

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
			SVOC-SIMGroup1	8270-Modified		01/10/25	01/10/25	
Q1040-01DL	RW5-SP100-20250108DL	Water			01/08/25			01/09/25
			SVOC-SIMGroup1	8270-Modified		01/10/25	01/13/25	
Q1040-02	RW5-SP201-20250108	Water			01/08/25			01/09/25
			SVOC-SIMGroup1	8270-Modified		01/10/25	01/10/25	
Q1040-03	RW5-SP303-20250108	Water			01/08/25			01/09/25
			SVOC-SIMGroup1	8270-Modified		01/10/25	01/10/25	



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

Hit Summary Sheet SW-846

SDG No.: Q1040

Client: Tetra Tech NUS, Inc.

Sample ID	Client ID	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : RW5-SP100-20250108								
Q1040-01	RW5-SP100-20250108	WATER	1,4-Dioxane	9.600	E	0.07	0.2	0.2 ug/L
			Total Svoc :	9.60				
			Total Concentration:	9.60				
Client ID : RW5-SP100-20250108DL								
Q1040-01DL	RW5-SP100-20250108DI	WATER	1,4-Dioxane	10.200	D	0.34	1	1 ug/L
			Total Svoc :	10.20				
			Total Concentration:	10.20				



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
Analytical Method:	SW8270ESIM		% Solid:	0
Sample Wt/Vol:	990	Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-SIMGroup1
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035906.D	1	01/10/25 08:10	01/10/25 17:45	PB166005

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	9.60	E	0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.42		30 - 150		105%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.47		30 - 150		118%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.46	*	55 - 111		114%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.44	*	53 - 106		111%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.52		58 - 132		131%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1120	7.832				
1146-65-2	Naphthalene-d8	2160	10.622				
15067-26-2	Acenaphthene-d10	1000	14.463				
1517-22-2	Phenanthrene-d10	1940	17.199				
1719-03-5	Chrysene-d12	1720	21.376				
1520-96-3	Perylene-d12	1970	23.681				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-SP100-20250108DL	SDG No.:	Q1040
Lab Sample ID:	Q1040-01DL	Matrix:	Water
Analytical Method:	SW8270ESIM	% Solid:	0
Sample Wt/Vol:	990 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035916.D	5	01/10/25 08:10	01/13/25 11:20	PB166005

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	10.2	D	0.34	1.00	1.00	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.50		30 - 150		125%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.55		30 - 150		136%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.59	*	55 - 111		147%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.50	*	53 - 106		125%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.62	*	58 - 132		154%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	870		7.832			
1146-65-2	Naphthalene-d8	1610		10.622			
15067-26-2	Acenaphthene-d10	789		14.463			
1517-22-2	Phenanthrene-d10	1570		17.199			
1719-03-5	Chrysene-d12	1410		21.376			
1520-96-3	Perylene-d12	1620		23.681			

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J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-SP201-20250108	SDG No.:	Q1040
Lab Sample ID:	Q1040-02	Matrix:	Water
Analytical Method:	SW8270ESIM	% Solid:	0
Sample Wt/Vol:	980 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035907.D	1	01/10/25 08:10	01/10/25 18:21	PB166005

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.20	U	0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.42		30 - 150		105%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.44		30 - 150		110%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.46	*	55 - 111		114%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.44	*	53 - 106		110%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.47		58 - 132		117%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1150	7.832				
1146-65-2	Naphthalene-d8	2170	10.622				
15067-26-2	Acenaphthene-d10	1030	14.463				
1517-22-2	Phenanthrene-d10	1980	17.199				
1719-03-5	Chrysene-d12	1700	21.376				
1520-96-3	Perylene-d12	1980	23.683				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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
Analytical Method:	SW8270ESIM	% Solid:	0
Sample Wt/Vol:	970 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035908.D	1	01/10/25 08:10	01/10/25 18:56	PB166005

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.21	U	0.070	0.21	0.21	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.41		30 - 150		102%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.47		30 - 150		117%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.43		55 - 111		107%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.43	*	53 - 106		108%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.52		58 - 132		129%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	888	7.832				
1146-65-2	Naphthalene-d8	1710	10.622				
15067-26-2	Acenaphthene-d10	800	14.458				
1517-22-2	Phenanthrene-d10	1630	17.206				
1719-03-5	Chrysene-d12	1390	21.385				
1520-96-3	Perylene-d12	1540	23.686				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



QC SUMMARY

Surrogate Summary

SW-846

SDG No.: Q1040

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
PB166005BL	PB166005BL	2-Methylnaphthalene-d10	0.4	0.46	114		30	150
		Fluoranthene-d10	0.4	0.48	119		30	150
		Nitrobenzene-d5	0.4	0.49	123	*	55	111
		2-Fluorobiphenyl	0.4	0.45	111	*	53	106
		Terphenyl-d14	0.4	0.48	120		58	132
PB166005BS	PB166005BS	2-Methylnaphthalene-d10	0.4	0.47	116		30	150
		Fluoranthene-d10	0.4	0.45	111		30	150
		Nitrobenzene-d5	0.4	0.50	126	*	55	111
		2-Fluorobiphenyl	0.4	0.48	119	*	53	106
		Terphenyl-d14	0.4	0.48	120		58	132
PB166005BSD	PB166005BSD	2-Methylnaphthalene-d10	0.4	0.48	119		30	150
		Fluoranthene-d10	0.4	0.45	113		30	150
		Nitrobenzene-d5	0.4	0.50	124	*	55	111
		2-Fluorobiphenyl	0.4	0.47	118	*	53	106
		Terphenyl-d14	0.4	0.48	119		58	132
Q1040-01	RW5-SP100-20250108	2-Methylnaphthalene-d10	0.4	0.42	105		30	150
		Fluoranthene-d10	0.4	0.47	118		30	150
		Nitrobenzene-d5	0.4	0.46	114	*	55	111
		2-Fluorobiphenyl	0.4	0.44	111	*	53	106
		Terphenyl-d14	0.4	0.52	131		58	132
Q1040-01DL	RW5-SP100-20250108DL	2-Methylnaphthalene-d10	0.4	0.50	125		30	150
		Fluoranthene-d10	0.4	0.55	136		30	150
		Nitrobenzene-d5	0.4	0.59	147	*	55	111
		2-Fluorobiphenyl	0.4	0.50	125	*	53	106
		Terphenyl-d14	0.4	0.62	154	*	58	132
Q1040-02	RW5-SP201-20250108	2-Methylnaphthalene-d10	0.4	0.42	105		30	150
		Fluoranthene-d10	0.4	0.44	110		30	150
		Nitrobenzene-d5	0.4	0.46	114	*	55	111
		2-Fluorobiphenyl	0.4	0.44	110	*	53	106
		Terphenyl-d14	0.4	0.47	117		58	132
Q1040-03	RW5-SP303-20250108	2-Methylnaphthalene-d10	0.4	0.41	102		30	150
		Fluoranthene-d10	0.4	0.47	117		30	150
		Nitrobenzene-d5	0.4	0.43	107		55	111
		2-Fluorobiphenyl	0.4	0.43	108	*	53	106
		Terphenyl-d14	0.4	0.52	129		58	132

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1040

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified **DataFile:** BN035911.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB166005BSD	1,4-Dioxane	0.4	0.40	ug/L	100	2			70	130	20

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1040

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified DataFile: BN035917.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Limits		RPD
								Qual	Low	High	
PB166005BS	1,4-Dioxane	0.4	0.41	ug/L	103				70	130	

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB166005BL

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM Case No.: Q1040

SAS No.: Q1040 SDG NO.: Q1040

Lab File ID: BN035915.D

Lab Sample ID: PB166005BL

Instrument ID: BNA_N

Date Extracted: 01/10/2025

Matrix: (soil/water) Water

Date Analyzed: 01/13/2025

Level: (low/med) LOW

Time Analyzed: 10:44

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB166005BS	PB166005BS	BN035917.D	01/13/2025
PB166005BSD	PB166005BSD	BN035911.D	01/10/2025
RW5-SP100-20250108	Q1040-01	BN035906.D	01/10/2025
RW5-SP201-20250108	Q1040-02	BN035907.D	01/10/2025
RW5-SP303-20250108	Q1040-03	BN035908.D	01/10/2025

COMMENTS: _____

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: Q1040

SDG NO.: Q1040

Lab File ID: BN035870.D

DFTPP Injection Date: 01/02/2025

Instrument ID: BNA_N

DFTPP Injection Time: 10:49

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	39.9
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	39
70	Less than 2.0% of mass 69	0.3 (0.7) 1
127	10.0 - 80.0% of mass 198	43.4
197	Less than 2.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.2
275	10.0 - 60.0% of mass 198	25.6
365	Greater than 1% of mass 198	3.3
441	Present, but less than mass 443	9.5
442	Greater than 50% of mass 198	63
443	15.0 - 24.0% of mass 442	12.1 (19.3) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDICC0.1	SSTDICC0.1	BN035871.D	01/02/2025	11:28
SSTDICC0.2	SSTDICC0.2	BN035872.D	01/02/2025	12:04
SSTDICCC0.4	SSTDICCC0.4	BN035873.D	01/02/2025	12:40
SSTDICC0.8	SSTDICC0.8	BN035874.D	01/02/2025	13:16
SSTDICC1.6	SSTDICC1.6	BN035875.D	01/02/2025	13:52
SSTDICC3.2	SSTDICC3.2	BN035876.D	01/02/2025	14:28
SSTDICC5.0	SSTDICC5.0	BN035877.D	01/02/2025	15:04

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: Q1040

SDG NO.: Q1040

Lab File ID: BN035903.D

DFTPP Injection Date: 01/10/2025

Instrument ID: BNA_N

DFTPP Injection Time: 12:38

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	50.6
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	46.1
70	Less than 2.0% of mass 69	0.3 (0.6) 1
127	10.0 - 80.0% of mass 198	47.5
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	25.4
365	Greater than 1% of mass 198	4
441	Present, but less than mass 443	8.4
442	Greater than 50% of mass 198	54.2
443	15.0 - 24.0% of mass 442	10.3 (19.1) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDCCC0.4	SSTDCCC0.4	BN035904.D	01/10/2025	13:17
RW5-SP100-20250108	Q1040-01	BN035906.D	01/10/2025	17:45
RW5-SP201-20250108	Q1040-02	BN035907.D	01/10/2025	18:21
RW5-SP303-20250108	Q1040-03	BN035908.D	01/10/2025	18:56
PB166005BSD	PB166005BSD	BN035911.D	01/10/2025	20:44
SSTDCCC0.4EC	SSTDCCC0.4	BN035912.D	01/10/2025	21:20

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: Q1040

SDG NO.: Q1040

Lab File ID: BN035913.D

DFTPP Injection Date: 01/13/2025

Instrument ID: BNA_N

DFTPP Injection Time: 09:28

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	52
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	46.2
70	Less than 2.0% of mass 69	0.3 (0.7) 1
127	10.0 - 80.0% of mass 198	47.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.1
275	10.0 - 60.0% of mass 198	24.6
365	Greater than 1% of mass 198	4.2
441	Present, but less than mass 443	9.2
442	Greater than 50% of mass 198	59.8
443	15.0 - 24.0% of mass 442	11.2 (18.8) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDCCC0.4	SSTDCCC0.4	BN035914.D	01/13/2025	10:07
PB166005BL	PB166005BL	BN035915.D	01/13/2025	10:44
RW5-SP100-20250108DL	Q1040-01DL	BN035916.D	01/13/2025	11:20
PB166005BS	PB166005BS	BN035917.D	01/13/2025	11:56
SSTDCCC0.4EC	SSTDCCC0.4	BN035918.D	01/13/2025	12:37

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1040 SAS No.: Q1040 SDG NO.: Q1040

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 01/10/2025

Lab File ID: BN035904.D Time Analyzed: 13:17

Instrument ID: BNA_N GC Column: ZB-GR ID: 0.25 (mm)

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	1524	7.832	2846	10.62	1400	14.46
UPPER LIMIT	3048	8.332	5692	11.122	2800	14.963
LOWER LIMIT	762	7.332	1423	10.122	700	13.963
EPA SAMPLE NO.						
01 RW5-SP100-20250108	1117	7.83	2161	10.62	1003	14.46
02 RW5-SP201-20250108	1151	7.83	2169	10.62	1026	14.46
03 RW5-SP303-20250108	888	7.83	1708	10.62	800	14.46
04 PB166005BSD	848	7.83	1569	10.62	773	14.46

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1040 SAS No.: Q1040 SDG NO.: Q1040

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 01/10/2025

Lab File ID: BN035904.D Time Analyzed: 13:17

Instrument ID: BNA_N GC Column: ZB-GR ID: 0.25 (mm)

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	2590	17.199	2090	21.385	2349	23.684
UPPER LIMIT	5180	17.699	4180	21.885	4698	24.184
LOWER LIMIT	1295	16.699	1045	20.885	1174.5	23.184
EPA SAMPLE NO.						
01 RW5-SP100-20250108	1938	17.20	1723	21.38	1969	23.68
02 RW5-SP201-20250108	1977	17.20	1700	21.38	1984	23.68
03 RW5-SP303-20250108	1628	17.21	1388	21.39	1542	23.69
04 PB166005BSD	1389	17.20	1178	21.39	1390	23.69

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1040 SAS No.: Q1040 SDG NO.: Q1040

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 01/13/2025

Lab File ID: BN035914.D Time Analyzed: 10:07

Instrument ID: BNA_N GC Column: ZB-GR ID: 0.25 (mm)

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	1245	7.832	2271	10.62	1028	14.46
UPPER LIMIT	2490	8.332	4542	11.122	2056	14.963
LOWER LIMIT	622.5	7.332	1135.5	10.122	514	13.963
EPA SAMPLE NO.						
01 PB166005BL	1369	7.83	2542	10.62	1264	14.46
02 RW5-SP100-20250108DL	870	7.83	1614	10.62	789	14.46
03 PB166005BS	934	7.83	1774	10.62	843	14.46

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1040 SAS No.: Q1040 SDG NO.: Q1040

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 01/13/2025

Lab File ID: BN035914.D Time Analyzed: 10:07

Instrument ID: BNA_N GC Column: ZB-GR ID: 0.25 (mm)

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	1955	17.199	1568	21.376	1851	23.681
UPPER LIMIT	3910	17.699	3136	21.876	3702	24.181
LOWER LIMIT	977.5	16.699	784	20.876	925.5	23.181
EPA SAMPLE NO.						
01 PB166005BL	2501	17.21	2263	21.38	2548	23.69
02 RW5-SP100-20250108DL	1568	17.20	1407	21.38	1618	23.68
03 PB166005BS	1498	17.20	1254	21.38	1525	23.68

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.



QC SAMPLE DATA

Report of Analysis

Client:	Tetra Tech NUS, Inc.		Date Collected:	
Project:	RW5B FT WC - # 112G08005-WE13		Date Received:	
Client Sample ID:	PB166005BL		SDG No.:	Q1040
Lab Sample ID:	PB166005BL		Matrix:	Water
Analytical Method:	SW8270ESIM		% Solid:	0
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-SIMGroup1
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035915.D	1	01/10/25 08:10	01/13/25 10:44	PB166005

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.20	U	0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.46		30 - 150		114%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.48		30 - 150		119%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.49	*	55 - 111		123%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.45	*	53 - 106		111%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.48		58 - 132		120%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1370		7.832			
1146-65-2	Naphthalene-d8	2540		10.622			
15067-26-2	Acenaphthene-d10	1260		14.458			
1517-22-2	Phenanthrene-d10	2500		17.206			
1719-03-5	Chrysene-d12	2260		21.376			
1520-96-3	Perylene-d12	2550		23.686			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	Tetra Tech NUS, Inc.		Date Collected:	
Project:	RW5B FT WC - # 112G08005-WE13		Date Received:	
Client Sample ID:	PB166005BS		SDG No.:	Q1040
Lab Sample ID:	PB166005BS		Matrix:	Water
Analytical Method:	SW8270ESIM		% Solid:	0
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-SIMGroup1
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035917.D	1	01/10/25 08:10	01/13/25 11:56	PB166005

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.41		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.47		30 - 150		116%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.45		30 - 150		111%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.50	*	55 - 111		126%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.48	*	53 - 106		119%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.48		58 - 132		120%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	934		7.832			
1146-65-2	Naphthalene-d8	1770		10.622			
15067-26-2	Acenaphthene-d10	843		14.463			
1517-22-2	Phenanthrene-d10	1500		17.199			
1719-03-5	Chrysene-d12	1250		21.376			
1520-96-3	Perylene-d12	1530		23.68			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	Tetra Tech NUS, Inc.		Date Collected:		
Project:	RW5B FT WC - # 112G08005-WE13		Date Received:		
Client Sample ID:	PB166005BSD		SDG No.:	Q1040	
Lab Sample ID:	PB166005BSD		Matrix:	Water	
Analytical Method:	SW8270ESIM		% Solid:	0	
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1000	uL
Soil Aliquot Vol:		uL	Test:	SVOC-SIMGroup1	
Extraction Type :		Decanted : N	Level :	LOW	
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N	PH :
Prep Method :					

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035911.D	1	01/10/25 08:10	01/10/25 20:44	PB166005

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.40		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.48		30 - 150		119%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.45		30 - 150		113%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.50	*	55 - 111		124%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.47	*	53 - 106		118%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.48		58 - 132		119%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	848		7.832			
1146-65-2	Naphthalene-d8	1570		10.622			
15067-26-2	Acenaphthene-d10	773		14.463			
1517-22-2	Phenanthrene-d10	1390		17.199			
1719-03-5	Chrysene-d12	1180		21.385			
1520-96-3	Perylene-d12	1390		23.686			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



CALIBRATION SUMMARY

Method Path : Z:\svoasrv\HPCHEM1\BNA_N\Methods\
 Method File : 8270-SIM-BN010225.M
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 Last Update : Thu Jan 02 15:39:17 2025
 Response Via : Initial Calibration

Calibration Files

0.1 =BN035871.D 0.2 =BN035872.D 0.4 =BN035873.D 0.8 =BN035874.D 1.6 =BN035875.D 3.2 =BN035876.D 5.0 =BN035877.D

	Compound	0.1	0.2	0.4	0.8	1.6	3.2	5.0	Avg	%RSD

1) I	1,4-Dichlorobenzen...	-----ISTD-----								
2)	1,4-Dioxane	0.454	0.422	0.373	0.388	0.391	0.377	0.377	0.397	7.52
3)	n-Nitrosodimet...	0.707	0.674	0.676	0.690	0.722	0.690	0.692	0.693	2.45
4) S	2-Fluorophenol	1.031	1.009	0.952	0.958	0.997	0.956	0.968	0.981	3.13
5) S	Phenol-d6	1.351	1.255	1.180	1.197	1.215	1.163	1.170	1.219	5.44
6)	bis(2-Chloroet...	1.001	0.946	0.936	0.913	0.938	0.886	0.879	0.929	4.43
7) I	Naphthalene-d8	-----ISTD-----								
8) S	Nitrobenzene-d5	0.346	0.307	0.296	0.302	0.319	0.317	0.330	0.317	5.48
9)	Naphthalene	1.163	1.094	1.086	1.096	1.167	1.113	1.141	1.123	3.00
10)	Hexachlorobuta...	0.368	0.354	0.353	0.363	0.382	0.362	0.369	0.365	2.74
11) SURR2	Methylnaphth...	0.547	0.536	0.527	0.519	0.556	0.524	0.540	0.536	2.50
12)	2-Methylnaphth...	0.691	0.654	0.685	0.680	0.731	0.701	0.722	0.695	3.75
13) I	Acenaphthene-d10	-----ISTD-----								
14) S	2,4,6-Tribromo...	0.164	0.165	0.189	0.189	0.207	0.211	0.220	0.192	11.39
15) S	2-Fluorobiphenyl	1.776	1.675	1.708	1.765	1.823	1.779	1.762	1.755	2.79
16)	Acenaphthylene	1.890	1.766	1.819	1.839	1.962	1.948	1.963	1.884	4.15
17)	Acenaphthene	1.187	1.162	1.198	1.232	1.300	1.275	1.291	1.235	4.43
18)	Fluorene	1.341	1.270	1.307	1.298	1.419	1.444	1.432	1.359	5.28
19) I	Phenanthrene-d10	-----ISTD-----								
20)	4,6-Dinitro-2-...	0.058	0.066	0.067	0.069	0.076	0.076	0.074	0.069	9.51
21)	4-Bromophenyl-...	0.265	0.269	0.268	0.267	0.290	0.283	0.279	0.274	3.47
22)	Hexachlorobenzene	0.393	0.369	0.356	0.362	0.394	0.373	0.371	0.374	3.93
23)	Atrazine	0.169	0.191	0.176	0.171	0.198	0.190	0.193	0.184	6.36
24)	Pentachlorophenol	0.141	0.101	0.118	0.122	0.143	0.148	0.153	0.132	14.40
25)	Phenanthrene	1.131	1.132	1.142	1.144	1.228	1.193	1.200	1.167	3.36
26)	Anthracene	0.996	0.998	1.008	1.033	1.137	1.132	1.130	1.062	6.34
27) SURR	Fluoranthene-d10	0.988	0.952	0.978	0.959	1.028	1.010	1.035	0.993	3.28
28)	Fluoranthene	1.268	1.253	1.330	1.312	1.441	1.446	1.475	1.361	6.71
29) I	Chrysene-d12	-----ISTD-----								
30)	Pyrene	1.606	1.620	1.571	1.612	1.711	1.621	1.627	1.624	2.63
31) S	Terphenyl-d14	0.814	0.813	0.790	0.777	0.828	0.776	0.781	0.797	2.64
32)	Benzo(a)anthra...	1.379	1.382	1.344	1.407	1.461	1.427	1.466	1.410	3.19
33)	Chrysene	1.484	1.458	1.441	1.451	1.541	1.478	1.471	1.475	2.24
34)	Bis(2-ethylhex...	0.691	0.583	0.582	0.541	0.569	0.519	0.530	0.574	10.05
35) I	Perylene-d12	-----ISTD-----								

Method Path : Z:\svoasrv\HPCHEM1\BNA_N\Methods\

Method File : 8270-SIM-BN010225.M

36)	Indeno(1,2,3-c...	1.428	1.461	1.414	1.578	1.697	1.712	1.751	1.577	9.15
37)	Benzo(b)fluora...	1.337	1.304	1.294	1.351	1.466	1.420	1.447	1.374	5.06
38)	Benzo(k)fluora...	1.279	1.254	1.251	1.344	1.469	1.442	1.482	1.360	7.55
39) C	Benzo(a)pyrene	1.099	1.181	1.086	1.163	1.270	1.244	1.284	1.190	6.71
40)	Dibenzo(a,h)an...	1.145	1.152	1.106	1.251	1.363	1.365	1.402	1.255	9.75
41)	Benzo(g,h,i)pe...	1.335	1.316	1.245	1.407	1.490	1.501	1.530	1.403	7.72

(#) = Out of Range

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: Q1040 SAS No.: Q1040 SDG No.: Q1040

Instrument ID: BNA_N Calibration Date/Time: 01/10/2025 13:17

Lab File ID: BN035904.D Init. Calib. Date(s): 01/02/2025 01/02/2025

EPA Sample No.: SSTDCCC0.4 Init. Calib. Time(s): 11:28 15:04

GC Column: ZB-GR ID: 0.25 (mm)

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.536	0.503		-6.2	20.0
Fluoranthene-d10	0.993	0.942		-5.1	20.0
2-Fluorophenol	0.981	0.965		-1.6	20.0
Phenol-d6	1.219	1.165		-4.4	20.0
Nitrobenzene-d5	0.317	0.347		9.5	20.0
2-Fluorobiphenyl	1.755	1.724		-1.8	20.0
2,4,6-Tribromophenol	0.192	0.204		6.3	20.0
Terphenyl-d14	0.797	0.773		-3.0	20.0
1,4-Dioxane	0.397	0.432		8.8	20.0

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: Q1040 SAS No.: Q1040 SDG No.: Q1040

Instrument ID: BNA_N Calibration Date/Time: 01/10/2025 21:20

Lab File ID: BN035912.D Init. Calib. Date(s): 01/02/2025 01/02/2025

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 11:28 15:04

GC Column: ZB-GR ID: 0.25 (mm)

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.536	0.515		-3.9	50.0
Fluoranthene-d10	0.993	0.961		-3.2	50.0
2-Fluorophenol	0.981	0.915		-6.7	50.0
Phenol-d6	1.219	1.137		-6.8	50.0
Nitrobenzene-d5	0.317	0.351		10.7	50.0
2-Fluorobiphenyl	1.755	1.801		2.6	50.0
2,4,6-Tribromophenol	0.192	0.220		14.6	50.0
Terphenyl-d14	0.797	0.765		-4.0	50.0
1,4-Dioxane	0.397	0.410		3.3	50.0

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: Q1040 SAS No.: Q1040 SDG No.: Q1040

Instrument ID: BNA_N Calibration Date/Time: 01/13/2025 10:07

Lab File ID: BN035914.D Init. Calib. Date(s): 01/02/2025 01/02/2025

EPA Sample No.: SSTDCCC0.4 Init. Calib. Time(s): 11:28 15:04

GC Column: ZB-GR ID: 0.25 (mm)

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.536	0.496		-7.5	20.0
Fluoranthene-d10	0.993	0.914		-8.0	20.0
2-Fluorophenol	0.981	0.937		-4.5	20.0
Phenol-d6	1.219	1.133		-7.1	20.0
Nitrobenzene-d5	0.317	0.355		12.0	20.0
2-Fluorobiphenyl	1.755	1.826		4.0	20.0
2,4,6-Tribromophenol	0.192	0.220		14.6	20.0
Terphenyl-d14	0.797	0.760		-4.6	20.0
1,4-Dioxane	0.397	0.435		9.6	20.0

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: Q1040 SAS No.: Q1040 SDG No.: Q1040

Instrument ID: BNA_N Calibration Date/Time: 01/13/2025 12:37

Lab File ID: BN035918.D Init. Calib. Date(s): 01/02/2025 01/02/2025

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 11:28 15:04

GC Column: ZB-GR ID: 0.25 (mm)

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.536	0.510		-4.9	50.0
Fluoranthene-d10	0.993	1.002		0.9	50.0
2-Fluorophenol	0.981	0.917		-6.5	50.0
Phenol-d6	1.219	1.099		-9.8	50.0
Nitrobenzene-d5	0.317	0.338		6.6	50.0
2-Fluorobiphenyl	1.755	1.756		0.1	50.0
2,4,6-Tribromophenol	0.192	0.251		30.7	50.0
Terphenyl-d14	0.797	0.778		-2.4	50.0
1,4-Dioxane	0.397	0.342		-13.9	50.0

All other compounds must meet a minimum RRF of 0.010.



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,
Fax : 908 789 8922

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



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

Metals

- 2b -

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



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

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
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

- 4 -

INTERFERENCE CHECK SAMPLE

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

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
- 5a -
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

- 5a -

MATRIX SPIKE DUPLICATE SUMMARY

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

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

- 6 -

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

- 6 -

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



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Client:	<u>Tetra Tech NUS, Inc.</u>	SDG No.:	<u>Q1040</u>				
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
-9 -
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

- 11 -

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

- 11 -

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

- 11 -

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

- 11 -

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

- 11 -

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:				
		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