

ANALYTICAL RESULTS SUMMARY

SEMI-VOLATILE ORGANICS

PROJECT NAME : NWIRP BETHPAGE 112G08005-WE13

TETRA TECH NUS, INC.

661 Andersen Drive

Suite 200

Pittsburgh, PA - 15220-2745

Phone No: 412-921-7090

ORDER ID : Q2063

ATTENTION : Ernie Wu



Laboratory Certification ID # 20012



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Cover Page

Order ID : Q2063

Project ID : NWIRP Bethpage 112G08005-WE13

Client : Tetra Tech NUS, Inc.

Lab Sample Number

Q2063-01
Q2063-02
Q2063-03

Client Sample Number

RW5-SP100-20250515
RW5-SP201-20250515
RW5-SP303-20250515

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature :

APPROVED

By *Nimisha Pandya, QA/QC Supervisor at 1:36 pm, May 27, 2025*

Date: 5/26/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CASE NARRATIVE

Tetra Tech NUS, Inc.

Project Name: NWIRP Bethpage 112G08005-WE13

Project Manager: Ernie Wu

Order ID # Q2063

Test Name: SVOC-SIMGroup1

A. Number of Samples and Date of Receipt:

3 Water samples were received on 05/16/2025.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: SVOC-SIMGroup1. This data package contains results for SVOC-SIMGroup1.

C. Analytical Techniques:

The samples were analyzed on instrument BNA_N using GC Column ZB-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGAThe analysis of SVOC-SIMGroup1 was based on method 8270-Modified and extraction was done based on method 3510.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria except for RW5-SP201-20250515 [Terphenyl-d14 - 133%]. This surrogate is not required for DOD project, therefore no corrective action was taken.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank Spike Duplicate met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

The Tuning criteria met requirements.

Sample RW5-SP100-20250515 was diluted due to original sample had high concentrations. But tune was not ok in original run therefore only dilution is reported as final results.

E. Additional Comments:

The laboratory certifies that the all-electronic diskette deliverable exactly match the data summary forms (i.e. Form Is).

The Form 6 is not included in the data package because the Initial Calibration was performed using 7 points.

The not QT review data is reported in the Miscellaneous.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <20% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 20% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 1:36 pm, May 27, 2025

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following “ Results Qualifiers” are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. “10 U”. This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as “12 B”.
E	Indicates the analyte ‘s concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a “P”.
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q2063

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SOHIL JODHANI

Date: 05/26/2025

LAB CHRONICLE

OrderID:	Q2063	OrderDate:	5/16/2025 10:38:00 AM
Client:	Tetra Tech NUS, Inc.	Project:	NWIRP Bethpage 112G08005-WE13
Contact:	Ernie Wu	Location:	L41

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2063-01	RW5-SP100-2025051 5	Water			05/15/25			05/16/25
			SVOC-SIMGroup1	8270-Modified		05/16/25	05/20/25	
Q2063-02	RW5-SP201-2025051 5	Water			05/15/25			05/16/25
			SVOC-SIMGroup1	8270-Modified		05/16/25	05/20/25	
Q2063-03	RW5-SP303-2025051 5	Water			05/15/25			05/16/25
			SVOC-SIMGroup1	8270-Modified		05/16/25	05/20/25	



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

Hit Summary Sheet SW-846

SDG No.: Q2063
Client: Tetra Tech NUS, Inc.

Sample ID	Client ID	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID :	RW5-SP100-20250515							
Q2063-01	RW5-SP100-20250515	WATER	1,4-Dioxane	5.600	0.13	0.4	0.4	ug/L
			Total Svoc :	5.60				
			Total Concentration:	5.60				



SAMPLE DATA

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/15/25
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	05/16/25
Client Sample ID:	RW5-SP100-20250515	SDG No.:	Q2063
Lab Sample ID:	Q2063-01	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
BN037077.D	2	05/16/25 11:50	05/20/25 16:59	PB168032

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	5.60		0.13	0.40	0.40	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.30		30 - 150		75%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.35		30 - 150		86%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.30		55 - 111		75%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.29		53 - 106		73%	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	1880	7.611				
1146-65-2	Naphthalene-d8	5070	10.394				
15067-26-2	Acenaphthene-d10	2830	14.256				
1517-22-2	Phenanthrene-d10	5700	17.009				
1719-03-5	Chrysene-d12	4060	21.207				
1520-96-3	Perylene-d12	3510	23.407				

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:	05/15/25
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	05/16/25
Client Sample ID:	RW5-SP201-20250515	SDG No.:	Q2063
Lab Sample ID:	Q2063-02	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
BN037078.D	1	05/16/25 11:50	05/20/25 17:35	PB168032

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	0.29		30 - 150		73%	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		72%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.29		53 - 106		72%	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	2020	7.611				
1146-65-2	Naphthalene-d8	5260	10.394				
15067-26-2	Acenaphthene-d10	2990	14.256				
1517-22-2	Phenanthrene-d10	6090	17.009				
1719-03-5	Chrysene-d12	4330	21.207				
1520-96-3	Perylene-d12	3600	23.407				

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:	05/15/25
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	05/16/25
Client Sample ID:	RW5-SP303-20250515	SDG No.:	Q2063
Lab Sample ID:	Q2063-03	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
BN037079.D	1	05/16/25 11:50	05/20/25 18:11	PB168032

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	0.28		30 - 150		70%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.35		30 - 150		88%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.27		55 - 111		68%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.27		53 - 106		67%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.45		58 - 132		113%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1610	7.611				
1146-65-2	Naphthalene-d8	4340	10.394				
15067-26-2	Acenaphthene-d10	2540	14.256				
1517-22-2	Phenanthrene-d10	5160	17.009				
1719-03-5	Chrysene-d12	4020	21.206				
1520-96-3	Perylene-d12	3490	23.409				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



QC SUMMARY

Surrogate Summary

SW-846

SDG No.: Q2063

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
PB168032BL	PB168032BL	2-Methylnaphthalene-d10	0.4	0.36	90		30	150
		Fluoranthene-d10	0.4	0.34	84		30	150
		Nitrobenzene-d5	0.4	0.32	81		55	111
		2-Fluorobiphenyl	0.4	0.34	84		53	106
		Terphenyl-d14	0.4	0.42	104		58	132
PB168032BS	PB168032BS	2-Methylnaphthalene-d10	0.4	0.39	96		30	150
		Fluoranthene-d10	0.4	0.33	81		30	150
		Nitrobenzene-d5	0.4	0.32	81		55	111
		2-Fluorobiphenyl	0.4	0.33	83		53	106
		Terphenyl-d14	0.4	0.39	97		58	132
PB168032BSD	PB168032BSD	2-Methylnaphthalene-d10	0.4	0.39	98		30	150
		Fluoranthene-d10	0.4	0.33	83		30	150
		Nitrobenzene-d5	0.4	0.35	88		55	111
		2-Fluorobiphenyl	0.4	0.33	83		53	106
		Terphenyl-d14	0.4	0.42	104		58	132
Q2063-01	RW5-SP100-20250515	2-Methylnaphthalene-d10	0.4	0.30	75		30	150
		Fluoranthene-d10	0.4	0.35	86		30	150
		Nitrobenzene-d5	0.4	0.30	75		55	111
		2-Fluorobiphenyl	0.4	0.29	73		53	106
		Terphenyl-d14	0.4	0.51	127		58	132
Q2063-02	RW5-SP201-20250515	2-Methylnaphthalene-d10	0.4	0.29	73		30	150
		Fluoranthene-d10	0.4	0.35	88		30	150
		Nitrobenzene-d5	0.4	0.29	72		55	111
		2-Fluorobiphenyl	0.4	0.29	72		53	106
		Terphenyl-d14	0.4	0.53	133	*	58	132
Q2063-03	RW5-SP303-20250515	2-Methylnaphthalene-d10	0.4	0.28	70		30	150
		Fluoranthene-d10	0.4	0.35	88		30	150
		Nitrobenzene-d5	0.4	0.27	68		55	111
		2-Fluorobiphenyl	0.4	0.27	67		53	106
		Terphenyl-d14	0.4	0.45	113		58	132

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2063

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified DataFile: BN037080.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB168032BS	1,4-Dioxane	0.4	0.31	ug/L	78				70	130	

A
B
C
D
E
F
G

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2063

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified DataFile: BN037081.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB168032BSD	1,4-Dioxane	0.4	0.32	ug/L	80	3			70	130	20

A
B
C
D
E
F
G

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB168032BL

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM Case No.: Q2063

SAS No.: Q2063 SDG NO.: Q2063

Lab File ID: BN037075.D

Lab Sample ID: PB168032BL

Instrument ID: BNA_N

Date Extracted: 05/16/2025

Matrix: (soil/water) Water

Date Analyzed: 05/20/2025

Level: (low/med) LOW

Time Analyzed: 15:45

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB168032BS	PB168032BS	BN037080.D	05/20/2025
RW5-SP100-20250515	Q2063-01	BN037077.D	05/20/2025
RW5-SP201-20250515	Q2063-02	BN037078.D	05/20/2025
RW5-SP303-20250515	Q2063-03	BN037079.D	05/20/2025
PB168032BSD	PB168032BSD	BN037081.D	05/20/2025

COMMENTS: _____

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: Q2063

SDG NO.: Q2063

Lab File ID: BN036998.D

DFTPP Injection Date: 05/13/2025

Instrument ID: BNA_N

DFTPP Injection Time: 17:02

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	62.8
68	Less than 2.0% of mass 69	0.8 (1.4) 1
69	Mass 69 relative abundance	55.6
70	Less than 2.0% of mass 69	0.3 (0.6) 1
127	10.0 - 80.0% of mass 198	52.7
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	6.9
275	10.0 - 60.0% of mass 198	23.8
365	Greater than 1% of mass 198	3.9
441	Present, but less than mass 443	8.7
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	10.4 (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	BN036999.D	05/13/2025	17:41
SSTDICC0.2	SSTDICC0.2	BN037000.D	05/13/2025	18:17
SSTDICCC0.4	SSTDICCC0.4	BN037001.D	05/13/2025	18:53
SSTDICC0.8	SSTDICC0.8	BN037002.D	05/13/2025	19:29
SSTDICC1.6	SSTDICC1.6	BN037003.D	05/13/2025	20:05
SSTDICC3.2	SSTDICC3.2	BN037004.D	05/13/2025	20:41
SSTDICC5.0	SSTDICC5.0	BN037005.D	05/13/2025	21:17

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: Q2063

SDG NO.: Q2063

Lab File ID: BN037073.D

DFTPP Injection Date: 05/20/2025

Instrument ID: BNA_N

DFTPP Injection Time: 14:30

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	69.3
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	59.3
70	Less than 2.0% of mass 69	0.3 (0.4) 1
127	10.0 - 80.0% of mass 198	52.8
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	6.9
275	10.0 - 60.0% of mass 198	25.4
365	Greater than 1% of mass 198	3.7
441	Present, but less than mass 443	8.8
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	10.5 (19.4) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDCCC0.4	SSTDCCC0.4	BN037074.D	05/20/2025	15:09
PB168032BL	PB168032BL	BN037075.D	05/20/2025	15:45
RW5-SP100-20250515	Q2063-01	BN037077.D	05/20/2025	16:59
RW5-SP201-20250515	Q2063-02	BN037078.D	05/20/2025	17:35
RW5-SP303-20250515	Q2063-03	BN037079.D	05/20/2025	18:11
PB168032BS	PB168032BS	BN037080.D	05/20/2025	18:47
PB168032BSD	PB168032BSD	BN037081.D	05/20/2025	19:23
SSTDCCC0.4EC	SSTDCCC0.4	BN037082.D	05/20/2025	19:59

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q2063 SAS No.: Q2063 SDG NO.: Q2063

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 05/20/2025

Lab File ID: BN037074.D Time Analyzed: 15:09

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	2240	7.611	6230	10.39	3461	14.26
UPPER LIMIT	4480	8.111	12460	10.894	6922	14.756
LOWER LIMIT	1120	7.111	3115	9.894	1730.5	13.756
EPA SAMPLE NO.						
01 RW5-SP303-20250515	1605	7.61	4337	10.39	2543	14.26
02 PB168032BL	1695	7.61	4260	10.39	2468	14.26
03 RW5-SP100-20250515	1879	7.61	5069	10.39	2826	14.26
04 PB168032BS	1842	7.61	4702	10.39	2635	14.26
05 PB168032BSD	1841	7.61	4693	10.39	2613	14.26
06 RW5-SP201-20250515	2023	7.61	5257	10.39	2991	14.26

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.: Q2063 SAS No.: Q2063 SDG NO.: Q2063

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 05/20/2025

Lab File ID: BN037074.D Time Analyzed: 15:09

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	6762	17.009	4645	21.207	3820	23.407
UPPER LIMIT	13524	17.509	9290	21.707	7640	23.907
LOWER LIMIT	3381	16.509	2322.5	20.707	1910	22.907
EPA SAMPLE NO.						
01 RW5-SP303-20250515	5161	17.01	4016	21.21	3494	23.41
02 PB168032BL	5072	17.01	3622	21.21	3128	23.41
03 RW5-SP100-20250515	5701	17.01	4060	21.21	3512	23.41
04 PB168032BS	5352	17.01	4047	21.21	3455	23.40
05 PB168032BSD	5111	17.01	3649	21.20	3038	23.40
06 RW5-SP201-20250515	6089	17.01	4329	21.21	3603	23.41

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:	NWIRP Bethpage 112G08005-WE13		Date Received:		
Client Sample ID:	PB168032BL		SDG No.:	Q2063	
Lab Sample ID:	PB168032BL		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
BN037075.D	1	05/16/25 11:50	05/20/25 15:45	PB168032

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	0.36		30 - 150		90%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.34		30 - 150		84%	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		84%	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	1700	7.611				
1146-65-2	Naphthalene-d8	4260	10.393				
15067-26-2	Acenaphthene-d10	2470	14.256				
1517-22-2	Phenanthrene-d10	5070	17.008				
1719-03-5	Chrysene-d12	3620	21.206				
1520-96-3	Perylene-d12	3130	23.409				

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:	NWIRP Bethpage 112G08005-WE13		Date Received:	
Client Sample ID:	PB168032BS		SDG No.:	Q2063
Lab Sample ID:	PB168032BS		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
BN037080.D	1	05/16/25 11:50	05/20/25 18:47	PB168032

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.31		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.39		30 - 150		96%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.33		30 - 150		81%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.32		55 - 111		81%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.33		53 - 106		83%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.39		58 - 132		97%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1840	7.611				
1146-65-2	Naphthalene-d8	4700	10.394				
15067-26-2	Acenaphthene-d10	2640	14.256				
1517-22-2	Phenanthrene-d10	5350	17.009				
1719-03-5	Chrysene-d12	4050	21.206				
1520-96-3	Perylene-d12	3460	23.404				

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:	NWIRP Bethpage 112G08005-WE13		Date Received:		
Client Sample ID:	PB168032BSD		SDG No.:	Q2063	
Lab Sample ID:	PB168032BSD		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
BN037081.D	1	05/16/25 11:50	05/20/25 19:23	PB168032

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	0.39		30 - 150		98%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.33		30 - 150		83%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.35		55 - 111		88%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.33		53 - 106		83%	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	1840	7.611				
1146-65-2	Naphthalene-d8	4690	10.394				
15067-26-2	Acenaphthene-d10	2610	14.256				
1517-22-2	Phenanthrene-d10	5110	17.009				
1719-03-5	Chrysene-d12	3650	21.198				
1520-96-3	Perylene-d12	3040	23.401				

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-BN051425.M
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 Last Update : Wed May 14 11:26:32 2025
 Response Via : Initial Calibration

Calibration Files

0.1 =BN036999.D 0.2 =BN037000.D 0.4 =BN037001.D 0.8 =BN037002.D 1.6 =BN037003.D 3.2 =BN037004.D 5.0 =BN037005.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	0.510	0.512	0.487	0.514	0.467	0.454	0.491	5.25	
3)	n-Nitrosodimet...	1.465	0.974	0.980	0.971	1.075	0.967	0.950	1.054	17.59
4) S	2-Fluorophenol	1.101	1.134	1.024	1.093	0.964	0.971	1.048	6.87	
5) S	Phenol-d6	1.304	1.385	1.236	1.392	1.259	1.292	1.311	4.91	
6)	bis(2-Chloroet...	1.441	1.163	1.153	1.135	1.240	1.168	1.148	1.207	9.02
7) I	Naphthalene-d8	-----ISTD-----								
8) S	Nitrobenzene-d5	0.546	0.383	0.398	0.400	0.452	0.426	0.442	0.436	12.60
9)	Naphthalene	1.326	1.140	1.144	1.122	1.226	1.152	1.165	1.182	6.05
10)	Hexachlorobuta...	0.286	0.248	0.244	0.235	0.256	0.236	0.233	0.248	7.47
11) SURR2	Methylnaphth...	0.529	0.547	0.552	0.548	0.603	0.574	0.588	0.563	4.65
12)	2-Methylnaphth...	0.754	0.724	0.736	0.733	0.814	0.770	0.790	0.760	4.34
13) I	Acenaphthene-d10	-----ISTD-----								
14) S	2,4,6-Tribromo...	0.174	0.168	0.178	0.160	0.186	0.175	0.189	0.176	5.77
15) S	2-Fluorobiphenyl	1.912	1.801	1.901	1.802	1.927	1.672	1.807	1.832	4.90
16)	Acenaphthylene	1.906	1.838	1.894	1.849	2.071	1.997	2.075	1.947	5.14
17)	Acenaphthene	1.255	1.229	1.243	1.217	1.350	1.298	1.315	1.272	3.89
18)	Fluorene	1.602	1.581	1.635	1.611	1.779	1.721	1.752	1.669	4.80
19) I	Phenanthrene-d10	-----ISTD-----								
20)	4,6-Dinitro-2-...	0.060	0.073	0.079	0.102	0.103	0.124	0.090	26.02	
21)	4-Bromophenyl-...	0.243	0.246	0.250	0.247	0.262	0.261	0.259	0.253	3.13
22)	Hexachlorobenzene	0.267	0.269	0.281	0.259	0.281	0.270	0.267	0.270	3.03
23)	Atrazine	0.199	0.207	0.211	0.213	0.237	0.234	0.242	0.220	7.64
24)	Pentachlorophenol	0.133	0.134	0.141	0.137	0.159	0.162	0.177	0.149	11.45
25)	Phenanthrene	1.259	1.272	1.292	1.263	1.367	1.337	1.361	1.307	3.56
26)	Anthracene	1.099	1.104	1.166	1.130	1.269	1.259	1.300	1.190	7.13
27) SURR	Fluoranthene-d10	1.033	1.033	1.078	1.042	1.153	1.161	1.178	1.097	5.95
28)	Fluoranthene	1.461	1.439	1.500	1.496	1.670	1.672	1.693	1.562	7.13
29) I	Chrysene-d12	-----ISTD-----								
30)	Pyrene	1.744	1.708	1.727	1.656	1.790	1.641	1.711	1.711	2.96
31) S	Terphenyl-d14	0.897	0.844	0.871	0.822	0.891	0.816	0.848	0.856	3.73
32)	Benzo(a)anthra...	1.463	1.432	1.485	1.438	1.594	1.521	1.609	1.506	4.77
33)	Chrysene	1.655	1.559	1.616	1.532	1.653	1.560	1.576	1.593	3.05
34)	Bis(2-ethylhex...	0.955	0.919	0.906	0.855	0.941	0.903	1.011	0.927	5.27
35) I	Perylene-d12	-----ISTD-----								

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

Method File : 8270-SIM-BN051425.M

36)	Indeno(1,2,3-c...	1.511	1.613	1.645	1.568	1.687	1.732	1.680	1.634	4.65
37)	Benzo(b)fluora...	1.631	1.570	1.602	1.599	1.749	1.698	1.765	1.659	4.71
38)	Benzo(k)fluora...	1.539	1.538	1.642	1.601	1.770	1.661	1.719	1.639	5.34
39) C	Benzo(a)pyrene	1.380	1.343	1.381	1.331	1.486	1.444	1.486	1.407	4.59
40)	Dibenzo(a,h)an...	1.116	1.232	1.273	1.237	1.340	1.376	1.334	1.272	6.90
41)	Benzo(g,h,i)pe...	1.299	1.407	1.424	1.330	1.403	1.439	1.376	1.383	3.72

(#) = Out of Range

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

Lab Code: CHEM Case No.: Q2063 SAS No.: Q2063 SDG No.: Q2063

Instrument ID: BNA_N Calibration Date/Time: 05/20/2025 15:09

Lab File ID: BN037074.D Init. Calib. Date(s): 05/13/2025 05/13/2025

EPA Sample No.: SSTDCCC0.4 Init. Calib. Time(s): 17:41 21:17

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.563	0.573		1.8	20.0
Fluoranthene-d10	1.097	1.010		-7.9	20.0
2-Fluorophenol	1.048	0.964		-8.0	20.0
Phenol-d6	1.311	1.198		-8.6	20.0
Nitrobenzene-d5	0.436	0.402		-7.8	20.0
2-Fluorobiphenyl	1.832	1.798		-1.9	20.0
2,4,6-Tribromophenol	0.176	0.153		-13.1	20.0
Terphenyl-d14	0.856	0.940		9.8	20.0
1,4-Dioxane	0.491	0.488		-0.6	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.: Q2063 SAS No.: Q2063 SDG No.: Q2063

Instrument ID: BNA_N Calibration Date/Time: 05/20/2025 19:59

Lab File ID: BN037082.D Init. Calib. Date(s): 05/13/2025 05/13/2025

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 17:41 21:17

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.563	0.581		3.2	50.0
Fluoranthene-d10	1.097	1.017		-7.3	50.0
2-Fluorophenol	1.048	0.946		-9.7	50.0
Phenol-d6	1.311	1.150		-12.3	50.0
Nitrobenzene-d5	0.436	0.417		-4.4	50.0
2-Fluorobiphenyl	1.832	1.796		-2.0	50.0
2,4,6-Tribromophenol	0.176	0.165		-6.3	50.0
Terphenyl-d14	0.856	0.957		11.8	50.0
1,4-Dioxane	0.491	0.473		-3.7	50.0

All other compounds must meet a minimum RRF of 0.010.



SHIPPING DOCUMENTS

CHEMTECH CHAIN OF CUSTODY RECORD		284 Sheffield Street, Mountainside, NJ 07092 (908) 789-8900 Fax: (908) 78-8922 www.chemtech.net		Chemtech Project Number: Q2063																			
				COC Number:																			
CLIENT INFORMATION			PROJECT INFORMATION					BILLING INFORMATION															
COMPANY: Tetra Tech			PROJECT NAME: NWIRP Bethpage					BILL TO: PO#															
ADDRESS: 4433 Corporation Ln, Suite 300			PROJECT #: 112G08005-WE13 LOCATION: RW5B					ADDRESS:															
CITY: Virginia Beach STATE: VA ZIP: 23462			PROJECT MANAGER: Ernie Wu					CITY: STATE: ZIP:															
ATTENTION: Ernie Wu			E-MAIL: ernie.wu@tetratech.com					ATTENTION: PHONE:															
PHONE: 757-466-4901 FAX: 757-461-4148			PHONE: 757-466-4901 FAX: 757-461-4148																				
DATA TURNAROUND INFORMATION			DATA DELIVERABLE INFORMATION					ANALYSIS															
FAX: 10 DAYS* HARD COPY: 10 DAYS* EDD 10 DAYS* * TO BE APPROVED BY CHEMTECH STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS			☐ RESULTS ONLY ☐ USEPA CLP ☐ RESULTS + QC ☐ New York State ASP "B" ☐ New Jersey REDUCED ☐ New York State ASP "A" ☐ New Jersey CLP ☐ Other _____ ☐ EDD Format _____					1,4-Dioxane SW846 8270 SIM <table border="1" style="border-collapse: collapse; text-align: center; width: 100%;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> </table>							1	2	3	4	5	6	7	8	9
															1	2	3	4	5	6	7	8	9
PRESERVATIVES							COMMENTS																
CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# of Bottles										<-- Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other						
		COMP	GRAB	DATE	TIME	<table border="1" style="border-collapse: collapse; text-align: center; width: 100%;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> </table>									1	2		3	4	5	6	7	8
1	2	3	4	5	6	7	8	9															
1.	RW5-SP100-20250515	GW		x	5/15/25	10:45	1	x															
2.	RW5-SP201-20250515	GW		x	5/15/25	10:47	1	x															
3.	RW5-SP303-20250515	GW		x	5/15/25	10:53	1	x															
4.																							
5.																							
6.																							
7.																							
8.																							
9.																							
10.																							

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY	Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 3.1°C MeOH extraction requires an additional 4oz. Jar for percent solid Comments:	☐ Ice in Cooler?: yes If Cool #1
1. [Signature]	5/15/25	1. [Signature]		
RELINQUISHED BY	DATE/TIME	RECEIVED BY		
2. [Signature]	5/16/25	2. [Signature]		
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY		
3. [Signature]		3. [Signature]	Page _____ of _____	SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete
☐ YES ☐ NO

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488