

LAB CHRONICLE

OrderID:	P5166	OrderDate:	12/6/2024 1:09:00 PM
Client:	Tetra Tech NUS, Inc.	Project:	CTO WE13
Contact:	Ernie Wu	Location:	L51

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5166-04	RW5-SP100-20241206	Water			12/06/24			12/06/24
			SVOC-SIMGroup1	8270-Modified		12/09/24	12/09/24	
P5166-04DL	RW5-SP100-20241206DL	Water			12/06/24			12/06/24
			SVOC-SIMGroup1	8270-Modified		12/09/24	12/10/24	
P5166-05	RW5-SP201-20241206	Water			12/06/24			12/06/24
			SVOC-SIMGroup1	8270-Modified		12/09/24	12/09/24	
P5166-06	RW5-SP303-20241206	Water			12/06/24			12/06/24
			SVOC-SIMGroup1	8270-Modified		12/09/24	12/09/24	



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

Hit Summary Sheet SW-846

SDG No.: P5166
Client: Tetra Tech NUS, Inc.

Sample ID	Client ID	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : RW5-SP100-20241206								
P5166-04	RW5-SP100-20241206	WATER	1,4-Dioxane	8.400	E	0.07	0.2	0.2 ug/L
			Total Svoc :			8.40		
			Total Concentration:			8.40		
Client ID : RW5-SP100-20241206DL								
P5166-04DL	RW5-SP100-20241206DI	WATER	1,4-Dioxane	8.800	D	0.34	1	1 ug/L
			Total Svoc :			8.80		
			Total Concentration:			8.80		



SAMPLE DATA

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	12/06/24
Project:	CTO WE13	Date Received:	12/06/24
Client Sample ID:	RW5-SP100-20241206	SDG No.:	P5166
Lab Sample ID:	P5166-04	Matrix:	Water
Analytical Method:	SW8270SIM	% 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 :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035517.D	1	12/09/24 11:27	12/09/24 21:19	PB165497

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	8.40	E	0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.35		30 - 150		87%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.40		30 - 150		100%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.37		55 - 111		94%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.33		53 - 106		83%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.55	*	58 - 132		138%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1840	7.301				
1146-65-2	Naphthalene-d8	4850	10.041				
15067-26-2	Acenaphthene-d10	3620	13.957				
1517-22-2	Phenanthrene-d10	9120	16.723				
1719-03-5	Chrysene-d12	7610	20.965				
1520-96-3	Perylene-d12	7090	23.062				

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:	12/06/24
Project:	CTO WE13	Date Received:	12/06/24
Client Sample ID:	RW5-SP100-20241206DL	SDG No.:	P5166
Lab Sample ID:	P5166-04DL	Matrix:	Water
Analytical Method:	SW8270SIM	% 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 :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035527.D	5	12/09/24 11:27	12/10/24 10:45	PB165497

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	8.80	D	0.34	1.00	1.00	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.35		30 - 150		86%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.39		30 - 150		96%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.32		55 - 111		79%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.31		53 - 106		77%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.57	*	58 - 132		142%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1780		7.301			
1146-65-2	Naphthalene-d8	4600		10.041			
15067-26-2	Acenaphthene-d10	3510		13.957			
1517-22-2	Phenanthrene-d10	9370		16.736			
1719-03-5	Chrysene-d12	6990		20.974			
1520-96-3	Perylene-d12	6330		23.067			

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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:	12/06/24
Project:	CTO WE13	Date Received:	12/06/24
Client Sample ID:	RW5-SP201-20241206	SDG No.:	P5166
Lab Sample ID:	P5166-05	Matrix:	Water
Analytical Method:	SW8270SIM	% 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 :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035518.D	1	12/09/24 11:27	12/09/24 21:55	PB165497

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	0.37		30 - 150		94%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.44		30 - 150		110%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.39		55 - 111		98%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.36		53 - 106		91%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.66	*	58 - 132		165%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1760	7.301				
1146-65-2	Naphthalene-d8	4810	10.041				
15067-26-2	Acenaphthene-d10	3560	13.957				
1517-22-2	Phenanthrene-d10	8360	16.723				
1719-03-5	Chrysene-d12	7090	20.965				
1520-96-3	Perylene-d12	6750	23.059				

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MDL = Method Detection Limit

LOD = Limit of Detection

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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:	12/06/24
Project:	CTO WE13	Date Received:	12/06/24
Client Sample ID:	RW5-SP303-20241206	SDG No.:	P5166
Lab Sample ID:	P5166-06	Matrix:	Water
Analytical Method:	SW8270SIM	% 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 :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035519.D	1	12/09/24 11:27	12/09/24 22:31	PB165497

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	0.45		30 - 150		112%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.52		30 - 150		129%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.45	*	55 - 111		113%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.41		53 - 106		103%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.74	*	58 - 132		184%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1260	7.301				
1146-65-2	Naphthalene-d8	3410	10.041				
15067-26-2	Acenaphthene-d10	2620	13.957				
1517-22-2	Phenanthrene-d10	6480	16.723				
1719-03-5	Chrysene-d12	5570	20.974				
1520-96-3	Perylene-d12	5310	23.065				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

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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

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* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



QC SUMMARY

Surrogate Summary

SW-846

SDG No.: **P5166**

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

Analytical Method: **8270-Modified**

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
P5166-04	RW5-SP100-20241206	2-Methylnaphthalene-d10	0.4	0.35	87		30	150
		Fluoranthene-d10	0.4	0.40	100		30	150
		Nitrobenzene-d5	0.4	0.37	94		55	111
		2-Fluorobiphenyl	0.4	0.33	83		53	106
		Terphenyl-d14	0.4	0.55	138	*	58	132
P5166-04DL	RW5-SP100-20241206DL	2-Methylnaphthalene-d10	0.4	0.35	86		30	150
		Fluoranthene-d10	0.4	0.39	96		30	150
		Nitrobenzene-d5	0.4	0.32	79		55	111
		2-Fluorobiphenyl	0.4	0.31	77		53	106
		Terphenyl-d14	0.4	0.57	142	*	58	132
P5166-05	RW5-SP201-20241206	2-Methylnaphthalene-d10	0.4	0.37	94		30	150
		Fluoranthene-d10	0.4	0.44	110		30	150
		Nitrobenzene-d5	0.4	0.39	98		55	111
		2-Fluorobiphenyl	0.4	0.36	91		53	106
		Terphenyl-d14	0.4	0.66	165	*	58	132
P5166-06	RW5-SP303-20241206	2-Methylnaphthalene-d10	0.4	0.45	112		30	150
		Fluoranthene-d10	0.4	0.52	129		30	150
		Nitrobenzene-d5	0.4	0.45	113	*	55	111
		2-Fluorobiphenyl	0.4	0.41	103		53	106
		Terphenyl-d14	0.4	0.74	184	*	58	132
PB165497BL	PB165497BL	2-Methylnaphthalene-d10	0.4	0.46	114		30	150
		Fluoranthene-d10	0.4	0.45	112		30	150
		Nitrobenzene-d5	0.4	0.45	113	*	55	111
		2-Fluorobiphenyl	0.4	0.43	106		53	106
		Terphenyl-d14	0.4	0.56	141	*	58	132
PB165497BS	PB165497BS	2-Methylnaphthalene-d10	0.4	0.53	133		30	150
		Fluoranthene-d10	0.4	0.38	94		30	150
		Nitrobenzene-d5	0.4	0.41	102		55	111
		2-Fluorobiphenyl	0.4	0.40	101		53	106
		Terphenyl-d14	0.4	0.48	119		58	132
PB165497BSD	PB165497BSD	2-Methylnaphthalene-d10	0.4	0.53	133		30	150
		Fluoranthene-d10	0.4	0.37	91		30	150
		Nitrobenzene-d5	0.4	0.43	107		55	111
		2-Fluorobiphenyl	0.4	0.40	99		53	106
		Terphenyl-d14	0.4	0.48	119		58	132

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P5166

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified **DataFile:** BN035528.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Limits		RPD
								Qual	Low	High	
PB165497BS	1,4-Dioxane	0.4	0.36	ug/L	90				70	130	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P5166

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified **DataFile:** BN035529.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Limits		RPD
								Qual	Low	High	
PB165497BSD	1,4-Dioxane	0.4	0.35	ug/L	88	3			70	130	20

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB165497BL

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM Case No.: P5166

SAS No.: P5166 SDG NO.: P5166

Lab File ID: BN035511.D

Lab Sample ID: PB165497BL

Instrument ID: BNA_N

Date Extracted: 12/09/2024

Matrix: (soil/water) Water

Date Analyzed: 12/09/2024

Level: (low/med) LOW

Time Analyzed: 17:43

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
RW5-SP303-20241206	P5166-06	BN035519.D	12/09/2024
PB165497BS	PB165497BS	BN035528.D	12/10/2024
PB165497BSD	PB165497BSD	BN035529.D	12/10/2024
RW5-SP100-20241206	P5166-04	BN035517.D	12/09/2024
RW5-SP201-20241206	P5166-05	BN035518.D	12/09/2024

COMMENTS: _____

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P5166 SDG NO.: P5166

Lab File ID: BN035349.D

DFTPP Injection Date: 11/27/2024

Instrument ID: BNA_N

DFTPP Injection Time: 14:55

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	21.6
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	28.9
70	Less than 2.0% of mass 69	0.1 (0.4) 1
127	10.0 - 80.0% of mass 198	39.4
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	6.7
275	10.0 - 60.0% of mass 198	27.9
365	Greater than 1% of mass 198	4.6
441	Present, but less than mass 443	11.5
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	14 (19.7) 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	BN035350.D	11/27/2024	15:34
SSTDICC0.2	SSTDICC0.2	BN035351.D	11/27/2024	16:10
SSTDICCC0.4	SSTDICCC0.4	BN035352.D	11/27/2024	16:46
SSTDICC0.8	SSTDICC0.8	BN035353.D	11/27/2024	17:21
SSTDICC1.6	SSTDICC1.6	BN035354.D	11/27/2024	17:57
SSTDICC3.2	SSTDICC3.2	BN035355.D	11/27/2024	18:33
SSTDICC5.0	SSTDICC5.0	BN035356.D	11/27/2024	19:09

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P5166 SDG NO.: P5166

Lab File ID: BN035509.D

DFTPP Injection Date: 12/09/2024

Instrument ID: BNA_N

DFTPP Injection Time: 16:28

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24.4
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	33.2
70	Less than 2.0% of mass 69	0.1 (0.4) 1
127	10.0 - 80.0% of mass 198	41.6
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	7
275	10.0 - 60.0% of mass 198	27.3
365	Greater than 1% of mass 198	4.1
441	Present, but less than mass 443	9.8
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	12.1 (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	BN035510.D	12/09/2024	17:07
PB165497BL	PB165497BL	BN035511.D	12/09/2024	17:43
RW5-SP100-20241206	P5166-04	BN035517.D	12/09/2024	21:19
RW5-SP201-20241206	P5166-05	BN035518.D	12/09/2024	21:55
RW5-SP303-20241206	P5166-06	BN035519.D	12/09/2024	22:31
SSTDCCC0.4EC	SSTDCCC0.4	BN035523.D	12/10/2024	00:55

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P5166 SDG NO.: P5166

Lab File ID: BN035524.D

DFTPP Injection Date: 12/10/2024

Instrument ID: BNA_N

DFTPP Injection Time: 08:55

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24.6
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	33.3
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	41.8
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	7.1
275	10.0 - 60.0% of mass 198	27.3
365	Greater than 1% of mass 198	4.1
441	Present, but less than mass 443	10.1
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	12.2 (19.7) 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	BN035525.D	12/10/2024	09:33
RW5-SP100-20241206DL	P5166-04DL	BN035527.D	12/10/2024	10:45
PB165497BS	PB165497BS	BN035528.D	12/10/2024	11:21
PB165497BSD	PB165497BSD	BN035529.D	12/10/2024	12:03
SSTDCCC0.4EC	SSTDCCC0.4	BN035530.D	12/10/2024	12:40

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P5166 SAS No.: P5166 SDG NO.: P5166

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/09/2024

Lab File ID: BN035510.D Time Analyzed: 17:07

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	1975	7.3	5582	10.04	4021	13.96
UPPER LIMIT	3950	7.8	11164	10.541	8042	14.456
LOWER LIMIT	987.5	6.8	2791	9.541	2010.5	13.456
EPA SAMPLE NO.						
01 PB165497BL	1641	7.30	4578	10.05	3247	13.96
02 RW5-SP303-20241206	1257	7.30	3408	10.04	2615	13.96
03 RW5-SP100-20241206	1838	7.30	4853	10.04	3623	13.96
04 RW5-SP201-20241206	1759	7.30	4808	10.04	3560	13.96

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.: P5166 SAS No.: P5166 SDG NO.: P5166

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/09/2024

Lab File ID: BN035510.D Time Analyzed: 17:07

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	9077	16.723	8166	20.965	8385	23.059
UPPER LIMIT	18154	17.223	16332	21.465	16770	23.559
LOWER LIMIT	4538.5	16.223	4083	20.465	4192.5	22.559
EPA SAMPLE NO.						
01 PB165497BL	7570	16.74	6431	20.97	6251	23.07
02 RW5-SP303-20241206	6478	16.72	5571	20.97	5305	23.07
03 RW5-SP100-20241206	9117	16.72	7610	20.97	7094	23.06
04 RW5-SP201-20241206	8364	16.72	7094	20.97	6747	23.06

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.: P5166 SAS No.: P5166 SDG NO.: P5166

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/10/2024

Lab File ID: BN035525.D Time Analyzed: 09:33

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	2237	7.293	6161	10.04	4478	13.96
UPPER LIMIT	4474	7.793	12322	10.541	8956	14.457
LOWER LIMIT	1118.5	6.793	3080.5	9.541	2239	13.457
EPA SAMPLE NO.						
01 PB165497BSD	1941	7.29	5150	10.04	3668	13.96
02 PB165497BS	1669	7.30	4431	10.04	3092	13.96
03 RW5-SP100-20241206DL	1780	7.30	4601	10.04	3512	13.96

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.: P5166 SAS No.: P5166 SDG NO.: P5166

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/10/2024

Lab File ID: BN035525.D Time Analyzed: 09:33

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	11122	16.723	9383	20.965	8820	23.059
UPPER LIMIT	22244	17.223	18766	21.465	17640	23.559
LOWER LIMIT	5561	16.223	4691.5	20.465	4410	22.559
EPA SAMPLE NO.						
01 PB165497BSD	9298	16.72	7541	20.97	6738	23.06
02 PB165497BS	7959	16.72	6696	20.96	5945	23.06
03 RW5-SP100-20241206DL	9370	16.74	6994	20.97	6330	23.07

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:	CTO WE13		Date Received:	
Client Sample ID:	PB165497BL		SDG No.:	P5166
Lab Sample ID:	PB165497BL		Matrix:	Water
Analytical Method:	SW8270SIM		% 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 :	SW3510C			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035511.D	1	12/09/24 11:27	12/09/24 17:43	PB165497

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	0.45		30 - 150		112%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.45	*	55 - 111		113%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.43		53 - 106		106%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.56	*	58 - 132		141%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1640	7.3				
1146-65-2	Naphthalene-d8	4580	10.052				
15067-26-2	Acenaphthene-d10	3250	13.957				
1517-22-2	Phenanthrene-d10	7570	16.736				
1719-03-5	Chrysene-d12	6430	20.974				
1520-96-3	Perylene-d12	6250	23.067				

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:	CTO WE13		Date Received:	
Client Sample ID:	PB165497BS		SDG No.:	P5166
Lab Sample ID:	PB165497BS		Matrix:	Water
Analytical Method:	SW8270SIM		% 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 :	SW3510C			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035528.D	1	12/09/24 11:27	12/10/24 11:21	PB165497

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.36		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.53		30 - 150		133%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.38		30 - 150		94%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.41		55 - 111		102%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.40		53 - 106		101%	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	1670	7.3				
1146-65-2	Naphthalene-d8	4430	10.041				
15067-26-2	Acenaphthene-d10	3090	13.956				
1517-22-2	Phenanthrene-d10	7960	16.723				
1719-03-5	Chrysene-d12	6700	20.964				
1520-96-3	Perylene-d12	5950	23.058				

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:	CTO WE13		Date Received:		
Client Sample ID:	PB165497BSD		SDG No.:	P5166	
Lab Sample ID:	PB165497BSD		Matrix:	Water	
Analytical Method:	SW8270SIM		% 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 :	SW3510C				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035529.D	1	12/09/24 11:27	12/10/24 12:03	PB165497

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.35		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.53		30 - 150		133%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.37		30 - 150		91%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.43		55 - 111		107%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.40		53 - 106		99%	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	1940	7.293				
1146-65-2	Naphthalene-d8	5150	10.041				
15067-26-2	Acenaphthene-d10	3670	13.957				
1517-22-2	Phenanthrene-d10	9300	16.723				
1719-03-5	Chrysene-d12	7540	20.965				
1520-96-3	Perylene-d12	6740	23.062				

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-BN112724.M
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 Last Update : Wed Nov 27 23:03:24 2024
 Response Via : Initial Calibration

Calibration Files

0.1 =BN035350.D 0.2 =BN035351.D 0.4 =BN035352.D 0.8 =BN035353.D 1.6 =BN035354.D 3.2 =BN035355.D 5.0 =BN035356.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	0.406	0.417	0.376	0.380	0.392	0.357	0.348	0.382	6.52
3)	n-Nitrosodimet...	0.334	0.302	0.326	0.315	0.332	0.310	0.309	0.319	3.92
4) S	2-Fluorophenol	1.025	1.112	1.018	0.958	0.998	0.954	0.942	1.001	5.88
5) S	Phenol-d6	1.227	1.186	1.193	1.143	1.235	1.215	1.229	1.204	2.69
6)	bis(2-Chloroet...	1.035	1.021	0.992	0.993	1.051	0.997	0.991	1.012	2.39
7) I	Naphthalene-d8	-----ISTD-----								
8) S	Nitrobenzene-d5	0.227	0.232	0.235	0.248	0.257	0.251	0.261	0.244	5.31
9)	Naphthalene	1.062	1.029	1.047	1.032	1.096	1.049	1.070	1.055	2.22
10)	Hexachlorobuta...	0.245	0.242	0.247	0.241	0.255	0.236	0.238	0.243	2.60
11) SURR2	Methylnaphth...	0.591	0.603	0.619	0.615	0.659	0.639	0.656	0.626	4.16
12)	2-Methylnaphth...	0.724	0.716	0.740	0.747	0.795	0.771	0.795	0.755	4.25
13) I	Acenaphthene-d10	-----ISTD-----								
14) S	2,4,6-Tribromo...	0.273	0.258	0.257	0.268	0.293	0.311	0.328	0.284	9.67
15) S	2-Fluorobiphenyl	1.489	1.491	1.510	1.508	1.566	1.511	1.511	1.512	1.68
16)	Acenaphthylene	1.643	1.600	1.595	1.638	1.737	1.763	1.781	1.680	4.68
17)	Acenaphthene	1.121	1.084	1.086	1.108	1.145	1.122	1.140	1.115	2.17
18)	Fluorene	1.589	1.549	1.543	1.600	1.652	1.614	1.625	1.596	2.47
19) I	Phenanthrene-d10	-----ISTD-----								
20)	4,6-Dinitro-2-...	0.038	0.031	0.036	0.041	0.051			0.039	19.30
21)	4-Bromophenyl-...	0.226	0.218	0.226	0.233	0.249	0.242	0.244	0.234	4.85
22)	Hexachlorobenzene	0.265	0.266	0.273	0.276	0.288	0.278	0.277	0.275	2.82
23)	Atrazine	0.155	0.155	0.154	0.156	0.175	0.179	0.191	0.167	8.98
24)	Pentachlorophenol	0.140	0.090	0.095	0.103	0.121	0.136	0.150	0.120	19.86
25)	Phenanthrene	1.092	1.046	1.067	1.092	1.148	1.121	1.125	1.099	3.20
26)	Anthracene	0.964	0.923	0.940	0.973	1.050	1.042	1.064	0.994	5.76
27) SURR	Fluoranthene-d10	1.203	1.086	1.077	1.105	1.165	1.138	1.164	1.134	4.10
28)	Fluoranthene	1.538	1.396	1.416	1.456	1.539	1.497	1.526	1.481	3.99
29) I	Chrysene-d12	-----ISTD-----								
30)	Pyrene	1.583	1.445	1.475	1.443	1.519	1.440	1.431	1.477	3.79
31) S	Terphenyl-d14	0.832	0.777	0.791	0.771	0.812	0.772	0.769	0.789	3.08
32)	Benzo(a)anthra...	1.431	1.343	1.355	1.375	1.451	1.411	1.429	1.399	2.98
33)	Chrysene	1.463	1.452	1.441	1.415	1.487	1.422	1.420	1.443	1.84
34)	Bis(2-ethylhex...	0.710	0.558	0.516	0.505	0.520	0.516	0.544	0.553	12.96
35) I	Perylene-d12	-----ISTD-----								

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

Method File : 8270-SIM-BN112724.M

36)	Indeno(1,2,3-c...	1.411	1.489	1.532	1.554	1.660	1.615	1.685	1.564	6.22
37)	Benzo(b)fluora...	1.305	1.348	1.313	1.378	1.827	1.463	1.608	1.463	13.12
38)	Benzo(k)fluora...	1.444	1.376	1.402	1.419	1.527	1.447	1.468	1.440	3.39
39) C	Benzo(a)pyrene	1.204	1.156	1.146	1.171	1.256	1.232	1.271	1.205	4.11
40)	Dibenzo(a,h)an...	1.104	1.187	1.194	1.226	1.315	1.280	1.332	1.234	6.55
41)	Benzo(g,h,i)pe...	1.188	1.238	1.248	1.269	1.360	1.330	1.394	1.289	5.71

(#) = Out of Range

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: P5166 SAS No.: P5166 SDG No.: P5166

Instrument ID: BNA_N Calibration Date/Time: 12/09/2024 17:07

Lab File ID: BN035510.D Init. Calib. Date(s): 11/27/2024 11/27/2024

EPA Sample No.: SSTDCCC0.4 Init. Calib. Time(s): 15:34 19:09

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.626	0.627		0.2	20.0
Fluoranthene-d10	1.134	1.031		-9.1	20.0
2-Fluorophenol	1.001	1.045		4.4	20.0
Phenol-d6	1.204	1.324		10.0	20.0
Nitrobenzene-d5	0.244	0.260		6.6	20.0
2-Fluorobiphenyl	1.512	1.514		0.1	20.0
2,4,6-Tribromophenol	0.284	0.274		-3.5	20.0
Terphenyl-d14	0.789	0.816		3.4	20.0
1,4-Dioxane	0.382	0.363		-5.0	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.: P5166 SAS No.: P5166 SDG No.: P5166

Instrument ID: BNA_N Calibration Date/Time: 12/10/2024 00:55

Lab File ID: BN035523.D Init. Calib. Date(s): 11/27/2024 11/27/2024

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 15:34 19:09

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.626	0.625		-0.2	50.0
Fluoranthene-d10	1.134	1.005		-11.4	50.0
2-Fluorophenol	1.001	1.013		1.2	50.0
Phenol-d6	1.204	1.247		3.6	50.0
Nitrobenzene-d5	0.244	0.265		8.6	50.0
2-Fluorobiphenyl	1.512	1.447		-4.3	50.0
2,4,6-Tribromophenol	0.284	0.266		-6.3	50.0
Terphenyl-d14	0.789	0.812		2.9	50.0
1,4-Dioxane	0.382	0.386		1.0	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.: P5166 SAS No.: P5166 SDG No.: P5166

Instrument ID: BNA_N Calibration Date/Time: 12/10/2024 09:33

Lab File ID: BN035525.D Init. Calib. Date(s): 11/27/2024 11/27/2024

EPA Sample No.: SSTDCCC0.4 Init. Calib. Time(s): 15:34 19:09

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.626	0.622		-0.6	20.0
Fluoranthene-d10	1.134	0.995		-12.3	20.0
2-Fluorophenol	1.001	1.042		4.1	20.0
Phenol-d6	1.204	1.276		6.0	20.0
Nitrobenzene-d5	0.244	0.257		5.3	20.0
2-Fluorobiphenyl	1.512	1.496		-1.1	20.0
2,4,6-Tribromophenol	0.284	0.249		-12.3	20.0
Terphenyl-d14	0.789	0.834		5.7	20.0
1,4-Dioxane	0.382	0.382		0.0	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.: P5166 SAS No.: P5166 SDG No.: P5166

Instrument ID: BNA_N Calibration Date/Time: 12/10/2024 12:40

Lab File ID: BN035530.D Init. Calib. Date(s): 11/27/2024 11/27/2024

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 15:34 19:09

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.626	0.609		-2.7	50.0
Fluoranthene-d10	1.134	0.937		-17.4	50.0
2-Fluorophenol	1.001	0.987		-1.4	50.0
Phenol-d6	1.204	1.206		0.2	50.0
Nitrobenzene-d5	0.244	0.255		4.5	50.0
2-Fluorobiphenyl	1.512	1.456		-3.7	50.0
2,4,6-Tribromophenol	0.284	0.253		-10.9	50.0
Terphenyl-d14	0.789	0.823		4.3	50.0
1,4-Dioxane	0.382	0.377		-1.3	50.0

All other compounds must meet a minimum RRF of 0.010.