



LAB CHRONICLE

OrderID:	Q1040	OrderDate:	1/9/2025 10:13:00 AM
Client:	Tetra Tech NUS, Inc.	Project:	RW5B FT WC - # 112G08005-WE13
Contact:	Ernie Wu	Location:	N41

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1040-01	RW5-SP100-20250108	Water			01/08/25			01/09/25
			Metals Group4	6010D		01/13/25	01/17/25	
Q1040-03	RW5-SP303-20250108	Water			01/08/25			01/09/25
			Metals Group4	6010D		01/13/25	01/17/25	



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Hit Summary Sheet
SW-846

SDG No.:	Q1040	Order ID:	Q1040
Client:	Tetra Tech NUS, Inc.	Project ID:	RW5B FT WC - # 112G08005-WE13

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID :	RW5-SP100-20250108								
Q1040-01	RW5-SP100-20250108	Water	Iron	128		18.5	40.0	50.0	ug/L



SAMPLE DATA

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/08/25
Project:	RW5B FT WC - # 112G08005-WE13	Date Received:	01/09/25
Client Sample ID:	RW5-SP100-20250108	SDG No.:	Q1040
Lab Sample ID:	Q1040-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	128		1	18.5	40.0	50.0	ug/L	01/13/25 10:35	01/17/25 14:14	SW6010	SW3010

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group4			

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:	Tetra Tech NUS, Inc.	Date Collected:	01/08/25
Project:	RW5B FT WC - # 112G08005-WE13	Date Received:	01/09/25
Client Sample ID:	RW5-SP303-20250108	SDG No.:	Q1040
Lab Sample ID:	Q1040-03	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	40.0	U	1	18.5	40.0	50.0	ug/L	01/13/25 10:35	01/17/25 14:18	SW6010	SW3010

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group4			

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



METAL CALIBRATION DATA

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1040
Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1040 **SAS No.:** Q1040
Initial Calibration Source: EPA
Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Iron	9620	10000	96	90 - 110	P	01/17/2025	11:21	LB134334

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1040
Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1040 **SAS No.:** Q1040
Initial Calibration Source: EPA
Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Iron	102	100	102	80 - 120	P	01/17/2025	11:26	LB134334

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1040

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1040 **SAS No.:** Q1040

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Iron	5080	5000	102	90 - 110	P	01/17/2025	11:56	LB134334
CCV02	Iron	4910	5000	98	90 - 110	P	01/17/2025	12:47	LB134334
CCV03	Iron	4900	5000	98	90 - 110	P	01/17/2025	13:36	LB134334
CCV04	Iron	4940	5000	99	90 - 110	P	01/17/2025	14:27	LB134334
CCV05	Iron	4740	5000	95	90 - 110	P	01/17/2025	15:34	LB134334
CCV06	Iron	4940	5000	99	90 - 110	P	01/17/2025	16:16	LB134334
CCV07	Iron	4770	5000	96	90 - 110	P	01/17/2025	17:11	LB134334
CCV08	Iron	4960	5000	99	90 - 110	P	01/17/2025	17:52	LB134334



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Metals

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CRDL STANDARD FOR AA & ICP

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1040
Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1040 **SAS No.:** Q1040
Initial Calibration Source: _____
Continuing Calibration Source: _____

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRI01	Iron	97.7	100	98	40 - 160	P	01/17/2025	11:35	LB134334



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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:	Tetra Tech NUS, Inc.				SDG No.:	Q1040				
Contract:	TETR06	Lab Code:	CHEM	Case No.:	Q1040	SAS No.:	Q1040			
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Iron	100	+/-100	U	80.0	100	P	01/17/2025	11:30	LB134334

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1040
Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1040 **SAS No.:** Q1040

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Iron	100	+/-100	U	80.0	100	P	01/17/2025	12:00	LB134334
CCB02	Iron	100	+/-100	U	80.0	100	P	01/17/2025	12:51	LB134334
CCB03	Iron	100	+/-100	U	80.0	100	P	01/17/2025	13:41	LB134334
CCB04	Iron	100	+/-100	U	80.0	100	P	01/17/2025	14:31	LB134334
CCB05	Iron	100	+/-100	U	80.0	100	P	01/17/2025	15:38	LB134334
CCB06	Iron	100	+/-100	U	80.0	100	P	01/17/2025	16:20	LB134334
CCB07	Iron	100	+/-100	U	80.0	100	P	01/17/2025	17:16	LB134334
CCB08	Iron	100	+/-100	U	80.0	100	P	01/17/2025	17:56	LB134334

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc.

SDG No.: Q1040

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166037BL		WATER		Batch Number:		PB166037		Prep Date:	01/13/2025	
	Iron	50.0	<50.0	U	40.0	50.0	P	01/17/2025	12:13	LB134334

Metals
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INTERFERENCE CHECK SAMPLE

Client: <u>Tetra Tech NUS, Inc.</u>	SDG No.: <u>Q1040</u>
Contract: <u>TETR06</u>	Lab Code: <u>CHEM</u>
ICS Source: <u>EPA</u>	Case No.: <u>Q1040</u>
	SAS No.: <u>Q1040</u>
	Instrument ID: <u>P4</u>

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Iron	95900	101000	95	85600	116500	01/17/2025	11:39	LB134334
ICSAB01	Iron	101000	99300	102	84400	114500	01/17/2025	11:43	LB134334



METAL QC DATA

metals
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MATRIX SPIKE SUMMARY

client: <u>Tetra Tech NUS, Inc.</u>	level: <u>low</u>	sdg no.: <u>Q1040</u>
contract: <u>TETR06</u>	lab code: <u>CHEM</u>	case no.: <u>Q1040</u> sas no.: <u>Q1040</u>
matrix: <u>Water</u>	sample id: <u>Q1048-01</u>	client id: <u>WATER TREATMENT DISCHARGEMS</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q1048-01MS</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Iron	ug/L	87 - 115	2760		1180		1500	105		P

metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: <u>Tetra Tech NUS, Inc.</u>	level: <u>low</u>	sdg no.: <u>Q1040</u>
contract: <u>TETR06</u>	lab code: <u>CHEM</u>	case no.: <u>Q1040</u> sas no.: <u>Q1040</u>
matrix: <u>Water</u>	sample id: <u>Q1048-01</u>	client id: <u>WATER TREATMENT DISCHARGEMSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q1048-01MSD</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Iron	ug/L	87 - 115	2730		1180		1500	104		P

Metals
- 5b -

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1040
Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1040 **SAS No.:** Q1040
Matrix: **Level:** LOW **Client ID:**
Sample ID: **Spiked ID:**

Analyte	Units	Acceptance Limit %R	C	Sample Result	C	Spike Added	% Recovery	Qual	M
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A
B
C
D
E
F
G
H

Metals

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DUPLICATE SAMPLE SUMMARY

Client:	<u>Tetra Tech NUS, Inc.</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q1040</u>
Contract:	<u>TETR06</u>	Lab Code:	<u>CHEM</u>	Case No.:	<u>Q1040</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q1048-01</u>	Client ID:	<u>WATER TREATMENT DISCHARGEDUP</u>
Percent Solids for Sample:	NA	Duplicate ID	Q1048-01DUP	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Iron	ug/L	20	1180		1150		3		P

Metals

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DUPLICATE SAMPLE SUMMARY

Client:	<u>Tetra Tech NUS, Inc.</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q1040</u>
Contract:	<u>TETR06</u>	Lab Code:	<u>CHEM</u>	Case No.:	<u>Q1040</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q1048-01MS</u>	Client ID:	<u>WATER TREATMENT DISCHARGEMSD</u>
Percent Solids for Sample:	NA	Duplicate ID	Q1048-01MSD	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Iron	ug/L	20	2760		2730		1		P

Metals

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1040
Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1040 **SAS No.:** Q1040

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166037BS Iron	ug/L	1500	1470		98	87 - 115	P

Metals
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ICP SERIAL DILUTIONS

SAMPLE NO.

WATER TREATMENT DISCHARGEL

Lab Name: Chemtech Consulting Group **Contract:** TETR06
Lab Code: CHEM **Lb No.:** lb134334 **Lab Sample ID :** Q1048-01L **SDG No.:** Q1040
Matrix (soil/water): Water **Level (low/med):** LOW
Concentration Units: ug/L

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S) C	% Differ- ence	Q	M
Iron	1180	1090	8		P



METAL PREPARATION & INSTRUMENT DATA

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc.

SDG No.: Q1040

Contract: TETR06

Lab Code: CHEM

Case No.: Q1040

SAS No.: Q1040

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Al	Ca	Fe	Mg	Ag
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc.

SDG No.: Q1040

Contract: TETR06

Lab Code: CHEM

Case No.: Q1040

SAS No.: Q1040

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		As	Ba	Be	Cd	Co
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	-0.0039600

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc.

SDG No.: Q1040

Contract: TETR06

Lab Code: CHEM

Case No.: Q1040

SAS No.: Q1040

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Cr	Cu	K	Mn	Mo
Iron	240.488	0.0000000	0.0000000	0.0000730	0.0000000	-0.0015250

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1040
Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1040 **SAS No.:** Q1040
Instrument ID: _____ **Date:** _____
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Na	Ni	Pb	Sb	Se
Iron	240.488	0.0000000	-0.0017000	0.0000000	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc.

SDG No.: Q1040

Contract: TETR06

Lab Code: CHEM

Case No.: Q1040

SAS No.: Q1040

Instrument ID: _____

Date: _____

Interement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Sn	Ti	Tl	V	Zn
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

METAL PREPARATION & ANALYICAL SUMMARY

Metals

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SAMPLE PREPARATION SUMMARY

Client:	<u>Tetra Tech NUS, Inc.</u>	SDG No.:	<u>Q1040</u>
Contract:	<u>TETR06</u>	Lab Code:	<u>CHEM</u>
		Method:	<u></u>
		Case No.:	<u>Q1040</u>
		SAS No.:	<u>Q1040</u>

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB166037							
PB166037BL	PB166037BL	MB	WATER	01/13/2025	50.0	25.0	
PB166037BS	PB166037BS	LCS	WATER	01/13/2025	50.0	25.0	
Q1040-01	RW5-SP100-20250108	SAM	WATER	01/13/2025	50.0	25.0	
Q1040-03	RW5-SP303-20250108	SAM	WATER	01/13/2025	50.0	25.0	
Q1048-01DUP	WATER TREATMENT DISCHARGEDUP	DUP	WATER	01/13/2025	50.0	25.0	
Q1048-01MS	WATER TREATMENT DISCHARGEMS	MS	WATER	01/13/2025	50.0	25.0	
Q1048-01MSD	WATER TREATMENT DISCHARGEMSD	MSD	WATER	01/13/2025	50.0	25.0	

metals
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ANALYSIS RUN LOG

Client: Tetra Tech NUS, Inc. **Contract:** TETR06

Lab code: CHEM **Case no.:** Q1040 **Sas no.:** Q1040 **Sdg no.:** Q1040

Instrument id number: **Method:** **Run number:** LB134334

Start date: 01/17/2025 **End date:** 01/17/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1051	Fe
S1	S1	1	1055	Fe
S2	S2	1	1059	Fe
S3	S3	1	1104	Fe
S4	S4	1	1108	Fe
S5	S5	1	1112	Fe
ICV01	ICV01	1	1121	Fe
LLICV01	LLICV01	1	1126	Fe
ICB01	ICB01	1	1130	Fe
CRI01	CRI01	1	1135	Fe
ICSA01	ICSA01	1	1139	Fe
ICSAB01	ICSAB01	1	1143	Fe
CCV01	CCV01	1	1156	Fe
CCB01	CCB01	1	1200	Fe
PB166037BL	PB166037BL	1	1213	Fe
PB166037BS	PB166037BS	1	1217	Fe
CCV02	CCV02	1	1247	Fe
CCB02	CCB02	1	1251	Fe
CCV03	CCV03	1	1336	Fe
CCB03	CCB03	1	1341	Fe
Q1040-01	RW5-SP100-20250108	1	1414	Fe
Q1040-03	RW5-SP303-20250108	1	1418	Fe
CCV04	CCV04	1	1427	Fe
CCB04	CCB04	1	1431	Fe
Q1048-01DUP	WATER TREATMENT DISCHA	1	1436	Fe
Q1048-01L	WATER TREATMENT DISCHA	5	1440	Fe
Q1048-01MSD	WATER TREATMENT DISCHA	1	1458	Fe
Q1048-01MS	WATER TREATMENT DISCHA	1	1504	Fe
CCV05	CCV05	1	1534	Fe
CCB05	CCB05	1	1538	Fe
CCV06	CCV06	1	1616	Fe
CCB06	CCB06	1	1620	Fe
CCV07	CCV07	1	1711	Fe
CCB07	CCB07	1	1716	Fe
CCV08	CCV08	1	1752	Fe
CCB08	CCB08	1	1756	Fe