



LAB CHRONICLE

OrderID:	P4440	OrderDate:	10/18/2024 10:22:00 AM
Client:	Tetra Tech NUS, Inc.	Project:	CTO WE13
Contact:	Ernie Wu	Location:	K51,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4440-01	BPOW6-11-HYD-2024 1016	Water			10/16/24			10/18/24
			SVOC-SIMGroup1	8270-Modified		10/21/24	10/25/24	
P4440-01RE	BPOW6-11-HYD-2024 1016RE	Water			10/16/24			10/18/24
			SVOC-SIMGroup1	8270-Modified		10/21/24	10/25/24	



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

Hit Summary Sheet
SW-846

SDG No.: P4440
Client: Tetra Tech NUS, Inc.

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID :				0.000					
Total Svoc :					0.00				
Total Concentration:					0.00				



SAMPLE DATA

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	10/16/24
Project:	CTO WE13	Date Received:	10/18/24
Client Sample ID:	BPOW6-11-HYD-20241016	SDG No.:	P4440
Lab Sample ID:	P4440-01	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
BN034717.D	1	10/21/24 08:45	10/25/24 06:39	PB164282

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	0.091	*	30 - 150		23%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.35		30 - 150		86%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.31		55 - 111		78%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.34		53 - 106		84%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.38		58 - 132		96%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	5540	7.712				
1146-65-2	Naphthalene-d8	15600	10.479				
15067-26-2	Acenaphthene-d10	6990	14.318				
1517-22-2	Phenanthrene-d10	13000	17.057				
1719-03-5	Chrysene-d12	7950	21.241				
1520-96-3	Perylene-d12	7260	23.458				

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:	10/16/24
Project:	CTO WE13	Date Received:	10/18/24
Client Sample ID:	BPOW6-11-HYD-20241016RE	SDG No.:	P4440
Lab Sample ID:	P4440-01RE	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
BN034724.D	1	10/21/24 08:45	10/25/24 11:34	PB164282

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	0.095	*	30 - 150		24%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.37		30 - 150		93%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.32		55 - 111		81%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.33		53 - 106		83%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.39		58 - 132		98%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	6120	7.712				
1146-65-2	Naphthalene-d8	17500	10.479				
15067-26-2	Acenaphthene-d10	8280	14.318				
1517-22-2	Phenanthrene-d10	15500	17.057				
1719-03-5	Chrysene-d12	11200	21.241				
1520-96-3	Perylene-d12	11500	23.461				

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.: P4440

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
P4440-01	BPOW6-11-HYD-20241016	2-Methylnaphthalene-d10	0.4	0.091	23	*	30	150
		Fluoranthene-d10	0.4	0.35	86		30	150
		Nitrobenzene-d5	0.4	0.31	78		55	111
		2-Fluorobiphenyl	0.4	0.34	84		53	106
		Terphenyl-d14	0.4	0.38	96		58	132
P4440-01RE	BPOW6-11-HYD-20241016RE	2-Methylnaphthalene-d10	0.4	0.095	24	*	30	150
		Fluoranthene-d10	0.4	0.37	93		30	150
		Nitrobenzene-d5	0.4	0.32	81		55	111
		2-Fluorobiphenyl	0.4	0.33	83		53	106
		Terphenyl-d14	0.4	0.39	98		58	132
PB164282BL	PB164282BL	2-Methylnaphthalene-d10	0.4	0.33	83		30	150
		Fluoranthene-d10	0.4	0.34	86		30	150
		Nitrobenzene-d5	0.4	0.34	85		55	111
		2-Fluorobiphenyl	0.4	0.37	91		53	106
		Terphenyl-d14	0.4	0.39	97		58	132
PB164282BS	PB164282BS	2-Methylnaphthalene-d10	0.4	0.50	125		30	150
		Fluoranthene-d10	0.4	0.34	84		30	150
		Nitrobenzene-d5	0.4	0.34	84		55	111
		2-Fluorobiphenyl	0.4	0.36	90		53	106
		Terphenyl-d14	0.4	0.36	91		58	132
PB164282BSD	PB164282BSD	2-Methylnaphthalene-d10	0.4	0.50	125		30	150
		Fluoranthene-d10	0.4	0.33	83		30	150
		Nitrobenzene-d5	0.4	0.34	84		55	111
		2-Fluorobiphenyl	0.4	0.36	89		53	106
		Terphenyl-d14	0.4	0.37	93		58	132

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P4440

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified DataFile: BN034706.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Limits		RPD
								Qual	Low	High	
PB164282BS	1,4-Dioxane	0.4	0.30	ug/L	75				70	130	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P4440

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified DataFile: BN034711.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB164282BSD	1,4-Dioxane	0.4	0.31	ug/L	78	3			70	130	20

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB164282BL

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM Case No.: P4440

SAS No.: P4440 SDG NO.: P4440

Lab File ID: BN034705.D

Lab Sample ID: PB164282BL

Instrument ID: BNA_N

Date Extracted: 10/21/2024

Matrix: (soil/water) Water

Date Analyzed: 10/24/2024

Level: (low/med) LOW

Time Analyzed: 23:26

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB164282BS	PB164282BS	BN034706.D	10/25/2024
PB164282BSD	PB164282BSD	BN034711.D	10/25/2024
BPOW6-11-HYD-20241016	P4440-01	BN034717.D	10/25/2024

COMMENTS: _____

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P4440 SDG NO.: P4440

Lab File ID: BN034683.D

DFTPP Injection Date: 10/24/2024

Instrument ID: BNA_N

DFTPP Injection Time: 07:59

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	66.1
68	Less than 2.0% of mass 69	0.9 (1.7) 1
69	Mass 69 relative abundance	54.4
70	Less than 2.0% of mass 69	0.3 (0.5) 1
127	10.0 - 80.0% of mass 198	60.3
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 60.0% of mass 198	20.6
365	Greater than 1% of mass 198	2.5
441	Present, but less than mass 443	7.8
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	9.1 (18.6) 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	BN034684.D	10/24/2024	09:11
SSTDICC0.2	SSTDICC0.2	BN034685.D	10/24/2024	09:47
SSTDICCC0.4	SSTDICCC0.4	BN034686.D	10/24/2024	10:23
SSTDICC0.8	SSTDICC0.8	BN034687.D	10/24/2024	10:59
SSTDICC1.6	SSTDICC1.6	BN034688.D	10/24/2024	11:35
SSTDICC3.2	SSTDICC3.2	BN034689.D	10/24/2024	12:11
SSTDICC5.0	SSTDICC5.0	BN034690.D	10/24/2024	12:48
SSTDCCC0.4EC	SSTDCCC0.4	BN034699.D	10/24/2024	19:06

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P4440 SDG NO.: P4440

Lab File ID: BN034700.D

DFTPP Injection Date: 10/24/2024

Instrument ID: BNA_N

DFTPP Injection Time: 20:22

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	73.1
68	Less than 2.0% of mass 69	0.9 (1.6) 1
69	Mass 69 relative abundance	59.5
70	Less than 2.0% of mass 69	0.3 (0.5) 1
127	10.0 - 80.0% of mass 198	65.2
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 60.0% of mass 198	20.7
365	Greater than 1% of mass 198	2.6
441	Present, but less than mass 443	7.2
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	9.2 (21.6) 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	BN034701.D	10/24/2024	21:01
PB164282BL	PB164282BL	BN034705.D	10/24/2024	23:26
PB164282BS	PB164282BS	BN034706.D	10/25/2024	00:02
PB164282BSD	PB164282BSD	BN034711.D	10/25/2024	03:02
BPOW6-11-HYD-20241016	P4440-01	BN034717.D	10/25/2024	06:39
SSTDCCC0.4EC	SSTDCCC0.4	BN034719.D	10/25/2024	07:51

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P4440 SDG NO.: P4440

Lab File ID: BN034720.D

DFTPP Injection Date: 10/25/2024

Instrument ID: BNA_N

DFTPP Injection Time: 09:07

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	66.6
68	Less than 2.0% of mass 69	0.9 (1.6) 1
69	Mass 69 relative abundance	56.4
70	Less than 2.0% of mass 69	0.2 (0.4) 1
127	10.0 - 80.0% of mass 198	61.5
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	6.8
275	10.0 - 60.0% of mass 198	21
365	Greater than 1% of mass 198	2.8
441	Present, but less than mass 443	7.4
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	9.5 (19.4) 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	BN034721.D	10/25/2024	09:46
BPOW6-11-HYD-20241016RE	P4440-01RE	BN034724.D	10/25/2024	11:34
SSTDCCC0.4EC	SSTDCCC0.4	BN034732.D	10/25/2024	20:41

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P4440 SAS No.: P4440 SDG NO.: P4440

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 10/24/2024

Lab File ID: BN034701.D Time Analyzed: 21:01

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	5885	7.712	17350	10.48	8078	14.33
UPPER LIMIT	11770	8.212	34700	10.979	16156	14.825
LOWER LIMIT	2942.5	7.212	8675	9.979	4039	13.825
EPA SAMPLE NO.						
01 BPOW6-11-HYD-20241016	5535	7.71	15645	10.48	6994	14.32
02 PB164282BL	6454	7.71	17746	10.48	7655	14.33
03 PB164282BS	6277	7.71	17435	10.48	7557	14.32
04 PB164282BSD	5974	7.71	16564	10.48	7143	14.33

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.: P4440 SAS No.: P4440 SDG NO.: P4440

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 10/24/2024

Lab File ID: BN034701.D Time Analyzed: 21:01

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	14577	17.064	8841	21.248	8336	23.464
UPPER LIMIT	29154	17.564	17682	21.748	16672	23.964
LOWER LIMIT	7288.5	16.564	4420.5	20.748	4168	22.964
EPA SAMPLE NO.						
01 BPOW6-11-HYD-20241016	12994	17.06	7954	21.24	7258	23.46
02 PB164282BL	13670	17.07	7475	21.24	6736	23.46
03 PB164282BS	13505	17.06	7661	21.24	6455	23.46
04 PB164282BSD	13002	17.06	7027	21.24	5873	23.46

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.: P4440 SAS No.: P4440 SDG NO.: P4440

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 10/25/2024

Lab File ID: BN034721.D Time Analyzed: 09:46

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	6565	7.705	19566	10.48	9604	14.33
UPPER LIMIT	13130	8.205	39132	10.979	19208	14.825
LOWER LIMIT	3282.5	7.205	9783	9.979	4802	13.825
EPA SAMPLE NO.						
01 BPOW6-11-HYD-20241016RE	6120	7.71	17531	10.48	8276	14.32

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.: P4440 SAS No.: P4440 SDG NO.: P4440

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 10/25/2024

Lab File ID: BN034721.D Time Analyzed: 09:46

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	17577	17.064	13068	21.248	14018	23.459
UPPER LIMIT	35154	17.564	26136	21.748	28036	23.959
LOWER LIMIT	8788.5	16.564	6534	20.748	7009	22.959
EPA SAMPLE NO.						
01 BPOW6-11-HYD-20241016RE	15513	17.06	11157	21.24	11491	23.46

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:	PB164282BL		SDG No.:	P4440
Lab Sample ID:	PB164282BL		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
BN034705.D	1	10/21/24 08:45	10/24/24 23:26	PB164282

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	0.33		30 - 150		83%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.34		30 - 150		86%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.34		55 - 111		85%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.37		53 - 106		91%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.39		58 - 132		97%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	6450	7.712				
1146-65-2	Naphthalene-d8	17700	10.479				
15067-26-2	Acenaphthene-d10	7660	14.329				
1517-22-2	Phenanthrene-d10	13700	17.069				
1719-03-5	Chrysene-d12	7480	21.241				
1520-96-3	Perylene-d12	6740	23.461				

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:	PB164282BS		SDG No.:	P4440	
Lab Sample ID:	PB164282BS		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
BN034706.D	1	10/21/24 08:45	10/25/24 00:02	PB164282

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.30		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.50		30 - 150		125%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.34		30 - 150		84%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.34		55 - 111		84%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.36		53 - 106		90%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.36		58 - 132		91%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	6280	7.712				
1146-65-2	Naphthalene-d8	17400	10.479				
15067-26-2	Acenaphthene-d10	7560	14.318				
1517-22-2	Phenanthrene-d10	13500	17.056				
1719-03-5	Chrysene-d12	7660	21.241				
1520-96-3	Perylene-d12	6460	23.461				

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:	PB164282BSD		SDG No.:	P4440	
Lab Sample ID:	PB164282BSD		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
BN034711.D	1	10/21/24 08:45	10/25/24 03:02	PB164282

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.31		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.50		30 - 150		125%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.33		30 - 150		83%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.34		55 - 111		84%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.36		53 - 106		89%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.37		58 - 132		93%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	5970	7.712				
1146-65-2	Naphthalene-d8	16600	10.479				
15067-26-2	Acenaphthene-d10	7140	14.329				
1517-22-2	Phenanthrene-d10	13000	17.057				
1719-03-5	Chrysene-d12	7030	21.241				
1520-96-3	Perylene-d12	5870	23.458				

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-BN102424.M
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 Last Update : Thu Oct 24 13:17:02 2024
 Response Via : Initial Calibration

Calibration Files

0.1 =BN034684.D 0.2 =BN034685.D 0.4 =BN034686.D 0.8 =BN034687.D 1.6 =BN034688.D 3.2 =BN034689.D 5.0 =BN034690.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	0.621	0.564	0.485	0.545	0.530	0.503	0.479	0.532	9.40
3)	n-Nitrosodimet...	0.775	0.766	0.704	0.842	0.827	0.761	0.749	0.775	6.06
4) S	2-Fluorophenol	1.188	1.202	1.070	1.268	1.253	1.168	1.177	1.189	5.46
5) S	Phenol-d6	1.556	1.554	1.386	1.658	1.657	1.569	1.597	1.568	5.85
6)	bis(2-Chloroet...	1.306	1.281	1.140	1.380	1.346	1.243	1.220	1.274	6.37
7) I	Naphthalene-d8	-----ISTD-----								
8) S	Nitrobenzene-d5	0.345	0.323	0.294	0.354	0.349	0.337	0.348	0.336	6.27
9)	Naphthalene	1.126	1.100	0.987	1.182	1.157	1.094	1.101	1.107	5.61
10)	Hexachlorobuta...	0.175	0.169	0.149	0.178	0.170	0.160	0.159	0.166	6.23
11) SURR	2-Methylnaphth...	0.542	0.534	0.481	0.583	0.586	0.557	0.566	0.550	6.53
12)	2-Methylnaphth...	0.675	0.670	0.600	0.729	0.730	0.697	0.705	0.687	6.50
13) I	Acenaphthene-d10	-----ISTD-----								
14) S	2,4,6-Tribromo...	0.110	0.118	0.096	0.127	0.133	0.136	0.146	0.124	13.66
15) S	2-Fluorobiphenyl	1.661	1.577	1.379	1.703	1.666	1.540	1.601	1.590	6.84
16)	Acenaphthylene	1.900	1.860	1.581	2.040	2.038	1.964	2.064	1.921	8.76
17)	Acenaphthene	1.318	1.286	1.122	1.435	1.407	1.329	1.370	1.324	7.79
18)	Fluorene	1.598	1.609	1.388	1.764	1.750	1.663	1.663	1.634	7.68
19) I	Phenanthrene-d10	-----ISTD-----								
20)	4,6-Dinitro-2-...	0.048	0.043	0.055	0.059	0.063	0.067	0.056		16.66
21)	4-Bromophenyl-...	0.217	0.211	0.190	0.224	0.221	0.212	0.219	0.213	5.22
22)	Hexachlorobenzene	0.238	0.234	0.211	0.243	0.238	0.226	0.229	0.231	4.55
23)	Atrazine	0.151	0.158	0.140	0.183	0.181	0.181	0.179	0.168	10.55
24)	Pentachlorophenol	0.065	0.064	0.083	0.087	0.092	0.100	0.082		17.73
25)	Phenanthrene	1.214	1.208	1.065	1.273	1.244	1.191	1.215	1.202	5.49
26)	Anthracene	1.006	1.043	0.931	1.124	1.127	1.102	1.131	1.067	7.17
27) SURR	Fluoranthene-d10	0.870	0.885	0.784	0.994	0.951	0.913	0.910	0.901	7.35
28)	Fluoranthene	1.188	1.222	1.092	1.380	1.333	1.290	1.269	1.253	7.66
29) I	Chrysene-d12	-----ISTD-----								
30)	Pyrene	2.066	2.035	1.880	2.152	2.164	2.039	2.048	2.055	4.57
31) S	Terphenyl-d14	0.813	0.797	0.740	0.867	0.865	0.820	0.820	0.817	5.27
32)	Benzo(a)anthra...	1.502	1.445	1.373	1.640	1.613	1.553	1.570	1.528	6.19
33)	Chrysene	1.642	1.568	1.442	1.709	1.643	1.533	1.531	1.581	5.68
34)	Bis(2-ethylhex...	0.901	0.779	0.722	0.843	0.878	0.915	1.030	0.867	11.48
35) I	Perylene-d12	-----ISTD-----								

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

Method File : 8270-SIM-BN102424.M

36)	Indeno(1,2,3-c...	1.562	1.447	1.418	1.596	1.620	1.517	1.624	1.541	5.39
37)	Benzo(b)fluora...	1.543	1.516	1.481	1.714	1.699	1.614	1.615	1.597	5.57
38)	Benzo(k)fluora...	1.511	1.491	1.386	1.723	1.712	1.596	1.613	1.576	7.75
39) C	Benzo(a)pyrene	1.203	1.188	1.157	1.369	1.383	1.323	1.350	1.282	7.45
40)	Dibenzo(a,h)an...	1.236	1.139	1.113	1.246	1.283	1.201	1.288	1.215	5.58
41)	Benzo(g,h,i)pe...	1.397	1.287	1.262	1.377	1.387	1.290	1.378	1.340	4.28

(#) = Out of Range

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: P4440 SAS No.: P4440 SDG No.: P4440

Instrument ID: BNA_N Calibration Date/Time: 10/24/2024 21:01

Lab File ID: BN034701.D Init. Calib. Date(s): 10/24/2024 10/24/2024

EPA Sample No.: SSTDCCC0.4 Init. Calib. Time(s): 09:11 12:48

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.550	0.473		-14.0	20.0
Fluoranthene-d10	0.901	0.768		-14.8	20.0
2-Fluorophenol	1.189	1.172		-1.4	20.0
Phenol-d6	1.568	1.616		3.1	20.0
Nitrobenzene-d5	0.336	0.290		-13.7	20.0
2-Fluorobiphenyl	1.590	1.425		-10.4	20.0
2,4,6-Tribromophenol	0.124	0.096		-22.6	20.0
Terphenyl-d14	0.817	0.690		-15.5	20.0
1,4-Dioxane	0.532	0.489		-8.1	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.: P4440 SAS No.: P4440 SDG No.: P4440

Instrument ID: BNA_N Calibration Date/Time: 10/25/2024 07:51

Lab File ID: BN034719.D Init. Calib. Date(s): 10/24/2024 10/24/2024

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 09:11 12:48

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.550	0.486		-11.6	50.0
Fluoranthene-d10	0.901	0.942		4.6	50.0
2-Fluorophenol	1.189	1.294		8.8	50.0
Phenol-d6	1.568	1.736		10.7	50.0
Nitrobenzene-d5	0.336	0.300		-10.7	50.0
2-Fluorobiphenyl	1.590	1.367		-14.0	50.0
2,4,6-Tribromophenol	0.124	0.113		-8.9	50.0
Terphenyl-d14	0.817	0.696		-14.8	50.0
1,4-Dioxane	0.532	0.475		-10.7	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.: P4440 SAS No.: P4440 SDG No.: P4440

Instrument ID: BNA_N Calibration Date/Time: 10/25/2024 09:46

Lab File ID: BN034721.D Init. Calib. Date(s): 10/24/2024 10/24/2024

EPA Sample No.: SSTDCCC0.4 Init. Calib. Time(s): 09:11 12:48

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.550	0.491		-10.7	20.0
Fluoranthene-d10	0.901	0.834		-7.4	20.0
2-Fluorophenol	1.189	1.280		7.7	20.0
Phenol-d6	1.568	1.733		10.5	20.0
Nitrobenzene-d5	0.336	0.300		-10.7	20.0
2-Fluorobiphenyl	1.590	1.396		-12.2	20.0
2,4,6-Tribromophenol	0.124	0.119		-4.0	20.0
Terphenyl-d14	0.817	0.690		-15.5	20.0
1,4-Dioxane	0.532	0.460		-13.5	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.: P4440 SAS No.: P4440 SDG No.: P4440

Instrument ID: BNA_N Calibration Date/Time: 10/25/2024 20:41

Lab File ID: BN034732.D Init. Calib. Date(s): 10/24/2024 10/24/2024

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 09:11 12:48

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.550	0.499		-9.3	50.0
Fluoranthene-d10	0.901	0.778		-13.7	50.0
2-Fluorophenol	1.189	1.284		8.0	50.0
Phenol-d6	1.568	1.673		6.7	50.0
Nitrobenzene-d5	0.336	0.311		-7.4	50.0
2-Fluorobiphenyl	1.590	1.375		-13.5	50.0
2,4,6-Tribromophenol	0.124	0.129		4.0	50.0
Terphenyl-d14	0.817	0.831		1.7	50.0
1,4-Dioxane	0.532	0.481		-9.6	50.0

All other compounds must meet a minimum RRF of 0.010.