    | 21.4           | 20.0               | 107           | 17                     | 23                      | 05/21/2025       | 14:43            | LB135886      |
|                | Copper    | 27.9           | 25.0               | 112           | 21                     | 29                      | 05/21/2025       | 14:43            | LB135886      |
|                | Iron      | 98700          | 100000             | 99            | 0                      | 0                       | 05/21/2025       | 14:43            | LB135886      |
|                | Lead      | 27.3           | 25.0               | 109           | 21.3                   | 28.8                    | 05/21/2025       | 14:43            | LB135886      |
|                | Magnesium | 93600          | 100000             | 94            | 0                      | 0                       | 05/21/2025       | 14:43            | LB135886      |
|                | Manganese | 27.2           | 27.0               | 101           | 23                     | 31.1                    | 05/21/2025       | 14:43            | LB135886      |
|                | Nickel    | 24.7           | 24.0               | 103           | 20.4                   | 27.6                    | 05/21/2025       | 14:43            | LB135886      |
|                | Potassium | 97400          | 100000             | 97            | 0                      | 0                       | 05/21/2025       | 14:43            | LB135886      |
|                | Selenium  | 20.8           | 19.0               | 110           | 9                      | 29                      | 05/21/2025       | 14:43            | LB135886      |
|                | Silver    | 18.4           | 18.0               | 102           | 15.3                   | 20.7                    | 05/21/2025       | 14:43            | LB135886      |
|                | Sodium    | 97900          | 100000             | 98            | 0                      | 0                       | 05/21/2025       | 14:43            | LB135886      |
|                | Thallium  | 20.3           | 21.0               | 97            | 17.9                   | 24.2                    | 05/21/2025       | 14:43            | LB135886      |

**Metals**  
**- 4 -**  
**INTERFERENCE CHECK SAMPLE**

|                                                             |                                                            |
|-------------------------------------------------------------|------------------------------------------------------------|
| <b>Client:</b> <u>US Army Corp of Engineers</u>             | <b>SDG No.:</b> <u>Q2085</u>                               |
| <b>Contract:</b> <u>USAR03</u> <b>Lab Code:</b> <u>CHEM</u> | <b>Case No.:</b> <u>Q2085</u> <b>SAS No.:</b> <u>Q2085</u> |
| <b>ICS Source:</b> <u>EPA</u>                               | <b>Instrument ID:</b> <u>P8</u>                            |

| Sample ID | Analyte  | Result<br>ug/L | True Value<br>ug/L | %<br>Recovery | Low<br>Limit<br>(ug/L) | High<br>Limit<br>(ug/L) | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|----------|----------------|--------------------|---------------|------------------------|-------------------------|------------------|------------------|---------------|
| ICSAB01   | Vanadium | 20.4           | 19.0               | 107           | 9                      | 29                      | 05/21/2025       | 14:43            | LB135886      |
|           | Zinc     | 31.1           | 29.0               | 107           | 19                     | 39                      | 05/21/2025       | 14:43            | LB135886      |



# METAL QC DATA

**metals**  
**- 5a -**  
**MATRIX SPIKE SUMMARY**

|                                   |                                  |                   |                 |                                         |                          |
|-----------------------------------|----------------------------------|-------------------|-----------------|-----------------------------------------|--------------------------|
| <b>client:</b>                    | <u>US Army Corp of Engineers</u> | <b>level:</b>     | <u>low</u>      | <b>sdg no.:</b>                         | <u>Q2085</u>             |
| <b>contract:</b>                  | <u>USAR03</u>                    | <b>lab code:</b>  | <u>CHEM</u>     | <b>case no.:</b>                        | <u>Q2085</u>             |
| <b>matrix:</b>                    | <u>Solid</u>                     | <b>sample id:</b> | <u>Q2085-04</u> | <b>client id:</b>                       | <u>SC-1-SED-051625MS</u> |
| <b>Percent Solids for Sample:</b> | <u>70.5</u>                      | <b>Spiked ID:</b> | <u>Q2085-05</u> | <b>Percent Solids for Spike Sample:</b> | <u>70.5</u>              |

| Analyte   | Units | Acceptance<br>Limit %R | Spiked<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M  |
|-----------|-------|------------------------|------------------|---|------------------|---|----------------|---------------|------|----|
| Aluminum  | mg/Kg | 78 - 124               | 5760             |   | 3290             |   | 1100           | 228           | N    | P  |
| Antimony  | mg/Kg | 72 - 124               | 51.5             |   | 2.12             |   | 54.1           | 91            |      | P  |
| Arsenic   | mg/Kg | 82 - 118               | 3.45             |   | 2.49             |   | 54.1           | 2             | N    | P  |
| Barium    | mg/Kg | 86 - 116               | 247              |   | 7.23             |   | 270            | 88            |      | P  |
| Beryllium | mg/Kg | 80 - 120               | 53.4             |   | 0.24             |   | 54.1           | 98            |      | P  |
| Cadmium   | mg/Kg | 84 - 116               | 52.0             |   | 0.097            | J | 54.1           | 96            |      | P  |
| Calcium   | mg/Kg | 86 - 118               | 5360             |   | 430              |   | 5400           | 91            |      | P  |
| Chromium  | mg/Kg | 83 - 119               | 57.5             |   | 5.35             |   | 54.1           | 96            |      | P  |
| Cobalt    | mg/Kg | 84 - 115               | 53.0             |   | 1.94             |   | 54.1           | 94            |      | P  |
| Copper    | mg/Kg | 84 - 119               | 509              |   | 3.71             |   | 540            | 93            |      | P  |
| Iron      | mg/Kg | 81 - 124               | 12900            |   | 6010             |   | 2700           | 255           | N    | P  |
| Lead      | mg/Kg | 84 - 118               | 266              |   | 4.25             |   | 270            | 97            |      | P  |
| Magnesium | mg/Kg | 80 - 123               | 6500             |   | 1020             |   | 5400           | 101           |      | P  |
| Manganese | mg/Kg | 85 - 116               | 592              |   | 50.7             |   | 540            | 100           |      | P  |
| Nickel    | mg/Kg | 84 - 119               | 52.6             |   | 4.38             |   | 54.1           | 89            |      | P  |
| Mercury   | mg/Kg | 80 - 124               | 0.37             |   | 0.017            | U | 0.35           | 106           |      | CV |
| Potassium | mg/Kg | 85 - 119               | 3070             |   | 620              |   | 2700           | 90            |      | P  |
| Selenium  | mg/Kg | 80 - 119               | 47.3             |   | 0.51             | U | 54.1           | 87            |      | P  |
| Silver    | mg/Kg | 83 - 118               | 9.01             |   | 0.10             | U | 54.1           | 17            | N    | P  |
| Sodium    | mg/Kg | 79 - 125               | 7270             |   | 2270             |   | 5400           | 92            |      | P  |
| Thallium  | mg/Kg | 83 - 118               | 50.9             |   | 0.062            | J | 54.1           | 94            |      | P  |
| Vanadium  | mg/Kg | 82 - 116               | 62.5             |   | 7.42             |   | 54.1           | 102           |      | P  |
| Zinc      | mg/Kg | 82 - 119               | 539              |   | 27.3             |   | 540            | 95            |      | P  |

**metals**  
**- 5a -**  
**MATRIX SPIKE DUPLICATE SUMMARY**

|                                   |                                  |                   |                 |                                         |                           |
|-----------------------------------|----------------------------------|-------------------|-----------------|-----------------------------------------|---------------------------|
| <b>client:</b>                    | <u>US Army Corp of Engineers</u> | <b>level:</b>     | <u>low</u>      | <b>sdg no.:</b>                         | <u>Q2085</u>              |
| <b>contract:</b>                  | <u>USAR03</u>                    | <b>lab code:</b>  | <u>CHEM</u>     | <b>case no.:</b>                        | <u>Q2085</u>              |
| <b>matrix:</b>                    | <u>Solid</u>                     | <b>sample id:</b> | <u>Q2085-04</u> | <b>client id:</b>                       | <u>SC-1-SED-051625MSD</u> |
| <b>Percent Solids for Sample:</b> | <u>70.5</u>                      | <b>Spiked ID:</b> | <u>Q2085-06</u> | <b>Percent Solids for Spike Sample:</b> | <u>70.5</u>               |

| Analyte   | Units | Acceptance<br>Limit %R | MSD<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M  |
|-----------|-------|------------------------|---------------|---|------------------|---|----------------|---------------|------|----|
| Aluminum  | mg/Kg | 78 - 124               | 5810          |   | 3290             |   | 1100           | 228           | N    | P  |
| Antimony  | mg/Kg | 72 - 124               | 53.6          |   | 2.12             |   | 55.4           | 93            |      | P  |
| Arsenic   | mg/Kg | 82 - 118               | 3.37          |   | 2.49             |   | 55.4           | 2             | N    | P  |
| Barium    | mg/Kg | 86 - 116               | 252           |   | 7.23             |   | 280            | 88            |      | P  |
| Beryllium | mg/Kg | 80 - 120               | 55.0          |   | 0.24             |   | 55.4           | 99            |      | P  |
| Cadmium   | mg/Kg | 84 - 116               | 54.3          |   | 0.097            | J | 55.4           | 98            |      | P  |
| Calcium   | mg/Kg | 86 - 118               | 5520          |   | 430              |   | 5500           | 92            |      | P  |
| Chromium  | mg/Kg | 83 - 119               | 59.6          |   | 5.35             |   | 55.4           | 98            |      | P  |
| Cobalt    | mg/Kg | 84 - 115               | 55.1          |   | 1.94             |   | 55.4           | 96            |      | P  |
| Copper    | mg/Kg | 84 - 119               | 533           |   | 3.71             |   | 550            | 96            |      | P  |
| Iron      | mg/Kg | 81 - 124               | 14400         |   | 6010             |   | 2800           | 302           | N    | P  |
| Lead      | mg/Kg | 84 - 118               | 274           |   | 4.25             |   | 280            | 97            |      | P  |
| Magnesium | mg/Kg | 80 - 123               | 6710          |   | 1020             |   | 5500           | 103           |      | P  |
| Manganese | mg/Kg | 85 - 116               | 615           |   | 50.7             |   | 550            | 102           |      | P  |
| Nickel    | mg/Kg | 84 - 119               | 54.8          |   | 4.38             |   | 55.4           | 91            |      | P  |
| Mercury   | mg/Kg | 80 - 124               | 0.41          |   | 0.017            | U | 0.37           | 110           |      | CV |
| Potassium | mg/Kg | 85 - 119               | 3150          |   | 620              |   | 2800           | 91            |      | P  |
| Selenium  | mg/Kg | 80 - 119               | 49.2          |   | 0.51             | U | 55.4           | 89            |      | P  |
| Silver    | mg/Kg | 83 - 118               | 9.43          |   | 0.10             | U | 55.4           | 17            | N    | P  |
| Sodium    | mg/Kg | 79 - 125               | 7270          |   | 2270             |   | 5500           | 90            |      | P  |
| Thallium  | mg/Kg | 83 - 118               | 52.3          |   | 0.062            | J | 55.4           | 94            |      | P  |
| Vanadium  | mg/Kg | 82 - 116               | 66.1          |   | 7.42             |   | 55.4           | 106           |      | P  |
| Zinc      | mg/Kg | 82 - 119               | 558           |   | 27.3             |   | 550            | 96            |      | P  |

**Metals**  
**- 5b -**  
**POST DIGEST SPIKE SUMMARY**

|                                                 |                                    |                                                            |
|-------------------------------------------------|------------------------------------|------------------------------------------------------------|
| <b>Client:</b> <u>US Army Corp of Engineers</u> | <b>SDG No.:</b> <u>Q2085</u>       |                                                            |
| <b>Contract:</b> <u>USAR03</u>                  | <b>Lab Code:</b> <u>CHEM</u>       | <b>Case No.:</b> <u>Q2085</u> <b>SAS No.:</b> <u>Q2085</u> |
| <b>Matrix:</b> <u>Solid</u>                     | <b>Level:</b> <u>LOW</u>           | <b>Client ID:</b> <u>SC-1-SED-051625A</u>                  |
| <b>Sample ID:</b> <u>Q2085-04</u>               | <b>Spiked ID:</b> <u>Q2085-04A</u> |                                                            |

| Analyte  | Units | Acceptance<br>Limit %R | Spiked<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|----------|-------|------------------------|------------------|---|------------------|---|----------------|---------------|------|---|
| Aluminum | mg/Kg | 78 - 124               | 5340             |   | 3290             |   | 1000           | 205           | N    | P |
| Arsenic  | mg/Kg | 82 - 118               | 3.07             |   | 2.49             |   | 50.7           | 1             | N    | P |
| Iron     | mg/Kg | 81 - 124               | 13200            |   | 6010             |   | 2500           | 286           | N    | P |
| Silver   | mg/Kg | 83 - 118               | 8.57             |   | 0.10             | U | 50.7           | 17            | N    | P |

**Metals**

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**DUPLICATE SAMPLE SUMMARY**

**Client:** US Army Corp of Engineers **Level:** LOW **SDG No.:** Q2085  
**Contract:** USAR03 **Lab Code:** CHEM **Case No.:** Q2085 **SAS No.:** Q2085  
**Matrix:** Solid **Sample ID:** Q2085-04 **Client ID:** SC-1-SED-051625DUP  
**Percent Solids for Sample:** 70.5 **Duplicate ID** Q2085-04DUP **Percent Solids for Spike Sample:** 70.5

| Analyte   | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M  |
|-----------|-------|------------------|---------------|---|------------------|---|-----|------|----|
| Aluminum  | mg/Kg | 20               | 3290          |   | 3470             |   | 5   |      | P  |
| Antimony  | mg/Kg | 20               | 2.12          |   | 0.31             |   | 149 | *    | P  |
| Arsenic   | mg/Kg | 20               | 2.49          |   | 2.65             |   | 6   |      | P  |
| Barium    | mg/Kg | 20               | 7.23          |   | 7.49             |   | 4   |      | P  |
| Beryllium | mg/Kg | 20               | 0.24          |   | 0.25             |   | 6   |      | P  |
| Cadmium   | mg/Kg | 20               | 0.097         | J | 0.099            | J | 2   |      | P  |
| Calcium   | mg/Kg | 20               | 430           |   | 480              |   | 11  |      | P  |
| Chromium  | mg/Kg | 20               | 5.35          |   | 5.56             |   | 4   |      | P  |
| Cobalt    | mg/Kg | 20               | 1.94          |   | 2.04             |   | 5   |      | P  |
| Copper    | mg/Kg | 20               | 3.71          |   | 3.67             |   | 1   |      | P  |
| Iron      | mg/Kg | 20               | 6010          |   | 6570             |   | 9   |      | P  |
| Lead      | mg/Kg | 20               | 4.25          |   | 3.96             |   | 7   |      | P  |
| Magnesium | mg/Kg | 20               | 1020          |   | 1060             |   | 4   |      | P  |
| Manganese | mg/Kg | 20               | 50.7          |   | 53.7             |   | 6   |      | P  |
| Nickel    | mg/Kg | 20               | 4.38          |   | 4.38             |   | 0   |      | P  |
| Mercury   | mg/Kg | 20               | 0.017         | U | 0.018            | U |     |      | CV |
| Potassium | mg/Kg | 20               | 620           |   | 603              |   | 3   |      | P  |
| Selenium  | mg/Kg | 20               | 0.51          | U | 0.53             | U |     |      | P  |
| Silver    | mg/Kg | 20               | 0.10          | U | 0.11             | U |     |      | P  |
| Sodium    | mg/Kg | 20               | 2270          |   | 2260             |   | 0   |      | P  |
| Thallium  | mg/Kg | 20               | 0.062         | J | 0.064            | J | 3   |      | P  |
| Vanadium  | mg/Kg | 20               | 7.42          |   | 7.57             |   | 2   |      | P  |
| Zinc      | mg/Kg | 20               | 27.3          |   | 16.3             |   | 50  | *    | P  |

“A control limit of  $\pm 20\%$  RPD for each matrix applies for sample values greater than 10 times Detection Limit”

**Metals**

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**DUPLICATE SAMPLE SUMMARY**

**Client:** US Army Corp of Engineers **Level:** LOW **SDG No.:** Q2085  
**Contract:** USAR03 **Lab Code:** CHEM **Case No.:** Q2085 **SAS No.:** Q2085  
**Matrix:** Solid **Sample ID:** Q2085-05 **Client ID:** SC-1-SED-051625MSD  
**Percent Solids for Sample:** 70.5 **Duplicate ID** Q2085-06 **Percent Solids for Spike Sample:** 70.5

| Analyte   | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M  |
|-----------|-------|------------------|---------------|---|------------------|---|-----|------|----|
| Aluminum  | mg/Kg | 20               | 5760          |   | 5810             |   | 1   |      | P  |
| Antimony  | mg/Kg | 20               | 51.5          |   | 53.6             |   | 4   |      | P  |
| Arsenic   | mg/Kg | 20               | 3.45          |   | 3.37             |   | 2   |      | P  |
| Barium    | mg/Kg | 20               | 247           |   | 252              |   | 2   |      | P  |
| Beryllium | mg/Kg | 20               | 53.4          |   | 55.0             |   | 3   |      | P  |
| Cadmium   | mg/Kg | 20               | 52.0          |   | 54.3             |   | 4   |      | P  |
| Calcium   | mg/Kg | 20               | 5360          |   | 5520             |   | 3   |      | P  |
| Chromium  | mg/Kg | 20               | 57.5          |   | 59.6             |   | 4   |      | P  |
| Cobalt    | mg/Kg | 20               | 53.0          |   | 55.1             |   | 4   |      | P  |
| Copper    | mg/Kg | 20               | 509           |   | 533              |   | 5   |      | P  |
| Iron      | mg/Kg | 20               | 12900         |   | 14400            |   | 11  |      | P  |
| Lead      | mg/Kg | 20               | 266           |   | 274              |   | 3   |      | P  |
| Magnesium | mg/Kg | 20               | 6500          |   | 6710             |   | 3   |      | P  |
| Manganese | mg/Kg | 20               | 592           |   | 615              |   | 4   |      | P  |
| Nickel    | mg/Kg | 20               | 52.6          |   | 54.8             |   | 4   |      | P  |
| Mercury   | mg/Kg | 20               | 0.37          |   | 0.41             |   | 9   |      | CV |
| Potassium | mg/Kg | 20               | 3070          |   | 3150             |   | 3   |      | P  |
| Selenium  | mg/Kg | 20               | 47.3          |   | 49.2             |   | 4   |      | P  |
| Silver    | mg/Kg | 20               | 9.01          |   | 9.43             |   | 5   |      | P  |
| Sodium    | mg/Kg | 20               | 7270          |   | 7270             |   | 0   |      | P  |
| Thallium  | mg/Kg | 20               | 50.9          |   | 52.3             |   | 3   |      | P  |
| Vanadium  | mg/Kg | 20               | 62.5          |   | 66.1             |   | 6   |      | P  |
| Zinc      | mg/Kg | 20               | 539           |   | 558              |   | 3   |      | P  |

“A control limit of  $\pm 20\%$  RPD for each matrix applies for sample values greater than 10 times Detection Limit”

Metals

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: US Army Corp of Engineers SDG No.: Q2085  
 Contract: USAR03 Lab Code: CHEM Case No.: Q2085 SAS No.: Q2085

| Analyte    | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|------------|-------|------------|--------|---|------------|-------------------|---|
| PB168105BS |       |            |        |   |            |                   |   |
| Aluminum   | mg/Kg | 1000       | 1040   |   | 104        | 78 - 124          | P |
| Antimony   | mg/Kg | 50.0       | 50.7   |   | 101        | 72 - 124          | P |
| Arsenic    | mg/Kg | 50.0       | 50.9   |   | 102        | 82 - 118          | P |
| Barium     | mg/Kg | 250        | 255    |   | 102        | 86 - 116          | P |
| Beryllium  | mg/Kg | 50.0       | 52.3   |   | 105        | 80 - 120          | P |
| Cadmium    | mg/Kg | 50.0       | 51.5   |   | 103        | 84 - 116          | P |
| Calcium    | mg/Kg | 5000       | 5060   |   | 101        | 86 - 118          | P |
| Chromium   | mg/Kg | 50.0       | 52.3   |   | 105        | 83 - 119          | P |
| Cobalt     | mg/Kg | 50.0       | 52.4   |   | 105        | 84 - 115          | P |
| Copper     | mg/Kg | 500        | 525    |   | 105        | 84 - 119          | P |
| Iron       | mg/Kg | 2500       | 2620   |   | 105        | 81 - 124          | P |
| Lead       | mg/Kg | 250        | 251    |   | 100        | 84 - 118          | P |
| Magnesium  | mg/Kg | 5000       | 5290   |   | 106        | 80 - 123          | P |
| Manganese  | mg/Kg | 500        | 518    |   | 104        | 85 - 116          | P |
| Nickel     | mg/Kg | 50.0       | 49.5   |   | 99         | 84 - 119          | P |
| Potassium  | mg/Kg | 2500       | 2570   |   | 103        | 85 - 119          | P |
| Selenium   | mg/Kg | 50.0       | 50.1   |   | 100        | 80 - 119          | P |
| Silver     | mg/Kg | 50.0       | 51.9   |   | 104        | 83 - 118          | P |
| Sodium     | mg/Kg | 5000       | 5230   |   | 105        | 79 - 125          | P |
| Thallium   | mg/Kg | 50.0       | 50.6   |   | 101        | 83 - 118          | P |
| Vanadium   | mg/Kg | 50.0       | 52.0   |   | 104        | 82 - 116          | P |
| Zinc       | mg/Kg | 500        | 520    |   | 104        | 82 - 119          | P |

**Metals**

- 7 -

**LABORATORY CONTROL SAMPLE SUMMARY**

**Client:** US Army Corp of Engineers **SDG No.:** Q2085  
**Contract:** USAR03 **Lab Code:** CHEM **Case No.:** Q2085 **SAS No.:** Q2085

| Analyte               | Units | True Value | Result | C | %<br>Recovery | Acceptance<br>Limits | M  |
|-----------------------|-------|------------|--------|---|---------------|----------------------|----|
| PB168173BS<br>Mercury | mg/Kg | 0.25       | 0.22   |   | 86            | 80 - 124             | CV |

## FORM 8A

## ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: US Army Corp of Engineers

Contract: USAR03

Lab Code: CHEM Case no.: Q2085

Sas No.: Q2085 SDG No.: Q2085

Instrument ID: P8

Start Date : 05/21/2025

Run Number: LB135886

End Date : 05/21/2025

| Lab<br>SampleID | Client<br>SampleID | Time | Internal Standard %RI For: Non-Collision Cell |   |                 |   |                |   |                  |   |                  |   |
|-----------------|--------------------|------|-----------------------------------------------|---|-----------------|---|----------------|---|------------------|---|------------------|---|
|                 |                    |      | Element<br>6Li                                | Q | Element<br>45Sc | Q | Element<br>89Y | Q | Element<br>103Rh | Q | Element<br>159Tb | Q |
| S0              | S0                 | 1353 | 100                                           |   | 100             |   | 100            |   | 100              |   | 100              |   |
| S2              | S2                 | 1400 | 102                                           |   | 100             |   | 101            |   | 99               |   | 99               |   |
| S3              | S3                 | 1403 | 103                                           |   | 98              |   | 100            |   | 97               |   | 100              |   |
| S4              | S4                 | 1407 | 104                                           |   | 96              |   | 98             |   | 94               |   | 100              |   |
| S5              | S5                 | 1409 | 101                                           |   | 94              |   | 96             |   | 91               |   | 97               |   |
| S6              | S6                 | 1412 | 100                                           |   | 91              |   | 93             |   | 88               |   | 97               |   |
| S7              | S7                 | 1415 | 95                                            |   | 89              |   | 91             |   | 84               |   | 95               |   |
| S8              | S8                 | 1418 | 86                                            |   | 84              |   | 88             |   | 75               |   | 90               |   |
| ICV01           | ICV01              | 1430 | 103                                           |   | 99              |   | 101            |   | 98               |   | 101              |   |
| LLICV01         | LLICV01            | 1433 | 104                                           |   | 99              |   | 101            |   | 98               |   | 100              |   |
| ICB01           | ICB01              | 1437 | 104                                           |   | 101             |   | 103            |   | 101              |   | 102              |   |
| ICSA01          | ICSA01             | 1440 | 99                                            |   | 96              |   | 97             |   | 88               |   | 99               |   |
| ICSAB01         | ICSAB01            | 1443 | 100                                           |   | 97              |   | 100            |   | 91               |   | 101              |   |
| CCV01           | CCV01              | 1451 | 92                                            |   | 92              |   | 94             |   | 84               |   | 96               |   |
| CCB01           | CCB01              | 1457 | 105                                           |   | 101             |   | 103            |   | 101              |   | 103              |   |
| CRI             | CRI                | 1500 | 103                                           |   | 103             |   | 105            |   | 101              |   | 104              |   |
| ZZZZZZ          | ZZZZZZ             | 1531 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1534 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1537 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1540 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1543 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1546 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1550 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1553 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1556 |                                               |   |                 |   |                |   |                  |   |                  |   |
| CCV02           | CCV02              | 1559 | 89                                            |   | 89              |   | 93             |   | 82               |   | 94               |   |
| CCB02           | CCB02              | 1605 | 101                                           |   | 101             |   | 100            |   | 99               |   | 101              |   |
| ZZZZZZ          | ZZZZZZ             | 1609 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1612 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1615 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1618 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1622 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1624 |                                               |   |                 |   |                |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1627 |                                               |   |                 |   |                |   |                  |   |                  |   |
| PB168105BL      | PB168105BL         | 1645 | 98                                            |   | 98              |   | 100            |   | 98               |   | 100              |   |
| PB168105BS      | PB168105BS         | 1649 | 94                                            |   | 95              |   | 98             |   | 90               |   | 99               |   |

Internal Standard %RI Limit: 30 - 120

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: US Army Corp of Engineers

Contract: USAR03

Lab Code: CHEM Case no.: Q2085

Sas No.: Q2085 SDG No.: Q2085

Instrument ID: P8

Start Date : 05/21/2025

Run Number: LB135886

End Date : 05/21/2025

| Lab<br>SampleID | Client<br>SampleID | Time | Internal Standard %RI For: Non-Collision Cell |   |                 |   |                |   |                  |   |                  |   |
|-----------------|--------------------|------|-----------------------------------------------|---|-----------------|---|----------------|---|------------------|---|------------------|---|
|                 |                    |      | Element<br>6Li                                | Q | Element<br>45Sc | Q | Element<br>89Y | Q | Element<br>103Rh | Q | Element<br>159Tb | Q |
| Q2085-01        | SC-4-SED-05        | 1654 | 102                                           |   | 106             |   | 112            |   | 100              |   | 107              |   |
| CCV03           | CCV03              | 1657 | 89                                            |   | 93              |   | 96             |   | 85               |   | 98               |   |
| CCB03           | CCB03              | 1728 | 99                                            |   | 99              |   | 102            |   | 99               |   | 104              |   |
| Q2085-02        | SC-3-SED-05        | 1732 | 103                                           |   | 109             |   | 113            |   | 98               |   | 107              |   |
| Q2085-03        | SC-2-SED-05        | 1735 | 100                                           |   | 102             |   | 105            |   | 98               |   | 105              |   |
| Q2085-04        | SC-1-SED-05        | 1739 | 101                                           |   | 104             |   | 111            |   | 98               |   | 105              |   |
| Q2085-04DUP     | SC-1-SED-05        | 1742 | 102                                           |   | 105             |   | 112            |   | 99               |   | 106              |   |
| Q2085-04L       | SC-1-SED-05        | 1745 | 101                                           |   | 98              |   | 102            |   | 97               |   | 101              |   |
| Q2085-05        | SC-1-SED-05        | 1748 | 95                                            |   | 104             |   | 114            |   | 94               |   | 102              |   |
| Q2085-06        | SC-1-SED-05        | 1751 | 95                                            |   | 104             |   | 114            |   | 93               |   | 103              |   |
| Q2085-04A       | SC-1-SED-05        | 1754 | 94                                            |   | 104             |   | 114            |   | 93               |   | 104              |   |
| Q2085-07        | SC-COMP-SED        | 1756 | 96                                            |   | 105             |   | 111            |   | 98               |   | 104              |   |
| Q2085-08        | DUPE-1-SC          | 1800 | 94                                            |   | 102             |   | 108            |   | 97               |   | 105              |   |
| CCV04           | CCV04              | 1804 | 84                                            |   | 90              |   | 93             |   | 83               |   | 95               |   |
| CCB04           | CCB04              | 1816 | 93                                            |   | 99              |   | 101            |   | 99               |   | 101              |   |

Internal Standard %RI Limit: 30 - 120

## FORM 8A

## ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: US Army Corp of Engineers

Contract: USAR03

Lab Code: CHEM Case no.: Q2085

Sas No.: Q2085 SDG No.: Q2085

Instrument ID: P8

Start Date : 05/21/2025

Run Number: LB135886

End Date : 05/21/2025

| Lab<br>SampleID | Client<br>SampleID | Time | Internal Standard %RI For: Collision Cell |   |                |   |                  |   |                  |   |                  |   |
|-----------------|--------------------|------|-------------------------------------------|---|----------------|---|------------------|---|------------------|---|------------------|---|
|                 |                    |      | Element<br>45Sc                           | Q | Element<br>89Y | Q | Element<br>103Rh | Q | Element<br>159Tb | Q | Element<br>165Ho | Q |
| S0              | S0                 | 1353 | 100                                       |   | 100            |   | 100              |   | 100              |   | 100              |   |
| S2              | S2                 | 1400 | 101                                       |   | 102            |   | 100              |   | 100              |   | 102              |   |
| S3              | S3                 | 1403 | 99                                        |   | 99             |   | 98               |   | 98               |   | 99               |   |
| S4              | S4                 | 1407 | 97                                        |   | 95             |   | 95               |   | 96               |   | 98               |   |
| S5              | S5                 | 1409 | 94                                        |   | 93             |   | 91               |   | 95               |   | 96               |   |
| S6              | S6                 | 1412 | 93                                        |   | 91             |   | 89               |   | 93               |   | 96               |   |
| S7              | S7                 | 1415 | 92                                        |   | 89             |   | 84               |   | 91               |   | 93               |   |
| S8              | S8                 | 1418 | 85                                        |   | 86             |   | 75               |   | 87               |   | 89               |   |
| ICV01           | ICV01              | 1430 | 100                                       |   | 100            |   | 99               |   | 99               |   | 101              |   |
| LLICV01         | LLICV01            | 1433 | 100                                       |   | 101            |   | 100              |   | 99               |   | 101              |   |
| ICB01           | ICB01              | 1437 | 100                                       |   | 103            |   | 102              |   | 100              |   | 103              |   |
| ICSA01          | ICSA01             | 1440 | 96                                        |   | 97             |   | 91               |   | 97               |   | 100              |   |
| ICSAB01         | ICSAB01            | 1443 | 96                                        |   | 97             |   | 89               |   | 96               |   | 100              |   |
| CCV01           | CCV01              | 1451 | 94                                        |   | 94             |   | 85               |   | 93               |   | 96               |   |
| CCB01           | CCB01              | 1457 | 101                                       |   | 101            |   | 101              |   | 99               |   | 102              |   |
| CRI             | CRI                | 1500 | 100                                       |   | 101            |   | 101              |   | 99               |   | 101              |   |
| ZZZZZZ          | ZZZZZZ             | 1531 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1534 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1537 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1540 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1543 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1546 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1550 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1553 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1556 |                                           |   |                |   |                  |   |                  |   |                  |   |
| CCV02           | CCV02              | 1559 | 91                                        |   | 91             |   | 82               |   | 91               |   | 93               |   |
| CCB02           | CCB02              | 1605 | 98                                        |   | 99             |   | 99               |   | 98               |   | 100              |   |
| ZZZZZZ          | ZZZZZZ             | 1609 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1612 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1615 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1618 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1622 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1624 |                                           |   |                |   |                  |   |                  |   |                  |   |
| ZZZZZZ          | ZZZZZZ             | 1627 |                                           |   |                |   |                  |   |                  |   |                  |   |
| PB168105BL      | PB168105BL         | 1645 | 97                                        |   | 97             |   | 98               |   | 95               |   | 99               |   |
| PB168105BS      | PB168105BS         | 1649 | 95                                        |   | 93             |   | 89               |   | 93               |   | 95               |   |

Internal Standard %RI Limit: 30 - 120

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: US Army Corp of Engineers

Contract: USAR03

Lab Code: CHEM Case no.: Q2085

Sas No.: Q2085 SDG No.: Q2085

Instrument ID: P8

Start Date : 05/21/2025

Run Number: LB135886

End Date : 05/21/2025

| Lab<br>SampleID | Client<br>SampleID | Time | Internal Standard %RI For: Collision Cell |   |                |   |                  |   |                  |   |                  |   |
|-----------------|--------------------|------|-------------------------------------------|---|----------------|---|------------------|---|------------------|---|------------------|---|
|                 |                    |      | Element<br>45Sc                           | Q | Element<br>89Y | Q | Element<br>103Rh | Q | Element<br>159Tb | Q | Element<br>165Ho | Q |
| Q2085-01        | SC-4-SED-05        | 1654 | 105                                       |   | 107            |   | 98               |   | 99               |   | 102              |   |
| CCV03           | CCV03              | 1657 | 97                                        |   | 97             |   | 88               |   | 96               |   | 98               |   |
| CCB03           | CCB03              | 1728 | 98                                        |   | 99             |   | 100              |   | 98               |   | 100              |   |
| Q2085-02        | SC-3-SED-05        | 1732 | 107                                       |   | 108            |   | 96               |   | 100              |   | 102              |   |
| Q2085-03        | SC-2-SED-05        | 1735 | 99                                        |   | 101            |   | 100              |   | 101              |   | 102              |   |
| Q2085-04        | SC-1-SED-05        | 1739 | 102                                       |   | 107            |   | 97               |   | 100              |   | 101              |   |
| Q2085-04DUP     | SC-1-SED-05        | 1742 | 105                                       |   | 109            |   | 99               |   | 101              |   | 104              |   |
| Q2085-04L       | SC-1-SED-05        | 1745 | 97                                        |   | 99             |   | 98               |   | 96               |   | 99               |   |
| Q2085-05        | SC-1-SED-05        | 1748 | 104                                       |   | 108            |   | 92               |   | 98               |   | 99               |   |
| Q2085-06        | SC-1-SED-05        | 1751 | 104                                       |   | 110            |   | 93               |   | 97               |   | 100              |   |
| Q2085-04A       | SC-1-SED-05        | 1754 | 104                                       |   | 110            |   | 92               |   | 98               |   | 100              |   |
| Q2085-07        | SC-COMP-SED        | 1756 | 102                                       |   | 107            |   | 97               |   | 99               |   | 102              |   |
| Q2085-08        | DUPE-1-SC          | 1800 | 100                                       |   | 104            |   | 97               |   | 98               |   | 101              |   |
| CCV04           | CCV04              | 1804 | 91                                        |   | 92             |   | 83               |   | 90               |   | 93               |   |
| CCB04           | CCB04              | 1816 | 98                                        |   | 98             |   | 99               |   | 96               |   | 99               |   |

Internal Standard %RI Limit: 30 - 120

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: US Army Corp of Engineers  
Lab Code: CHEM Case no.: Q2085  
Instrument ID: P8  
Run Number: LB135886

Contract: USAR03  
Sas No.: Q2085 SDG No.: Q2085  
Start Date : 05/21/2025  
End Date : 05/21/2025

| Lab SampleID | Client SampleID | Time | Internal Standard %RI For: Non-Collision Cell |   |               |   |         |   |         |   |         |   |
|--------------|-----------------|------|-----------------------------------------------|---|---------------|---|---------|---|---------|---|---------|---|
|              |                 |      | Element 165Ho                                 | Q | Element 209Bi | Q | Element | Q | Element | Q | Element | Q |
| S0           | S0              | 1353 | 100                                           |   | 100           |   |         |   |         |   |         |   |
| S2           | S2              | 1400 | 102                                           |   | 100           |   |         |   |         |   |         |   |
| S3           | S3              | 1403 | 101                                           |   | 99            |   |         |   |         |   |         |   |
| S4           | S4              | 1407 | 101                                           |   | 99            |   |         |   |         |   |         |   |
| S5           | S5              | 1409 | 99                                            |   | 97            |   |         |   |         |   |         |   |
| S6           | S6              | 1412 | 98                                            |   | 94            |   |         |   |         |   |         |   |
| S7           | S7              | 1415 | 97                                            |   | 91            |   |         |   |         |   |         |   |
| S8           | S8              | 1418 | 93                                            |   | 81            |   |         |   |         |   |         |   |
| ICV01        | ICV01           | 1430 | 102                                           |   | 101           |   |         |   |         |   |         |   |
| LLICV01      | LLICV01         | 1433 | 103                                           |   | 101           |   |         |   |         |   |         |   |
| ICB01        | ICB01           | 1437 | 104                                           |   | 103           |   |         |   |         |   |         |   |
| ICSA01       | ICSA01          | 1440 | 101                                           |   | 93            |   |         |   |         |   |         |   |
| ICSAB01      | ICSAB01         | 1443 | 103                                           |   | 93            |   |         |   |         |   |         |   |
| CCV01        | CCV01           | 1451 | 97                                            |   | 86            |   |         |   |         |   |         |   |
| CCB01        | CCB01           | 1457 | 104                                           |   | 103           |   |         |   |         |   |         |   |
| CRI          | CRI             | 1500 | 104                                           |   | 103           |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1531 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1534 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1537 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1540 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1543 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1546 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1550 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1553 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1556 |                                               |   |               |   |         |   |         |   |         |   |
| CCV02        | CCV02           | 1559 | 98                                            |   | 88            |   |         |   |         |   |         |   |
| CCB02        | CCB02           | 1605 | 103                                           |   | 105           |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1609 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1612 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1615 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1618 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1622 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1624 |                                               |   |               |   |         |   |         |   |         |   |
| ZZZZZZ       | ZZZZZZ          | 1627 |                                               |   |               |   |         |   |         |   |         |   |

Internal Standard %RI Limit: 30 -120

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: US Army Corp of Engineers  
Lab Code: CHEM Case no.: Q2085  
Instrument ID: P8  
Run Number: LB135886

Contract: USAR03  
Sas No.: Q2085 SDG No.: Q2085  
Start Date : 05/21/2025  
End Date : 05/21/2025

| Lab<br>SampleID | Client<br>SampleID | Time | Internal Standard %RI For: Non-Collision Cell |   |                  |   |         |   |         |   |         |   |
|-----------------|--------------------|------|-----------------------------------------------|---|------------------|---|---------|---|---------|---|---------|---|
|                 |                    |      | Element<br>165Ho                              | Q | Element<br>209Bi | Q | Element | Q | Element | Q | Element | Q |
| PB168105BL      | PB168105BL         | 1645 | 102                                           |   | 103              |   |         |   |         |   |         |   |
| PB168105BS      | PB168105BS         | 1649 | 100                                           |   | 96               |   |         |   |         |   |         |   |
| Q2085-01        | SC-4-SED-051       | 1654 | 108                                           |   | 106              |   |         |   |         |   |         |   |
| CCV03           | CCV03              | 1657 | 98                                            |   | 91               |   |         |   |         |   |         |   |
| CCB03           | CCB03              | 1728 | 105                                           |   | 105              |   |         |   |         |   |         |   |
| Q2085-02        | SC-3-SED-051       | 1732 | 107                                           |   | 103              |   |         |   |         |   |         |   |
| Q2085-03        | SC-2-SED-051       | 1735 | 106                                           |   | 105              |   |         |   |         |   |         |   |
| Q2085-04        | SC-1-SED-051       | 1739 | 108                                           |   | 105              |   |         |   |         |   |         |   |
| Q2085-04DUP     | SC-1-SED-051       | 1742 | 108                                           |   | 104              |   |         |   |         |   |         |   |
| Q2085-04L       | SC-1-SED-051       | 1745 | 105                                           |   | 103              |   |         |   |         |   |         |   |
| Q2085-05        | SC-1-SED-051       | 1748 | 106                                           |   | 98               |   |         |   |         |   |         |   |
| Q2085-06        | SC-1-SED-051       | 1751 | 105                                           |   | 99               |   |         |   |         |   |         |   |
| Q2085-04A       | SC-1-SED-051       | 1754 | 105                                           |   | 98               |   |         |   |         |   |         |   |
| Q2085-07        | SC-COMP-SED-       | 1756 | 107                                           |   | 103              |   |         |   |         |   |         |   |
| Q2085-08        | DUPE-1-SC          | 1800 | 105                                           |   | 103              |   |         |   |         |   |         |   |
| CCV04           | CCV04              | 1804 | 97                                            |   | 88               |   |         |   |         |   |         |   |
| CCB04           | CCB04              | 1816 | 102                                           |   | 103              |   |         |   |         |   |         |   |

Internal Standard %RI Limit: 30 -120

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: US Army Corp of Engineers  
Lab Code: CHEM Case no.: Q2085  
Instrument ID: P8  
Run Number: LB135886

Contract: USAR03  
Sas No.: Q2085 SDG No.: Q2085  
Start Date : 05/21/2025  
End Date : 05/21/2025

| Lab<br>SampleID | Client<br>SampleID | Time | Internal Standard %RI For: Collision Cell |   |         |   |         |   |         |   |         |   |
|-----------------|--------------------|------|-------------------------------------------|---|---------|---|---------|---|---------|---|---------|---|
|                 |                    |      | Element<br>209Bi                          | Q | Element | Q | Element | Q | Element | Q | Element | Q |
| S0              | S0                 | 1353 | 100                                       |   |         |   |         |   |         |   |         |   |
| S2              | S2                 | 1400 | 98                                        |   |         |   |         |   |         |   |         |   |
| S3              | S3                 | 1403 | 96                                        |   |         |   |         |   |         |   |         |   |
| S4              | S4                 | 1407 | 95                                        |   |         |   |         |   |         |   |         |   |
| S5              | S5                 | 1409 | 92                                        |   |         |   |         |   |         |   |         |   |
| S6              | S6                 | 1412 | 91                                        |   |         |   |         |   |         |   |         |   |
| S7              | S7                 | 1415 | 86                                        |   |         |   |         |   |         |   |         |   |
| S8              | S8                 | 1418 | 77                                        |   |         |   |         |   |         |   |         |   |
| ICV01           | ICV01              | 1430 | 99                                        |   |         |   |         |   |         |   |         |   |
| LLICV01         | LLICV01            | 1433 | 98                                        |   |         |   |         |   |         |   |         |   |
| ICB01           | ICB01              | 1437 | 100                                       |   |         |   |         |   |         |   |         |   |
| ICSA01          | ICSA01             | 1440 | 90                                        |   |         |   |         |   |         |   |         |   |
| ICSAB01         | ICSAB01            | 1443 | 90                                        |   |         |   |         |   |         |   |         |   |
| CCV01           | CCV01              | 1451 | 84                                        |   |         |   |         |   |         |   |         |   |
| CCB01           | CCB01              | 1457 | 99                                        |   |         |   |         |   |         |   |         |   |
| CRI             | CRI                | 1500 | 99                                        |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1531 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1534 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1537 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1540 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1543 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1546 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1550 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1553 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1556 |                                           |   |         |   |         |   |         |   |         |   |
| CCV02           | CCV02              | 1559 | 82                                        |   |         |   |         |   |         |   |         |   |
| CCB02           | CCB02              | 1605 | 98                                        |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1609 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1612 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1615 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1618 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1622 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1624 |                                           |   |         |   |         |   |         |   |         |   |
| ZZZZZZ          | ZZZZZZ             | 1627 |                                           |   |         |   |         |   |         |   |         |   |

Internal Standard %RI Limit: 30 -120

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: US Army Corp of Engineers  
Lab Code: CHEM Case no.: Q2085  
Instrument ID: P8  
Run Number: LB135886

Contract: USAR03  
Sas No.: Q2085 SDG No.: Q2085  
Start Date : 05/21/2025  
End Date : 05/21/2025

| Lab<br>SampleID | Client<br>SampleID | Time | Internal Standard %RI For: Collision Cell |   |         |   |         |   |         |   |         |   |
|-----------------|--------------------|------|-------------------------------------------|---|---------|---|---------|---|---------|---|---------|---|
|                 |                    |      | Element<br>209Bi                          | Q | Element | Q | Element | Q | Element | Q | Element | Q |
| PB168105BL      | PB168105BL         | 1645 | 96                                        |   |         |   |         |   |         |   |         |   |
| PB168105BS      | PB168105BS         | 1649 | 90                                        |   |         |   |         |   |         |   |         |   |
| Q2085-01        | SC-4-SED-051       | 1654 | 97                                        |   |         |   |         |   |         |   |         |   |
| CCV03           | CCV03              | 1657 | 88                                        |   |         |   |         |   |         |   |         |   |
| CCB03           | CCB03              | 1728 | 99                                        |   |         |   |         |   |         |   |         |   |
| Q2085-02        | SC-3-SED-051       | 1732 | 97                                        |   |         |   |         |   |         |   |         |   |
| Q2085-03        | SC-2-SED-051       | 1735 | 99                                        |   |         |   |         |   |         |   |         |   |
| Q2085-04        | SC-1-SED-051       | 1739 | 98                                        |   |         |   |         |   |         |   |         |   |
| Q2085-04DUP     | SC-1-SED-051       | 1742 | 98                                        |   |         |   |         |   |         |   |         |   |
| Q2085-04L       | SC-1-SED-051       | 1745 | 96                                        |   |         |   |         |   |         |   |         |   |
| Q2085-05        | SC-1-SED-051       | 1748 | 91                                        |   |         |   |         |   |         |   |         |   |
| Q2085-06        | SC-1-SED-051       | 1751 | 91                                        |   |         |   |         |   |         |   |         |   |
| Q2085-04A       | SC-1-SED-051       | 1754 | 92                                        |   |         |   |         |   |         |   |         |   |
| Q2085-07        | SC-COMP-SED-       | 1756 | 96                                        |   |         |   |         |   |         |   |         |   |
| Q2085-08        | DUPE-1-SC          | 1800 | 96                                        |   |         |   |         |   |         |   |         |   |
| CCV04           | CCV04              | 1804 | 83                                        |   |         |   |         |   |         |   |         |   |
| CCB04           | CCB04              | 1816 | 96                                        |   |         |   |         |   |         |   |         |   |

**Metals**  
**-9 -**  
**ICP SERIAL DILUTIONS**

SAMPLE NO.

SC-1-SED-051625L

Lab Name: Chemtech Consulting Group

Contract: USAR03

Lab Code: CHEM Lb No.: lb135886 Lab Sample ID : Q2085-04L SDG No.: Q2085

Matrix (soil/water): Solid Level (low/med): LOW

Concentration Units: mg/Kg

| Analyte   | Initial Sample Result (I) |       |   | Serial Dilution Result (S) |       |   | % Differ-<br>ence | Q | M  |
|-----------|---------------------------|-------|---|----------------------------|-------|---|-------------------|---|----|
|           |                           | C     |   |                            | C     |   |                   |   |    |
| Aluminum  |                           | 3290  |   |                            | 3200  |   | 3                 |   | P  |
| Antimony  |                           | 2.12  |   |                            | 2.93  |   | 38                |   | P  |
| Arsenic   |                           | 2.49  |   |                            | 2.43  |   | 2                 |   | P  |
| Barium    |                           | 7.23  |   |                            | 7.14  |   | 1                 |   | P  |
| Beryllium |                           | 0.24  |   |                            | 0.22  | J | 6                 |   | P  |
| Cadmium   |                           | 0.097 | J |                            | 0.51  | U | 100.0             |   | P  |
| Calcium   |                           | 430   |   |                            | 412   |   | 4                 |   | P  |
| Chromium  |                           | 5.35  |   |                            | 5.21  |   | 3                 |   | P  |
| Cobalt    |                           | 1.94  |   |                            | 1.90  |   | 2                 |   | P  |
| Copper    |                           | 3.71  |   |                            | 3.75  |   | 1                 |   | P  |
| Iron      |                           | 6010  |   |                            | 5710  |   | 5                 |   | P  |
| Lead      |                           | 4.25  |   |                            | 4.28  |   | 1                 |   | P  |
| Magnesium |                           | 1020  |   |                            | 1040  |   | 1                 |   | P  |
| Manganese |                           | 50.7  |   |                            | 49.3  |   | 3                 |   | P  |
| Nickel    |                           | 4.38  |   |                            | 4.40  |   | 1                 |   | P  |
| Mercury   |                           | 0.017 | U |                            | 0.086 | U |                   |   | CV |
| Potassium |                           | 620   |   |                            | 635   |   | 2                 |   | P  |
| Selenium  |                           | 0.51  | U |                            | 2.53  | U |                   |   | P  |
| Silver    |                           | 0.10  | U |                            | 0.51  | U |                   |   | P  |
| Sodium    |                           | 2270  |   |                            | 2330  |   | 3                 |   | P  |
| Thallium  |                           | 0.062 | J |                            | 0.51  | U | 100.0             |   | P  |
| Vanadium  |                           | 7.42  |   |                            | 7.40  |   | 0                 |   | P  |
| Zinc      |                           | 27.3  |   |                            | 33.2  |   | 22                |   | P  |



# METAL PREPARATION & INSTRUMENT DATA



# METAL PREPARATION & ANALYICAL SUMMARY

**Metals**  
**- 13 -**

**SAMPLE PREPARATION SUMMARY**

|                  |                                  |                  |              |
|------------------|----------------------------------|------------------|--------------|
| <b>Client:</b>   | <u>US Army Corp of Engineers</u> | <b>SDG No.:</b>  | <u>Q2085</u> |
| <b>Contract:</b> | <u>USAR03</u>                    | <b>Lab Code:</b> | <u>CHEM</u>  |
|                  |                                  | <b>Method:</b>   | <u></u>      |
|                  |                                  | <b>Case No.:</b> | <u>Q2085</u> |
|                  |                                  | <b>SAS No.:</b>  | <u>Q2085</u> |

| Sample ID                     | Client ID          | Sample Type | Matrix | Prep Date  | Initial Sample Size(g) | Final Sample Volume (mL) | Percent Solids |
|-------------------------------|--------------------|-------------|--------|------------|------------------------|--------------------------|----------------|
| <b>Batch Number: PB168105</b> |                    |             |        |            |                        |                          |                |
| PB168105BL                    | PB168105BL         | MB          | SOLID  | 05/21/2025 | 1.00                   | 100.0                    | 100.00         |
| PB168105BS                    | PB168105BS         | LCS         | SOLID  | 05/21/2025 | 1.00                   | 100.0                    | 100.00         |
| Q2085-01                      | SC-4-SED-051525    | SAM         | SOLID  | 05/21/2025 | 1.27                   | 100.0                    | 75.70          |
| Q2085-02                      | SC-3-SED-051525    | SAM         | SOLID  | 05/21/2025 | 1.15                   | 100.0                    | 73.80          |
| Q2085-03                      | SC-2-SED-051525    | SAM         | SOLID  | 05/21/2025 | 1.27                   | 100.0                    | 79.30          |
| Q2085-04                      | SC-1-SED-051625    | SAM         | SOLID  | 05/21/2025 | 1.40                   | 100.0                    | 70.50          |
| Q2085-04DUP                   | SC-1-SED-051625DUP | DUP         | SOLID  | 05/21/2025 | 1.33                   | 100.0                    | 70.50          |
| Q2085-05                      | SC-1-SED-051625MS  | MS          | SOLID  | 05/21/2025 | 1.31                   | 100.0                    | 70.50          |
| Q2085-06                      | SC-1-SED-051625MSD | MSD         | SOLID  | 05/21/2025 | 1.28                   | 100.0                    | 70.50          |
| Q2085-07                      | SC-COMP-SED-051625 | SAM         | SOLID  | 05/21/2025 | 1.31                   | 100.0                    | 73.50          |
| Q2085-08                      | DUPE-1-SC          | SAM         | SOLID  | 05/21/2025 | 1.41                   | 100.0                    | 76.20          |

**Metals**  
**- 13 -**

**SAMPLE PREPARATION SUMMARY**

|                  |                                  |                  |              |
|------------------|----------------------------------|------------------|--------------|
| <b>Client:</b>   | <u>US Army Corp of Engineers</u> | <b>SDG No.:</b>  | <u>Q2085</u> |
| <b>Contract:</b> | <u>USAR03</u>                    | <b>Lab Code:</b> | <u>CHEM</u>  |
|                  |                                  | <b>Method:</b>   | <u></u>      |
|                  |                                  | <b>Case No.:</b> | <u>Q2085</u> |
|                  |                                  | <b>SAS No.:</b>  | <u>Q2085</u> |

| Sample ID                     | Client ID          | Sample Type | Matrix | Prep Date  | Initial Sample Size(g) | Final Sample Volume (mL) | Percent Solids |
|-------------------------------|--------------------|-------------|--------|------------|------------------------|--------------------------|----------------|
| <b>Batch Number: PB168173</b> |                    |             |        |            |                        |                          |                |
| PB168173BL                    | PB168173BL         | MB          | SOLID  | 05/27/2025 | 0.50                   | 35.0                     | 100.00         |
| PB168173BS                    | PB168173BS         | LCS         | SOLID  | 05/27/2025 | 0.57                   | 35.0                     | 100.00         |
| Q2085-01                      | SC-4-SED-051525    | SAM         | SOLID  | 05/27/2025 | 0.59                   | 35.0                     | 75.70          |
| Q2085-02                      | SC-3-SED-051525    | SAM         | SOLID  | 05/27/2025 | 0.60                   | 35.0                     | 73.80          |
| Q2085-03                      | SC-2-SED-051525    | SAM         | SOLID  | 05/27/2025 | 0.59                   | 35.0                     | 79.30          |
| Q2085-04                      | SC-1-SED-051625    | SAM         | SOLID  | 05/27/2025 | 0.58                   | 35.0                     | 70.50          |
| Q2085-04DUP                   | SC-1-SED-051625DUP | DUP         | SOLID  | 05/27/2025 | 0.55                   | 35.0                     | 70.50          |
| Q2085-05                      | SC-1-SED-051625MS  | MS          | SOLID  | 05/27/2025 | 0.56                   | 35.0                     | 70.50          |
| Q2085-06                      | SC-1-SED-051625MSD | MSD         | SOLID  | 05/27/2025 | 0.54                   | 35.0                     | 70.50          |
| Q2085-07                      | SC-COMP-SED-051625 | SAM         | SOLID  | 05/27/2025 | 0.60                   | 35.0                     | 73.50          |
| Q2085-08                      | DUPE-1-SC          | SAM         | SOLID  | 05/27/2025 | 0.58                   | 35.0                     | 76.20          |

**metals**  
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**ANALYSIS RUN LOG**

**Client:** US Army Corp of Engineers **Contract:** USAR03

**Lab code:** CHEM **Case no.:** Q2085 **Sas no.:** Q2085 **Sdg no.:** Q2085

**Instrument id number:**                      **Method:**                      **Run number:** LB135886

**Start date:** 05/21/2025 **End date:** 05/21/2025

| Lab sample id. | Client Sample Id   | d/f | Time | Parameter list                                                  |
|----------------|--------------------|-----|------|-----------------------------------------------------------------|
| S0             | S0                 | 1   | 1353 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S2             | S2                 | 1   | 1400 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S3             | S3                 | 1   | 1403 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S4             | S4                 | 1   | 1407 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S5             | S5                 | 1   | 1409 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S6             | S6                 | 1   | 1412 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S7             | S7                 | 1   | 1415 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| S8             | S8                 | 1   | 1418 | Al,Ca,Fe,K,Mg,Na                                                |
| ICV01          | ICV01              | 1   | 1430 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| LLICV01        | LLICV01            | 1   | 1433 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICB01          | ICB01              | 1   | 1437 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSA01         | ICSA01             | 1   | 1440 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| ICSAB01        | ICSAB01            | 1   | 1443 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV01          | CCV01              | 1   | 1451 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB01          | CCB01              | 1   | 1457 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CRI            | CRI                | 1   | 1500 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV02          | CCV02              | 1   | 1559 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB02          | CCB02              | 1   | 1605 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| PB168105BL     | PB168105BL         | 1   | 1645 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| PB168105BS     | PB168105BS         | 1   | 1649 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| Q2085-01       | SC-4-SED-051525    | 1   | 1654 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV03          | CCV03              | 1   | 1657 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB03          | CCB03              | 1   | 1728 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| Q2085-02       | SC-3-SED-051525    | 1   | 1732 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| Q2085-03       | SC-2-SED-051525    | 1   | 1735 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| Q2085-04       | SC-1-SED-051625    | 1   | 1739 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| Q2085-04DUP    | SC-1-SED-051625DUP | 1   | 1742 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| Q2085-04L      | SC-1-SED-051625L   | 5   | 1745 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| Q2085-05       | SC-1-SED-051625MS  | 1   | 1748 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| Q2085-06       | SC-1-SED-051625MSD | 1   | 1751 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| Q2085-04A      | SC-1-SED-051625A   | 1   | 1754 | Ag,Al,As,Fe                                                     |
| Q2085-07       | SC-COMP-SED-051625 | 1   | 1756 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| Q2085-08       | DUPE-1-SC          | 1   | 1800 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCV04          | CCV04              | 1   | 1804 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |
| CCB04          | CCB04              | 1   | 1816 | Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn |

**metals**  
**- 14 -**  
**ANALYSIS RUN LOG**

**Client:** US Army Corp of Engineers **Contract:** USAR03

**Lab code:** CHEM **Case no.:** Q2085 **Sas no.:** Q2085 **Sdg no.:** Q2085

**Instrument id number:**                      **Method:**                      **Run number:** LB135943

**Start date:** 05/29/2025 **End date:** 05/29/2025

| Lab sample id. | Client Sample Id   | d/f | Time | Parameter list |
|----------------|--------------------|-----|------|----------------|
| S0             | S0                 | 1   | 1053 | HG             |
| S0.2           | S0.2               | 1   | 1055 | HG             |
| S2.5           | S2.5               | 1   | 1057 | HG             |
| S5             | S5                 | 1   | 1110 | HG             |
| S7.5           | S7.5               | 1   | 1112 | HG             |
| S10            | S10                | 1   | 1115 | HG             |
| ICV21          | ICV21              | 1   | 1118 | HG             |
| ICB21          | ICB21              | 1   | 1120 | HG             |
| CCV76          | CCV76              | 1   | 1122 | HG             |
| CCB76          | CCB76              | 1   | 1127 | HG             |
| CRA            | CRA                | 1   | 1138 | HG             |
| PB168173BL     | PB168173BL         | 1   | 1155 | HG             |
| PB168173BS     | PB168173BS         | 1   | 1158 | HG             |
| Q2085-01       | SC-4-SED-051525    | 1   | 1202 | HG             |
| Q2085-02       | SC-3-SED-051525    | 1   | 1205 | HG             |
| Q2085-03       | SC-2-SED-051525    | 1   | 1207 | HG             |
| Q2085-04       | SC-1-SED-051625    | 1   | 1210 | HG             |
| CCV77          | CCV77              | 1   | 1225 | HG             |
| CCB77          | CCB77              | 1   | 1230 | HG             |
| Q2085-04DUP    | SC-1-SED-051625DUP | 1   | 1232 | HG             |
| Q2085-05       | SC-1-SED-051625MS  | 1   | 1243 | HG             |
| Q2085-06       | SC-1-SED-051625MSD | 1   | 1245 | HG             |
| Q2085-07       | SC-COMP-SED-051625 | 1   | 1248 | HG             |
| Q2085-08       | DUPE-1-SC          | 1   | 1250 | HG             |
| Q2085-04L      | SC-1-SED-051625L   | 5   | 1257 | HG             |
| CCV78          | CCV78              | 1   | 1301 | HG             |
| CCB78          | CCB78              | 1   | 1304 | HG             |
| CCV79          | CCV79              | 1   | 1319 | HG             |
| CCB79          | CCB79              | 1   | 1322 | HG             |

## LAB CHRONICLE

|                 |                           |                   |                               |
|-----------------|---------------------------|-------------------|-------------------------------|
| <b>OrderID:</b> | Q2085                     | <b>OrderDate:</b> | 5/20/2025 11:40:33 AM         |
| <b>Client:</b>  | US Army Corp of Engineers | <b>Project:</b>   | USACE NAB Sediment Project 25 |
| <b>Contact:</b> | Kendall Rosenberg         | <b>Location:</b>  | L41                           |

| LabID           | ClientID               | Matrix      | Test              | Method                                          | Sample Date               | Prep Date | Anal Date         | Received        |
|-----------------|------------------------|-------------|-------------------|-------------------------------------------------|---------------------------|-----------|-------------------|-----------------|
| <b>Q2085-01</b> | <b>SC-4-SED-051525</b> | <b>SOIL</b> |                   |                                                 | <b>05/15/25<br/>15:50</b> |           |                   | <b>05/20/25</b> |
|                 |                        |             | Ammonia           | SM4500-NH3                                      |                           | 05/21/25  | 05/22/25<br>12:01 |                 |
|                 |                        |             | Phosphorus, Total | 365.3                                           |                           | 05/28/25  | 05/28/25<br>15:37 |                 |
|                 |                        |             | TKN               | SM4500-N<br>Org C-11 plus<br>NH3 B plus<br>G-11 |                           | 05/22/25  | 05/22/25<br>16:01 |                 |
|                 |                        |             | TOC               | 9060A                                           |                           |           | 05/23/25<br>10:01 |                 |
| <b>Q2085-02</b> | <b>SC-3-SED-051525</b> | <b>SOIL</b> |                   |                                                 | <b>05/15/25<br/>16:21</b> |           |                   | <b>05/20/25</b> |
|                 |                        |             | Ammonia           | SM4500-NH3                                      |                           | 05/21/25  | 05/22/25<br>12:01 |                 |
|                 |                        |             | Phosphorus, Total | 365.3                                           |                           | 05/28/25  | 05/28/25<br>15:39 |                 |
|                 |                        |             | TKN               | SM4500-N<br>Org C-11 plus<br>NH3 B plus<br>G-11 |                           | 05/22/25  | 05/22/25<br>16:01 |                 |
|                 |                        |             | TOC               | 9060A                                           |                           |           | 05/23/25<br>10:11 |                 |
| <b>Q2085-03</b> | <b>SC-2-SED-051525</b> | <b>SOIL</b> |                   |                                                 | <b>05/15/25<br/>17:04</b> |           |                   | <b>05/20/25</b> |
|                 |                        |             | Ammonia           | SM4500-NH3                                      |                           | 05/21/25  | 05/22/25<br>12:01 |                 |
|                 |                        |             | Phosphorus, Total | 365.3                                           |                           | 05/28/25  | 05/28/25<br>15:39 |                 |

### LAB CHRONICLE

|          |                    |      |                   |                                                 |          |                   |                   |          |
|----------|--------------------|------|-------------------|-------------------------------------------------|----------|-------------------|-------------------|----------|
| Q2085-07 | SC-COMP-SED-051625 | SOIL | TKN               | SM4500-N<br>Org C-11 plus<br>NH3 B plus<br>G-11 | 05/22/25 | 05/22/25<br>16:01 | 05/16/25<br>10:45 | 05/20/25 |
|          |                    |      | TOC               | 9060A                                           |          | 05/23/25<br>10:25 |                   |          |
|          |                    |      | Ammonia           | SM4500-NH3                                      | 05/21/25 | 05/22/25<br>12:01 |                   |          |
|          |                    |      | Phosphorus, Total | 365.3                                           | 05/28/25 | 05/28/25<br>15:40 |                   |          |
|          |                    |      | TKN               | SM4500-N<br>Org C-11 plus<br>NH3 B plus<br>G-11 | 05/22/25 | 05/22/25<br>16:01 |                   |          |
| Q2085-08 | DUPE-1-SC          | SOIL | TOC               | 9060A                                           |          | 05/23/25<br>11:11 | 05/16/25<br>12:00 | 05/20/25 |
|          |                    |      | Phosphorus, Total | 365.3                                           | 05/28/25 | 05/28/25<br>15:41 |                   |          |
|          |                    |      | Ammonia           | SM4500-NH3                                      | 05/21/25 | 05/22/25<br>12:01 |                   |          |
|          |                    |      | TKN               | SM4500-N<br>Org C-11 plus<br>NH3 B plus<br>G-11 | 05/22/25 | 05/22/25<br>16:01 |                   |          |
|          |                    |      | TOC               | 9060A                                           |          | 05/23/25<br>11:33 |                   |          |



# SAMPLE DATA

## Report of Analysis

|                   |                               |                 |                |
|-------------------|-------------------------------|-----------------|----------------|
| Client:           | US Army Corp of Engineers     | Date Collected: | 05/15/25 15:50 |
| Project:          | USACE NAB Sediment Project 25 | Date Received:  | 05/20/25       |
| Client Sample ID: | SC-4-SED-051525               | SDG No.:        | Q2085          |
| Lab Sample ID:    | Q2085-01                      | Matrix:         | SOIL           |
|                   |                               | % Solid:        | 75.7           |

| Parameter         | Conc. | Qua. | DF | MDL  | LOQ / CRQL | Units(Dry Weight) | Prep Date      | Date Ana.      | Ana Met.                                     |
|-------------------|-------|------|----|------|------------|-------------------|----------------|----------------|----------------------------------------------|
| Ammonia as N      | 16.0  |      | 1  | 2.80 | 6.40       | mg/Kg             | 05/21/25 10:40 | 05/22/25 12:01 | SM 4500-NH3<br>B plus G-11                   |
| Phosphorus, Total | 62.3  |      | 1  | 0.38 | 3.27       | mg/Kg             | 05/28/25 11:45 | 05/28/25 15:37 | 365.3                                        |
| TKN               | 222   |      | 1  | 12.2 | 32.4       | mg/Kg             | 05/22/25 08:50 | 05/22/25 16:01 | SM4500-N Org<br>C-11 plus NH3<br>B plus G-11 |
| TOC               | 4370  |      | 1  | 28.9 | 250        | mg/Kg             |                | 05/23/25 10:01 | 9060A                                        |

Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements  
H = Sample Analysis Out Of Hold Time

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N =Spiked sample recovery not within control limits

## Report of Analysis

|                   |                               |                 |                |
|-------------------|-------------------------------|-----------------|----------------|
| Client:           | US Army Corp of Engineers     | Date Collected: | 05/15/25 16:21 |
| Project:          | USACE NAB Sediment Project 25 | Date Received:  | 05/20/25       |
| Client Sample ID: | SC-3-SED-051525               | SDG No.:        | Q2085          |
| Lab Sample ID:    | Q2085-02                      | Matrix:         | SOIL           |
|                   |                               | % Solid:        | 73.8           |

| Parameter         | Conc. | Qua. | DF | MDL  | LOQ / CRQL | Units(Dry Weight) | Prep Date      | Date Ana.      | Ana Met.                                     |
|-------------------|-------|------|----|------|------------|-------------------|----------------|----------------|----------------------------------------------|
| Ammonia as N      | 11.9  |      | 1  | 2.90 | 6.60       | mg/Kg             | 05/21/25 10:40 | 05/22/25 12:01 | SM 4500-NH3<br>B plus G-11                   |
| Phosphorus, Total | 58.4  |      | 1  | 0.39 | 3.32       | mg/Kg             | 05/28/25 11:45 | 05/28/25 15:39 | 365.3                                        |
| TKN               | 249   |      | 1  | 12.2 | 32.6       | mg/Kg             | 05/22/25 08:50 | 05/22/25 16:01 | SM4500-N Org<br>C-11 plus NH3<br>B plus G-11 |
| TOC               | 1570  |      | 1  | 28.9 | 250        | mg/Kg             |                | 05/23/25 10:11 | 9060A                                        |

Comments:

U = Not Detected  
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LOD = Limit of Detection  
D = Dilution  
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H = Sample Analysis Out Of Hold Time

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N =Spiked sample recovery not within control limits

## Report of Analysis

|                   |                               |                 |                |
|-------------------|-------------------------------|-----------------|----------------|
| Client:           | US Army Corp of Engineers     | Date Collected: | 05/15/25 17:04 |
| Project:          | USACE NAB Sediment Project 25 | Date Received:  | 05/20/25       |
| Client Sample ID: | SC-2-SED-051525               | SDG No.:        | Q2085          |
| Lab Sample ID:    | Q2085-03                      | Matrix:         | SOIL           |
|                   |                               | % Solid:        | 79.3           |

| Parameter         | Conc. | Qua. | DF | MDL  | LOQ / CRQL | Units(Dry Weight) | Prep Date      | Date Ana.      | Ana Met.                                     |
|-------------------|-------|------|----|------|------------|-------------------|----------------|----------------|----------------------------------------------|
| Ammonia as N      | 2.80  | J    | 1  | 2.60 | 5.80       | mg/Kg             | 05/21/25 10:40 | 05/22/25 12:01 | SM 4500-NH3<br>B plus G-11                   |
| Phosphorus, Total | 36.3  |      | 1  | 0.36 | 3.09       | mg/Kg             | 05/28/25 11:45 | 05/28/25 15:39 | 365.3                                        |
| TKN               | 139   |      | 1  | 11.7 | 31.2       | mg/Kg             | 05/22/25 08:50 | 05/22/25 16:01 | SM4500-N Org<br>C-11 plus NH3<br>B plus G-11 |
| TOC               | 1360  |      | 1  | 28.9 | 250        | mg/Kg             |                | 05/23/25 10:25 | 9060A                                        |

Comments:

U = Not Detected  
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LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements  
H = Sample Analysis Out Of Hold Time

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N =Spiked sample recovery not within control limits

## Report of Analysis

|                   |                               |                 |                |
|-------------------|-------------------------------|-----------------|----------------|
| Client:           | US Army Corp of Engineers     | Date Collected: | 05/16/25 10:45 |
| Project:          | USACE NAB Sediment Project 25 | Date Received:  | 05/20/25       |
| Client Sample ID: | SC-COMP-SED-051625            | SDG No.:        | Q2085          |
| Lab Sample ID:    | Q2085-07                      | Matrix:         | SOIL           |
|                   |                               | % Solid:        | 73.5           |

| Parameter         | Conc. | Qua. | DF | MDL  | LOQ / CRQL | Units(Dry Weight) | Prep Date      | Date Ana.      | Ana Met.                                     |
|-------------------|-------|------|----|------|------------|-------------------|----------------|----------------|----------------------------------------------|
| Ammonia as N      | 8.10  |      | 1  | 2.90 | 6.50       | mg/Kg             | 05/21/25 10:40 | 05/22/25 12:01 | SM 4500-NH3<br>B plus G-11                   |
| Phosphorus, Total | 36.8  |      | 1  | 0.39 | 3.37       | mg/Kg             | 05/28/25 11:45 | 05/28/25 15:40 | 365.3                                        |
| TKN               | 275   |      | 1  | 12.5 | 33.3       | mg/Kg             | 05/22/25 08:50 | 05/22/25 16:01 | SM4500-N Org<br>C-11 plus NH3<br>B plus G-11 |
| TOC               | 4830  |      | 1  | 28.9 | 250        | mg/Kg             |                | 05/23/25 11:11 | 9060A                                        |

Comments:

U = Not Detected  
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MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements  
H = Sample Analysis Out Of Hold Time

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N =Spiked sample recovery not within control limits

## Report of Analysis

|                   |                               |                 |                |
|-------------------|-------------------------------|-----------------|----------------|
| Client:           | US Army Corp of Engineers     | Date Collected: | 05/16/25 00:00 |
| Project:          | USACE NAB Sediment Project 25 | Date Received:  | 05/20/25       |
| Client Sample ID: | DUPE-1-SC                     | SDG No.:        | Q2085          |
| Lab Sample ID:    | Q2085-08                      | Matrix:         | SOIL           |
|                   |                               | % Solid:        | 76.2           |

| Parameter         | Conc. | Qua. | DF | MDL  | LOQ / CRQL | Units(Dry Weight) | Prep Date      | Date Ana.      | Ana Met.                                     |
|-------------------|-------|------|----|------|------------|-------------------|----------------|----------------|----------------------------------------------|
| Ammonia as N      | 15.7  |      | 1  | 2.80 | 6.40       | mg/Kg             | 05/21/25 10:40 | 05/22/25 12:01 | SM 4500-NH3<br>B plus G-11                   |
| Phosphorus, Total | 54.2  |      | 1  | 0.37 | 3.22       | mg/Kg             | 05/28/25 11:45 | 05/28/25 15:41 | 365.3                                        |
| TKN               | 159   |      | 1  | 12.2 | 32.5       | mg/Kg             | 05/22/25 08:50 | 05/22/25 16:01 | SM4500-N Org<br>C-11 plus NH3<br>B plus G-11 |
| TOC               | 3780  |      | 1  | 28.9 | 250        | mg/Kg             |                | 05/23/25 11:33 | 9060A                                        |

Comments: \_\_\_\_\_

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements  
H = Sample Analysis Out Of Hold Time

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
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E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N =Spiked sample recovery not within control limits



# QC RESULT SUMMARY

## Initial and Continuing Calibration Verification

**Client:** US Army Corp of Engineers

**SDG No.:** Q2085

**Project:** USACE NAB Sediment Project 25

**RunNo.:** LB135882

| Analyte                                | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|----------------------------------------|-------|--------|------------|------------|------------------------|---------------|
| Sample ID: <b>ICV1</b><br>Ammonia as N | mg/L  | 1      | 1          | 100        | 90-110                 | 05/22/2025    |
| Sample ID: <b>CCV1</b><br>Ammonia as N | mg/L  | 1      | 1          | 100        | 90-110                 | 05/22/2025    |
| Sample ID: <b>CCV2</b><br>Ammonia as N | mg/L  | 1      | 1          | 100        | 90-110                 | 05/22/2025    |
| Sample ID: <b>CCV3</b><br>Ammonia as N | mg/L  | 1.1    | 1          | 110        | 90-110                 | 05/22/2025    |

## Initial and Continuing Calibration Verification

**Client:** US Army Corp of Engineers

**SDG No.:** Q2085

**Project:** USACE NAB Sediment Project 25

**RunNo.:** LB135888

| Analyte                       | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|-------------------------------|-------|--------|------------|------------|------------------------|---------------|
| Sample ID: <b>ICV1</b><br>TKN | mg/L  | 4.8    | 5          | 96         | 90-110                 | 05/22/2025    |
| Sample ID: <b>CCV1</b><br>TKN | mg/L  | 4.7    | 5          | 94         | 90-110                 | 05/22/2025    |
| Sample ID: <b>CCV2</b><br>TKN | mg/L  | 4.8    | 5          | 96         | 90-110                 | 05/22/2025    |
| Sample ID: <b>CCV3</b><br>TKN | mg/L  | 4.7    | 5          | 94         | 90-110                 | 05/22/2025    |

## Initial and Continuing Calibration Verification

**Client:** US Army Corp of Engineers

**SDG No.:** Q2085

**Project:** USACE NAB Sediment Project 25

**RunNo.:** LB135894

| Analyte                       | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|-------------------------------|-------|--------|------------|------------|------------------------|---------------|
| Sample ID: <b>ICV1</b><br>TOC | mg/L  | 1030   | 1000       | 103        | 90-110                 | 03/14/2025    |
| Sample ID: <b>CCV1</b><br>TOC | mg/L  | 1060   | 1000       | 106        | 90-110                 | 05/23/2025    |
| Sample ID: <b>CCV2</b><br>TOC | mg/L  | 1050   | 1000       | 105        | 90-110                 | 05/23/2025    |

## Initial and Continuing Calibration Verification

**Client:** US Army Corp of Engineers

**SDG No.:** Q2085

**Project:** USACE NAB Sediment Project 25

**RunNo.:** LB135933

| Analyte                                     | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---------------------------------------------|-------|--------|------------|------------|------------------------|---------------|
| Sample ID: <b>ICV</b><br>Phosphorus, Total  | mg/L  | 0.507  | 0.50       | 101        | 90-110                 | 05/28/2025    |
| Sample ID: <b>CCV1</b><br>Phosphorus, Total | mg/L  | 0.501  | 0.50       | 100        | 90-110                 | 05/28/2025    |
| Sample ID: <b>CCV2</b><br>Phosphorus, Total | mg/L  | 0.504  | 0.50       | 101        | 90-110                 | 05/28/2025    |
| Sample ID: <b>CCV3</b><br>Phosphorus, Total | mg/L  | 0.492  | 0.50       | 98         | 90-110                 | 05/28/2025    |

### Initial and Continuing Calibration Blank Summary

**Client:** US Army Corp of Engineers

**SDG No.:** Q2085

**Project:** USACE NAB Sediment Project 25

**RunNo.:** LB135882

| Analyte                                | Units | Result   | Acceptance Limits | Conc Qual | MDL   | RDL | Analysis Date |
|----------------------------------------|-------|----------|-------------------|-----------|-------|-----|---------------|
| Sample ID: <b>ICB1</b><br>Ammonia as N | mg/L  | < 0.0500 | 0.0500            | U         | 0.030 | 0.1 | 05/22/2025    |
| Sample ID: <b>CCB1</b><br>Ammonia as N | mg/L  | < 0.0500 | 0.0500            | U         | 0.030 | 0.1 | 05/22/2025    |
| Sample ID: <b>CCB2</b><br>Ammonia as N | mg/L  | < 0.0500 | 0.0500            | U         | 0.030 | 0.1 | 05/22/2025    |
| Sample ID: <b>CCB3</b><br>Ammonia as N | mg/L  | < 0.0500 | 0.0500            | U         | 0.030 | 0.1 | 05/22/2025    |

### Initial and Continuing Calibration Blank Summary

|                                               |                         |
|-----------------------------------------------|-------------------------|
| <b>Client:</b> US Army Corp of Engineers      | <b>SDG No.:</b> Q2085   |
| <b>Project:</b> USACE NAB Sediment Project 25 | <b>RunNo.:</b> LB135888 |

| Analyte                       | Units | Result   | Acceptance Limits | Conc Qual | MDL  | RDL | Analysis Date |
|-------------------------------|-------|----------|-------------------|-----------|------|-----|---------------|
| Sample ID: <b>ICB1</b><br>TKN | mg/L  | < 0.2500 | 0.2500            | U         | 0.11 | 0.5 | 05/22/2025    |
| Sample ID: <b>CCB1</b><br>TKN | mg/L  | < 0.2500 | 0.2500            | U         | 0.11 | 0.5 | 05/22/2025    |
| Sample ID: <b>CCB2</b><br>TKN | mg/L  | < 0.2500 | 0.2500            | U         | 0.11 | 0.5 | 05/22/2025    |
| Sample ID: <b>CCB3</b><br>TKN | mg/L  | < 0.2500 | 0.2500            | U         | 0.11 | 0.5 | 05/22/2025    |

### Initial and Continuing Calibration Blank Summary

|                                               |                         |
|-----------------------------------------------|-------------------------|
| <b>Client:</b> US Army Corp of Engineers      | <b>SDG No.:</b> Q2085   |
| <b>Project:</b> USACE NAB Sediment Project 25 | <b>RunNo.:</b> LB135894 |

| Analyte                       | Units | Result     | Acceptance Limits | Conc Qual | MDL  | RDL | Analysis Date |
|-------------------------------|-------|------------|-------------------|-----------|------|-----|---------------|
| Sample ID: <b>ICB1</b><br>TOC | mg/L  | < 125.0000 | 125.0000          | U         | 22.3 | 250 | 03/14/2025    |
| Sample ID: <b>CCB1</b><br>TOC | mg/L  | < 125.0000 | 125.0000          | U         | 22.3 | 250 | 05/23/2025    |
| Sample ID: <b>CCB2</b><br>TOC | mg/L  | < 125.0000 | 125.0000          | U         | 22.3 | 250 | 05/23/2025    |

### Initial and Continuing Calibration Blank Summary

**Client:** US Army Corp of Engineers

**SDG No.:** Q2085

**Project:** USACE NAB Sediment Project 25

**RunNo.:** LB135933

| Analyte                                     | Units | Result   | Acceptance Limits | Conc Qual | MDL    | RDL  | Analysis Date |
|---------------------------------------------|-------|----------|-------------------|-----------|--------|------|---------------|
| Sample ID: <b>ICB</b><br>Phosphorus, Total  | mg/L  | 0.006    | 0.0250            | J         | 0.0045 | 0.05 | 05/28/2025    |
| Sample ID: <b>CCB1</b><br>Phosphorus, Total | mg/L  | < 0.0250 | 0.0250            | U         | 0.0045 | 0.05 | 05/28/2025    |
| Sample ID: <b>CCB2</b><br>Phosphorus, Total | mg/L  | 0.008    | 0.0250            | J         | 0.0045 | 0.05 | 05/28/2025    |
| Sample ID: <b>CCB3</b><br>Phosphorus, Total | mg/L  | 0.006    | 0.0250            | J         | 0.0045 | 0.05 | 05/28/2025    |

## Preparation Blank Summary

**Client:** US Army Corp of Engineers

**SDG No.:** Q2085

**Project:** USACE NAB Sediment Project 25

| Analyte                                           | Units | Result     | Acceptance Limits | Conc Qual | MDL  | RDL | Analysis Date |
|---------------------------------------------------|-------|------------|-------------------|-----------|------|-----|---------------|
| Sample ID: <b>LB135894BLS</b><br>TOC              | mg/Kg | < 125.0000 | 125.0000          | U         | 28.9 | 250 | 05/23/2025    |
| Sample ID: <b>PB168096BL</b><br>TKN               | mg/Kg | < 12.5000  | 12.5000           | U         | 9.4  | 25  | 05/22/2025    |
| Sample ID: <b>PB168128BL</b><br>Ammonia as N      | mg/Kg | < 2.5000   | 2.5000            | U         | 2.2  | 5   | 05/22/2025    |
| Sample ID: <b>PB168183BL</b><br>Phosphorus, Total | mg/Kg | 0.4        | 1.2500            | J         | 0.29 | 2.5 | 05/28/2025    |

## Matrix Spike Summary

|                   |                               |                                         |          |
|-------------------|-------------------------------|-----------------------------------------|----------|
| <b>Client:</b>    | US Army Corp of Engineers     | <b>SDG No.:</b>                         | Q2085    |
| <b>Project:</b>   | USACE NAB Sediment Project 25 | <b>Sample ID:</b>                       | Q2085-01 |
| <b>Client ID:</b> | SC-4-SED-051525MS             | <b>Percent Solids for Spike Sample:</b> | 75.7     |

| Analyte           | Units | Acceptance<br>Limit %R | Spiked<br>Result | Conc.<br>Qualifier | Sample<br>Result | Conc.<br>Qualifier | Spike<br>Added | Dilution<br>Factor | %<br>Rec | Qual | Analysis<br>Date |
|-------------------|-------|------------------------|------------------|--------------------|------------------|--------------------|----------------|--------------------|----------|------|------------------|
| Ammonia as N      | mg/Kg | 75-125                 | 76.0             |                    | 16.0             |                    | 63.5           | 1                  | 94       |      | 05/22/2025       |
| Phosphorus, Total | mg/Kg | 90-110                 | 93.6             | D                  | 62.3             |                    | 64.8           | 2                  | 48       | *    | 05/28/2025       |
| TKN               | mg/Kg | 75-125                 | 505              |                    | 222              |                    | 320            | 1                  | 88       |      | 05/22/2025       |

## Matrix Spike Summary

|                   |                               |                                         |          |
|-------------------|-------------------------------|-----------------------------------------|----------|
| <b>Client:</b>    | US Army Corp of Engineers     | <b>SDG No.:</b>                         | Q2085    |
| <b>Project:</b>   | USACE NAB Sediment Project 25 | <b>Sample ID:</b>                       | Q2085-01 |
| <b>Client ID:</b> | SC-4-SED-051525MSD            | <b>Percent Solids for Spike Sample:</b> | 75.7     |

| Analyte           | Units | Acceptance<br>Limit %R | Spiked<br>Result | Conc.<br>Qualifier | Sample<br>Result | Conc.<br>Qualifier | Spike<br>Added | Dilution<br>Factor | %<br>Rec | Qual | Analysis<br>Date |
|-------------------|-------|------------------------|------------------|--------------------|------------------|--------------------|----------------|--------------------|----------|------|------------------|
| Ammonia as N      | mg/Kg | 75-125                 | 81.4             |                    | 16.0             |                    | 65.4           | 1                  | 100      |      | 05/22/2025       |
| Phosphorus, Total | mg/Kg | 90-110                 | 93.4             | D                  | 62.3             |                    | 64.8           | 2                  | 48       | *    | 05/28/2025       |
| TKN               | mg/Kg | 75-125                 | 538              |                    | 222              |                    | 320            | 1                  | 99       |      | 05/22/2025       |

## Matrix Spike Summary

|                   |                               |                                         |          |
|-------------------|-------------------------------|-----------------------------------------|----------|
| <b>Client:</b>    | US Army Corp of Engineers     | <b>SDG No.:</b>                         | Q2085    |
| <b>Project:</b>   | USACE NAB Sediment Project 25 | <b>Sample ID:</b>                       | Q2085-08 |
| <b>Client ID:</b> | DUPE-1-SCMS                   | <b>Percent Solids for Spike Sample:</b> | 76.2     |

| Analyte | Units | Acceptance<br>Limit %R | Spiked<br>Result | Conc.<br>Qualifier | Sample<br>Result | Conc.<br>Qualifier | Spike<br>Added | Dilution<br>Factor | %<br>Rec | Qual | Analysis<br>Date |
|---------|-------|------------------------|------------------|--------------------|------------------|--------------------|----------------|--------------------|----------|------|------------------|
| TOC     | mg/Kg | 75-125                 | 4850             |                    | 3780             |                    | 1000           | 1                  | 107      |      | 05/23/2025       |

## Matrix Spike Summary

|                   |                               |                                         |          |
|-------------------|-------------------------------|-----------------------------------------|----------|
| <b>Client:</b>    | US Army Corp of Engineers     | <b>SDG No.:</b>                         | Q2085    |
| <b>Project:</b>   | USACE NAB Sediment Project 25 | <b>Sample ID:</b>                       | Q2085-08 |
| <b>Client ID:</b> | DUPE-1-SCMSD                  | <b>Percent Solids for Spike Sample:</b> | 76.2     |

| Analyte | Units | Acceptance<br>Limit %R | Spiked<br>Result | Conc.<br>Qualifier | Sample<br>Result | Conc.<br>Qualifier | Spike<br>Added | Dilution<br>Factor | %<br>Rec | Qual | Analysis<br>Date |
|---------|-------|------------------------|------------------|--------------------|------------------|--------------------|----------------|--------------------|----------|------|------------------|
| TOC     | mg/Kg | 75-125                 | 4660             |                    | 3780             |                    | 1000           | 1                  | 88       |      | 05/23/2025       |

## Duplicate Sample Summary

|                                                                                                                                   |                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Client:</b> US Army Corp of Engineers<br><b>Project:</b> USACE NAB Sediment Project 25<br><b>Client ID:</b> SC-4-SED-051525DUP | <b>SDG No.:</b> Q2085<br><b>Sample ID:</b> Q2085-01<br><b>Percent Solids for Spike Sample:</b> 75.7 |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|

| Analyte           | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/AD | Qual | Analysis Date |
|-------------------|-------|------------------|---------------|-----------------|------------------|-----------------|-----------------|--------|------|---------------|
| Ammonia as N      | mg/Kg | +/-20            | 16.0          |                 | 15.8             |                 | 1               | 1      |      | 05/22/2025    |
| TKN               | mg/Kg | +/-20            | 222           |                 | 234              |                 | 1               | 5      |      | 05/22/2025    |
| Phosphorus, Total | mg/Kg | +/-20            | 62.3          |                 | 61.9             |                 | 1               | 0.64   |      | 05/28/2025    |

## Duplicate Sample Summary

|                   |                               |                                         |          |
|-------------------|-------------------------------|-----------------------------------------|----------|
| <b>Client:</b>    | US Army Corp of Engineers     | <b>SDG No.:</b>                         | Q2085    |
| <b>Project:</b>   | USACE NAB Sediment Project 25 | <b>Sample ID:</b>                       | Q2085-01 |
| <b>Client ID:</b> | SC-4-SED-051525MSD            | <b>Percent Solids for Spike Sample:</b> | 75.7     |

| Analyte           | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/AD | Qual | Analysis Date |
|-------------------|-------|------------------|---------------|-----------------|------------------|-----------------|-----------------|--------|------|---------------|
| Ammonia as N      | mg/Kg | +/-20            | 76.0          |                 | 81.4             |                 | 1               | 7      |      | 05/22/2025    |
| TKN               | mg/Kg | +/-20            | 505           |                 | 538              |                 | 1               | 6      |      | 05/22/2025    |
| Phosphorus, Total | mg/Kg | +/-20            | 93.6          | D               | 93.4             | D               | 2               | 0.21   |      | 05/28/2025    |

## Duplicate Sample Summary

|                   |                               |                                         |          |
|-------------------|-------------------------------|-----------------------------------------|----------|
| <b>Client:</b>    | US Army Corp of Engineers     | <b>SDG No.:</b>                         | Q2085    |
| <b>Project:</b>   | USACE NAB Sediment Project 25 | <b>Sample ID:</b>                       | Q2085-08 |
| <b>Client ID:</b> | DUPE-1-SCMSD                  | <b>Percent Solids for Spike Sample:</b> | 76.2     |

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/AD | Qual | Analysis Date |
|---------|-------|------------------|---------------|-----------------|------------------|-----------------|-----------------|--------|------|---------------|
| TOC     | mg/Kg | +/-20            | 4850          |                 | 4660             |                 | 1               | 4      |      | 05/23/2025    |

### Laboratory Control Sample Summary

|                 |                               |                 |          |
|-----------------|-------------------------------|-----------------|----------|
| <b>Client:</b>  | US Army Corp of Engineers     | <b>SDG No.:</b> | Q2085    |
| <b>Project:</b> | USACE NAB Sediment Project 25 | <b>Run No.:</b> | LB135894 |

| Analyte   | Units       | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|-----------|-------------|------------|--------|-----------------|------------|-----------------|---------------------|---------------|
| Sample ID | LB135894BSS |            |        |                 |            |                 |                     |               |
| TOC       | mg/Kg       | 1000       | 1070   |                 | 107        | 1               | 90-110              | 05/23/2025    |

### Laboratory Control Sample Summary

|                 |                               |                 |          |
|-----------------|-------------------------------|-----------------|----------|
| <b>Client:</b>  | US Army Corp of Engineers     | <b>SDG No.:</b> | Q2085    |
| <b>Project:</b> | USACE NAB Sediment Project 25 | <b>Run No.:</b> | LB135888 |

| Analyte   | Units      | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|-----------|------------|------------|--------|-----------------|------------|-----------------|---------------------|---------------|
| Sample ID | PB168096BS |            |        |                 |            |                 |                     |               |
| TKN       | mg/Kg      | 250        | 240    |                 | 96         | 1               | 90-110              | 05/22/2025    |

### Laboratory Control Sample Summary

|                 |                               |                 |          |
|-----------------|-------------------------------|-----------------|----------|
| <b>Client:</b>  | US Army Corp of Engineers     | <b>SDG No.:</b> | Q2085    |
| <b>Project:</b> | USACE NAB Sediment Project 25 | <b>Run No.:</b> | LB135882 |

| Analyte      | Units      | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|--------------|------------|------------|--------|-----------------|------------|-----------------|---------------------|---------------|
| Sample ID    | PB168128BS |            |        |                 |            |                 |                     |               |
| Ammonia as N | mg/Kg      | 50         | 50.9   |                 | 102        | 1               | 90-110              | 05/22/2025    |

## Laboratory Control Sample Summary

|                 |                               |                 |          |
|-----------------|-------------------------------|-----------------|----------|
| <b>Client:</b>  | US Army Corp of Engineers     | <b>SDG No.:</b> | Q2085    |
| <b>Project:</b> | USACE NAB Sediment Project 25 | <b>Run No.:</b> | LB135933 |

| Analyte           | Units      | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|-------------------|------------|------------|--------|-----------------|------------|-----------------|---------------------|---------------|
| Sample ID         | PB168183BS |            |        |                 |            |                 |                     |               |
| Phosphorus, Total | mg/Kg      | 25.0       | 24.8   |                 | 99         | 1               | 90-110              | 05/28/2025    |



# SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: US Army Corps of Engineers

ADDRESS: 2 Hopkins Plaza

CITY Baltimore STATE: MD ZIP: 21201

ATTENTION: Kendall Rosenberg

PHONE: 443-406-5447 FAX: N/A

CLIENT PROJECT INFORMATION

PROJECT NAME: USACE NAB SEDIMENT 25

PROJECT NO.: LOCATION: Slaughter, MD

PROJECT MANAGER: YAZMEE

e-mail: Kendall.M.Rosenberg@USACE.ARMY.MD

PHONE: 443-406-5447 FAX: N/A

CLIENT BILLING INFORMATION

BILL TO: Kendall Rosenberg PO#:

ADDRESS: 2 Hopkins Plaza

CITY Baltimore STATE: MD ZIP: 21201

ATTENTION: Kendall Rosenberg PHONE: 443-406-5447

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) \_\_\_\_\_ DAYS\*  
HARDCOPY (DATA PACKAGE): 10 DAYS\*  
EDD: 10 DAYS\*

\*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)  
☒ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP  
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B  
+ Raw Data ☐ Other \_\_\_\_\_  
☒ EDD FORMAT PDF

1. Percent Solids  
2. TKW  
3. TOC  
4. Metals ICP  
5. Metals ICP  
6. Phosphorus  
7. Ammonia  
8.  
9.

PRESERVATIVES

COMMENTS

ALLIANCE  
SAMPLE  
ID

PROJECT  
SAMPLE IDENTIFICATION

SAMPLE  
MATRIX

SAMPLE  
TYPE  
COMP GRAB

SAMPLE  
COLLECTION  
DATE TIME

# OF BOTTLES

E E E E E E  
1 2 3 4 5 6 7 8 9

← Specify Preservatives  
A-HCl D-NaOH  
B-HNO3 E-ICE  
C-H2SO4 F-OTHER

|     |                     |     |   |         |      |   |   |   |   |   |   |   |  |  |  |  |     |  |
|-----|---------------------|-----|---|---------|------|---|---|---|---|---|---|---|--|--|--|--|-----|--|
| 1.  | SC-4-SED-051525     | SED | X | 5/15/25 | 1550 | 6 | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  |  |     |  |
| 2.  | SC-3-SED-051525     |     | X | 5/15/25 | 1621 | 6 | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  |  |     |  |
| 3.  | SC-2-SED-051525     |     | X | 5/15/25 | 1704 | 6 | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  |  |     |  |
| 4.  | SC-1-SED-051625     |     | X | 5/16/25 | 1008 | 6 | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  |  |     |  |
| 5.  | SC-1-SED-MS-051625  |     | X | 5/16/25 | 1008 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |  |  |  |  | MS  |  |
| 6.  | SC-1-SED-MSD-051625 |     | X | 5/16/25 | 1008 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |  |  |  |  | MSD |  |
| 7.  | SC-COMP-SED-051625  |     | X | 5/16/25 | 1045 | 6 | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  |  |     |  |
| 8.  | DUPE-1-SC           |     | X | —       | —    | 6 | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  |  |     |  |
| 9.  |                     |     |   |         |      |   |   |   |   |   |   |   |  |  |  |  |     |  |
| 10. |                     |     |   |         |      |   |   |   |   |   |   |   |  |  |  |  |     |  |

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

|                          |            |              |                                                                                                                       |
|--------------------------|------------|--------------|-----------------------------------------------------------------------------------------------------------------------|
| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: | Conditions of bottles or coolers at receipt:                                                                          |
| 1. KMR; USACE            | 5/19/25    | 1. FedEx     | <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP 4.2 °C |
| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: | Comments:                                                                                                             |
| 2.                       | 5/20/25    | 2. CR        | 2 coolers in shipment                                                                                                 |
| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |                                                                                                                       |
| 3.                       |            | 3.           |                                                                                                                       |

Page 1 of 1

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete ☐ YES ☐ NO

### Laboratory Certification

| Certified By         | License No.      |
|----------------------|------------------|
|                      |                  |
| CAS EPA CLP Contract | 68HERH20D0011    |
|                      |                  |
| Connecticut          | PH-0830          |
|                      |                  |
| DOD ELAP (ANAB)      | L2219            |
|                      |                  |
| Maine                | 2024021          |
|                      |                  |
| Maryland             | 296              |
|                      |                  |
| New Hampshire        | 255424 Rev 1     |
|                      |                  |
| New Jersey           | 20012            |
|                      |                  |
| New York             | 11376            |
|                      |                  |
| Pennsylvania         | 68-00548         |
|                      |                  |
| Soil Permit          | 525-24-234-08441 |
|                      |                  |
| Texas                | T104704488       |