

LAB CHRONICLE

OrderID:	P4428	OrderDate:	10/17/2024 10:10:00 AM
Client:	Tetra Tech NUS, Inc.	Project:	CTO WE13
Contact:	Ernie Wu	Location:	K51

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4428-01	RW7-SP100-20241016	Water			10/16/24			10/17/24
			SVOC-SIMGroup1	8270-Modified		10/17/24	10/24/24	
P4428-02	RW7-SP201-20241016	Water			10/16/24			10/17/24
			SVOC-SIMGroup1	8270-Modified		10/17/24	10/25/24	
P4428-03	RW7-SP302-20241016	Water			10/16/24			10/17/24
			SVOC-SIMGroup1	8270-Modified		10/17/24	10/24/24	
P4428-04	RW7-SP303-20241016	Water			10/16/24			10/17/24
			SVOC-SIMGroup1	8270-Modified		10/17/24	10/24/24	



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

Hit Summary Sheet
SW-846

SDG No.: P4428
Client: Tetra Tech NUS, Inc.

Sample ID	Client ID	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : RW7-SP100-20241016								
P4428-01	RW7-SP100-20241016	WATER	1,4-Dioxane	4.700	Q	0.07	0.21	0.21 ug/L
			Total Svoc :	4.70				
			Total Concentration:	4.70				
Client ID : RW7-SP302-20241016								
P4428-03	RW7-SP302-20241016	WATER	1,4-Dioxane	0.090	JQ	0.07	0.21	0.21 ug/L
			Total Svoc :	0.09				
			Total Concentration:	0.09				



SAMPLE DATA

Report of Analysis

Client:	Tetra Tech NUS, Inc.		Date Collected:	10/16/24	
Project:	CTO WE13		Date Received:	10/17/24	
Client Sample ID:	RW7-SP100-20241016		SDG No.:	P4428	
Lab Sample ID:	P4428-01		Matrix:	Water	
Analytical Method:	SW8270SIM		% Solid:	0	
Sample Wt/Vol:	970	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
BN034693.D	1	10/17/24 13:55	10/24/24 15:28	PB164229

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	4.70	Q	0.070	0.21	0.21	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.25		30 - 150		63%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.30		30 - 150		75%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.26		55 - 111		64%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.26		53 - 106		65%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.33		58 - 132		81%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	5600	7.712				
1146-65-2	Naphthalene-d8	16300	10.479				
15067-26-2	Acenaphthene-d10	7520	14.325				
1517-22-2	Phenanthrene-d10	14300	17.064				
1719-03-5	Chrysene-d12	8900	21.248				
1520-96-3	Perylene-d12	8120	23.467				

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:	10/17/24
Client Sample ID:	RW7-SP201-20241016	SDG No.:	P4428
Lab Sample ID:	P4428-02	Matrix:	Water
Analytical Method:	SW8270SIM	% Solid:	0
Sample Wt/Vol:	980 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
BN034710.D	1	10/17/24 13:55	10/25/24 02:26	PB164229

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	0.28		30 - 150		69%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.35		30 - 150		88%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.29		55 - 111		73%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.30		53 - 106		75%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.40		58 - 132		100%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	5810	7.712				
1146-65-2	Naphthalene-d8	16300	10.479				
15067-26-2	Acenaphthene-d10	7110	14.329				
1517-22-2	Phenanthrene-d10	13100	17.069				
1719-03-5	Chrysene-d12	8330	21.241				
1520-96-3	Perylene-d12	6110	23.461				

U = Not Detected

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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:	10/16/24	
Project:	CTO WE13		Date Received:	10/17/24	
Client Sample ID:	RW7-SP302-20241016		SDG No.:	P4428	
Lab Sample ID:	P4428-03		Matrix:	Water	
Analytical Method:	SW8270SIM		% Solid:	0	
Sample Wt/Vol:	970	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
BN034695.D	1	10/17/24 13:55	10/24/24 16:41	PB164229

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.090	JQ	0.070	0.21	0.21	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.32		30 - 150		79%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.36		30 - 150		90%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.32		55 - 111		81%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.34		53 - 106		85%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.36		58 - 132		90%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	5910	7.712				
1146-65-2	Naphthalene-d8	16900	10.479				
15067-26-2	Acenaphthene-d10	7800	14.329				
1517-22-2	Phenanthrene-d10	14800	17.069				
1719-03-5	Chrysene-d12	9770	21.25				
1520-96-3	Perylene-d12	9240	23.467				

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:	10/17/24
Client Sample ID:	RW7-SP303-20241016	SDG No.:	P4428
Lab Sample ID:	P4428-04	Matrix:	Water
Analytical Method:	SW8270SIM	% Solid:	0
Sample Wt/Vol:	980 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
BN034696.D	1	10/17/24 13:55	10/24/24 17:18	PB164229

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	0.29		30 - 150		74%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.33		30 - 150		83%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.30		55 - 111		75%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.31		53 - 106		79%	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	6340	7.712				
1146-65-2	Naphthalene-d8	18200	10.479				
15067-26-2	Acenaphthene-d10	8400	14.329				
1517-22-2	Phenanthrene-d10	14900	17.069				
1719-03-5	Chrysene-d12	8920	21.25				
1520-96-3	Perylene-d12	8250	23.464				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

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M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



QC SUMMARY

Surrogate Summary

SW-846

SDG No.: P4428

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
P4428-01	RW7-SP100-20241016	2-Methylnaphthalene-d10	0.4	0.25	63		30	150
		Fluoranthene-d10	0.4	0.30	75		30	150
		Nitrobenzene-d5	0.4	0.26	64		55	111
		2-Fluorobiphenyl	0.4	0.26	65		53	106
		Terphenyl-d14	0.4	0.33	81		58	132
P4428-02	RW7-SP201-20241016	2-Methylnaphthalene-d10	0.4	0.28	69		30	150
		Fluoranthene-d10	0.4	0.35	88		30	150
		Nitrobenzene-d5	0.4	0.29	73		55	111
		2-Fluorobiphenyl	0.4	0.30	75		53	106
		Terphenyl-d14	0.4	0.40	100		58	132
P4428-03	RW7-SP302-20241016	2-Methylnaphthalene-d10	0.4	0.32	79		30	150
		Fluoranthene-d10	0.4	0.36	90		30	150
		Nitrobenzene-d5	0.4	0.32	81		55	111
		2-Fluorobiphenyl	0.4	0.34	85		53	106
		Terphenyl-d14	0.4	0.36	90		58	132
P4428-04	RW7-SP303-20241016	2-Methylnaphthalene-d10	0.4	0.29	74		30	150
		Fluoranthene-d10	0.4	0.33	83		30	150
		Nitrobenzene-d5	0.4	0.30	75		55	111
		2-Fluorobiphenyl	0.4	0.31	79		53	106
		Terphenyl-d14	0.4	0.37	93		58	132
PB164229BL	PB164229BL	2-Methylnaphthalene-d10	0.4	0.30	75		30	150
		Fluoranthene-d10	0.4	0.30	75		30	150
		Nitrobenzene-d5	0.4	0.31	77		55	111
		2-Fluorobiphenyl	0.4	0.32	80		53	106
		Terphenyl-d14	0.4	0.34	86		58	132
PB164229BS	PB164229BS	2-Methylnaphthalene-d10	0.4	0.29	72		30	150
		Fluoranthene-d10	0.4	0.26	65		30	150
		Nitrobenzene-d5	0.4	0.30	74		55	111
		2-Fluorobiphenyl	0.4	0.32	81		53	106
		Terphenyl-d14	0.4	0.42	105		58	132
PB164229BSD	PB164229BSD	2-Methylnaphthalene-d10	0.4	0.49	123		30	150
		Fluoranthene-d10	0.4	0.32	79		30	150
		Nitrobenzene-d5	0.4	0.33	81		55	111
		2-Fluorobiphenyl	0.4	0.35	88		53	106
		Terphenyl-d14	0.4	0.39	97		58	132

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P4428

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified DataFile: BN034694.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Limits		RPD
								Qual	Low	High	
PB164229BS	1,4-Dioxane	0.4	0.27	ug/L	68		*		70	130	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P4428

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified DataFile: BN034704.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB164229BSD	1,4-Dioxane	0.4	0.30	ug/L	75	11			70	130	20

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB164229BL

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM Case No.: P4428

SAS No.: P4428 SDG NO.: P4428

Lab File ID: BN034692.D

Lab Sample ID: PB164229BL

Instrument ID: BNA_N

Date Extracted: 10/17/2024

Matrix: (soil/water) Water

Date Analyzed: 10/24/2024

Level: (low/med) LOW

Time Analyzed: 14:50

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB164229BS	PB164229BS	BN034694.D	10/24/2024
RW7-SP302-20241016	P4428-03	BN034695.D	10/24/2024
RW7-SP303-20241016	P4428-04	BN034696.D	10/24/2024
PB164229BSD	PB164229BSD	BN034704.D	10/24/2024
RW7-SP100-20241016	P4428-01	BN034693.D	10/24/2024
RW7-SP201-20241016	P4428-02	BN034710.D	10/25/2024

COMMENTS: _____

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: P4428 SDG NO.: P4428

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
PB164229BL	PB164229BL	BN034692.D	10/24/2024	14:50
RW7-SP100-20241016	P4428-01	BN034693.D	10/24/2024	15:28
PB164229BS	PB164229BS	BN034694.D	10/24/2024	16:05
RW7-SP302-20241016	P4428-03	BN034695.D	10/24/2024	16:41
RW7-SP303-20241016	P4428-04	BN034696.D	10/24/2024	17:18
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.: P4428 SDG NO.: P4428

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
PB164229BSD	PB164229BSD	BN034704.D	10/24/2024	22:50
RW7-SP201-20241016	P4428-02	BN034710.D	10/25/2024	02:26
SSTDCCC0.4EC	SSTDCCC0.4	BN034719.D	10/25/2024	07:51

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P4428 SAS No.: P4428 SDG NO.: P4428

EPA Sample No.: SSTDICCC0.4 Date Analyzed: 10/24/2024

Lab File ID: BN034686.D Time Analyzed: 10:23

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	6324	7.712	18497	10.48	9311	14.33
UPPER LIMIT	12648	8.212	36994	10.979	18622	14.829
LOWER LIMIT	3162	7.212	9248.5	9.979	4655.5	13.829
EPA SAMPLE NO.						
01 PB164229BL	6659	7.71	18698	10.48	8134	14.33
02 RW7-SP100-20241016	5598	7.71	16265	10.48	7521	14.33
03 PB164229BS	7746	7.71	21854	10.48	9313	14.33
04 RW7-SP302-20241016	5914	7.71	16908	10.48	7800	14.33
05 RW7-SP303-20241016	6342	7.71	18201	10.48	8400	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.: P4428 SAS No.: P4428 SDG NO.: P4428

EPA Sample No.: SSTDICCC0.4 Date Analyzed: 10/24/2024

Lab File ID: BN034686.D Time Analyzed: 10:23

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	18185	17.069	10628	21.25	9595	23.467
UPPER LIMIT	36370	17.569	21256	21.75	19190	23.967
LOWER LIMIT	9092.5	16.569	5314	20.75	4797.5	22.967
EPA SAMPLE NO.						
01 PB164229BL	15380	17.07	8430	21.25	4222 *	23.47
02 RW7-SP100-20241016	14308	17.06	8901	21.25	8123	23.47
03 PB164229BS	17486	17.07	7332	21.25	876 *	23.47
04 RW7-SP302-20241016	14807	17.07	9773	21.25	9243	23.47
05 RW7-SP303-20241016	14880	17.07	8915	21.25	8250	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.: P4428 SAS No.: P4428 SDG NO.: P4428

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 RW7-SP201-20241016	5814	7.71	16296	10.48	7113	14.33
02 PB164229BSD	6487	7.71	18237	10.48	7824	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.: P4428 SAS No.: P4428 SDG NO.: P4428

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 RW7-SP201-20241016	13114	17.07	8330	21.24	6107	23.46
02 PB164229BSD	14054	17.07	7021	21.24	3135 *	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:	PB164229BL		SDG No.:	P4428	
Lab Sample ID:	PB164229BL		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
BN034692.D	1	10/17/24 13:55	10/24/24 14:50	PB164229

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	0.30		30 - 150		75%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.30		30 - 150		75%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.31		55 - 111		77%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.32		53 - 106		80%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.34		58 - 132		86%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	6660	7.712				
1146-65-2	Naphthalene-d8	18700	10.479				
15067-26-2	Acenaphthene-d10	8130	14.329				
1517-22-2	Phenanthrene-d10	15400	17.069				
1719-03-5	Chrysene-d12	8430	21.25				
1520-96-3	Perylene-d12	4220	23.466				

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:	PB164229BS		SDG No.:	P4428	
Lab Sample ID:	PB164229BS		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
BN034694.D	1	10/17/24 13:55	10/24/24 16:05	PB164229

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	0.29		30 - 150		72%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.26		30 - 150		65%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.30		55 - 111		74%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.32		53 - 106		81%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.42		58 - 132		105%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	7750	7.712				
1146-65-2	Naphthalene-d8	21900	10.479				
15067-26-2	Acenaphthene-d10	9310	14.329				
1517-22-2	Phenanthrene-d10	17500	17.069				
1719-03-5	Chrysene-d12	7330	21.25				
1520-96-3	Perylene-d12	876	23.467				

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:	PB164229BSD		SDG No.:	P4428	
Lab Sample ID:	PB164229BSD		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
BN034704.D	1	10/17/24 13:55	10/24/24 22:50	PB164229

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	0.49		30 - 150		123%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.32		30 - 150		79%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.33		55 - 111		81%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.35		53 - 106		88%	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	6490	7.712				
1146-65-2	Naphthalene-d8	18200	10.479				
15067-26-2	Acenaphthene-d10	7820	14.329				
1517-22-2	Phenanthrene-d10	14100	17.069				
1719-03-5	Chrysene-d12	7020	21.241				
1520-96-3	Perylene-d12	3140	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) SURR2	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.: P4428 SAS No.: P4428 SDG No.: P4428

Instrument ID: BNA_N Calibration Date/Time: 10/24/2024 19:06

Lab File ID: BN034699.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	0.482		-12.4	50.0
Fluoranthene-d10	0.901	0.776		-13.9	50.0
2-Fluorophenol	1.189	1.225		3.0	50.0
Phenol-d6	1.568	1.669		6.4	50.0
Nitrobenzene-d5	0.336	0.294		-12.5	50.0
2-Fluorobiphenyl	1.590	1.420		-10.7	50.0
2,4,6-Tribromophenol	0.124	0.099		-20.2	50.0
Terphenyl-d14	0.817	0.703		-14.0	50.0
1,4-Dioxane	0.532	0.488		-8.3	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.: P4428 SAS No.: P4428 SDG No.: P4428

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.: P4428 SAS No.: P4428 SDG No.: P4428

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.