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

LAB CHRONICLE

OrderID:	P4774	**OrderDate:**	11/7/2024 3:46:00 PM
Client:	Tetra Tech NUS, Inc.	**Project:**	CTO WE13
Contact:	Ernie Wu	**Location:**	L31,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4774-02	**VPB190-HYD-20241106**	**Water**			**11/06/24**			**11/07/24**
			SVOC-SIMGroup1	8270-Modified		11/08/24	11/13/24	
P4774-02RE	**VPB190-HYD-20241106RE**	**Water**			**11/06/24**			**11/07/24**
			SVOC-SIMGroup1	8270-Modified		11/08/24	11/14/24	
P4774-06	**BP-VPB-190-GW-638-640**	**Water**			**11/05/24**			**11/07/24**
			SVOC-SIMGroup1	8270-Modified		11/08/24	11/13/24	

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

Hit Summary Sheet
SW-846

SDG No.: P4774

Client: Tetra Tech NUS, Inc.

Sample ID	Client ID	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID :	**BP-VPB-190-GW-638-640**							
P4774-06	BP-VPB-190-GW-638-64 WATER	1,4-Dioxane	0.710	Q	0.08	0.22	0.22	ug/L
		Total Svoc :	**0.71**					
		Total Concentration:	**0.71**					

SAMPLE DATA

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

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	11/06/24
Project:	CTO WE13	Date Received:	11/07/24
Client Sample ID:	VPB190-HYD-20241106	SDG No.:	P4774
Lab Sample ID:	P4774-02	Matrix:	Water
Analytical Method:	SW8270SIM	% Solid:	0
Sample Wt/Vol:	960 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
BN035079.D	1	11/08/24 11:30	11/13/24 22:49	PB164785

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.21	UQ	0.070	0.21	0.21	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.0030	*	30 - 150		1%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.085	*	30 - 150		21%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.37		55 - 111		91%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.37		53 - 106		91%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.43		58 - 132		106%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2320	7.553				
1146-65-2	Naphthalene-d8	5750	10.319				
15067-26-2	Acenaphthene-d10	4370	14.19				
1517-22-2	Phenanthrene-d10	11700	16.932				
1719-03-5	Chrysene-d12	12400	21.133				
1520-96-3	Perylene-d12	13500	23.303				

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

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

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	11/06/24
Project:	CTO WE13	Date Received:	11/07/24
Client Sample ID:	VPB190-HYD-20241106RE	SDG No.:	P4774
Lab Sample ID:	P4774-02RE	Matrix:	Water
Analytical Method:	SW8270SIM	% Solid:	0
Sample Wt/Vol:	960 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
BN035090.D	1	11/08/24 11:30	11/14/24 16:35	PB164785

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.21	UQ	0.070	0.21	0.21	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.0020	*	30 - 150		1%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.083	*	30 - 150		21%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.35		55 - 111		88%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.37		53 - 106		92%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.43		58 - 132		108%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2640	7.553				
1146-65-2	Naphthalene-d8	6900	10.318				
15067-26-2	Acenaphthene-d10	5180	14.19				
1517-22-2	Phenanthrene-d10	12700	16.932				
1719-03-5	Chrysene-d12	12900	21.133				
1520-96-3	Perylene-d12	13200	23.302				

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

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

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	11/05/24
Project:	CTO WE13	Date Received:	11/07/24
Client Sample ID:	BP-VPB-190-GW-638-640	SDG No.:	P4774
Lab Sample ID:	P4774-06	Matrix:	Water
Analytical Method:	SW8270SIM	% Solid:	0
Sample Wt/Vol:	890 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
BN035078.D	1	11/08/24 11:30	11/13/24 22:13	PB164785

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.71	Q	0.080	0.22	0.22	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.37		30 - 150		92%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.39		30 - 150		98%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.35		55 - 111		88%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.37		53 - 106		91%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.44		58 - 132		111%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2220	7.553				
1146-65-2	Naphthalene-d8	5640	10.319				
15067-26-2	Acenaphthene-d10	4420	14.19				
1517-22-2	Phenanthrene-d10	11700	16.932				
1719-03-5	Chrysene-d12	13100	21.133				
1520-96-3	Perylene-d12	14200	23.3				

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

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

Surrogate Summary

SW-846

SDG No.: P4774

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%) Low	High
P4774-02	VPB190-HYD-20241106	2-Methylnaphthalene-d10	0.4	0.0030	1	*	30	150
		Fluoranthene-d10	0.4	0.085	21	*	30	150
		Nitrobenzene-d5	0.4	0.37	91		55	111
		2-Fluorobiphenyl	0.4	0.37	91		53	106
		Terphenyl-d14	0.4	0.43	106		58	132
P4774-02RE	VPB190-HYD-20241106RE	2-Methylnaphthalene-d10	0.4	0.0020	1	*	30	150
		Fluoranthene-d10	0.4	0.083	21	*	30	150
		Nitrobenzene-d5	0.4	0.35	88		55	111
		2-Fluorobiphenyl	0.4	0.37	92		53	106
		Terphenyl-d14	0.4	0.43	108		58	132
P4774-06	BP-VPB-190-GW-638-640	2-Methylnaphthalene-d10	0.4	0.37	92		30	150
		Fluoranthene-d10	0.4	0.39	98		30	150
		Nitrobenzene-d5	0.4	0.35	88		55	111
		2-Fluorobiphenyl	0.4	0.37	91		53	106
		Terphenyl-d14	0.4	0.44	111		58	132
PB164785BL	PB164785BL	2-Methylnaphthalene-d10	0.4	0.35	87		30	150
		Fluoranthene-d10	0.4	0.39	97		30	150
		Nitrobenzene-d5	0.4	0.38	95		55	111
		2-Fluorobiphenyl	0.4	0.37	91		53	106
		Terphenyl-d14	0.4	0.42	104		58	132
PB164785BS	PB164785BS	2-Methylnaphthalene-d10	0.4	0.44	110		30	150
		Fluoranthene-d10	0.4	0.36	90		30	150
		Nitrobenzene-d5	0.4	0.36	90		55	111
		2-Fluorobiphenyl	0.4	0.37	93		53	106
		Terphenyl-d14	0.4	0.41	101		58	132
PB164785BSD	PB164785BSD	2-Methylnaphthalene-d10	0.4	0.37	93		30	150
		Fluoranthene-d10	0.4	0.29	72		30	150
		Nitrobenzene-d5	0.4	0.30	75		55	111
		2-Fluorobiphenyl	0.4	0.30	75		53	106
		Terphenyl-d14	0.4	0.32	79		58	132

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

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P4774

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified **DataFile:** BN035071.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD Qual	Limits Low	Limits High	RPD
PB164785BS	1,4-Dioxane	0.4	0.33	ug/L	83				70	130	

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

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P4774

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified **DataFile:** BN035072.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD Qual	Limits Low	Limits High	Limits RPD
PB164785BSD	1,4-Dioxane	0.4	0.27	ug/L	68	20	*		70	130	20

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

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB164785BL

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: P4774 SAS No.: P4774 SDG NO.: P4774

Lab File ID: BN035070.D Lab Sample ID: PB164785BL

Instrument ID: BNA_N Date Extracted: 11/08/2024

Matrix: (soil/water) Water Date Analyzed: 11/13/2024

Level: (low/med) LOW Time Analyzed: 17:27

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB164785BS	PB164785BS	BN035071.D	11/13/2024
PB164785BSD	PB164785BSD	BN035072.D	11/13/2024
VPB190-HYD-20241106	P4774-02	BN035079.D	11/13/2024
BP-VPB-190-GW-638-640	P4774-06	BN035078.D	11/13/2024

COMMENTS:

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

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM SAS No.: P4774 SDG NO.: P4774

Lab File ID: BN035061.D DFTPP Injection Date: 11/13/2024

Instrument ID: BNA_N DFTPP Injection Time: 12:01

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	19.6
68	Less than 2.0% of mass 69	0.4 (1.4) 1
69	Mass 69 relative abundance	29.1
70	Less than 2.0% of mass 69	0.2 (0.7) 1
127	10.0 - 80.0% of mass 198	35.9
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	6.6
275	10.0 - 60.0% of mass 198	27.6
365	Greater than 1% of mass 198	4.4
441	Present, but less than mass 443	9.3
442	Greater than 50% of mass 198	59.1
443	15.0 - 24.0% of mass 442	11.2 (19) 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	BN035062.D	11/13/2024	12:40
SSTDICC0.2	SSTDICC0.2	BN035063.D	11/13/2024	13:16
SSTDICCC0.4	SSTDICCC0.4	BN035064.D	11/13/2024	13:52
SSTDICC0.8	SSTDICC0.8	BN035065.D	11/13/2024	14:28
SSTDICC1.6	SSTDICC1.6	BN035066.D	11/13/2024	15:04
SSTDICC3.2	SSTDICC3.2	BN035067.D	11/13/2024	15:39
SSTDICC5.0	SSTDICC5.0	BN035068.D	11/13/2024	16:15
PB164785BL	PB164785BL	BN035070.D	11/13/2024	17:27
PB164785BS	PB164785BS	BN035071.D	11/13/2024	18:03
PB164785BSD	PB164785BSD	BN035072.D	11/13/2024	18:38
BP-VPB-190-GW-638-640	P4774-06	BN035078.D	11/13/2024	22:13
VPB190-HYD-20241106	P4774-02	BN035079.D	11/13/2024	22:49
SSTDCCC0.4EC	SSTDCCC0.4	BN035080.D	11/13/2024	23:24

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

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM SAS No.: P4774 SDG NO.: P4774

Lab File ID: BN035081.D DFTPP Injection Date: 11/14/2024

Instrument ID: BNA_N DFTPP Injection Time: 08:53

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	19.9
68	Less than 2.0% of mass 69	0.6 (1.9) 1
69	Mass 69 relative abundance	30.1
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	37.5
197	Less than 2.0% of mass 198	0.4
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	29.4
365	Greater than 1% of mass 198	4.8
441	Present, but less than mass 443	9.9
442	Greater than 50% of mass 198	63.6
443	15.0 - 24.0% of mass 442	10.8 (16.9) 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	BN035082.D	11/14/2024	10:12
VPB190-HYD-20241106RE	P4774-02RE	BN035090.D	11/14/2024	16:35
SSTDCCC0.4EC	SSTDCCC0.4	BN035095.D	11/14/2024	19:35

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

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P4774 SAS No.: P4774 SDG NO.: P4774

EPA Sample No.: SSTDICCC0.4 Date Analyzed: 11/13/2024

Lab File ID: BN035064.D Time Analyzed: 13:52

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	2804	7.553	6865	10.32	5401	14.19
	UPPER LIMIT	5608	8.053	13730	10.819	10802	14.686
	LOWER LIMIT	1402	7.053	3432.5	9.819	2700.5	13.686
	EPA SAMPLE NO.						
01	VPB190-HYD-20241106	2315	7.55	5749	10.32	4373	14.19
02	BP-VPB-190-GW-638-640	2216	7.55	5643	10.32	4418	14.19
03	PB164785BL	2165	7.55	5024	10.32	3542	14.19
04	PB164785BS	2135	7.55	5031	10.32	3550	14.19
05	PB164785BSD	2529	7.55	5952	10.32	4350	14.19

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.

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

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P4774 SAS No.: P4774 SDG NO.: P4774

EPA Sample No.: SSTDICCC0.4 Date Analyzed: 11/13/2024

Lab File ID: BN035064.D Time Analyzed: 13:52

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	13499	16.939	14946	21.14	17077	23.304
	UPPER LIMIT	26998	17.439	29892	21.64	34154	23.804
	LOWER LIMIT	6749.5	16.439	7473	20.64	8538.5	22.804
	EPA SAMPLE NO.						
01	VPB190-HYD-20241106	11655	16.93	12368	21.13	13544	23.30
02	BP-VPB-190-GW-638-640	11698	16.93	13061	21.13	14235	23.30
03	PB164785BL	9470	16.93	10363	21.13	11874	23.31
04	PB164785BS	9574	16.94	9856	21.14	10124	23.30
05	PB164785BSD	12047	16.94	12506	21.13	13065	23.30

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.

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

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P4774 SAS No.: P4774 SDG NO.: P4774

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 11/14/2024

Lab File ID: BN035082.D Time Analyzed: 10:12

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	2551	7.553	6362	10.32	5037	14.19
	UPPER LIMIT	5102	8.053	12724	10.819	10074	14.69
	LOWER LIMIT	1275.5	7.053	3181	9.819	2518.5	13.69
	EPA SAMPLE NO.						
01	VPB190-HYD-20241106RE	2635	7.55	6903	10.32	5180	14.19

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.

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

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P4774 SAS No.: P4774 SDG NO.: P4774

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 11/14/2024

Lab File ID: BN035082.D Time Analyzed: 10:12

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	12802	16.933	13485	21.134	14730	23.3
	UPPER LIMIT	25604	17.433	26970	21.634	29460	23.8
	LOWER LIMIT	6401	16.433	6742.5	20.634	7365	22.8
	EPA SAMPLE NO.						
01	VPB190-HYD-20241106RE	12731	16.93	12938	21.13	13233	23.30

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

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

Report of Analysis

Client:	Tetra Tech NUS, Inc.			Date Collected:	
Project:	CTO WE13			Date Received:	
Client Sample ID:	PB164785BL			SDG No.:	P4774
Lab Sample ID:	PB164785BL			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
BN035070.D	1	11/08/24 11:30	11/13/24 17:27	PB164785

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	0.35		30 - 150		87%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.39		30 - 150		97%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.38		55 - 111		95%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.37		53 - 106		91%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.42		58 - 132		104%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2170	7.553				
1146-65-2	Naphthalene-d8	5020	10.319				
15067-26-2	Acenaphthene-d10	3540	14.19				
1517-22-2	Phenanthrene-d10	9470	16.932				
1719-03-5	Chrysene-d12	10400	21.133				
1520-96-3	Perylene-d12	11900	23.306				

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

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

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	
Project:	CTO WE13	Date Received:	
Client Sample ID:	PB164785BS	SDG No.:	P4774
Lab Sample ID:	PB164785BS	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
BN035071.D	1	11/08/24 11:30	11/13/24 18:03	PB164785

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.33		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.44		30 - 150		110%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.36		30 - 150		90%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.36		55 - 111		90%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.37		53 - 106		93%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.41		58 - 132		101%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2140	7.553				
1146-65-2	Naphthalene-d8	5030	10.319				
15067-26-2	Acenaphthene-d10	3550	14.186				
1517-22-2	Phenanthrene-d10	9570	16.939				
1719-03-5	Chrysene-d12	9860	21.14				
1520-96-3	Perylene-d12	10100	23.304				

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

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

Report of Analysis

Client:	Tetra Tech NUS, Inc.			Date Collected:	
Project:	CTO WE13			Date Received:	
Client Sample ID:	PB164785BSD			SDG No.:	P4774
Lab Sample ID:	PB164785BSD			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
BN035072.D	1	11/08/24 11:30	11/13/24 18:38	PB164785

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.27		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	0.29		30 - 150		72%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.30		55 - 111		75%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.30		53 - 106		75%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.32		58 - 132		79%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2530	7.553				
1146-65-2	Naphthalene-d8	5950	10.319				
15067-26-2	Acenaphthene-d10	4350	14.186				
1517-22-2	Phenanthrene-d10	12000	16.939				
1719-03-5	Chrysene-d12	12500	21.131				
1520-96-3	Perylene-d12	13100	23.301				

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

Response Factor Report BNA_N

Method Path : Z:\svoasrv\HPCHEM1\BNA_N\Methods\
Method File : 8270-SIM-BN111324.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
Last Update : Wed Nov 13 17:18:14 2024
Response Via : Initial Calibration

Calibration Files
0.1 =BN035062.D 0.2 =BN035063.D 0.4 =BN035064.D 0.8 =BN035065.D 1.6 =BN035066.D 3.2 =BN035067.D 5.0 =BN035068.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	0.410	0.382	0.335	0.371	0.367	0.348	0.329	0.363	7.76
3)		n-Nitrosodimet...	0.366	0.328	0.326	0.360	0.347	0.321	0.322	0.339	5.51
4)	S	2-Fluorophenol	1.073	1.039	0.949	1.086	1.034	0.966	0.961	1.015	5.54
5)	S	Phenol-d6	1.264	1.279	1.159	1.355	1.318	1.255	1.282	1.273	4.79
6)		bis(2-Chloroet...	0.972	0.949	0.893	1.027	0.995	0.925	0.929	0.956	4.77
7)	I	Naphthalene-d8	----------ISTD----------								
8)	S	Nitrobenzene-d5	0.358	0.338	0.320	0.368	0.356	0.344	0.353	0.348	4.53
9)		Naphthalene	1.088	1.009	0.977	1.116	1.085	1.010	1.027	1.044	4.96
10)		Hexachlorobuta...	0.324	0.305	0.293	0.326	0.315	0.289	0.291	0.306	5.12
11)	SURR	2-Methylnaphth...	0.694	0.683	0.664	0.762	0.753	0.703	0.731	0.713	5.13
12)		2-Methylnaphth...	0.742	0.748	0.711	0.823	0.815	0.765	0.789	0.770	5.29
13)	I	Acenaphthene-d10	----------ISTD----------								
14)	S	2,4,6-Tribromo...	0.281	0.262	0.240	0.300	0.299	0.308	0.331	0.289	10.57
15)	S	2-Fluorobiphenyl	1.701	1.576	1.460	1.735	1.687	1.599	1.614	1.624	5.73
16)		Acenaphthylene	1.715	1.616	1.488	1.822	1.775	1.756	1.795	1.709	6.93
17)		Acenaphthene	1.129	1.079	1.000	1.202	1.157	1.130	1.146	1.120	5.76
18)		Fluorene	1.704	1.591	1.463	1.755	1.708	1.656	1.659	1.648	5.86
19)	I	Phenanthrene-d10	----------ISTD----------								
20)		4,6-Dinitro-2-...	0.068	0.067	0.073	0.087	0.088	0.095	0.105	0.083	17.50
21)		4-Bromophenyl-...	0.256	0.240	0.246	0.272	0.267	0.252	0.252	0.255	4.41
22)		Hexachlorobenzene	0.275	0.259	0.253	0.277	0.273	0.258	0.258	0.264	3.79
23)		Atrazine	0.227	0.227	0.217	0.244	0.238	0.223	0.225	0.229	3.95
24)		Pentachlorophenol	0.106	0.101	0.104	0.130	0.130	0.141	0.154	0.124	16.69
25)		Phenanthrene	1.069	1.013	1.004	1.115	1.096	1.034	1.036	1.053	3.97
26)		Anthracene	0.917	0.904	0.920	1.024	1.016	0.986	1.001	0.967	5.32
27)	SURR	Fluoranthene-d10	1.196	1.178	1.169	1.288	1.284	1.222	1.240	1.225	3.91
28)		Fluoranthene	1.396	1.376	1.386	1.543	1.527	1.453	1.453	1.448	4.63
29)	I	Chrysene-d12	----------ISTD----------								
30)		Pyrene	1.339	1.290	1.288	1.424	1.367	1.301	1.317	1.332	3.70
31)	S	Terphenyl-d14	0.838	0.819	0.810	0.894	0.867	0.817	0.831	0.839	3.63
32)		Benzo(a)anthra...	1.421	1.368	1.328	1.464	1.416	1.355	1.396	1.393	3.31
33)		Chrysene	1.409	1.366	1.332	1.479	1.420	1.331	1.321	1.380	4.27
34)		Bis(2-ethylhex...	0.809	0.753	0.647	0.768	0.702	0.693	0.742	0.731	7.38
35)	I	Perylene-d12	----------ISTD----------								

Method Path : Z:\svoasrv\HPCHEM1\BNA_N\Methods\
Method File : 8270-SIM-BN111324.M

36)		Indeno(1,2,3-c...	1.609	1.515	1.522	1.730	1.659	1.550	1.585	1.596	4.88
37)		Benzo(b)fluora...	1.326	1.272	1.279	1.439	1.418	1.327	1.359	1.346	4.77
38)		Benzo(k)fluora...	1.342	1.288	1.287	1.418	1.410	1.323	1.358	1.347	3.94
39)	C	Benzo(a)pyrene	1.172	1.134	1.123	1.247	1.240	1.167	1.207	1.184	4.12
40)		Dibenzo(a,h)an...	1.248	1.195	1.210	1.375	1.322	1.235	1.265	1.264	5.06
41)		Benzo(g,h,i)pe...	1.380	1.288	1.286	1.452	1.386	1.294	1.328	1.345	4.71

(#) = Out of Range

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

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: P4774 SAS No.: P4774 SDG No.: P4774

Instrument ID: BNA_N Calibration Date/Time: 11/13/2024 23:24

Lab File ID: BN035080.D Init. Calib. Date(s): 11/13/2024 11/13/2024

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 12:40 16:15

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.713	0.667		-6.5	50.0
Fluoranthene-d10	1.225	1.141		-6.9	50.0
2-Fluorophenol	1.015	0.932		-8.2	50.0
Phenol-d6	1.273	1.205		-5.3	50.0
Nitrobenzene-d5	0.348	0.315		-9.5	50.0
2-Fluorobiphenyl	1.624	1.467		-9.7	50.0
2,4,6-Tribromophenol	0.289	0.245		-15.2	50.0
Terphenyl-d14	0.839	0.813		-3.1	50.0
1,4-Dioxane	0.363	0.342		-5.8	50.0

All other compounds must meet a minimum RRF of 0.010.

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

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: P4774 SAS No.: P4774 SDG No.: P4774

Instrument ID: BNA_N Calibration Date/Time: 11/14/2024 10:12

Lab File ID: BN035082.D Init. Calib. Date(s): 11/13/2024 11/13/2024

EPA Sample No.: SSTDCCC0.4 Init. Calib. Time(s): 12:40 16:15

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.713	0.656		-8.0	20.0
Fluoranthene-d10	1.225	1.132		-7.6	20.0
2-Fluorophenol	1.015	0.916		-9.8	20.0
Phenol-d6	1.273	1.184		-7.0	20.0
Nitrobenzene-d5	0.348	0.308		-11.5	20.0
2-Fluorobiphenyl	1.624	1.452		-10.6	20.0
2,4,6-Tribromophenol	0.289	0.230		-20.4	20.0
Terphenyl-d14	0.839	0.812		-3.2	20.0
1,4-Dioxane	0.363	0.354		-2.5	20.0

All other compounds must meet a minimum RRF of 0.010.

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

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: P4774 SAS No.: P4774 SDG No.: P4774

Instrument ID: BNA_N Calibration Date/Time: 11/14/2024 19:35

Lab File ID: BN035095.D Init. Calib. Date(s): 11/13/2024 11/13/2024

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 12:40 16:15

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.713	0.673		-5.6	50.0
Fluoranthene-d10	1.225	1.085		-11.4	50.0
2-Fluorophenol	1.015	0.911		-10.2	50.0
Phenol-d6	1.273	1.198		-5.9	50.0
Nitrobenzene-d5	0.348	0.309		-11.2	50.0
2-Fluorobiphenyl	1.624	1.474		-9.2	50.0
2,4,6-Tribromophenol	0.289	0.227		-21.5	50.0
Terphenyl-d14	0.839	0.833		-0.7	50.0
1,4-Dioxane	0.363	0.321		-11.6	50.0

All other compounds must meet a minimum RRF of 0.010.