



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



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: 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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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 analysis met criteria for all samples.

The Matrix Spike Duplicate analysis met criteria for all samples.

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

The Calibration met the requirements.

E. Additional Comments:

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Signature _____

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

- J** 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).
- U** Indicates the analyte was analyzed for, but not detected.
- ND** Indicates the analyte was analyzed for, but not detected
- E** Indicates the reported value is estimated because of the presence of interference
- M** Indicates Duplicate injection precision not met.
- N** Indicates the spiked sample recovery is not within control limits.
- S** Indicates the reported value was determined by the Method of Standard Addition (MSA).
- *** Indicates that the duplicate analysis is not within control limits.
- +** Indicates the correlation coefficient for the MSA is less than 0.995.
- D** Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
- M** Method qualifiers
"P" for ICP instrument
"PM" for ICP when Microwave Digestion is used
"CV" for Manual Cold Vapor AA
"AV" for automated Cold Vapor AA
"CA" for MIDI-Distillation Spectrophotometric
"AS" for Semi -Automated Spectrophotometric
"C" for Manual Spectrophotometric
"T" for Titrimetric
"NR" for analyte not required to be analyzed
- OR** Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
- Q** Indicates the LCS did not meet the control limits requirements
- H** 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