



LAB CHRONICLE

OrderID:	P5314	OrderDate:	12/17/2024 3:43:00 PM
Client:	Tetra Tech NUS, Inc.	Project:	CTO WE13
Contact:	Ernie Wu	Location:	L51,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5314-02	BP-VPB-190A-GW-678-680	Water			12/13/24			12/17/24
			SVOC-SIMGroup1	8270-Modified		12/18/24	12/23/24	
P5314-04	VPB190A-HYD-20241217	Water			12/17/24			12/17/24
			SVOC-SIMGroup1	8270-Modified		12/18/24	12/23/24	



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Hit Summary Sheet SW-846

SDG No.: P5314
Client: Tetra Tech NUS, Inc.

Sample ID	Client ID	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : BP-VPB-190A-GW-678-680								
P5314-02	BP-VPB-190A-GW-678-WATER	1,4-Dioxane	1.400		0.09	0.25	0.25	ug/L
		Total Svoc :		1.40				
		Total Concentration:		1.40				



SAMPLE DATA

Report of Analysis

Client:	Tetra Tech NUS, Inc.		Date Collected:	12/13/24
Project:	CTO WE13		Date Received:	12/17/24
Client Sample ID:	BP-VPB-190A-GW-678-680		SDG No.:	P5314
Lab Sample ID:	P5314-02		Matrix:	Water
Analytical Method:	SW8270ESIM		% Solid:	0
Sample Wt/Vol:	800	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
BN035785.D	1	12/18/24 12:50	12/23/24 15:41	PB165724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	1.40		0.090	0.25	0.25	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.39		30 - 150		96%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.41		30 - 150		101%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.41		55 - 111		102%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.39		53 - 106		97%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.56	*	58 - 132		140%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	3450	7.264				
1146-65-2	Naphthalene-d8	8950	10.009				
15067-26-2	Acenaphthene-d10	5550	13.924				
1517-22-2	Phenanthrene-d10	10300	16.698				
1719-03-5	Chrysene-d12	8360	20.947				
1520-96-3	Perylene-d12	8390	23.032				

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:	12/17/24
Project:	CTO WE13		Date Received:	12/17/24
Client Sample ID:	VPB190A-HYD-20241217		SDG No.:	P5314
Lab Sample ID:	P5314-04		Matrix:	Water
Analytical Method:	SW8270ESIM		% Solid:	0
Sample Wt/Vol:	940	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
BN035786.D	1	12/18/24 12:50	12/23/24 16:17	PB165724

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	0.13		30 - 150		34%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.17		30 - 150		43%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.42		55 - 111		104%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.43	*	53 - 106		107%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.68	*	58 - 132		170%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	4130		7.264			
1146-65-2	Naphthalene-d8	10900		10.009			
15067-26-2	Acenaphthene-d10	6410		13.925			
1517-22-2	Phenanthrene-d10	11600		16.698			
1719-03-5	Chrysene-d12	7750		20.947			
1520-96-3	Perylene-d12	5710		23.035			

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.: P5314

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
P5314-02	BP-VPB-190A-GW-678-680	2-Methylnaphthalene-d10	0.4	0.39	96		30	150
		Fluoranthene-d10	0.4	0.41	101		30	150
		Nitrobenzene-d5	0.4	0.41	102		55	111
		2-Fluorobiphenyl	0.4	0.39	97		53	106
		Terphenyl-d14	0.4	0.56	140	*	58	132
P5314-04	VPB190A-HYD-20241217	2-Methylnaphthalene-d10	0.4	0.13	34		30	150
		Fluoranthene-d10	0.4	0.17	43		30	150
		Nitrobenzene-d5	0.4	0.42	104		55	111
		2-Fluorobiphenyl	0.4	0.43	107	*	53	106
		Terphenyl-d14	0.4	0.68	170	*	58	132
PB165724BL	PB165724BL	2-Methylnaphthalene-d10	0.4	0.37	93		30	150
		Fluoranthene-d10	0.4	0.38	95		30	150
		Nitrobenzene-d5	0.4	0.46	114	*	55	111
		2-Fluorobiphenyl	0.4	0.38	96		53	106
		Terphenyl-d14	0.4	0.54	134	*	58	132
PB165724BS	PB165724BS	2-Methylnaphthalene-d10	0.4	0.56	139		30	150
		Fluoranthene-d10	0.4	0.44	109		30	150
		Nitrobenzene-d5	0.4	0.50	125	*	55	111
		2-Fluorobiphenyl	0.4	0.46	115	*	53	106
		Terphenyl-d14	0.4	0.50	125		58	132
PB165724BSD	PB165724BSD	2-Methylnaphthalene-d10	0.4	0.53	132		30	150
		Fluoranthene-d10	0.4	0.40	99		30	150
		Nitrobenzene-d5	0.4	0.56	140	*	55	111
		2-Fluorobiphenyl	0.4	0.47	116	*	53	106
		Terphenyl-d14	0.4	0.51	128		58	132

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P5314

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified **DataFile:** BN035764.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Limits		RPD
								Qual	Low	High	
PB165724BS	1,4-Dioxane	0.4	0.48	ug/L	120				70	130	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P5314

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified **DataFile:** BN035853.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB165724BSD	1,4-Dioxane	0.4	0.45	ug/L	113	6			70	130	20

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB165724BL

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM Case No.: P5314

SAS No.: P5314 SDG NO.: P5314

Lab File ID: BN035846.D

Lab Sample ID: PB165724BL

Instrument ID: BNA_N

Date Extracted: 12/18/2024

Matrix: (soil/water) Water

Date Analyzed: 12/26/2024

Level: (low/med) LOW

Time Analyzed: 10:35

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB165724BSD	PB165724BSD	BN035853.D	12/26/2024
PB165724BS	PB165724BS	BN035764.D	12/21/2024
BP-VPB-190A-GW-678-680	P5314-02	BN035785.D	12/23/2024
VPB190A-HYD-20241217	P5314-04	BN035786.D	12/23/2024

COMMENTS: _____

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P5314 SDG NO.: P5314

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.: P5314 SDG NO.: P5314

Lab File ID: BN035748.D

DFTPP Injection Date: 12/20/2024

Instrument ID: BNA_N

DFTPP Injection Time: 18:54

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	21.2
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	30
70	Less than 2.0% of mass 69	0.1 (0.5) 1
127	10.0 - 80.0% of mass 198	37.7
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	29.5
365	Greater than 1% of mass 198	4
441	Present, but less than mass 443	13.1
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	15.3 (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	BN035749.D	12/20/2024	19:33
PB165724BS	PB165724BS	BN035764.D	12/21/2024	04:34
SSTDCCC0.4EC	SSTDCCC0.4	BN035765.D	12/21/2024	05:10

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P5314 SDG NO.: P5314

Lab File ID: BN035775.D

DFTPP Injection Date: 12/23/2024

Instrument ID: BNA_N

DFTPP Injection Time: 09:43

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	23.6
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	31.2
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	39.7
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	29.2
365	Greater than 1% of mass 198	4.3
441	Present, but less than mass 443	14
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	16.4 (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	BN035776.D	12/23/2024	10:22
BP-VPB-190A-GW-678-680	P5314-02	BN035785.D	12/23/2024	15:41
VPB190A-HYD-20241217	P5314-04	BN035786.D	12/23/2024	16:17
SSTDCCC0.4EC	SSTDCCC0.4	BN035792.D	12/23/2024	19:51

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P5314 SDG NO.: P5314

Lab File ID: BN035844.D

DFTPP Injection Date: 12/26/2024

Instrument ID: BNA_N

DFTPP Injection Time: 09:19

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24
68	Less than 2.0% of mass 69	0.2 (0.6) 1
69	Mass 69 relative abundance	32.9
70	Less than 2.0% of mass 69	0.2 (0.5) 1
127	10.0 - 80.0% of mass 198	40
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	27.1
365	Greater than 1% of mass 198	3.9
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	14.1 (20.5) 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	BN035845.D	12/26/2024	09:58
PB165724BL	PB165724BL	BN035846.D	12/26/2024	10:35
PB165724BSD	PB165724BSD	BN035853.D	12/26/2024	14:54
SSTDCCC0.4EC	SSTDCCC0.4	BN035861.D	12/26/2024	19:41

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P5314 SAS No.: P5314 SDG NO.: P5314

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/20/2024

Lab File ID: BN035749.D Time Analyzed: 19:33

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	2885	7.272	7460	10.01	4592	13.93
UPPER LIMIT	5770	7.772	14920	10.509	9184	14.425
LOWER LIMIT	1442.5	6.772	3730	9.509	2296	13.425
EPA SAMPLE NO.						
01 PB165724BS	2647	7.27	6538	10.01	3740	13.92

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.: P5314 SAS No.: P5314 SDG NO.: P5314

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/20/2024

Lab File ID: BN035749.D Time Analyzed: 19:33

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	9182	16.698	7719	20.956	7943	23.038
UPPER LIMIT	18364	17.198	15438	21.456	15886	23.538
LOWER LIMIT	4591	16.198	3859.5	20.456	3971.5	22.538
EPA SAMPLE NO.						
01 PB165724BS	6891	16.70	6144	20.96	6576	23.04

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.: P5314 SAS No.: P5314 SDG NO.: P5314

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/23/2024

Lab File ID: BN035776.D Time Analyzed: 10:22

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	3884	7.264	10099	10.01	5893	13.92
UPPER LIMIT	7768	7.764	20198	10.509	11786	14.424
LOWER LIMIT	1942	6.764	5049.5	9.509	2946.5	13.424
EPA SAMPLE NO.						
01 BP-VPB-190A-GW-678-680	3452	7.26	8948	10.01	5551	13.92
02 VPB190A-HYD-20241217	4132	7.26	10947	10.01	6411	13.93

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.: P5314 SAS No.: P5314 SDG NO.: P5314

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/23/2024

Lab File ID: BN035776.D Time Analyzed: 10:22

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	11548	16.698	8770	20.947	8918	23.026
UPPER LIMIT	23096	17.198	17540	21.447	17836	23.526
LOWER LIMIT	5774	16.198	4385	20.447	4459	22.526
EPA SAMPLE NO.						
01 BP-VPB-190A-GW-678-680	10343	16.70	8364	20.95	8390	23.03
02 VPB190A-HYD-20241217	11585	16.70	7747	20.95	5708	23.04

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.: P5314 SAS No.: P5314 SDG NO.: P5314

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/26/2024

Lab File ID: BN035845.D Time Analyzed: 09:58

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	3755	7.257	9322	10.00	5387	13.91
UPPER LIMIT	7510	7.757	18644	10.499	10774	14.414
LOWER LIMIT	1877.5	6.757	4661	9.499	2693.5	13.414
EPA SAMPLE NO.						
01 PB165724BL	4513	7.26	10649	10.00	6575	13.92
02 PB165724BSD	2938	7.26	6908	10.00	3870	13.91

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.: P5314 SAS No.: P5314 SDG NO.: P5314

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/26/2024

Lab File ID: BN035845.D Time Analyzed: 09:58

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	11262	16.686	9932	20.938	10817	23.021
UPPER LIMIT	22524	17.186	19864	21.438	21634	23.521
LOWER LIMIT	5631	16.186	4966	20.438	5408.5	22.521
EPA SAMPLE NO.						
01 PB165724BL	14052	16.70	10269	20.95	9894	23.03
02 PB165724BSD	7401	16.70	5744	20.95	6254	23.02

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:	PB165724BL		SDG No.:	P5314	
Lab Sample ID:	PB165724BL		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
BN035846.D	1	12/18/24 12:50	12/26/24 10:35	PB165724

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		93%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.38		30 - 150		95%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.46	*	55 - 111		114%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.38		53 - 106		96%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.54	*	58 - 132		134%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	4510	7.257				
1146-65-2	Naphthalene-d8	10600	9.999				
15067-26-2	Acenaphthene-d10	6580	13.924				
1517-22-2	Phenanthrene-d10	14100	16.698				
1719-03-5	Chrysene-d12	10300	20.947				
1520-96-3	Perylene-d12	9890	23.029				

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:	PB165724BS		SDG No.:	P5314	
Lab Sample ID:	PB165724BS		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
BN035764.D	1	12/18/24 12:50	12/21/24 04:34	PB165724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.48		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.56		30 - 150		139%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.44		30 - 150		109%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.50	*	55 - 111		125%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.46	*	53 - 106		115%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.50		58 - 132		125%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2650	7.271				
1146-65-2	Naphthalene-d8	6540	10.009				
15067-26-2	Acenaphthene-d10	3740	13.924				
1517-22-2	Phenanthrene-d10	6890	16.698				
1719-03-5	Chrysene-d12	6140	20.955				
1520-96-3	Perylene-d12	6580	23.041				

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:	PB165724BSD		SDG No.:	P5314
Lab Sample ID:	PB165724BSD		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
BN035853.D	1	12/18/24 12:50	12/26/24 14:54	PB165724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.45		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.53		30 - 150		132%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.40		30 - 150		99%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.56	*	55 - 111		140%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.47	*	53 - 106		116%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.51		58 - 132		128%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2940	7.257				
1146-65-2	Naphthalene-d8	6910	9.999				
15067-26-2	Acenaphthene-d10	3870	13.914				
1517-22-2	Phenanthrene-d10	7400	16.698				
1719-03-5	Chrysene-d12	5740	20.947				
1520-96-3	Perylene-d12	6250	23.024				

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.: P5314 SAS No.: P5314 SDG No.: P5314

Instrument ID: BNA_N Calibration Date/Time: 12/20/2024 19:33

Lab File ID: BN035749.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	1.074		-5.3	20.0
2-Fluorophenol	1.001	1.021		2.0	20.0
Phenol-d6	1.204	1.178		-2.2	20.0
Nitrobenzene-d5	0.244	0.294		20.5	20.0
2-Fluorobiphenyl	1.512	1.560		3.2	20.0
2,4,6-Tribromophenol	0.284	0.235		-17.3	20.0
Terphenyl-d14	0.789	0.891		12.9	20.0
1,4-Dioxane	0.382	0.445		16.5	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.: P5314 SAS No.: P5314 SDG No.: P5314

Instrument ID: BNA_N Calibration Date/Time: 12/21/2024 05:10

Lab File ID: BN035765.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	0.578		-7.7	50.0
Fluoranthene-d10	1.134	0.989		-12.8	50.0
2-Fluorophenol	1.001	0.960		-4.1	50.0
Phenol-d6	1.204	1.094		-9.1	50.0
Nitrobenzene-d5	0.244	0.284		16.4	50.0
2-Fluorobiphenyl	1.512	1.389		-8.1	50.0
2,4,6-Tribromophenol	0.284	0.215		-24.3	50.0
Terphenyl-d14	0.789	0.863		9.4	50.0
1,4-Dioxane	0.382	0.439		14.9	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.: P5314 SAS No.: P5314 SDG No.: P5314

Instrument ID: BNA_N Calibration Date/Time: 12/23/2024 10:22

Lab File ID: BN035776.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	0.601		-4.0	20.0
Fluoranthene-d10	1.134	1.037		-8.6	20.0
2-Fluorophenol	1.001	1.009		0.7	20.0
Phenol-d6	1.204	1.111		-7.7	20.0
Nitrobenzene-d5	0.244	0.284		16.4	20.0
2-Fluorobiphenyl	1.512	1.601		5.9	20.0
2,4,6-Tribromophenol	0.284	0.205		-27.8	20.0
Terphenyl-d14	0.789	0.943		19.5	20.0
1,4-Dioxane	0.382	0.429		12.3	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.: P5314 SAS No.: P5314 SDG No.: P5314

Instrument ID: BNA_N Calibration Date/Time: 12/23/2024 19:51

Lab File ID: BN035792.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	0.557		-11.0	50.0
Fluoranthene-d10	1.134	0.972		-14.3	50.0
2-Fluorophenol	1.001	0.954		-4.7	50.0
Phenol-d6	1.204	1.061		-11.9	50.0
Nitrobenzene-d5	0.244	0.295		20.9	50.0
2-Fluorobiphenyl	1.512	1.518		0.4	50.0
2,4,6-Tribromophenol	0.284	0.220		-22.5	50.0
Terphenyl-d14	0.789	0.806		2.2	50.0
1,4-Dioxane	0.382	0.383		0.3	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.: P5314 SAS No.: P5314 SDG No.: P5314

Instrument ID: BNA_N Calibration Date/Time: 12/26/2024 09:58

Lab File ID: BN035845.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	0.545		-12.9	20.0
Fluoranthene-d10	1.134	0.991		-12.6	20.0
2-Fluorophenol	1.001	1.006		0.5	20.0
Phenol-d6	1.204	1.112		-7.6	20.0
Nitrobenzene-d5	0.244	0.298		22.1	20.0
2-Fluorobiphenyl	1.512	1.504		-0.5	20.0
2,4,6-Tribromophenol	0.284	0.248		-12.7	20.0
Terphenyl-d14	0.789	0.784		-0.6	20.0
1,4-Dioxane	0.382	0.405		6.0	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.: P5314 SAS No.: P5314 SDG No.: P5314

Instrument ID: BNA_N Calibration Date/Time: 12/26/2024 19:41

Lab File ID: BN035861.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	0.551		-12.0	50.0
Fluoranthene-d10	1.134	0.922		-18.7	50.0
2-Fluorophenol	1.001	0.931		-7.0	50.0
Phenol-d6	1.204	1.022		-15.1	50.0
Nitrobenzene-d5	0.244	0.306		25.4	50.0
2-Fluorobiphenyl	1.512	1.480		-2.1	50.0
2,4,6-Tribromophenol	0.284	0.225		-20.8	50.0
Terphenyl-d14	0.789	0.898		13.8	50.0
1,4-Dioxane	0.382	0.394		3.1	50.0

All other compounds must meet a minimum RRF of 0.010.