

LAB CHRONICLE

OrderID:	P4773	OrderDate:	11/7/2024 3:45:00 PM
Client:	Tetra Tech NUS, Inc.	Project:	CTO WE13
Contact:	Ernie Wu	Location:	L31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4773-01	RW7-SP100-20241107	Water			11/07/24			11/07/24
			SVOC-SIMGroup1	8270-Modified		11/08/24	11/13/24	
P4773-01DL	RW7-SP100-20241107DL	Water			11/07/24			11/07/24
			SVOC-SIMGroup1	8270-Modified		11/08/24	11/14/24	
P4773-02	RW7-SP201-20241107	Water			11/07/24			11/07/24
			SVOC-SIMGroup1	8270-Modified		11/08/24	11/13/24	
P4773-03	RW7-SP302-20241107	Water			11/07/24			11/07/24
			SVOC-SIMGroup1	8270-Modified		11/08/24	11/14/24	
P4773-04	RW7-SP303-20241107	Water			11/07/24			11/07/24
			SVOC-SIMGroup1	8270-Modified		11/08/24	11/14/24	



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

Hit Summary Sheet SW-846

SDG No.: P4773
Client: Tetra Tech NUS, Inc.

Sample ID	Client ID	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : RW7-SP100-20241107								
P4773-01	RW7-SP100-20241107	WATER	1,4-Dioxane	5.800	EQ	0.07	0.2	ug/L
			Total Svoc :	5.80				
			Total Concentration:	5.80				
Client ID : RW7-SP100-20241107DL								
P4773-01DL	RW7-SP100-20241107DI	WATER	1,4-Dioxane	5.400	DQ	0.14	0.4	ug/L
			Total Svoc :	5.40				
			Total Concentration:	5.40				
Client ID : RW7-SP302-20241107								
P4773-03	RW7-SP302-20241107	WATER	1,4-Dioxane	0.080	JQ	0.07	0.2	ug/L
			Total Svoc :	0.08				
			Total Concentration:	0.08				
Client ID : RW7-SP303-20241107								
P4773-04	RW7-SP303-20241107	WATER	1,4-Dioxane	0.070	JQ	0.07	0.2	ug/L
			Total Svoc :	0.07				
			Total Concentration:	0.07				



SAMPLE DATA

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	11/07/24
Project:	CTO WE13	Date Received:	11/07/24
Client Sample ID:	RW7-SP100-20241107	SDG No.:	P4773
Lab Sample ID:	P4773-01	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
BN035076.D	1	11/08/24 11:30	11/13/24 21:01	PB164785

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	5.80	EQ	0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.39		30 - 150		97%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.42		30 - 150		105%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.40		55 - 111		101%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.38		53 - 106		95%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.46		58 - 132		115%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2300	7.553				
1146-65-2	Naphthalene-d8	5820	10.319				
15067-26-2	Acenaphthene-d10	4550	14.19				
1517-22-2	Phenanthrene-d10	12100	16.932				
1719-03-5	Chrysene-d12	13400	21.133				
1520-96-3	Perylene-d12	14900	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

Report of Analysis

Client:	Tetra Tech NUS, Inc.		Date Collected:	11/07/24	
Project:	CTO WE13		Date Received:	11/07/24	
Client Sample ID:	RW7-SP100-20241107DL		SDG No.:	P4773	
Lab Sample ID:	P4773-01DL		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
BN035093.D	2	11/08/24 11:30	11/14/24 18:23	PB164785

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	5.40	DQ	0.14	0.40	0.40	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.36		30 - 150		90%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.37		30 - 150		92%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.36		55 - 111		90%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.36		53 - 106		91%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.44		58 - 132		110%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2840	7.553				
1146-65-2	Naphthalene-d8	7380	10.319				
15067-26-2	Acenaphthene-d10	5670	14.19				
1517-22-2	Phenanthrene-d10	13800	16.932				
1719-03-5	Chrysene-d12	13500	21.133				
1520-96-3	Perylene-d12	13300	23.303				

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A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	11/07/24
Project:	CTO WE13	Date Received:	11/07/24
Client Sample ID:	RW7-SP201-20241107	SDG No.:	P4773
Lab Sample ID:	P4773-02	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
BN035077.D	1	11/08/24 11:30	11/13/24 21:37	PB164785

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.20	UQ	0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.39		30 - 150		98%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.41		30 - 150		102%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.41		55 - 111		103%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.39		53 - 106		97%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.46		58 - 132		115%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2280	7.553				
1146-65-2	Naphthalene-d8	5710	10.319				
15067-26-2	Acenaphthene-d10	4450	14.186				
1517-22-2	Phenanthrene-d10	11800	16.939				
1719-03-5	Chrysene-d12	12600	21.131				
1520-96-3	Perylene-d12	13300	23.298				

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B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

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() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	11/07/24
Project:	CTO WE13	Date Received:	11/07/24
Client Sample ID:	RW7-SP302-20241107	SDG No.:	P4773
Lab Sample ID:	P4773-03	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
BN035092.D	1	11/08/24 11:30	11/14/24 17:47	PB164785

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.080	JQ	0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.42		30 - 150		106%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.43		30 - 150		106%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.42		55 - 111		105%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.42		53 - 106		105%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.51		58 - 132		127%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2450	7.553				
1146-65-2	Naphthalene-d8	6340	10.319				
15067-26-2	Acenaphthene-d10	4840	14.19				
1517-22-2	Phenanthrene-d10	11900	16.932				
1719-03-5	Chrysene-d12	11700	21.134				
1520-96-3	Perylene-d12	11200	23.303				

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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:	11/07/24
Project:	CTO WE13	Date Received:	11/07/24
Client Sample ID:	RW7-SP303-20241107	SDG No.:	P4773
Lab Sample ID:	P4773-04	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
BN035091.D	1	11/08/24 11:30	11/14/24 17:11	PB164785

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.070	JQ	0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.36		30 - 150		90%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.39		30 - 150		97%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.36		55 - 111		91%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.35		53 - 106		88%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.46		58 - 132		114%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2620	7.553				
1146-65-2	Naphthalene-d8	6820	10.319				
15067-26-2	Acenaphthene-d10	5370	14.19				
1517-22-2	Phenanthrene-d10	12800	16.932				
1719-03-5	Chrysene-d12	12800	21.133				
1520-96-3	Perylene-d12	13000	23.3				

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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

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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.: P4773

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
P4773-01	RW7-SP100-20241107	2-Methylnaphthalene-d10	0.4	0.39	97		30	150
		Fluoranthene-d10	0.4	0.42	105		30	150
		Nitrobenzene-d5	0.4	0.40	101		55	111
		2-Fluorobiphenyl	0.4	0.38	95		53	106
		Terphenyl-d14	0.4	0.46	115		58	132
P4773-01DL	RW7-SP100-20241107DL	2-Methylnaphthalene-d10	0.4	0.36	90		30	150
		Fluoranthene-d10	0.4	0.37	92		30	150
		Nitrobenzene-d5	0.4	0.36	90		55	111
		2-Fluorobiphenyl	0.4	0.36	91		53	106
		Terphenyl-d14	0.4	0.44	110		58	132
P4773-02	RW7-SP201-20241107	2-Methylnaphthalene-d10	0.4	0.39	98		30	150
		Fluoranthene-d10	0.4	0.41	102		30	150
		Nitrobenzene-d5	0.4	0.41	103		55	111
		2-Fluorobiphenyl	0.4	0.39	97		53	106
		Terphenyl-d14	0.4	0.46	115		58	132
P4773-03	RW7-SP302-20241107	2-Methylnaphthalene-d10	0.4	0.42	106		30	150
		Fluoranthene-d10	0.4	0.43	106		30	150
		Nitrobenzene-d5	0.4	0.42	105		55	111
		2-Fluorobiphenyl	0.4	0.42	105		53	106
		Terphenyl-d14	0.4	0.51	127		58	132
P4773-04	RW7-SP303-20241107	2-Methylnaphthalene-d10	0.4	0.36	90		30	150
		Fluoranthene-d10	0.4	0.39	97		30	150
		Nitrobenzene-d5	0.4	0.36	91		55	111
		2-Fluorobiphenyl	0.4	0.35	88		53	106
		Terphenyl-d14	0.4	0.46	114		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

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P4773

Client: Tetra Tech NUS, Inc.

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

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

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P4773

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified DataFile: BN035072.D

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

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB164785BL

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM Case No.: P4773

SAS No.: P4773 SDG NO.: P4773

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
RW7-SP302-20241107	P4773-03	BN035092.D	11/14/2024
RW7-SP303-20241107	P4773-04	BN035091.D	11/14/2024
RW7-SP100-20241107	P4773-01	BN035076.D	11/13/2024
RW7-SP201-20241107	P4773-02	BN035077.D	11/13/2024

COMMENTS: _____

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P4773 SDG NO.: P4773

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
RW7-SP100-20241107	P4773-01	BN035076.D	11/13/2024	21:01
RW7-SP201-20241107	P4773-02	BN035077.D	11/13/2024	21:37
SSTDCCC0.4EC	SSTDCCC0.4	BN035080.D	11/13/2024	23:24

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P4773 SDG NO.: P4773

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
RW7-SP303-20241107	P4773-04	BN035091.D	11/14/2024	17:11
RW7-SP302-20241107	P4773-03	BN035092.D	11/14/2024	17:47
RW7-SP100-20241107DL	P4773-01DL	BN035093.D	11/14/2024	18:23
SSTDCCC0.4EC	SSTDCCC0.4	BN035095.D	11/14/2024	19:35

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P4773 SAS No.: P4773 SDG NO.: P4773

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 RW7-SP100-20241107	2300	7.55	5817	10.32	4551	14.19
02 RW7-SP201-20241107	2283	7.55	5712	10.32	4446	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.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P4773 SAS No.: P4773 SDG NO.: P4773

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 RW7-SP100-20241107	12064	16.93	13393	21.13	14946	23.30
02 RW7-SP201-20241107	11812	16.94	12589	21.13	13332	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.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P4773 SAS No.: P4773 SDG NO.: P4773

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 RW7-SP100-20241107DL	2839	7.55	7379	10.32	5672	14.19
02 RW7-SP302-20241107	2453	7.55	6339	10.32	4841	14.19
03 RW7-SP303-20241107	2624	7.55	6821	10.32	5370	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.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P4773 SAS No.: P4773 SDG NO.: P4773

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 RW7-SP100-20241107DL	13767	16.93	13450	21.13	13263	23.30
02 RW7-SP302-20241107	11862	16.93	11655	21.13	11245	23.30
03 RW7-SP303-20241107	12809	16.93	12812	21.13	13035	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

Report of Analysis

Client:	Tetra Tech NUS, Inc.		Date Collected:		
Project:	CTO WE13		Date Received:		
Client Sample ID:	PB164785BL		SDG No.:	P4773	
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

Report of Analysis

Client:	Tetra Tech NUS, Inc.		Date Collected:		
Project:	CTO WE13		Date Received:		
Client Sample ID:	PB164785BS		SDG No.:	P4773	
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

Report of Analysis

Client:	Tetra Tech NUS, Inc.		Date Collected:		
Project:	CTO WE13		Date Received:		
Client Sample ID:	PB164785BSD		SDG No.:	P4773	
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

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) SURR2	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

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: P4773 SAS No.: P4773 SDG No.: P4773

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.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: P4773 SAS No.: P4773 SDG No.: P4773

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.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: P4773 SAS No.: P4773 SDG No.: P4773

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.