

LAB CHRONICLE

OrderID:	Q1199	OrderDate:	1/27/2025 3:35:00 PM
Client:	Tetra Tech NUS, Inc.	Project:	CTO WE13
Contact:	Ernie Wu	Location:	N21,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1199-02	BP-VPB-192-EB-2025 0124	Water			01/24/25			01/27/25
			SVOC-SIMGroup1	8270-Modified		01/28/25	01/29/25	
Q1199-03	BP-VPB-192-GW-280- 282	Water			01/24/25			01/27/25
			SVOC-SIMGroup1	8270-Modified		01/28/25	01/29/25	
Q1199-04	BP-VPB-192-GW-260- 262	Water			01/23/25			01/27/25
			SVOC-SIMGroup1	8270-Modified		01/28/25	01/29/25	
Q1199-05	BP-VPB-192-GW-240- 242	Water			01/23/25			01/27/25
			SVOC-SIMGroup1	8270-Modified		01/28/25	01/29/25	
Q1199-06	BP-VPB-192-GW-220- 222	Water			01/23/25			01/27/25
			SVOC-SIMGroup1	8270-Modified		01/28/25	01/29/25	

Hit Summary Sheet SW-846

SDG No.: Q1199

Client: Tetra Tech NUS, Inc.

Sample ID	Client ID	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : BP-VPB-192-GW-280-282								
Q1199-03	BP-VPB-192-GW-280-28 WATER	1,4-Dioxane	0.360		0.09	0.25	0.25	ug/L
		Total Svoc :		0.36				
		Total Concentration:		0.36				
Client ID : BP-VPB-192-GW-260-262								
Q1199-04	BP-VPB-192-GW-260-26 WATER	1,4-Dioxane	0.830		0.08	0.25	0.25	ug/L
		Total Svoc :		0.83				
		Total Concentration:		0.83				
Client ID : BP-VPB-192-GW-240-242								
Q1199-05	BP-VPB-192-GW-240-24 WATER	1,4-Dioxane	0.490		0.09	0.25	0.25	ug/L
		Total Svoc :		0.49				
		Total Concentration:		0.49				
Client ID : BP-VPB-192-GW-220-222								
Q1199-06	BP-VPB-192-GW-220-22 WATER	1,4-Dioxane	0.250		0.08	0.24	0.24	ug/L
		Total Svoc :		0.25				
		Total Concentration:		0.25				



SAMPLE DATA

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/24/25
Project:	CTO WE13	Date Received:	01/27/25
Client Sample ID:	BP-VPB-192-EB-20250124	SDG No.:	Q1199
Lab Sample ID:	Q1199-02	Matrix:	Water
Analytical Method:	SW8270ESIM	% Solid:	0
Sample Wt/Vol:	900 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN036115.D	1	01/28/25 09:50	01/29/25 19:55	PB166297

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.22	U	0.080	0.22	0.22	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.38		30 - 150		96%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.45		30 - 150		113%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.37		55 - 111		93%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.31		53 - 106		76%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.54	*	58 - 132		134%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2210	7.803				
1146-65-2	Naphthalene-d8	5270	10.6				
15067-26-2	Acenaphthene-d10	2990	14.441				
1517-22-2	Phenanthrene-d10	6580	17.186				
1719-03-5	Chrysene-d12	5320	21.376				
1520-96-3	Perylene-d12	5110	23.675				

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:	01/24/25
Project:	CTO WE13	Date Received:	01/27/25
Client Sample ID:	BP-VPB-192-GW-280-282	SDG No.:	Q1199
Lab Sample ID:	Q1199-03	Matrix:	Water
Analytical Method:	SW8270ESIM	% Solid:	0
Sample Wt/Vol:	800 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN036116.D	1	01/28/25 09:50	01/29/25 20:31	PB166297

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.36		0.090	0.25	0.25	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.32		30 - 150		79%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.44		30 - 150		110%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.35		55 - 111		87%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.30		53 - 106		76%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.47		58 - 132		117%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2250	7.803				
1146-65-2	Naphthalene-d8	5220	10.6				
15067-26-2	Acenaphthene-d10	2650	14.442				
1517-22-2	Phenanthrene-d10	5260	17.186				
1719-03-5	Chrysene-d12	4930	21.376				
1520-96-3	Perylene-d12	5690	23.672				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/23/25
Project:	CTO WE13	Date Received:	01/27/25
Client Sample ID:	BP-VPB-192-GW-260-262	SDG No.:	Q1199
Lab Sample ID:	Q1199-04	Matrix:	Water
Analytical Method:	SW8270ESIM	% Solid:	0
Sample Wt/Vol:	810 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN036117.D	1	01/28/25 09:50	01/29/25 21:07	PB166297

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.83		0.080	0.25	0.25	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.39		30 - 150		97%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.47		30 - 150		118%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.38		55 - 111		94%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.32		53 - 106		80%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.57	*	58 - 132		143%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2150	7.803				
1146-65-2	Naphthalene-d8	4870	10.6				
15067-26-2	Acenaphthene-d10	2940	14.441				
1517-22-2	Phenanthrene-d10	6490	17.186				
1719-03-5	Chrysene-d12	5410	21.376				
1520-96-3	Perylene-d12	5180	23.672				

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() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	Tetra Tech NUS, Inc.		Date Collected:	01/23/25
Project:	CTO WE13		Date Received:	01/27/25
Client Sample ID:	BP-VPB-192-GW-240-242		SDG No.:	Q1199
Lab Sample ID:	Q1199-05		Matrix:	Water
Analytical Method:	SW8270ESIM		% Solid:	0
Sample Wt/Vol:	800	Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-SIMGroup1
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN036118.D	1	01/28/25 09:50	01/29/25 21:43	PB166297

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.49		0.090	0.25	0.25	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.34		30 - 150		85%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.44		30 - 150		110%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.35		55 - 111		87%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.31		53 - 106		77%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.54	*	58 - 132		134%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2470	7.803				
1146-65-2	Naphthalene-d8	5780	10.6				
15067-26-2	Acenaphthene-d10	3180	14.442				
1517-22-2	Phenanthrene-d10	6950	17.186				
1719-03-5	Chrysene-d12	5740	21.376				
1520-96-3	Perylene-d12	5850	23.672				

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() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/23/25
Project:	CTO WE13	Date Received:	01/27/25
Client Sample ID:	BP-VPB-192-GW-220-222	SDG No.:	Q1199
Lab Sample ID:	Q1199-06	Matrix:	Water
Analytical Method:	SW8270ESIM	% Solid:	0
Sample Wt/Vol:	820 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN036114.D	1	01/28/25 09:50	01/29/25 19:19	PB166297

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.25		0.080	0.24	0.24	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.38		30 - 150		95%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.48		30 - 150		119%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.38		55 - 111		94%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.32		53 - 106		80%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.55	*	58 - 132		137%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2010	7.803				
1146-65-2	Naphthalene-d8	4880	10.6				
15067-26-2	Acenaphthene-d10	2770	14.441				
1517-22-2	Phenanthrene-d10	6230	17.186				
1719-03-5	Chrysene-d12	5540	21.376				
1520-96-3	Perylene-d12	5180	23.675				

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A = Aldol-Condensation Reaction Products



QC SUMMARY

Surrogate Summary

SW-846

SDG No.: Q1199

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
PB166297BL	PB166297BL	2-Methylnaphthalene-d10	0.4	0.43	108		30	150
		Fluoranthene-d10	0.4	0.43	108		30	150
		Nitrobenzene-d5	0.4	0.42	105		55	111
		2-Fluorobiphenyl	0.4	0.37	93		53	106
		Terphenyl-d14	0.4	0.56	141	*	58	132
PB166297BS	PB166297BS	2-Methylnaphthalene-d10	0.4	0.59	146		30	150
		Fluoranthene-d10	0.4	0.40	99		30	150
		Nitrobenzene-d5	0.4	0.43	108		55	111
		2-Fluorobiphenyl	0.4	0.38	95		53	106
		Terphenyl-d14	0.4	0.53	133	*	58	132
PB166297BSD	PB166297BSD	2-Methylnaphthalene-d10	0.4	0.57	143		30	150
		Fluoranthene-d10	0.4	0.40	100		30	150
		Nitrobenzene-d5	0.4	0.42	105		55	111
		2-Fluorobiphenyl	0.4	0.37	93		53	106
		Terphenyl-d14	0.4	0.55	137	*	58	132
Q1199-02	BP-VPB-192-EB-20250124	2-Methylnaphthalene-d10	0.4	0.38	96		30	150
		Fluoranthene-d10	0.4	0.45	113		30	150
		Nitrobenzene-d5	0.4	0.37	93		55	111
		2-Fluorobiphenyl	0.4	0.31	76		53	106
		Terphenyl-d14	0.4	0.54	134	*	58	132
Q1199-03	BP-VPB-192-GW-280-282	2-Methylnaphthalene-d10	0.4	0.32	79		30	150
		Fluoranthene-d10	0.4	0.44	110		30	150
		Nitrobenzene-d5	0.4	0.35	87		55	111
		2-Fluorobiphenyl	0.4	0.30	76		53	106
		Terphenyl-d14	0.4	0.47	117		58	132
Q1199-04	BP-VPB-192-GW-260-262	2-Methylnaphthalene-d10	0.4	0.39	97		30	150
		Fluoranthene-d10	0.4	0.47	118		30	150
		Nitrobenzene-d5	0.4	0.38	94		55	111
		2-Fluorobiphenyl	0.4	0.32	80		53	106
		Terphenyl-d14	0.4	0.57	143	*	58	132
Q1199-05	BP-VPB-192-GW-240-242	2-Methylnaphthalene-d10	0.4	0.34	85		30	150
		Fluoranthene-d10	0.4	0.44	110		30	150
		Nitrobenzene-d5	0.4	0.35	87		55	111
		2-Fluorobiphenyl	0.4	0.31	77		53	106
		Terphenyl-d14	0.4	0.54	134	*	58	132
Q1199-06	BP-VPB-192-GW-220-222	2-Methylnaphthalene-d10	0.4	0.38	95		30	150
		Fluoranthene-d10	0.4	0.48	119		30	150
		Nitrobenzene-d5	0.4	0.38	94		55	111
		2-Fluorobiphenyl	0.4	0.32	80		53	106
		Terphenyl-d14	0.4	0.55	137	*	58	132

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1199

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified **DataFile:** BN036126.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Limits		RPD
								Qual	Low	High	
PB166297BS	1,4-Dioxane	0.4	0.32	ug/L	80				70	130	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1199

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified DataFile: BN036127.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB166297BSD	1,4-Dioxane	0.4	0.30	ug/L	75	6			70	130	20

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB166297BL

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM Case No.: Q1199

SAS No.: Q1199 SDG NO.: Q1199

Lab File ID: BN036113.D

Lab Sample ID: PB166297BL

Instrument ID: BNA_N

Date Extracted: 01/28/2025

Matrix: (soil/water) Water

Date Analyzed: 01/29/2025

Level: (low/med) LOW

Time Analyzed: 18:42

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB166297BS	PB166297BS	BN036126.D	01/30/2025
BP-VPB-192-EB-20250124	Q1199-02	BN036115.D	01/29/2025
BP-VPB-192-GW-280-282	Q1199-03	BN036116.D	01/29/2025
BP-VPB-192-GW-260-262	Q1199-04	BN036117.D	01/29/2025
PB166297BSD	PB166297BSD	BN036127.D	01/30/2025
BP-VPB-192-GW-220-222	Q1199-06	BN036114.D	01/29/2025
BP-VPB-192-GW-240-242	Q1199-05	BN036118.D	01/29/2025

COMMENTS: _____

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: Q1199

SDG NO.: Q1199

Lab File ID: BN036009.D

DFTPP Injection Date: 01/22/2025

Instrument ID: BNA_N

DFTPP Injection Time: 09:44

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	48.9
68	Less than 2.0% of mass 69	0.5 (1.1) 1
69	Mass 69 relative abundance	45.7
70	Less than 2.0% of mass 69	0.3 (0.6) 1
127	10.0 - 80.0% of mass 198	47.7
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 60.0% of mass 198	24.1
365	Greater than 1% of mass 198	3.8
441	Present, but less than mass 443	9.4
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	11.5 (20.4) 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
SSTDICC0.1	SSTDICC0.1	BN036010.D	01/22/2025	11:02
SSTDICC0.2	SSTDICC0.2	BN036011.D	01/22/2025	11:38
SSTDICCC0.4	SSTDICCC0.4	BN036012.D	01/22/2025	12:13
SSTDICC0.8	SSTDICC0.8	BN036013.D	01/22/2025	12:49
SSTDICC1.6	SSTDICC1.6	BN036014.D	01/22/2025	13:25
SSTDICC3.2	SSTDICC3.2	BN036015.D	01/22/2025	14:01
SSTDICC5.0	SSTDICC5.0	BN036016.D	01/22/2025	14:36

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: Q1199

SDG NO.: Q1199

Lab File ID: BN036111.D

DFTPP Injection Date: 01/29/2025

Instrument ID: BNA_N

DFTPP Injection Time: 17:27

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	42.5
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	42.8
70	Less than 2.0% of mass 69	0.2 (0.5) 1
127	10.0 - 80.0% of mass 198	47.9
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 60.0% of mass 198	26.8
365	Greater than 1% of mass 198	3.7
441	Present, but less than mass 443	11.1
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	12.7 (18.8) 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	BN036112.D	01/29/2025	18:06
PB166297BL	PB166297BL	BN036113.D	01/29/2025	18:42
BP-VPB-192-GW-220-222	Q1199-06	BN036114.D	01/29/2025	19:19
BP-VPB-192-EB-20250124	Q1199-02	BN036115.D	01/29/2025	19:55
BP-VPB-192-GW-280-282	Q1199-03	BN036116.D	01/29/2025	20:31
BP-VPB-192-GW-260-262	Q1199-04	BN036117.D	01/29/2025	21:07
BP-VPB-192-GW-240-242	Q1199-05	BN036118.D	01/29/2025	21:43
PB166297BS	PB166297BS	BN036126.D	01/30/2025	02:31
PB166297BSD	PB166297BSD	BN036127.D	01/30/2025	03:07
SSTDCCC0.4EC	SSTDCCC0.4	BN036128.D	01/30/2025	03:43

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1199 SAS No.: Q1199 SDG NO.: Q1199

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 01/29/2025

Lab File ID: BN036112.D Time Analyzed: 18:06

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	2094	7.803	4943	10.60	2715	14.44
UPPER LIMIT	4188	8.303	9886	11.1	5430	14.937
LOWER LIMIT	1047	7.303	2471.5	10.1	1357.5	13.937
EPA SAMPLE NO.						
01 PB166297BL	2136	7.80	4915	10.60	2707	14.44
02 BP-VPB-192-GW-220-222	2008	7.80	4878	10.60	2770	14.44
03 BP-VPB-192-EB-20250124	2206	7.80	5271	10.60	2988	14.44
04 BP-VPB-192-GW-280-282	2253	7.80	5222	10.60	2653	14.44
05 BP-VPB-192-GW-260-262	2145	7.80	4867	10.60	2939	14.44
06 BP-VPB-192-GW-240-242	2471	7.80	5780	10.60	3178	14.44
07 PB166297BS	2324	7.80	5152	10.59	2819	14.44
08 PB166297BSD	2359	7.80	5174	10.59	2851	14.44

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.: Q1199 SAS No.: Q1199 SDG NO.: Q1199

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 01/29/2025

Lab File ID: BN036112.D Time Analyzed: 18:06

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	5698	17.194	4562	21.376	5021	23.677
UPPER LIMIT	11396	17.694	9124	21.876	10042	24.177
LOWER LIMIT	2849	16.694	2281	20.876	2510.5	23.177
EPA SAMPLE NO.						
01 PB166297BL	5606	17.19	4293	21.38	4681	23.68
02 BP-VPB-192-GW-220-222	6230	17.19	5536	21.38	5180	23.68
03 BP-VPB-192-EB-20250124	6578	17.19	5317	21.38	5108	23.68
04 BP-VPB-192-GW-280-282	5259	17.19	4932	21.38	5685	23.67
05 BP-VPB-192-GW-260-262	6485	17.19	5413	21.38	5178	23.67
06 BP-VPB-192-GW-240-242	6949	17.19	5738	21.38	5850	23.67
07 PB166297BS	5724	17.18	4238	21.38	4580	23.67
08 PB166297BSD	6109	17.19	4365	21.37	4649	23.67

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:	PB166297BL		SDG No.:	Q1199
Lab Sample ID:	PB166297BL		Matrix:	Water
Analytical Method:	SW8270ESIM		% Solid:	0
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-SIMGroup1
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN036113.D	1	01/28/25 09:50	01/29/25 18:42	PB166297

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	0.43		30 - 150		108%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.43		30 - 150		108%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.42		55 - 111		105%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.37		53 - 106		93%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.56	*	58 - 132		141%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2140		7.803			
1146-65-2	Naphthalene-d8	4920		10.6			
15067-26-2	Acenaphthene-d10	2710		14.442			
1517-22-2	Phenanthrene-d10	5610		17.186			
1719-03-5	Chrysene-d12	4290		21.376			
1520-96-3	Perylene-d12	4680		23.678			

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:	PB166297BS		SDG No.:	Q1199
Lab Sample ID:	PB166297BS		Matrix:	Water
Analytical Method:	SW8270ESIM		% Solid:	0
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-SIMGroup1
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN036126.D	1	01/28/25 09:50	01/30/25 02:31	PB166297

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.32		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.59		30 - 150		146%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.40		30 - 150		99%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.43		55 - 111		108%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.38		53 - 106		95%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.53	*	58 - 132		133%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2320	7.803				
1146-65-2	Naphthalene-d8	5150	10.59				
15067-26-2	Acenaphthene-d10	2820	14.436				
1517-22-2	Phenanthrene-d10	5720	17.181				
1719-03-5	Chrysene-d12	4240	21.375				
1520-96-3	Perylene-d12	4580	23.671				

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:	PB166297BSD		SDG No.:	Q1199
Lab Sample ID:	PB166297BSD		Matrix:	Water
Analytical Method:	SW8270ESIM		% Solid:	0
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-SIMGroup1
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN036127.D	1	01/28/25 09:50	01/30/25 03:07	PB166297

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	0.57		30 - 150		143%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.40		30 - 150		100%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.42		55 - 111		105%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.37		53 - 106		93%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.55	*	58 - 132		137%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	2360	7.803				
1146-65-2	Naphthalene-d8	5170	10.59				
15067-26-2	Acenaphthene-d10	2850	14.442				
1517-22-2	Phenanthrene-d10	6110	17.186				
1719-03-5	Chrysene-d12	4370	21.367				
1520-96-3	Perylene-d12	4650	23.672				

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-BN012225.M
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 Last Update : Thu Jan 23 00:34:56 2025
 Response Via : Initial Calibration

Calibration Files

0.1 =BN036010.D 0.2 =BN036011.D 0.4 =BN036012.D 0.8 =BN036013.D 1.6 =BN036014.D 3.2 =BN036015.D 5.0 =BN036016.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	0.452	0.460	0.469	0.477	0.447	0.408	0.417	0.447	5.81
3)	n-Nitrosodimet...	0.798	0.749	0.877	0.883	0.829	0.781	0.759	0.811	6.65
4) S	2-Fluorophenol	1.032	1.012	1.092	1.099	1.042	0.997	1.010	1.040	3.88
5) S	Phenol-d6	1.284	1.195	1.270	1.155	1.230	1.210	1.209	1.222	3.61
6)	bis(2-Chloroet...	1.024	0.979	1.056	0.929	0.993	0.952	0.952	0.984	4.53
7) I	Naphthalene-d8	-----ISTD-----								
8) S	Nitrobenzene-d5	0.377	0.356	0.399	0.333	0.397	0.388	0.394	0.378	6.55
9)	Naphthalene	1.149	1.141	1.250	1.137	1.184	1.141	1.131	1.162	3.68
10)	Hexachlorobuta...	0.383	0.369	0.404	0.371	0.388	0.359	0.353	0.375	4.74
11) SURR	2-Methylnaphth...	0.522	0.527	0.578	0.528	0.556	0.550	0.545	0.544	3.66
12)	2-Methylnaphth...	0.702	0.688	0.760	0.700	0.741	0.735	0.721	0.721	3.58
13) I	Acenaphthene-d10	-----ISTD-----								
14) S	2,4,6-Tribromo...	0.240	0.238	0.256	0.238	0.268	0.275	0.282	0.257	7.32
15) S	2-Fluorobiphenyl	1.806	1.736	1.934	1.787	1.819	1.693	1.724	1.786	4.47
16)	Acenaphthylene	1.835	1.826	2.011	1.840	1.940	1.889	1.936	1.897	3.65
17)	Acenaphthene	1.248	1.236	1.365	1.266	1.338	1.310	1.327	1.299	3.78
18)	Fluorene	1.583	1.482	1.633	1.550	1.739	1.703	1.700	1.627	5.76
19) I	Phenanthrene-d10	-----ISTD-----								
20)	4,6-Dinitro-2-...	0.071	0.081	0.095	0.089	0.101	0.107	0.108	0.093	14.73
21)	4-Bromophenyl-...	0.285	0.269	0.307	0.287	0.293	0.273	0.281	0.285	4.42
22)	Hexachlorobenzene	0.391	0.358	0.407	0.374	0.380	0.355	0.361	0.375	5.08
23)	Atrazine	0.185	0.194	0.218	0.204	0.216	0.209	0.215	0.206	6.05
24)	Pentachlorophenol	0.131	0.131	0.164	0.155	0.179	0.185	0.192	0.162	15.18
25)	Phenanthrene	1.154	1.158	1.302	1.172	1.226	1.182	1.219	1.202	4.33
26)	Anthracene	1.019	1.016	1.151	1.064	1.128	1.123	1.151	1.093	5.42
27) SURR	Fluoranthene-d10	1.005	1.006	1.111	0.994	0.959	1.078	1.101	1.036	5.75
28)	Fluoranthene	1.312	1.350	1.507	1.357	1.317	1.506	1.533	1.412	6.99
29) I	Chrysene-d12	-----ISTD-----								
30)	Pyrene	1.657	1.588	1.693	1.636	1.646	1.552	1.575	1.621	3.12
31) S	Terphenyl-d14	0.821	0.807	0.871	0.831	0.860	0.804	0.822	0.831	3.09
32)	Benzo(a)anthra...	1.445	1.403	1.503	1.411	1.513	1.448	1.433	1.451	2.93
33)	Chrysene	1.501	1.476	1.545	1.448	1.515	1.435	1.463	1.483	2.63
34)	Bis(2-ethylhex...	0.919	0.793	0.798	0.748	0.791	0.748	0.768	0.795	7.36
35) I	Perylene-d12	-----ISTD-----								

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

Method File : 8270-SIM-BN012225.M

36)	Indeno(1,2,3-c...	1.525	1.477	1.621	1.585	1.669	1.668	1.692	1.605	5.03
37)	Benzo(b)fluora...	1.443	1.380	1.497	1.429	1.475	1.444	1.510	1.454	3.03
38)	Benzo(k)fluora...	1.427	1.378	1.486	1.427	1.519	1.496	1.524	1.465	3.76
39) C	Benzo(a)pyrene	1.237	1.164	1.263	1.203	1.264	1.265	1.296	1.242	3.61
40)	Dibenzo(a,h)an...	1.187	1.169	1.290	1.279	1.337	1.338	1.356	1.279	5.86
41)	Benzo(g,h,i)pe...	1.338	1.308	1.426	1.387	1.438	1.428	1.436	1.394	3.75

(#) = Out of Range

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: Q1199 SAS No.: Q1199 SDG No.: Q1199

Instrument ID: BNA_N Calibration Date/Time: 01/29/2025 18:06

Lab File ID: BN036112.D Init. Calib. Date(s): 01/22/2025 01/22/2025

EPA Sample No.: SSTDCCC0.4 Init. Calib. Time(s): 11:02 14:36

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.544	0.594		9.2	20.0
Fluoranthene-d10	1.036	1.092		5.4	20.0
2-Fluorophenol	1.040	1.195		14.9	20.0
Phenol-d6	1.222	1.488		21.8	20.0
Nitrobenzene-d5	0.378	0.398		5.3	20.0
2-Fluorobiphenyl	1.786	1.681		-5.9	20.0
2,4,6-Tribromophenol	0.257	0.246		-4.3	20.0
Terphenyl-d14	0.831	0.973		17.1	20.0
1,4-Dioxane	0.447	0.405		-9.4	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.: Q1199 SAS No.: Q1199 SDG No.: Q1199

Instrument ID: BNA_N Calibration Date/Time: 01/30/2025 03:43

Lab File ID: BN036128.D Init. Calib. Date(s): 01/22/2025 01/22/2025

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 11:02 14:36

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.544	0.601		10.5	50.0
Fluoranthene-d10	1.036	1.159		11.9	50.0
2-Fluorophenol	1.040	1.189		14.3	50.0
Phenol-d6	1.222	1.499		22.7	50.0
Nitrobenzene-d5	0.378	0.413		9.3	50.0
2-Fluorobiphenyl	1.786	1.729		-3.2	50.0
2,4,6-Tribromophenol	0.257	0.251		-2.3	50.0
Terphenyl-d14	0.831	1.004		20.8	50.0
1,4-Dioxane	0.447	0.408		-8.7	50.0

All other compounds must meet a minimum RRF of 0.010.