

ANALYTICAL RESULTS SUMMARY

GENERAL CHEMISTRY

PROJECT NAME : NWIRP CALVERTON SITE 16 PHASE 3 RI

TETRA TECH NUS, INC.

661 Andersen Drive

Suite 200

Pittsburgh, PA - 15220-2745

Phone No: 412-921-7090

ORDER ID : P4894

ATTENTION : Corey Rich



Laboratory Certification ID # 20012



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Cover Page

Order ID : P4894

Project ID : NWIRP Calverton Site 16 Phase 3 RI

Client : Tetra Tech NUS, Inc.

Lab Sample Number

P4894-01
P4894-02
P4894-03

Client Sample Number

FES-SB401-1921
FES-SB401-6062
FES-DUP02-20241114

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: 11/26/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



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

CASE NARRATIVE

Tetra Tech NUS, Inc.

Project Name: NWIRP Calverton Site 16 Phase 3 RI

Project # N/A

Chemtech Project # P4894

Test Name: TOC

A. Number of Samples and Date of Receipt:

3 Solid samples were received on 11/16/2024.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: TOC. This data package contains results for TOC.

C. Analytical Techniques:

The analysis of TOC was based on method 9060A.

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:

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:

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 #: P4894

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: 11/26/2024

LAB CHRONICLE

OrderID:	P4894	OrderDate:	11/18/2024 10:06:44 AM
Client:	Tetra Tech NUS, Inc.	Project:	NWIRP Calverton Site 16 Phase 3 RI
Contact:	Corey Rich	Location:	L51

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4894-01	FES-SB401-1921	SOIL			11/14/24			11/16/24
			TOC	9060A	12:20		11/26/24 11:27	
P4894-02	FES-SB401-6062	SOIL			11/15/24			11/16/24
			TOC	9060A	09:30		11/26/24 12:07	
P4894-03	FES-DUP02-20241114	SOIL			11/14/24			11/16/24
			TOC	9060A	00:00		11/26/24 13:50	



SAMPLE DATA

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	11/14/24 12:20
Project:	NWIRP Calverton Site 16 Phase 3 RI	Date Received:	11/16/24
Client Sample ID:	FES-SB401-1921	SDG No.:	P4894
Lab Sample ID:	P4894-01	Matrix:	SOIL
		% Solid:	90.4

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
TOC	225	J	1	19.8	50.0	250	mg/Kg		11/26/24 11:27	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:	Tetra Tech NUS, Inc.	Date Collected:	11/15/24 09:30
Project:	NWIRP Calverton Site 16 Phase 3 RI	Date Received:	11/16/24
Client Sample ID:	FES-SB401-6062	SDG No.:	P4894
Lab Sample ID:	P4894-02	Matrix:	SOIL
		% Solid:	75.1

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
TOC	3930		1	19.8	50.0	250	mg/Kg		11/26/24 12:07	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:	Tetra Tech NUS, Inc.	Date Collected:	11/14/24 00:00
Project:	NWIRP Calverton Site 16 Phase 3 RI	Date Received:	11/16/24
Client Sample ID:	FES-DUP02-20241114	SDG No.:	P4894
Lab Sample ID:	P4894-03	Matrix:	SOIL
		% Solid:	92.6

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
TOC	182	J	1	19.8	50.0	250	mg/Kg		11/26/24 13:50	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



QC RESULT SUMMARY

Initial and Continuing Calibration Verification

Client: Tetra Tech NUS, Inc.

SDG No.: P4894

Project: NWIRP Calverton Site 16 Phase 3 RI

RunNo.: LB133629

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV1						
TOC		mg/L	934	1000	93	90-110	11/12/2024
Sample ID:	CCV1						
TOC		mg/L	944	1000	94	90-110	11/26/2024
Sample ID:	CCV2						
TOC		mg/L	982	1000	98	90-110	11/26/2024

Initial and Continuing Calibration Blank Summary

Client: Tetra Tech NUS, Inc.

SDG No.: P4894

Project: NWIRP Calverton Site 16 Phase 3 RI

RunNo.: LB133629

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 TOC	mg/L	< 125.0000	125.0000	U	22.3	250	11/12/2024
Sample ID: CCB1 TOC	mg/L	< 125.0000	125.0000	U	22.3	250	11/26/2024
Sample ID: CCB2 TOC	mg/L	< 125.0000	125.0000	U	22.3	250	11/26/2024

Preparation Blank Summary

Client:	Tetra Tech NUS, Inc.	SDG No.:	P4894
Project:	NWIRP Calverton Site 16 Phase 3 RI		

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	LB133629BLS						
TOC	mg/Kg	< 125.0000	125.0000	U	19.8	250	11/26/2024

Matrix Spike Summary

Client:

Tetra Tech NUS, Inc.

SDG No.:

P4894

Project:

NWIRP Calverton Site 16 Phase 3 RI

Sample ID:

P4894-02

Client ID:

FES-SB401-6062MS

Percent Solids for Spike Sample:

75.1

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
TOC	mg/Kg	75-125	4830		3930		1000	1	90		11/26/2024

Matrix Spike Summary

Client:	Tetra Tech NUS, Inc.	SDG No.:	P4894
Project:	NWIRP Calverton Site 16 Phase 3 RI	Sample ID:	P4894-02
Client ID:	FES-SB401-6062MSD	Percent Solids for Spike Sample:	75.1

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
TOC	mg/Kg	75-125	4950		3930		1000	1	102		11/26/2024

Duplicate Sample Summary

Client: Tetra Tech NUS, Inc. Project: NWIRP Calverton Site 16 Phase 3 RI Client ID: FES-SB401-6062MSD	SDG No.: P4894 Sample ID: P4894-02 Percent Solids for Spike Sample: 75.1
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Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
TOC	mg/Kg	+/-20	4830		4950		1	2		11/26/2024

Laboratory Control Sample Summary

Client: Tetra Tech NUS, Inc.

SDG No.: P4894

Project: NWIRP Calverton Site 16 Phase 3 RI

Run No.: LB133629

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB133629BSS							
TOC	mg/Kg	1000	952		95	1	90-110	11/26/2024



SHIPPING DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.

QUOTE NO.

COC Number 2042295

P4894

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6.1

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Tetra Tech Inc.
ADDRESS: 661 Anderson Dr. Suite 200
CITY Pittsburgh STATE: PA ZIP: 15220
ATTENTION: Corey Rich
PHONE: 412-921-8984 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton Site 16
112G-08005-ML205104
PROJECT NO.: LOCATION: Calverton, NY
PROJECT MANAGER: Corey Rich
e-mail: corey.rich@tetra tech.com
PHONE: 412-921-8984 FAX:

CLIENT BILLING INFORMATION

BILL TO: Tetra Tech Inc. PO#: 1132342
ADDRESS: 661 Anderson Dr. Suite 200
CITY Pittsburgh STATE: PA ZIP: 15220
ATTENTION: Corey Rich PHONE: 412-921-8984

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: SEE COMMENTS DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

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 SEE COMMENTS

TOG Bulk Density

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS		
			COMP	GRAB	DATE	TIME		E	E									← Specify Preservatives A-HCl B-HNO3 C-H2SO4	D-NaOH E-ICE F-OTHER
1.	FES-SB401-1921	SD		X	11-14-21	1220	2	1	1										
2.	FES-SB401-6062	SO		X	11-15-21	0930	2	1	1										
3.	FES-DUP02-20241114	QC		X	11-14-21	0000	2	1	1									Field Duplicate	
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			

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

RELINQUISHED BY SAMPLER: 1. <i>[Signature]</i>	DATE/TIME: 11-15-21/1615	RECEIVED BY: 1. <i>[Signature]</i>	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP 3.12 °C Comments: Follow Spec Contract For Data Turnaround and Data Deliverable Info
RELINQUISHED BY SAMPLER: 2. FedEx	DATE/TIME: 11-16-21 0905	RECEIVED BY: 2. <i>[Signature]</i>	
RELINQUISHED BY SAMPLER: 3.	DATE/TIME:	RECEIVED BY: 3.	

Page 1 of 1

CLIENT: ☐ Hand Delivered ☐ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling

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