

ANALYTICAL RESULTS SUMMARY

VOLATILE ORGANICS
SEMI-VOLATILE ORGANICS

PROJECT NAME : NAVFAC NWIRP BETHPAGE, NY SITE 1 OU-2 - 32258

AECOM TECHNICAL SERVICES, INC.

13640 Briarwick Drive

Austin, TX - 78729

Phone No: 512-454-4797

ORDER ID : P5164

ATTENTION : Eleanor Vivadou



Laboratory Certification ID # 20012



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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FORM S-I

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

NYSDEC Sample ID/Code	Laboratory Sample ID/Code	VOA GC/MS (Method #)	BNA GC/MS (Method #)	VOA GC (Method #)	Pest PCBs (Method #)	Metals (Method #)	Other (Method #)
RE108D2-20241206	P5164-01	8260-Low	8270-Modified				
RE108D1-20241206	P5164-02	8260-Low	8270-Modified				
RE105D1-20241206	P5164-03	8260-Low	8270-Modified				
RE105D2-20241206	P5164-04	8260-Low	8270-Modified				
TB	P5164-05	8260-Low	8270-Modified				
FB-20241206	P5164-06	8260-Low	8270-Modified				

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-IIa

SAMPLE PREPARATION AND ANALYSIS SUMMARY SEMIVOLATILE (BNA) ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
P5164-01	Water	12/06/24	12/06/24	12/09/24	12/09/24
P5164-02	Water	12/06/24	12/06/24	12/09/24	12/09/24
P5164-03	Water	12/06/24	12/06/24	12/09/24	12/09/24
P5164-04	Water	12/06/24	12/06/24	12/09/24	12/09/24
P5164-06	Water	12/06/24	12/06/24	12/09/24	12/09/24

* Details For Test : SVOC-SIMGroup1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-IIb

SAMPLE PREPARATION AND ANALYSIS SUMMARY VOLATILE (VOA) ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
P5164-01	Water	12/06/24	12/06/24		12/09/24
P5164-02	Water	12/06/24	12/06/24		12/09/24
P5164-03	Water	12/06/24	12/06/24		12/09/24
P5164-04	Water	12/06/24	12/06/24		12/09/24
P5164-05	Water	12/06/24	12/06/24		12/10/24
P5164-06	Water	12/06/24	12/06/24		12/09/24

* Details For Test : VOCMS Group1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-III

SAMPLE PREPARATION AND ANALYSIS SUMMARY MISCELLANEOUS ORGANIC ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
P5164-01	Water	8260-Low	5030		
P5164-02	Water	8260-Low	5030		
P5164-03	Water	8260-Low	5030		
P5164-04	Water	8260-Low	5030		
P5164-05	Water	8260-Low	5030		
P5164-06	Water	8260-Low	5030		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-III

SAMPLE PREPARATION AND ANALYSIS SUMMARY MISCELLANEOUS ORGANIC ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
P5164-01	Water	8270-Modified	3510C		
P5164-02	Water	8270-Modified	3510C		
P5164-03	Water	8270-Modified	3510C		
P5164-04	Water	8270-Modified	3510C		
P5164-06	Water	8270-Modified	3510C		

Cover Page

Order ID : P5164

Project ID : NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258

Client : AECOM Technical Services, Inc.

Lab Sample Number

P5164-01
P5164-02
P5164-03
P5164-04
P5164-05
P5164-06

Client Sample Number

RE108D2-20241206
RE108D1-20241206
RE105D1-20241206
RE105D2-20241206
TB
FB-20241206

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 : _____

Date: 12/13/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CASE NARRATIVE

AECOM Technical Services, Inc.

Project Name: NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258

Project # N/A

Chemtech Project # P5164

Test Name: VOCMS Group1

A. Number of Samples and Date of Receipt:

6 Water samples were received on 12/06/2024.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: SVOC-SIMGroup1 and VOCMS Group1. This data package contains results for VOCMS Group1.

C. Analytical Techniques:

The analysis performed on instrument MSVOA_X were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UI The analysis of VOCMS Group1 was based on method 8260D.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The RPD for {VX1209WBSD01} with File ID: VX044194.D met criteria except for Chloroethane[24%] due to difference in results of BS-BSD.

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 %RSD is greater than 20% in the Initial Calibration method (82X1121W.M) for Bromoform this compound is passing on Quadratic Regression.

The Continuous Calibration File ID VX044174.D met the requirements except for Bromodichloromethane, Dibromochloromethane, t-1,3-Dichloropropene and Trichlorofluoromethane failing high but no positive hit in associated samples therefore no corrective action taken.

The Continuous Calibration File ID VX044197.D met the requirements except for 2-Hexanone and 4-Methyl-2-Pentanone failing high but no positive hit in associated samples therefore no corrective action taken.

The Tuning criteria met requirements.

Samples RE108D2-20241206, RE105D2-20241206 was analyzed with straight 20X dilution due to past history of these samples containing high amounts of compound Trichloroethene.

E. Additional Comments:

The Sample #RE108D2-20241206, RE105D1-20241206 have the concentration of target compound below Method detection limits, therefore it is not reported as Hit in Form1.

Samples for MS/MSD for VOC analysis were not provided with this set of samples. The Blank Spike Duplicate is reported with the data.

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_____

CASE NARRATIVE

AECOM Technical Services, Inc.

Project Name: NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258

Project # N/A

Chemtech Project # P5164

Test Name: SVOC-SIMGroup1

A. Number of Samples and Date of Receipt:

6 Water samples were received on 12/06/2024.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: SVOC-SIMGroup1 and VOCMS Group1. 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 RE108D2-20241206 [Terphenyl-d14 - 161%], RE108D1-20241206 [2-Fluorobiphenyl - 115%, Terphenyl-d14 - 161%], RE105D1-20241206 [Terphenyl-d14 - 178%], RE105D2-20241206 [Terphenyl-d14 - 166%], FB-20241206 [2-Fluorobiphenyl - 110%, Terphenyl-d14 - 174%], PB165497BL [Nitrobenzene-d5 - 113% and Terphenyl-d14 - 141%], The failure surrogates not associated with the client parameters list, 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.

E. Additional Comments:

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 <15% 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 > 15% 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_____

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 #: P5164

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: 12/13/2024

LAB CHRONICLE

OrderID:	P5164	OrderDate:	12/6/2024 1:09:00 PM
Client:	AECOM Technical Services, Inc.	Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258
Contact:	Eleanor Vivadou	Location:	L61,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5164-01	RE108D2-20241206	Water	VOCMS Group1	8260-Low	12/06/24		12/09/24	12/06/24
P5164-02	RE108D1-20241206	Water	VOCMS Group1	8260-Low	12/06/24		12/09/24	12/06/24
P5164-03	RE105D1-20241206	Water	VOCMS Group1	8260-Low	12/06/24		12/09/24	12/06/24
P5164-04	RE105D2-20241206	Water	VOCMS Group1	8260-Low	12/06/24		12/09/24	12/06/24
P5164-05	TB	Water	VOCMS Group1	8260-Low	12/06/24		12/10/24	12/06/24
P5164-06	FB-20241206	Water	VOCMS Group1	8260-Low	12/06/24		12/09/24	12/06/24

Hit Summary Sheet SW-846

SDG No.: P5164
Client: AECOM Technical Services, Inc.

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID: P5164-01	RE108D2-20241206 RE108D2-20241206	Water	Trichloroethene	1300		6.40	15.0	20.0	ug/L
			Total Voc :	1300					
			Total Concentration:	1300					
Client ID: P5164-02	RE108D1-20241206 RE108D1-20241206	Water	1,1,2-Trichlorotrifluoroethane	0.33	J	0.25	0.50	1.00	ug/L
P5164-02	RE108D1-20241206	Water	Acetone	1.60	J	1.40	3.80	5.00	ug/L
P5164-02	RE108D1-20241206	Water	Trichloroethene	24.5		0.32	0.75	1.00	ug/L
P5164-02	RE108D1-20241206	Water	Tetrachloroethene	2.30		0.25	0.50	1.00	ug/L
			Total Voc :	28.7					
			Total Concentration:	28.7					
Client ID: P5164-03	RE105D1-20241206 RE105D1-20241206	Water	Dichlorodifluoromethane	1.10		0.21	0.50	1.00	ug/L
P5164-03	RE105D1-20241206	Water	1,1,2-Trichlorotrifluoroethane	6.10		0.25	0.50	1.00	ug/L
P5164-03	RE105D1-20241206	Water	1,1-Dichloroethene	0.76	J	0.26	0.75	1.00	ug/L
P5164-03	RE105D1-20241206	Water	Methylene Chloride	0.36	J	0.32	0.50	1.00	ug/L
P5164-03	RE105D1-20241206	Water	Trichloroethene	39.6		0.32	0.75	1.00	ug/L
			Total Voc :	47.9					
			Total Concentration:	47.9					
Client ID: P5164-04	RE105D2-20241206 RE105D2-20241206	Water	1,1,2-Trichlorotrifluoroethane	18.8	J	5.00	10.0	20.0	ug/L
P5164-04	RE105D2-20241206	Water	Trichloroethene	1600		6.40	15.0	20.0	ug/L
			Total Voc :	1620					
			Total Concentration:	1620					
Client ID: P5164-05	TB TB	Water	Chloromethane	1.20		0.35	0.50	1.00	ug/L
P5164-05	TB	Water	Acetone	1.40	J	1.40	3.80	5.00	ug/L
P5164-05	TB	Water	Methylene Chloride	0.58	J	0.32	0.50	1.00	ug/L
			Total Voc :	3.18					
			Total Concentration:	3.18					
Client ID: P5164-06	FB-20241206 FB-20241206	Water	Acetone	3.10	J	1.40	3.80	5.00	ug/L
P5164-06	FB-20241206	Water	Methylene Chloride	0.45	J	0.32	0.50	1.00	ug/L
			Total Voc :	3.55					
			Total Concentration:	3.55					



SAMPLE DATA

Report of Analysis

Client:	AECOM Technical Services, Inc.		Date Collected:	12/06/24	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	12/06/24	
Client Sample ID:	RE108D2-20241206		SDG No.:	P5164	
Lab Sample ID:	P5164-01		Matrix:	Water	
Analytical Method:	SW8260		% Solid:	0	
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000	uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1	
GC Column:	DB-624UI	ID : 0.18	Level :	LOW	
Prep Method :					

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044192.D	20		12/09/24 16:51	VX120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
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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:	AECOM Technical Services, Inc.		Date Collected:	12/06/24	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	12/06/24	
Client Sample ID:	RE108D1-20241206		SDG No.:	P5164	
Lab Sample ID:	P5164-02		Matrix:	Water	
Analytical Method:	SW8260		% Solid:	0	
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000	uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1	
GC Column:	DB-624UI	ID : 0.18	Level :	LOW	
Prep Method :					

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044188.D	1		12/09/24 15:17	VX120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
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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:	AECOM Technical Services, Inc.		Date Collected:	12/06/24	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	12/06/24	
Client Sample ID:	RE105D1-20241206		SDG No.:	P5164	
Lab Sample ID:	P5164-03		Matrix:	Water	
Analytical Method:	SW8260		% Solid:	0	
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000	uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1	
GC Column:	DB-624UI	ID : 0.18	Level :	LOW	
Prep Method :					

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044189.D	1		12/09/24 15:40	VX120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
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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:	AECOM Technical Services, Inc.		Date Collected:	12/06/24	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	12/06/24	
Client Sample ID:	RE105D2-20241206		SDG No.:	P5164	
Lab Sample ID:	P5164-04		Matrix:	Water	
Analytical Method:	SW8260		% Solid:	0	
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000	uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1	
GC Column:	DB-624UI	ID : 0.18	Level :	LOW	
Prep Method :					

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044193.D	20		12/09/24 17:14	VX120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
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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:	AECOM Technical Services, Inc.		Date Collected:	12/06/24	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	12/06/24	
Client Sample ID:	TB		SDG No.:	P5164	
Lab Sample ID:	P5164-05		Matrix:	Water	
Analytical Method:	SW8260		% Solid:	0	
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000	uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1	
GC Column:	DB-624UI	ID : 0.18	Level :	LOW	
Prep Method :					

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044200.D	1		12/10/24 11:59	VX121024

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
------------	-----------	-------	-----------	-----	-----	------------	-------

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:	AECOM Technical Services, Inc.		Date Collected:	12/06/24	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	12/06/24	
Client Sample ID:	FB-20241206		SDG No.:	P5164	
Lab Sample ID:	P5164-06		Matrix:	Water	
Analytical Method:	SW8260		% Solid:	0	
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000	uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1	
GC Column:	DB-624UI	ID : 0.18	Level :	LOW	
Prep Method :					

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044186.D	1		12/09/24 14:30	VX120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
------------	-----------	-------	-----------	-----	-----	------------	-------

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

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P5164

Client: AECOM Technical Services, Inc.

Analytical Method: SW8260-Low

Datafile : VX044178.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	RPD
									High	
VX1209WBS01	1,2-Dibromo-3-Chloropropane	20	19.6	ug/L	98			62	128	
	1,2,4-Trichlorobenzene	20	18.6	ug/L	93			69	130	
	1,2,3-Trichlorobenzene	20	19.3	ug/L	97			69	129	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P5164

Client: AECOM Technical Services, Inc.

Analytical Method: SW8260-Low

Datafile : VX044194.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VX1209WBSD01	1,2-Dibromo-3-Chloropropane	20	20.7	ug/L	104	6		62	128	20
	1,2,4-Trichlorobenzene	20	19.4	ug/L	97	4		69	130	20
	1,2,3-Trichlorobenzene	20	20.0	ug/L	100	3		69	129	20

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P5164

Client: AECOM Technical Services, Inc.

Analytical Method: SW8260-Low

Datafile : VX044201.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	RPD
									High	
VX1210WBS01	1,2-Dibromo-3-Chloropropane	20	19.1	ug/L	96			62	128	
	1,2,4-Trichlorobenzene	20	17.4	ug/L	87			69	130	
	1,2,3-Trichlorobenzene	20	19.0	ug/L	95			69	129	

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VX1209WBL01

Lab Name: CHEMTECH

Contract: AECO15

Lab Code: CHEM Case No.: P5164

SAS No.: P5164 SDG NO.: P5164

Lab File ID: VX044176.D

Lab Sample ID: VX1209WBL01

Date Analyzed: 12/09/2024

Time Analyzed: 10:35

GC Column: DB-624UI ID: 0.18 (mm)

Heated Purge: (Y/N) N

Instrument ID: MSVOA_X

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VX1209WBS01	VX1209WBS01	VX044178.D	12/09/2024
FB-20241206	P5164-06	VX044186.D	12/09/2024
RE108D1-20241206	P5164-02	VX044188.D	12/09/2024
RE105D1-20241206	P5164-03	VX044189.D	12/09/2024
RE108D2-20241206	P5164-01	VX044192.D	12/09/2024
RE105D2-20241206	P5164-04	VX044193.D	12/09/2024
VX1209WBSD01	VX1209WBSD01	VX044194.D	12/09/2024

COMMENTS: _____

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VX1210WBL01

Lab Name: CHEMTECH

Contract: AECO15

Lab Code: CHEM Case No.: P5164

SAS No.: P5164 SDG NO.: P5164

Lab File ID: VX044199.D

Lab Sample ID: VX1210WBL01

Date Analyzed: 12/10/2024

Time Analyzed: 11:35

GC Column: DB-624UI ID: 0.18 (mm)

Heated Purge: (Y/N) N

Instrument ID: MSVOA_X

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
TB	P5164-05	VX044200.D	12/10/2024
VX1210WBS01	VX1210WBS01	VX044201.D	12/10/2024

COMMENTS: _____

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: AECO15
Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG NO.: P5164
Lab File ID: VX043924.D BFB Injection Date: 11/21/2024
Instrument ID: MSVOA_X BFB Injection Time: 08:51
GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.4
75	30.0 - 60.0% of mass 95	54.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.5 (0.7) 1
174	50.0 - 100.0% of mass 95	70.5
175	5.0 - 9.0% of mass 174	4.8 (6.8) 1
176	95.0 - 101.0% of mass 174	67.9 (96.4) 1
177	5.0 - 9.0% of mass 176	4.9 (7.3) 2

1-Value is % mass 174

2-Value is % mass 176

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
VSTDIC001	VSTDIC001	VX043925.D	11/21/2024	09:47
VSTDIC005	VSTDIC005	VX043926.D	11/21/2024	10:14
VSTDIC020	VSTDIC020	VX043927.D	11/21/2024	10:37
VSTDIC050	VSTDIC050	VX043928.D	11/21/2024	11:17
VSTDIC100	VSTDIC100	VX043929.D	11/21/2024	11:40
VSTDIC150	VSTDIC150	VX043930.D	11/21/2024	12:03

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: AECO15
Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG NO.: P5164
Lab File ID: VX044173.D BFB Injection Date: 12/09/2024
Instrument ID: MSVOA_X BFB Injection Time: 09:06
GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.5
75	30.0 - 60.0% of mass 95	57.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.6 (0.8) 1
174	50.0 - 100.0% of mass 95	69.6
175	5.0 - 9.0% of mass 174	5.4 (7.8) 1
176	95.0 - 101.0% of mass 174	68.7 (98.7) 1
177	5.0 - 9.0% of mass 176	4.3 (6.2) 2

1-Value is % mass 174

2-Value is % mass 176

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
VSTDCCC050	VSTDCCC050	VX044174.D	12/09/2024	09:42
VX1209WBL01	VX1209WBL01	VX044176.D	12/09/2024	10:35
VX1209WBS01	VX1209WBS01	VX044178.D	12/09/2024	11:24
FB-20241206	P5164-06	VX044186.D	12/09/2024	14:30
RE108D1-20241206	P5164-02	VX044188.D	12/09/2024	15:17
RE105D1-20241206	P5164-03	VX044189.D	12/09/2024	15:40
RE108D2-20241206	P5164-01	VX044192.D	12/09/2024	16:51
RE105D2-20241206	P5164-04	VX044193.D	12/09/2024	17:14
VX1209WBSD01	VX1209WBSD01	VX044194.D	12/09/2024	17:37
VSTDCCC050EC	VSTDCCC050	VX044195.D	12/09/2024	18:00

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: AECO15
Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG NO.: P5164
Lab File ID: VX044196.D BFB Injection Date: 12/10/2024
Instrument ID: MSVOA_X BFB Injection Time: 09:01
GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.7
75	30.0 - 60.0% of mass 95	57.1
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.4 (0.6) 1
174	50.0 - 100.0% of mass 95	70.2
175	5.0 - 9.0% of mass 174	5.4 (7.7) 1
176	95.0 - 101.0% of mass 174	69.5 (99) 1
177	5.0 - 9.0% of mass 176	4.3 (6.2) 2

1-Value is % mass 174

2-Value is % mass 176

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
VSTDCCC050	VSTDCCC050	VX044197.D	12/10/2024	10:43
VX1210WBL01	VX1210WBL01	VX044199.D	12/10/2024	11:35
TB	P5164-05	VX044200.D	12/10/2024	11:59
VX1210WBS01	VX1210WBS01	VX044201.D	12/10/2024	12:22
VSTDCCC050EC	VSTDCCC050	VX044217.D	12/10/2024	18:44

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: AECO15
Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG NO.: P5164
Lab File ID: VX044174.D Date Analyzed: 12/09/2024
Instrument ID: MSVOA_X Time Analyzed: 09:42
GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	128814	5.54	227273	6.75	196952	10.05
UPPER LIMIT	257628	6.038	454546	7.251	393904	10.549
LOWER LIMIT	64407	5.038	113637	6.251	98476	9.549
EPA SAMPLE NO.						
RE108D2-20241206	107002	5.55	205381	6.76	184408	10.06
RE108D1-20241206	120459	5.54	226191	6.76	192858	10.06
RE105D1-20241206	108813	5.54	204658	6.76	176157	10.06
RE105D2-20241206	109323	5.55	207584	6.76	182923	10.06
FB-20241206	105637	5.55	204810	6.76	181265	10.06
VX1209WBL01	127252	5.54	245969	6.76	212379	10.05
VX1209WBS01	138067	5.55	244472	6.76	208975	10.05
VX1209WBSD01	135757	5.55	248673	6.76	215697	10.06

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

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 LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: AECO15
Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG NO.: P5164
Lab File ID: VX044174.D Date Analyzed: 12/09/2024
Instrument ID: MSVOA_X Time Analyzed: 09:42
GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	97559	12.018				
UPPER LIMIT	195118	12.518				
LOWER LIMIT	48779.5	11.518				
EPA SAMPLE NO.						
RE108D2-20241206	80855	12.02				
RE108D1-20241206	74622	12.02				
RE105D1-20241206	70850	12.02				
RE105D2-20241206	82399	12.02				
FB-20241206	74280	12.02				
VX1209WBL01	90543	12.02				
VX1209WBS01	95808	12.02				
VX1209WBSD01	96570	12.02				

IS4 = 1,4-Dichlorobenzene-d4

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 LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: AECO15
Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG NO.: P5164
Lab File ID: VX044197.D Date Analyzed: 12/10/2024
Instrument ID: MSVOA_X Time Analyzed: 10:43
GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	121082	5.54	212067	6.76	187191	10.05
UPPER LIMIT	242164	6.038	424134	7.257	374382	10.549
LOWER LIMIT	60541	5.038	106034	6.257	93595.5	9.549
EPA SAMPLE NO.						
TB	112437	5.55	211530	6.76	185283	10.06
VX1210WBL01	110263	5.54	207593	6.76	178508	10.06
VX1210WBS01	143461	5.54	255477	6.76	217630	10.06

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

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 LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: AECO15
Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG NO.: P5164
Lab File ID: VX044197.D Date Analyzed: 12/10/2024
Instrument ID: MSVOA_X Time Analyzed: 10:43
GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	91127	12.024				
UPPER LIMIT	182254	12.524				
LOWER LIMIT	45563.5	11.524				
EPA SAMPLE NO.						
TB	76755	12.02				
VX1210WBL01	71476	12.02				
VX1210WBS01	101326	12.02				

IS4 = 1,4-Dichlorobenzene-d4

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 LOWER 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:	AECOM Technical Services, Inc.		Date Collected:	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	
Client Sample ID:	VX1209WBL01		SDG No.:	P5164
Lab Sample ID:	VX1209WBL01		Matrix:	Water
Analytical Method:	SW8260		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1
GC Column:	DB-624UI	ID : 0.18	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044176.D	1		12/09/24 10:35	VX120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
------------	-----------	-------	-----------	-----	-----	------------	-------

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:	AECOM Technical Services, Inc.		Date Collected:	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	
Client Sample ID:	VX1210WBL01		SDG No.:	P5164
Lab Sample ID:	VX1210WBL01		Matrix:	Water
Analytical Method:	SW8260		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1
GC Column:	DB-624UI	ID : 0.18	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044199.D	1		12/10/24 11:35	VX121024

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
------------	-----------	-------	-----------	-----	-----	------------	-------

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:	AECOM Technical Services, Inc.		Date Collected:	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	
Client Sample ID:	VX1209WBS01		SDG No.:	P5164
Lab Sample ID:	VX1209WBS01		Matrix:	Water
Analytical Method:	SW8260		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1
GC Column:	DB-624UI	ID : 0.18	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044178.D	1		12/09/24 11:24	VX120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
------------	-----------	-------	-----------	-----	-----	------------	-------

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:	AECOM Technical Services, Inc.		Date Collected:	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	
Client Sample ID:	VX1210WBS01		SDG No.:	P5164
Lab Sample ID:	VX1210WBS01		Matrix:	Water
Analytical Method:	SW8260		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1
GC Column:	DB-624UI	ID : 0.18	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044201.D	1		12/10/24 12:22	VX121024

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
------------	-----------	-------	-----------	-----	-----	------------	-------

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:	AECOM Technical Services, Inc.		Date Collected:	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	
Client Sample ID:	VX1209WBSD01		SDG No.:	P5164
Lab Sample ID:	VX1209WBSD01		Matrix:	Water
Analytical Method:	SW8260		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1
GC Column:	DB-624UI	ID : 0.18	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044194.D	1		12/09/24 17:37	VX120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	16.0		0.21	0.50	1.00	ug/L
74-87-3	Chloromethane	18.1		0.35	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	18.3		0.34	0.75	1.00	ug/L
74-83-9	Bromomethane	21.0		1.40	3.80	5.00	ug/L
75-00-3	Chloroethane	25.4		0.56	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	19.8		0.34	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	18.3		0.25	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	19.1		0.26	0.75	1.00	ug/L
67-64-1	Acetone	100		1.40	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	13.8		0.32	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	21.9		0.16	0.50	1.00	ug/L
79-20-9	Methyl Acetate	21.5		0.60	0.75	1.00	ug/L
75-09-2	Methylene Chloride	19.9		0.32	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	19.5		0.25	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	21.2		0.23	0.50	1.00	ug/L
110-82-7	Cyclohexane	18.8		1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	110		1.30	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	19.4		0.25	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	21.3		0.25	0.75	1.00	ug/L
74-97-5	Bromochloromethane	18.9		0.18	0.50	1.00	ug/L
67-66-3	Chloroform	22.3		0.26	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	21.3		0.19	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	18.4		0.19	0.50	1.00	ug/L
71-43-2	Benzene	20.2		0.16	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	21.5		0.24	0.50	1.00	ug/L
79-01-6	Trichloroethene	17.9		0.32	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	20.0		0.19	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	20.4		0.24	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	110		0.75	2.50	5.00	ug/L
108-88-3	Toluene	20.8		0.18	0.50	1.00	ug/L

Report of Analysis

Client:	AECOM Technical Services, Inc.		Date Collected:	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	
Client Sample ID:	VX1209WBSD01		SDG No.:	P5164
Lab Sample ID:	VX1209WBSD01		Matrix:	Water
Analytical Method:	SW8260		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1
GC Column:	DB-624UI	ID : 0.18	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044194.D	1		12/09/24 17:37	VX120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
10061-02-6	t-1,3-Dichloropropene	19.8		0.21	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	20.2		0.18	0.50	1.00	ug/L
79-00-5	1,1,2-Trichloroethane	21.5		0.21	0.50	1.00	ug/L
591-78-6	2-Hexanone	120		1.10	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	19.8		0.18	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	21.3		0.16	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	19.6		0.25	0.50	1.00	ug/L
108-90-7	Chlorobenzene	20.0		0.13	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	20.9		0.16	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	41.4		0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	21.3		0.14	0.50	1.00	ug/L
100-42-5	Styrene	21.1		0.16	0.50	1.00	ug/L
75-25-2	Bromoform	17.5		0.21	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	21.9		0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	22.2		0.27	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	20.6		0.24	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	20.0		0.27	0.50	1.00	ug/L
95-50-1	1,2-Dichlorobenzene	21.3		0.19	0.50	1.00	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	20.7		0.46	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	19.4		0.42	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	20.0		0.51	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	55.7		81 - 118		111%	SPK: 50
1868-53-7	Dibromofluoromethane	52.0		80 - 119		104%	SPK: 50
2037-26-5	Toluene-d8	50.9		89 - 112		102%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.8		85 - 114		108%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	136000	5.55				
540-36-3	1,4-Difluorobenzene	249000	6.757				
3114-55-4	Chlorobenzene-d5	216000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	96600	12.024				

Report of Analysis

Client:	AECOM Technical Services, Inc.		Date Collected:	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	
Client Sample ID:	VX1209WBSD01		SDG No.:	P5164
Lab Sample ID:	VX1209WBSD01		Matrix:	Water
Analytical Method:	SW8260		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1
GC Column:	DB-624UI	ID : 0.18	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044194.D	1		12/09/24 17:37	VX120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
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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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: MSVOA_X Calibration Date(s): 11/21/2024 11/21/2024

Heated Purge: (Y/N) N Calibration Time(s): 09:47 12:03

GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID:		RRF001 = VX043925.D		RRF005 = VX043926.D		RRF020 = VX043927.D		RRF050 = VX043928.D		RRF100 = VX043929.D		RRF150 = VX043930.D	
COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	RRF	% RSD					
Dichlorodifluoromethane	0.634	0.633	0.641	0.684	0.601	0.608	0.633	4.6					
Chloromethane	0.578	0.662	0.720	0.697	0.665	0.677	0.667	7.3					
Vinyl Chloride	0.675	0.708	0.730	0.762	0.695	0.684	0.709	4.6					
Bromomethane		0.425	0.438	0.445	0.429	0.442	0.436	2					
Chloroethane	0.579	0.429	0.404	0.459	0.368	0.354	0.432	18.9					
Trichlorofluoromethane	1.038	1.267	1.335	1.357	1.281	1.328	1.268	9.3					
1,1,2-Trichlorotrifluoroethane	0.592	0.585	0.605	0.658	0.589	0.599	0.605	4.5					
1,1-Dichloroethene	0.596	0.530	0.585	0.600	0.572	0.576	0.576	4.4					
Acetone	0.401	0.396	0.401	0.425	0.370	0.370	0.394	5.4					
Carbon Disulfide	1.082	0.956	1.078	1.287	1.330	1.398	1.188	14.6					
Methyl tert-butyl Ether	1.732	1.991	2.212	2.264	2.160	2.192	2.092	9.5					
Methyl Acetate	0.931	0.871	0.911	0.987	0.894	0.910	0.917	4.3					
Methylene Chloride	0.704	0.656	0.684	0.667	0.643	0.655	0.668	3.3					
trans-1,2-Dichloroethene	0.545	0.563	0.609	0.633	0.600	0.619	0.595	5.7					
1,1-Dichloroethane	0.980	1.118	1.221	1.256	1.185	1.208	1.161	8.6					
Cyclohexane		0.911	0.976	1.041	0.926	0.925	0.956	5.6					
2-Butanone	0.448	0.486	0.538	0.567	0.500	0.510	0.508	8.1					
Carbon Tetrachloride	0.439	0.466	0.491	0.558	0.520	0.528	0.500	8.7					
cis-1,2-Dichloroethene	0.674	0.673	0.761	0.792	0.745	0.767	0.735	6.8					
Bromochloromethane	0.501	0.611	0.482	0.450	0.500	0.523	0.511	10.7					
Chloroform	1.070	1.238	1.309	1.316	1.269	1.293	1.249	7.4					
1,1,1-Trichloroethane	0.873	1.005	1.133	1.184	1.119	1.149	1.077	10.9					
Methylcyclohexane	0.544	0.556	0.564	0.656	0.574	0.576	0.578	6.9					
Benzene	1.211	1.369	1.457	1.494	1.388	1.402	1.387	7					
1,2-Dichloroethane	0.499	0.546	0.585	0.603	0.551	0.558	0.557	6.4					
Trichloroethene	0.547	0.372	0.368	0.373	0.345	0.352	0.393	19.5					
1,2-Dichloropropane	0.288	0.322	0.361	0.371	0.346	0.350	0.340	8.8					
Bromodichloromethane	0.349	0.425	0.501	0.544	0.528	0.545	0.482	16.4					
4-Methyl-2-Pentanone	0.437	0.527	0.562	0.606	0.539	0.548	0.537	10.4					
Toluene	0.636	0.839	0.883	0.921	0.850	0.852	0.830	12					

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: MSVOA_X Calibration Date(s): 11/21/2024 11/21/2024

Heated Purge: (Y/N) N Calibration Time(s): 09:47 12:03

GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID:		RRF001 = VX043925.D		RRF005 = VX043926.D		RRF020 = VX043927.D			
		RRF050 = VX043928.D		RRF100 = VX043929.D		RRF150 = VX043930.D			
COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	RRF	% RSD	
t-1,3-Dichloropropene	0.341	0.413	0.507	0.569	0.549	0.570	0.491	19.2	
cis-1,3-Dichloropropene	0.409	0.462	0.569	0.611	0.580	0.601	0.539	15.4	
1,1,2-Trichloroethane	0.287	0.340	0.375	0.370	0.340	0.345	0.343	9.1	
2-Hexanone	0.297	0.393	0.431	0.471	0.410	0.419	0.403	14.5	
Dibromochloromethane	0.249	0.292	0.344	0.396	0.380	0.401	0.344	18	
1,2-Dibromoethane	0.258	0.339	0.373	0.385	0.358	0.367	0.346	13.3	
Tetrachloroethene	0.304	0.342	0.336	0.349	0.315	0.332	0.330	5.1	
Chlorobenzene	1.050	1.109	1.107	1.145	1.069	1.108	1.098	3.1	
Ethyl Benzene	1.579	1.831	1.910	2.024	1.884	1.938	1.861	8.2	
m/p-Xylenes	0.610	0.663	0.704	0.762	0.700	0.725	0.694	7.6	
o-Xylene	0.543	0.665	0.691	0.757	0.693	0.716	0.678	10.7	
Styrene	0.859	1.025	1.174	1.263	1.186	1.217	1.121	13.5	
Bromoform	0.145	0.200	0.222	0.284	0.286	0.306	0.240	25.9	
Isopropylbenzene	3.435	3.927	3.996	4.097	3.679	3.927	3.843	6.3	
1,1,2,2-Tetrachloroethane	1.198	1.356	1.375	1.393	1.260	1.314	1.316	5.7	
1,3-Dichlorobenzene	1.580	1.656	1.701	1.764	1.623	1.696	1.670	3.9	
1,4-Dichlorobenzene	1.730	1.638	1.706	1.782	1.650	1.710	1.702	3.1	
1,2-Dichlorobenzene	1.506	1.733	1.723	1.768	1.642	1.740	1.685	5.8	
1,2-Dibromo-3-Chloropropane	0.213	0.254	0.252	0.284	0.275	0.304	0.264	12	
1,2,4-Trichlorobenzene	0.849	0.905	0.987	1.084	1.012	1.125	0.994	10.5	
1,2,3-Trichlorobenzene	0.753	0.960	1.055	1.118	1.018	1.130	1.006	13.8	
1,2-Dichloroethane-d4		0.926	0.876	0.751	0.855	0.880	0.858	7.6	
Dibromofluoromethane		0.371	0.353	0.327	0.359	0.376	0.357	5.4	
Toluene-d8		1.327	1.237	1.104	1.232	1.257	1.232	6.6	
4-Bromofluorobenzene		0.401	0.414	0.387	0.438	0.455	0.419	6.6	

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: MSVOA_X Calibration Date/Time: 12/09/2024 09:42

Lab File ID: VX044174.D Init. Calib. Date(s): 11/21/2024 11/21/2024

Heated Purge: (Y/N) N Init. Calib. Time(s): 09:47 12:03

GC Column: DB-624UI ID: 0.18 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	0.633	0.610		-3.63	20
Chloromethane	0.667	0.648	0.1	-2.85	20
Vinyl Chloride	0.709	0.724		2.12	20
Bromomethane	0.436	0.494		13.3	20
Chloroethane	0.432	0.500		15.74	20
Trichlorofluoromethane	1.268	1.627		28.31	20
1,1,2-Trichlorotrifluoroethane	0.605	0.671		10.91	20
1,1-Dichloroethene	0.576	0.615		6.77	20
Acetone	0.394	0.454		15.23	20
Carbon Disulfide	1.188	1.224		3.03	20
Methyl tert-butyl Ether	2.092	2.437		16.49	20
Methyl Acetate	0.917	0.987		7.63	20
Methylene Chloride	0.668	0.701		4.94	20
trans-1,2-Dichloroethene	0.595	0.641		7.73	20
1,1-Dichloroethane	1.161	1.300	0.1	11.97	20
Cyclohexane	0.956	1.016		6.28	20
2-Butanone	0.508	0.578		13.78	20
Carbon Tetrachloride	0.500	0.592		18.4	20
cis-1,2-Dichloroethene	0.735	0.807		9.8	20
Bromochloromethane	0.511	0.481		-5.87	20
Chloroform	1.249	1.399		12.01	20
1,1,1-Trichloroethane	1.077	1.285		19.31	20
Methylcyclohexane	0.578	0.649		12.28	20
Benzene	1.387	1.514		9.16	20
1,2-Dichloroethane	0.557	0.636		14.18	20
Trichloroethene	0.393	0.381		-3.05	20
1,2-Dichloropropane	0.340	0.389		14.41	20
Bromodichloromethane	0.482	0.601		24.69	20
4-Methyl-2-Pentanone	0.537	0.626		16.57	20
Toluene	0.830	0.946		13.98	20
t-1,3-Dichloropropene	0.491	0.595		21.18	20
cis-1,3-Dichloropropene	0.539	0.643		19.3	20
1,1,2-Trichloroethane	0.343	0.391		13.99	20
2-Hexanone	0.403	0.478		18.61	20
Dibromochloromethane	0.344	0.434		26.16	20
1,2-Dibromoethane	0.346	0.408		17.92	20
Tetrachloroethene	0.330	0.372		12.73	20
Chlorobenzene	1.098	1.208	0.3	10.02	20

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: MSVOA_X Calibration Date/Time: 12/09/2024 09:42

Lab File ID: VX044174.D Init. Calib. Date(s): 11/21/2024 11/21/2024

Heated Purge: (Y/N) N Init. Calib. Time(s): 09:47 12:03

GC Column: DB-624UI ID: 0.18 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Ethyl Benzene	1.861	2.172		16.71	20
m/p-Xylenes	0.694	0.800		15.27	20
o-Xylene	0.678	0.805		18.73	20
Styrene	1.121	1.342		19.72	20
Bromoform	0.240	0.311	0.1	29.58	20
Isopropylbenzene	3.843	4.238		10.28	20
1,1,2,2-Tetrachloroethane	1.316	1.394	0.3	5.93	20
1,3-Dichlorobenzene	1.670	1.830		9.58	20
1,4-Dichlorobenzene	1.702	1.840		8.11	20
1,2-Dichlorobenzene	1.685	1.854		10.03	20
1,2-Dibromo-3-Chloropropane	0.264	0.314		18.94	20
1,2,4-Trichlorobenzene	0.994	1.113		11.87	20
1,2,3-Trichlorobenzene	1.006	1.129		12.23	20
1,2-Dichloroethane-d4	0.858	0.874		1.87	20
Dibromofluoromethane	0.357	0.368		3.08	20
Toluene-d8	1.232	1.205		-2.19	20
4-Bromofluorobenzene	0.419	0.452		7.88	20

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: MSVOA_X Calibration Date/Time: 12/09/2024 18:00

Lab File ID: VX044195.D Init. Calib. Date(s): 11/21/2024 11/21/2024

Heated Purge: (Y/N) N Init. Calib. Time(s): 09:47 12:03

GC Column: DB-624UI ID: 0.18 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	0.633	0.478		-24.49	50
Chloromethane	0.667	0.536	0.1	-19.64	50
Vinyl Chloride	0.709	0.592		-16.5	50
Bromomethane	0.436	0.423		-2.98	50
Chloroethane	0.432	0.400		-7.41	50
Trichlorofluoromethane	1.268	1.210		-4.57	50
1,1,2-Trichlorotrifluoroethane	0.605	0.529		-12.56	50
1,1-Dichloroethene	0.576	0.505		-12.33	50
Acetone	0.394	0.326		-17.26	50
Carbon Disulfide	1.188	0.859		-27.69	50
Methyl tert-butyl Ether	2.092	2.131		1.86	50
Methyl Acetate	0.917	0.911		-0.65	50
Methylene Chloride	0.668	0.607		-9.13	50
trans-1,2-Dichloroethene	0.595	0.548		-7.9	50
1,1-Dichloroethane	1.161	1.137	0.1	-2.07	50
Cyclohexane	0.956	0.846		-11.51	50
2-Butanone	0.508	0.505		-0.59	50
Carbon Tetrachloride	0.500	0.471		-5.8	50
cis-1,2-Dichloroethene	0.735	0.696		-5.31	50
Bromochloromethane	0.511	0.452		-11.55	50
Chloroform	1.249	1.249		0	50
1,1,1-Trichloroethane	1.077	1.070		-0.65	50
Methylcyclohexane	0.578	0.498		-13.84	50
Benzene	1.387	1.310		-5.55	50
1,2-Dichloroethane	0.557	0.548		-1.62	50
Trichloroethene	0.393	0.325		-17.3	50
1,2-Dichloropropane	0.340	0.329		-3.23	50
Bromodichloromethane	0.482	0.493		2.28	50
4-Methyl-2-Pentanone	0.537	0.582		8.38	50
Toluene	0.830	0.816		-1.69	50
t-1,3-Dichloropropene	0.491	0.500		1.83	50
cis-1,3-Dichloropropene	0.539	0.525		-2.6	50
1,1,2-Trichloroethane	0.343	0.348		1.46	50
2-Hexanone	0.403	0.436		8.19	50
Dibromochloromethane	0.344	0.349		1.45	50
1,2-Dibromoethane	0.346	0.358		3.47	50
Tetrachloroethene	0.330	0.306		-7.27	50
Chlorobenzene	1.098	1.042	0.3	-5.1	50

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: MSVOA_X Calibration Date/Time: 12/09/2024 18:00

Lab File ID: VX044195.D Init. Calib. Date(s): 11/21/2024 11/21/2024

Heated Purge: (Y/N) N Init. Calib. Time(s): 09:47 12:03

GC Column: DB-624UI ID: 0.18 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Ethyl Benzene	1.861	1.827		-1.83	50
m/p-Xylenes	0.694	0.678		-2.31	50
o-Xylene	0.678	0.681		0.44	50
Styrene	1.121	1.134		1.16	50
Bromoform	0.240	0.240	0.1	0	50
Isopropylbenzene	3.843	3.670		-4.5	50
1,1,2,2-Tetrachloroethane	1.316	1.278	0.3	-2.89	50
1,3-Dichlorobenzene	1.670	1.584		-5.15	50
1,4-Dichlorobenzene	1.702	1.590		-6.58	50
1,2-Dichlorobenzene	1.685	1.617		-4.04	50
1,2-Dibromo-3-Chloropropane	0.264	0.268		1.51	50
1,2,4-Trichlorobenzene	0.994	0.914		-8.05	50
1,2,3-Trichlorobenzene	1.006	0.964		-4.18	50
1,2-Dichloroethane-d4	0.858	0.801		-6.64	50
Dibromofluoromethane	0.357	0.327		-8.4	50
Toluene-d8	1.232	1.104		-10.39	50
4-Bromofluorobenzene	0.419	0.414		-1.19	50

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: MSVOA_X Calibration Date/Time: 12/10/2024 10:43

Lab File ID: VX044197.D Init. Calib. Date(s): 11/21/2024 11/21/2024

Heated Purge: (Y/N) N Init. Calib. Time(s): 09:47 12:03

GC Column: DB-624UI ID: 0.18 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	0.633	0.527		-16.75	20
Chloromethane	0.667	0.569	0.1	-14.69	20
Vinyl Chloride	0.709	0.628		-11.43	20
Bromomethane	0.436	0.455		4.36	20
Chloroethane	0.432	0.424		-1.85	20
Trichlorofluoromethane	1.268	1.418		11.83	20
1,1,2-Trichlorotrifluoroethane	0.605	0.606		0.17	20
1,1-Dichloroethene	0.576	0.529		-8.16	20
Acetone	0.394	0.458		16.24	20
Carbon Disulfide	1.188	0.962		-19.02	20
Methyl tert-butyl Ether	2.092	2.233		6.74	20
Methyl Acetate	0.917	1.022		11.45	20
Methylene Chloride	0.668	0.637		-4.64	20
trans-1,2-Dichloroethene	0.595	0.573		-3.7	20
1,1-Dichloroethane	1.161	1.178	0.1	1.46	20
Cyclohexane	0.956	0.924		-3.35	20
2-Butanone	0.508	0.601		18.31	20
Carbon Tetrachloride	0.500	0.529		5.8	20
cis-1,2-Dichloroethene	0.735	0.749		1.9	20
Bromochloromethane	0.511	0.489		-4.3	20
Chloroform	1.249	1.296		3.76	20
1,1,1-Trichloroethane	1.077	1.143		6.13	20
Methylcyclohexane	0.578	0.582		0.69	20
Benzene	1.387	1.399		0.87	20
1,2-Dichloroethane	0.557	0.598		7.36	20
Trichloroethene	0.393	0.358		-8.91	20
1,2-Dichloropropane	0.340	0.365		7.35	20
Bromodichloromethane	0.482	0.545		13.07	20
4-Methyl-2-Pentanone	0.537	0.657		22.35	20
Toluene	0.830	0.892		7.47	20
t-1,3-Dichloropropene	0.491	0.566		15.27	20
cis-1,3-Dichloropropene	0.539	0.591		9.65	20
1,1,2-Trichloroethane	0.343	0.382		11.37	20
2-Hexanone	0.403	0.515		27.79	20
Dibromochloromethane	0.344	0.401		16.57	20
1,2-Dibromoethane	0.346	0.404		16.76	20
Tetrachloroethene	0.330	0.336		1.82	20
Chlorobenzene	1.098	1.144	0.3	4.19	20

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: MSVOA_X Calibration Date/Time: 12/10/2024 10:43

Lab File ID: VX044197.D Init. Calib. Date(s): 11/21/2024 11/21/2024

Heated Purge: (Y/N) N Init. Calib. Time(s): 09:47 12:03

GC Column: DB-624UI ID: 0.18 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Ethyl Benzene	1.861	2.022		8.65	20
m/p-Xylenes	0.694	0.751		8.21	20
o-Xylene	0.678	0.748		10.32	20
Styrene	1.121	1.260		12.4	20
Bromoform	0.240	0.284	0.1	18.33	20
Isopropylbenzene	3.843	4.048		5.33	20
1,1,2,2-Tetrachloroethane	1.316	1.422	0.3	8.06	20
1,3-Dichlorobenzene	1.670	1.754		5.03	20
1,4-Dichlorobenzene	1.702	1.759		3.35	20
1,2-Dichlorobenzene	1.685	1.803		7	20
1,2-Dibromo-3-Chloropropane	0.264	0.303		14.77	20
1,2,4-Trichlorobenzene	0.994	1.061		6.74	20
1,2,3-Trichlorobenzene	1.006	1.115		10.84	20
1,2-Dichloroethane-d4	0.858	0.878		2.33	20
Dibromofluoromethane	0.357	0.374		4.76	20
Toluene-d8	1.232	1.265		2.68	20
4-Bromofluorobenzene	0.419	0.460		9.78	20

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: MSVOA_X Calibration Date/Time: 12/10/2024 18:44

Lab File ID: VX044217.D Init. Calib. Date(s): 11/21/2024 11/21/2024

Heated Purge: (Y/N) N Init. Calib. Time(s): 09:47 12:03

GC Column: DB-624UI ID: 0.18 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	0.633	0.496		-21.64	50
Chloromethane	0.667	0.566	0.1	-15.14	50
Vinyl Chloride	0.709	0.616		-13.12	50
Bromomethane	0.436	0.441		1.15	50
Chloroethane	0.432	0.416		-3.7	50
Trichlorofluoromethane	1.268	1.286		1.42	50
1,1,2-Trichlorotrifluoroethane	0.605	0.555		-8.26	50
1,1-Dichloroethene	0.576	0.521		-9.55	50
Acetone	0.394	0.357		-9.39	50
Carbon Disulfide	1.188	0.842		-29.13	50
Methyl tert-butyl Ether	2.092	2.267		8.36	50
Methyl Acetate	0.917	0.993		8.29	50
Methylene Chloride	0.668	0.651		-2.55	50
trans-1,2-Dichloroethene	0.595	0.559		-6.05	50
1,1-Dichloroethane	1.161	1.194	0.1	2.84	50
Cyclohexane	0.956	0.852		-10.88	50
2-Butanone	0.508	0.539		6.1	50
Carbon Tetrachloride	0.500	0.466		-6.8	50
cis-1,2-Dichloroethene	0.735	0.744		1.22	50
Bromochloromethane	0.511	0.464		-9.2	50
Chloroform	1.249	1.314		5.2	50
1,1,1-Trichloroethane	1.077	1.126		4.55	50
Methylcyclohexane	0.578	0.493		-14.71	50
Benzene	1.387	1.288		-7.14	50
1,2-Dichloroethane	0.557	0.549		-1.44	50
Trichloroethene	0.393	0.315		-19.85	50
1,2-Dichloropropane	0.340	0.336		-1.18	50
Bromodichloromethane	0.482	0.497		3.11	50
4-Methyl-2-Pentanone	0.537	0.594		10.61	50
Toluene	0.830	0.815		-1.81	50
t-1,3-Dichloropropene	0.491	0.497		1.22	50
cis-1,3-Dichloropropene	0.539	0.534		-0.93	50
1,1,2-Trichloroethane	0.343	0.350		2.04	50
2-Hexanone	0.403	0.444		10.17	50
Dibromochloromethane	0.344	0.358		4.07	50
1,2-Dibromoethane	0.346	0.362		4.62	50
Tetrachloroethene	0.330	0.309		-6.36	50
Chlorobenzene	1.098	1.073	0.3	-2.28	50

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: MSVOA_X Calibration Date/Time: 12/10/2024 18:44

Lab File ID: VX044217.D Init. Calib. Date(s): 11/21/2024 11/21/2024

Heated Purge: (Y/N) N Init. Calib. Time(s): 09:47 12:03

GC Column: DB-624UI ID: 0.18 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Ethyl Benzene	1.861	1.866		0.27	50
m/p-Xylenes	0.694	0.686		-1.15	50
o-Xylene	0.678	0.698		2.95	50
Styrene	1.121	1.176		4.91	50
Bromoform	0.240	0.254	0.1	5.83	50
Isopropylbenzene	3.843	3.780		-1.64	50
1,1,2,2-Tetrachloroethane	1.316	1.342	0.3	1.98	50
1,3-Dichlorobenzene	1.670	1.628		-2.52	50
1,4-Dichlorobenzene	1.702	1.600		-5.99	50
1,2-Dichlorobenzene	1.685	1.644		-2.43	50
1,2-Dibromo-3-Chloropropane	0.264	0.280		6.06	50
1,2,4-Trichlorobenzene	0.994	0.956		-3.82	50
1,2,3-Trichlorobenzene	1.006	0.973		-3.28	50
1,2-Dichloroethane-d4	0.858	0.913		6.41	50
Dibromofluoromethane	0.357	0.351		-1.68	50
Toluene-d8	1.232	1.161		-5.76	50
4-Bromofluorobenzene	0.419	0.428		2.15	50

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

LAB CHRONICLE

OrderID:	P5164	OrderDate:	12/6/2024 1:09:00 PM
Client:	AECOM Technical Services, Inc.	Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258
Contact:	Eleanor Vivadou	Location:	L61,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5164-01	RE108D2-20241206	Water	SVOC-SIMGroup1	8270-Modified	12/06/24	12/09/24	12/09/24	12/06/24
P5164-02	RE108D1-20241206	Water	SVOC-SIMGroup1	8270-Modified	12/06/24	12/09/24	12/09/24	12/06/24
P5164-03	RE105D1-20241206	Water	SVOC-SIMGroup1	8270-Modified	12/06/24	12/09/24	12/09/24	12/06/24
P5164-04	RE105D2-20241206	Water	SVOC-SIMGroup1	8270-Modified	12/06/24	12/09/24	12/09/24	12/06/24
P5164-06	FB-20241206	Water	SVOC-SIMGroup1	8270-Modified	12/06/24	12/09/24	12/09/24	12/06/24



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

Hit Summary Sheet SW-846

SDG No.: P5164
Client: AECOM Technical Services, Inc.

Sample ID	Client ID	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : RE108D2-20241206								
P5164-01	RE108D2-20241206	WATER 1,4-Dioxane	2.500		0.07	0.2	0.2	ug/L
		Total Svoc :		2.50				
		Total Concentration:		2.50				
Client ID : RE108D1-20241206								
P5164-02	RE108D1-20241206	WATER 1,4-Dioxane	3.100		0.07	0.2	0.2	ug/L
		Total Svoc :		3.10				
		Total Concentration:		3.10				
Client ID : RE105D1-20241206								
P5164-03	RE105D1-20241206	WATER 1,4-Dioxane	4.900		0.07	0.21	0.21	ug/L
		Total Svoc :		4.90				
		Total Concentration:		4.90				
Client ID : RE105D2-20241206								
P5164-04	RE105D2-20241206	WATER 1,4-Dioxane	4.300		0.07	0.2	0.2	ug/L
		Total Svoc :		4.30				
		Total Concentration:		4.30				



SAMPLE DATA

Report of Analysis

Client:	AECOM Technical Services, Inc.		Date Collected:	12/06/24
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	12/06/24
Client Sample ID:	RE108D2-20241206		SDG No.:	P5164
Lab Sample ID:	P5164-01		Matrix:	Water
Analytical Method:	SW8270SIM		% Solid:	0
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-SIMGroup1
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035512.D	1	12/09/24 11:27	12/09/24 18:19	PB165497

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	2.50		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.39		30 - 150		97%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.46		30 - 150		114%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.43		55 - 111		106%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.42		53 - 106		105%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.64	*	58 - 132		161%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1620	7.301				
1146-65-2	Naphthalene-d8	4620	10.041				
15067-26-2	Acenaphthene-d10	3280	13.957				
1517-22-2	Phenanthrene-d10	7900	16.723				
1719-03-5	Chrysene-d12	7070	20.965				
1520-96-3	Perylene-d12	7060	23.059				

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:	AECOM Technical Services, Inc.	Date Collected:	12/06/24
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258	Date Received:	12/06/24
Client Sample ID:	RE108D1-20241206	SDG No.:	P5164
Lab Sample ID:	P5164-02	Matrix:	Water
Analytical Method:	SW8270SIM	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035513.D	1	12/09/24 11:27	12/09/24 18:55	PB165497

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	3.10		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.39		30 - 150		98%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.41		30 - 150		102%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.42		55 - 111		104%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.46	*	53 - 106		115%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.64	*	58 - 132		161%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1500	7.3				
1146-65-2	Naphthalene-d8	4290	10.041				
15067-26-2	Acenaphthene-d10	3270	13.956				
1517-22-2	Phenanthrene-d10	7860	16.723				
1719-03-5	Chrysene-d12	6610	20.965				
1520-96-3	Perylene-d12	6390	23.061				

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:	AECOM Technical Services, Inc.		Date Collected:	12/06/24
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	12/06/24
Client Sample ID:	RE105D1-20241206		SDG No.:	P5164
Lab Sample ID:	P5164-03		Matrix:	Water
Analytical Method:	SW8270SIM		% Solid:	0
Sample Wt/Vol:	960	Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-SIMGroup1
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035515.D	1	12/09/24 11:27	12/09/24 20:07	PB165497

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	4.90		0.070	0.21	0.21	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.37		30 - 150		91%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.40		30 - 150		100%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.38		55 - 111		95%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.39		53 - 106		97%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.71	*	58 - 132		178%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1530	7.301				
1146-65-2	Naphthalene-d8	4180	10.041				
15067-26-2	Acenaphthene-d10	3190	13.957				
1517-22-2	Phenanthrene-d10	7890	16.723				
1719-03-5	Chrysene-d12	6610	20.965				
1520-96-3	Perylene-d12	6380	23.062				

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:	AECOM Technical Services, Inc.		Date Collected:	12/06/24
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	12/06/24
Client Sample ID:	RE105D2-20241206		SDG No.:	P5164
Lab Sample ID:	P5164-04		Matrix:	Water
Analytical Method:	SW8270SIM		% Solid:	0
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-SIMGroup1
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BN035514.D	1	12/09/24 11:27	12/09/24 19:31	PB165497

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	4.30		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	0.43		30 - 150		108%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.41		55 - 111		103%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.41		53 - 106		102%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.67	*	58 - 132		166%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1520	7.3				
1146-65-2	Naphthalene-d8	4180	10.041				
15067-26-2	Acenaphthene-d10	3090	13.956				
1517-22-2	Phenanthrene-d10	7600	16.723				
1719-03-5	Chrysene-d12	6220	20.965				
1520-96-3	Perylene-d12	6150	23.061				

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:	AECOM Technical Services, Inc.		Date Collected:	12/06/24
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	12/06/24
Client Sample ID:	FB-20241206		SDG No.:	P5164
Lab Sample ID:	P5164-06		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
BN035516.D	1	12/09/24 11:27	12/09/24 20:43	PB165497

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	0.41		30 - 150		101%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.45		30 - 150		111%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.45		55 - 111		111%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.44	*	53 - 106		110%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.70	*	58 - 132		174%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1690	7.301				
1146-65-2	Naphthalene-d8	4710	10.041				
15067-26-2	Acenaphthene-d10	3570	13.957				
1517-22-2	Phenanthrene-d10	8430	16.723				
1719-03-5	Chrysene-d12	7110	20.965				
1520-96-3	Perylene-d12	6620	23.062				

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.: P5164

Client: AECOM Technical Services, Inc.

Analytical Method: 8270-Modified

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
P5164-01	RE108D2-20241206	2-Methylnaphthalene-d10	0.4	0.39	97		30	150
		Fluoranthene-d10	0.4	0.46	114		30	150
		Nitrobenzene-d5	0.4	0.43	106		55	111
		2-Fluorobiphenyl	0.4	0.42	105		53	106
		Terphenyl-d14	0.4	0.64	161	*	58	132
P5164-02	RE108D1-20241206	2-Methylnaphthalene-d10	0.4	0.39	98		30	150
		Fluoranthene-d10	0.4	0.41	102		30	150
		Nitrobenzene-d5	0.4	0.42	104		55	111
		2-Fluorobiphenyl	0.4	0.46	115	*	53	106
		Terphenyl-d14	0.4	0.64	161	*	58	132
P5164-03	RE105D1-20241206	2-Methylnaphthalene-d10	0.4	0.37	91		30	150
		Fluoranthene-d10	0.4	0.40	100		30	150
		Nitrobenzene-d5	0.4	0.38	95		55	111
		2-Fluorobiphenyl	0.4	0.39	97		53	106
		Terphenyl-d14	0.4	0.71	178	*	58	132
P5164-04	RE105D2-20241206	2-Methylnaphthalene-d10	0.4	0.39	96		30	150
		Fluoranthene-d10	0.4	0.43	108		30	150
		Nitrobenzene-d5	0.4	0.41	103		55	111
		2-Fluorobiphenyl	0.4	0.41	102		53	106
		Terphenyl-d14	0.4	0.67	166	*	58	132
P5164-06	FB-20241206	2-Methylnaphthalene-d10	0.4	0.41	101		30	150
		Fluoranthene-d10	0.4	0.45	111		30	150
		Nitrobenzene-d5	0.4	0.45	111		55	111
		2-Fluorobiphenyl	0.4	0.44	110	*	53	106
		Terphenyl-d14	0.4	0.70	174	*	58	132
PB165497BL	PB165497BL	2-Methylnaphthalene-d10	0.4	0.46	114		30	150
		Fluoranthene-d10	0.4	0.45	112		30	150
		Nitrobenzene-d5	0.4	0.45	113	*	55	111
		2-Fluorobiphenyl	0.4	0.43	106		53	106
		Terphenyl-d14	0.4	0.56	141	*	58	132
PB165497BS	PB165497BS	2-Methylnaphthalene-d10	0.4	0.53	133		30	150
		Fluoranthene-d10	0.4	0.38	94		30	150
		Nitrobenzene-d5	0.4	0.41	102		55	111
		2-Fluorobiphenyl	0.4	0.40	101		53	106
		Terphenyl-d14	0.4	0.48	119		58	132
PB165497BSD	PB165497BSD	2-Methylnaphthalene-d10	0.4	0.53	133		30	150
		Fluoranthene-d10	0.4	0.37	91		30	150
		Nitrobenzene-d5	0.4	0.43	107		55	111
		2-Fluorobiphenyl	0.4	0.40	99		53	106
		Terphenyl-d14	0.4	0.48	119		58	132

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P5164

Client: AECOM Technical Services, Inc.

Analytical Method: 8270-Modified DataFile: BN035528.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB165497BS	1,4-Dioxane	0.4	0.36	ug/L	90				70	130	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P5164

Client: AECOM Technical Services, Inc.

Analytical Method: 8270-Modified DataFile: BN035529.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB165497BSD	1,4-Dioxane	0.4	0.35	ug/L	88	3			70	130	20

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB165497BL

Lab Name: CHEMTECH

Contract: AECO15

Lab Code: CHEM Case No.: P5164

SAS No.: P5164 SDG NO.: P5164

Lab File ID: BN035511.D

Lab Sample ID: PB165497BL

Instrument ID: BNA_N

Date Extracted: 12/09/2024

Matrix: (soil/water) Water

Date Analyzed: 12/09/2024

Level: (low/med) LOW

Time Analyzed: 17:43

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
RE105D2-20241206	P5164-04	BN035514.D	12/09/2024
RE105D1-20241206	P5164-03	BN035515.D	12/09/2024
FB-20241206	P5164-06	BN035516.D	12/09/2024
PB165497BS	PB165497BS	BN035528.D	12/10/2024
PB165497BSD	PB165497BSD	BN035529.D	12/10/2024
RE108D2-20241206	P5164-01	BN035512.D	12/09/2024
RE108D1-20241206	P5164-02	BN035513.D	12/09/2024

COMMENTS: _____

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: AECO15

Lab Code: CHEM

SAS No.: P5164 SDG NO.: P5164

Lab File ID: BN035349.D

DFTPP Injection Date: 11/27/2024

Instrument ID: BNA_N

DFTPP Injection Time: 14:55

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	21.6
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	28.9
70	Less than 2.0% of mass 69	0.1 (0.4) 1
127	10.0 - 80.0% of mass 198	39.4
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	6.7
275	10.0 - 60.0% of mass 198	27.9
365	Greater than 1% of mass 198	4.6
441	Present, but less than mass 443	11.5
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	14 (19.7) 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	BN035350.D	11/27/2024	15:34
SSTDICC0.2	SSTDICC0.2	BN035351.D	11/27/2024	16:10
SSTDICCC0.4	SSTDICCC0.4	BN035352.D	11/27/2024	16:46
SSTDICC0.8	SSTDICC0.8	BN035353.D	11/27/2024	17:21
SSTDICC1.6	SSTDICC1.6	BN035354.D	11/27/2024	17:57
SSTDICC3.2	SSTDICC3.2	BN035355.D	11/27/2024	18:33
SSTDICC5.0	SSTDICC5.0	BN035356.D	11/27/2024	19:09

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: AECO15

Lab Code: CHEM

SAS No.: P5164 SDG NO.: P5164

Lab File ID: BN035509.D

DFTPP Injection Date: 12/09/2024

Instrument ID: BNA_N

DFTPP Injection Time: 16:28

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24.4
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	33.2
70	Less than 2.0% of mass 69	0.1 (0.4) 1
127	10.0 - 80.0% of mass 198	41.6
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
275	10.0 - 60.0% of mass 198	27.3
365	Greater than 1% of mass 198	4.1
441	Present, but less than mass 443	9.8
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	12.1 (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	BN035510.D	12/09/2024	17:07
PB165497BL	PB165497BL	BN035511.D	12/09/2024	17:43
RE108D2-20241206	P5164-01	BN035512.D	12/09/2024	18:19
RE108D1-20241206	P5164-02	BN035513.D	12/09/2024	18:55
RE105D2-20241206	P5164-04	BN035514.D	12/09/2024	19:31
RE105D1-20241206	P5164-03	BN035515.D	12/09/2024	20:07
FB-20241206	P5164-06	BN035516.D	12/09/2024	20:43
SSTDCCC0.4EC	SSTDCCC0.4	BN035523.D	12/10/2024	00:55

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: AECO15

Lab Code: CHEM

SAS No.: P5164 SDG NO.: P5164

Lab File ID: BN035524.D

DFTPP Injection Date: 12/10/2024

Instrument ID: BNA_N

DFTPP Injection Time: 08:55

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24.6
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	33.3
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	41.8
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	7.1
275	10.0 - 60.0% of mass 198	27.3
365	Greater than 1% of mass 198	4.1
441	Present, but less than mass 443	10.1
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	12.2 (19.7) 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	BN035525.D	12/10/2024	09:33
PB165497BS	PB165497BS	BN035528.D	12/10/2024	11:21
PB165497BSD	PB165497BSD	BN035529.D	12/10/2024	12:03
SSTDCCC0.4EC	SSTDCCC0.4	BN035530.D	12/10/2024	12:40

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG NO.: P5164

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/09/2024

Lab File ID: BN035510.D Time Analyzed: 17:07

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	1975	7.3	5582	10.04	4021	13.96
UPPER LIMIT	3950	7.8	11164	10.541	8042	14.456
LOWER LIMIT	987.5	6.8	2791	9.541	2010.5	13.456
EPA SAMPLE NO.						
01 PB165497BL	1641	7.30	4578	10.05	3247	13.96
02 RE108D2-20241206	1616	7.30	4623	10.04	3281	13.96
03 RE108D1-20241206	1500	7.30	4288	10.04	3273	13.96
04 RE105D1-20241206	1526	7.30	4181	10.04	3189	13.96
05 RE105D2-20241206	1515	7.30	4180	10.04	3091	13.96
06 FB-20241206	1690	7.30	4712	10.04	3572	13.96

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.: P5164 SAS No.: P5164 SDG NO.: P5164

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/09/2024

Lab File ID: BN035510.D Time Analyzed: 17:07

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	9077	16.723	8166	20.965	8385	23.059
UPPER LIMIT	18154	17.223	16332	21.465	16770	23.559
LOWER LIMIT	4538.5	16.223	4083	20.465	4192.5	22.559
EPA SAMPLE NO.						
01 PB165497BL	7570	16.74	6431	20.97	6251	23.07
02 RE108D2-20241206	7900	16.72	7073	20.97	7058	23.06
03 RE108D1-20241206	7859	16.72	6610	20.97	6392	23.06
04 RE105D1-20241206	7888	16.72	6613	20.97	6375	23.06
05 RE105D2-20241206	7600	16.72	6224	20.97	6145	23.06
06 FB-20241206	8431	16.72	7106	20.97	6618	23.06

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.: P5164 SAS No.: P5164 SDG NO.: P5164

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/10/2024

Lab File ID: BN035525.D Time Analyzed: 09:33

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	2237	7.293	6161	10.04	4478	13.96
UPPER LIMIT	4474	7.793	12322	10.541	8956	14.457
LOWER LIMIT	1118.5	6.793	3080.5	9.541	2239	13.457
EPA SAMPLE NO.						
01 PB165497BSD	1941	7.29	5150	10.04	3668	13.96
02 PB165497BS	1669	7.30	4431	10.04	3092	13.96

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.: P5164 SAS No.: P5164 SDG NO.: P5164

EPA Sample No.: SSTDCCC0.4 Date Analyzed: 12/10/2024

Lab File ID: BN035525.D Time Analyzed: 09:33

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	11122	16.723	9383	20.965	8820	23.059
UPPER LIMIT	22244	17.223	18766	21.465	17640	23.559
LOWER LIMIT	5561	16.223	4691.5	20.465	4410	22.559
EPA SAMPLE NO.						
01 PB165497BSD	9298	16.72	7541	20.97	6738	23.06
02 PB165497BS	7959	16.72	6696	20.96	5945	23.06

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:	AECOM Technical Services, Inc.		Date Collected:	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	
Client Sample ID:	PB165497BL		SDG No.:	P5164
Lab Sample ID:	PB165497BL		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
BN035511.D	1	12/09/24 11:27	12/09/24 17:43	PB165497

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	0.46		30 - 150		114%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.45		30 - 150		112%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.45	*	55 - 111		113%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.43		53 - 106		106%	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	1640	7.3				
1146-65-2	Naphthalene-d8	4580	10.052				
15067-26-2	Acenaphthene-d10	3250	13.957				
1517-22-2	Phenanthrene-d10	7570	16.736				
1719-03-5	Chrysene-d12	6430	20.974				
1520-96-3	Perylene-d12	6250	23.067				

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:	AECOM Technical Services, Inc.		Date Collected:	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	
Client Sample ID:	PB165497BS		SDG No.:	P5164
Lab Sample ID:	PB165497BS		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
BN035528.D	1	12/09/24 11:27	12/10/24 11:21	PB165497

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.36		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.53		30 - 150		133%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.38		30 - 150		94%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.41		55 - 111		102%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.40		53 - 106		101%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.48		58 - 132		119%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1670	7.3				
1146-65-2	Naphthalene-d8	4430	10.041				
15067-26-2	Acenaphthene-d10	3090	13.956				
1517-22-2	Phenanthrene-d10	7960	16.723				
1719-03-5	Chrysene-d12	6700	20.964				
1520-96-3	Perylene-d12	5950	23.058				

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:	AECOM Technical Services, Inc.		Date Collected:	
Project:	NAVFAC NWIRP Bethpage, NY Site 1 OU-2 - 32258		Date Received:	
Client Sample ID:	PB165497BSD		SDG No.:	P5164
Lab Sample ID:	PB165497BSD		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
BN035529.D	1	12/09/24 11:27	12/10/24 12:03	PB165497

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.35		0.070	0.20	0.20	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.53		30 - 150		133%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.37		30 - 150		91%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.43		55 - 111		107%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.40		53 - 106		99%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.48		58 - 132		119%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1940	7.293				
1146-65-2	Naphthalene-d8	5150	10.041				
15067-26-2	Acenaphthene-d10	3670	13.957				
1517-22-2	Phenanthrene-d10	9300	16.723				
1719-03-5	Chrysene-d12	7540	20.965				
1520-96-3	Perylene-d12	6740	23.062				

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-BN112724.M
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 Last Update : Wed Nov 27 23:03:24 2024
 Response Via : Initial Calibration

Calibration Files

0.1 =BN035350.D 0.2 =BN035351.D 0.4 =BN035352.D 0.8 =BN035353.D 1.6 =BN035354.D 3.2 =BN035355.D 5.0 =BN035356.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	0.406	0.417	0.376	0.380	0.392	0.357	0.348	0.382	6.52
3)	n-Nitrosodimet...	0.334	0.302	0.326	0.315	0.332	0.310	0.309	0.319	3.92
4) S	2-Fluorophenol	1.025	1.112	1.018	0.958	0.998	0.954	0.942	1.001	5.88
5) S	Phenol-d6	1.227	1.186	1.193	1.143	1.235	1.215	1.229	1.204	2.69
6)	bis(2-Chloroet...	1.035	1.021	0.992	0.993	1.051	0.997	0.991	1.012	2.39
7) I	Naphthalene-d8	-----ISTD-----								
8) S	Nitrobenzene-d5	0.227	0.232	0.235	0.248	0.257	0.251	0.261	0.244	5.31
9)	Naphthalene	1.062	1.029	1.047	1.032	1.096	1.049	1.070	1.055	2.22
10)	Hexachlorobuta...	0.245	0.242	0.247	0.241	0.255	0.236	0.238	0.243	2.60
11) SURR2	Methylnaphth...	0.591	0.603	0.619	0.615	0.659	0.639	0.656	0.626	4.16
12)	2-Methylnaphth...	0.724	0.716	0.740	0.747	0.795	0.771	0.795	0.755	4.25
13) I	Acenaphthene-d10	-----ISTD-----								
14) S	2,4,6-Tribromo...	0.273	0.258	0.257	0.268	0.293	0.311	0.328	0.284	9.67
15) S	2-Fluorobiphenyl	1.489	1.491	1.510	1.508	1.566	1.511	1.511	1.512	1.68
16)	Acenaphthylene	1.643	1.600	1.595	1.638	1.737	1.763	1.781	1.680	4.68
17)	Acenaphthene	1.121	1.084	1.086	1.108	1.145	1.122	1.140	1.115	2.17
18)	Fluorene	1.589	1.549	1.543	1.600	1.652	1.614	1.625	1.596	2.47
19) I	Phenanthrene-d10	-----ISTD-----								
20)	4,6-Dinitro-2-...	0.038	0.031	0.036	0.041	0.051			0.039	19.30
21)	4-Bromophenyl-...	0.226	0.218	0.226	0.233	0.249	0.242	0.244	0.234	4.85
22)	Hexachlorobenzene	0.265	0.266	0.273	0.276	0.288	0.278	0.277	0.275	2.82
23)	Atrazine	0.155	0.155	0.154	0.156	0.175	0.179	0.191	0.167	8.98
24)	Pentachlorophenol	0.140	0.090	0.095	0.103	0.121	0.136	0.150	0.120	19.86
25)	Phenanthrene	1.092	1.046	1.067	1.092	1.148	1.121	1.125	1.099	3.20
26)	Anthracene	0.964	0.923	0.940	0.973	1.050	1.042	1.064	0.994	5.76
27) SURR	Fluoranthene-d10	1.203	1.086	1.077	1.105	1.165	1.138	1.164	1.134	4.10
28)	Fluoranthene	1.538	1.396	1.416	1.456	1.539	1.497	1.526	1.481	3.99
29) I	Chrysene-d12	-----ISTD-----								
30)	Pyrene	1.583	1.445	1.475	1.443	1.519	1.440	1.431	1.477	3.79
31) S	Terphenyl-d14	0.832	0.777	0.791	0.771	0.812	0.772	0.769	0.789	3.08
32)	Benzo(a)anthra...	1.431	1.343	1.355	1.375	1.451	1.411	1.429	1.399	2.98
33)	Chrysene	1.463	1.452	1.441	1.415	1.487	1.422	1.420	1.443	1.84
34)	Bis(2-ethylhex...	0.710	0.558	0.516	0.505	0.520	0.516	0.544	0.553	12.96
35) I	Perylene-d12	-----ISTD-----								

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

Method File : 8270-SIM-BN112724.M

36)	Indeno(1,2,3-c...	1.411	1.489	1.532	1.554	1.660	1.615	1.685	1.564	6.22
37)	Benzo(b)fluora...	1.305	1.348	1.313	1.378	1.827	1.463	1.608	1.463	13.12
38)	Benzo(k)fluora...	1.444	1.376	1.402	1.419	1.527	1.447	1.468	1.440	3.39
39) C	Benzo(a)pyrene	1.204	1.156	1.146	1.171	1.256	1.232	1.271	1.205	4.11
40)	Dibenzo(a,h)an...	1.104	1.187	1.194	1.226	1.315	1.280	1.332	1.234	6.55
41)	Benzo(g,h,i)pe...	1.188	1.238	1.248	1.269	1.360	1.330	1.394	1.289	5.71

(#) = Out of Range

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: BNA_N Calibration Date/Time: 12/09/2024 17:07

Lab File ID: BN035510.D Init. Calib. Date(s): 11/27/2024 11/27/2024

EPA Sample No.: SSTDCCC0.4 Init. Calib. Time(s): 15:34 19:09

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.626	0.627		0.2	20.0
Fluoranthene-d10	1.134	1.031		-9.1	20.0
2-Fluorophenol	1.001	1.045		4.4	20.0
Phenol-d6	1.204	1.324		10.0	20.0
Nitrobenzene-d5	0.244	0.260		6.6	20.0
2-Fluorobiphenyl	1.512	1.514		0.1	20.0
2,4,6-Tribromophenol	0.284	0.274		-3.5	20.0
Terphenyl-d14	0.789	0.816		3.4	20.0
1,4-Dioxane	0.382	0.363		-5.0	20.0

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: BNA_N Calibration Date/Time: 12/10/2024 00:55

Lab File ID: BN035523.D Init. Calib. Date(s): 11/27/2024 11/27/2024

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 15:34 19:09

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.626	0.625		-0.2	50.0
Fluoranthene-d10	1.134	1.005		-11.4	50.0
2-Fluorophenol	1.001	1.013		1.2	50.0
Phenol-d6	1.204	1.247		3.6	50.0
Nitrobenzene-d5	0.244	0.265		8.6	50.0
2-Fluorobiphenyl	1.512	1.447		-4.3	50.0
2,4,6-Tribromophenol	0.284	0.266		-6.3	50.0
Terphenyl-d14	0.789	0.812		2.9	50.0
1,4-Dioxane	0.382	0.386		1.0	50.0

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: BNA_N Calibration Date/Time: 12/10/2024 09:33

Lab File ID: BN035525.D Init. Calib. Date(s): 11/27/2024 11/27/2024

EPA Sample No.: SSTDCCC0.4 Init. Calib. Time(s): 15:34 19:09

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.626	0.622		-0.6	20.0
Fluoranthene-d10	1.134	0.995		-12.3	20.0
2-Fluorophenol	1.001	1.042		4.1	20.0
Phenol-d6	1.204	1.276		6.0	20.0
Nitrobenzene-d5	0.244	0.257		5.3	20.0
2-Fluorobiphenyl	1.512	1.496		-1.1	20.0
2,4,6-Tribromophenol	0.284	0.249		-12.3	20.0
Terphenyl-d14	0.789	0.834		5.7	20.0
1,4-Dioxane	0.382	0.382		0.0	20.0

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: AECO15

Lab Code: CHEM Case No.: P5164 SAS No.: P5164 SDG No.: P5164

Instrument ID: BNA_N Calibration Date/Time: 12/10/2024 12:40

Lab File ID: BN035530.D Init. Calib. Date(s): 11/27/2024 11/27/2024

EPA Sample No.: SSTDCCC0.4EC Init. Calib. Time(s): 15:34 19:09

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

COMPOUND	RRF	RRF0.4	MIN RRF	%D	MAX%D
2-Methylnaphthalene-d10	0.626	0.609		-2.7	50.0
Fluoranthene-d10	1.134	0.937		-17.4	50.0
2-Fluorophenol	1.001	0.987		-1.4	50.0
Phenol-d6	1.204	1.206		0.2	50.0
Nitrobenzene-d5	0.244	0.255		4.5	50.0
2-Fluorobiphenyl	1.512	1.456		-3.7	50.0
2,4,6-Tribromophenol	0.284	0.253		-10.9	50.0
Terphenyl-d14	0.789	0.823		4.3	50.0
1,4-Dioxane	0.382	0.377		-1.3	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) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.

QUOTE NO.

COC Number 2041883

P5164

7
7.1

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: RESOLUTION

ADDRESS:

CITY STATE: ZIP:

ATTENTION: ELEANOR VIVAUDOU

PHONE:

FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NNRP BETHPAGE

PROJECT NO.: LOCATION: BETHPAGE

PROJECT MANAGER: E. VIVAUDOU

e-mail: ELEANOR.VIVAUDOU@AE.COM.COM

PHONE:

FAX:

CLIENT BILLING INFORMATION

BILL TO: E. VIVAUDOU PO#:

ADDRESS: 27 ELLIS PLACE

CITY OSSINING STATE: NY ZIP: 10563

ATTENTION: E. VIVAUDOU PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) DAYS*

HARDCOPY (DATA PACKAGE): DAYS*

EDD: DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)

☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP

☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B

+ Raw Data ☐ Other

☒ EDD FORMAT NYSDEC EDD CATB

VOL'S 8260
14 DIOXANE 8270

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										COMMENTS
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	RE108D2 - 20241206	6W		X	12-6-24	0940	3	2	1								
2.	RE108D1 - 20241206	6W		X		1040	3	2	1								
3.	RE105D1 - 20241206	6W		X		0915	3	2	1								
4.	RE105D2 - 20241206	6W		X		0940	3	2	1								
5.	TB	DW		X	9-13-24	-	2	2									
6.	FB - 20241206	DW		X	12-6-24	1130	3	2	1								
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER:

DATE/TIME:

RECEIVED BY:

1. 

12-6-24

1. 

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 21.4 °C

Comments:

RELINQUISHED BY SAMPLER:

DATE/TIME:

RECEIVED BY:

2.

2.

RELINQUISHED BY SAMPLER:

DATE/TIME: 1700

RECEIVED BY:

3. 

12-6-24

3.

Page 1 of 1

CLIENT: ☐ Hand Delivered ☐ Other

CHEMTECH: ☐ Picked Up ☐ Field Sampling

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

LOGIN REPORT/SAMPLE TRANSFER

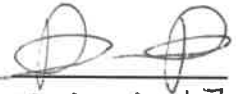
Order ID : P5164	AECO15	Order Date : 12/6/2024 1:09:00 PM	Project Mgr :
Client Name : AECOM Technical Services		Project Name : NAVFAC NWIRP Bethpage	Report Type : Results Only NYS ASP B
Client Contact : Eleanor Vivadou		Receive DateTime : 12/6/2024 5:00:00 PM	EDD Type : EQUIS
Invoice Name : AECOM Technical Services		Purchase Order :	Hard Copy Date :
Invoice Contact : Eleanor Vivadou			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
P5164-01	RE108D2-20241206	Water	12/06/2024	09:40					
					VOCMS Group1		8260-Low	10 Bus. Days	
P5164-02	RE108D1-20241206	Water	12/06/2024	10:40					
					VOCMS Group1		8260-Low	10 Bus. Days	
P5164-03	RE105D1-20241206	Water	12/06/2024	09:15					
					VOCMS Group1		8260-Low	10 Bus. Days	
P5164-04	RE105D2-20241206	Water	12/06/2024	09:40					
					VOCMS Group1		8260-Low	10 Bus. Days	
P5164-05	TB	Water	12/06/2024	00:00					
					VOCMS Group1		8260-Low	10 Bus. Days	
P5164-06	FB-20241206	Water	12/06/2024	11:30					
					VOCMS Group1		8260-Low	10 Bus. Days	

LOGIN REPORT/SAMPLE TRANSFER

Order ID : P5164	AECO15	Order Date : 12/6/2024 1:09:00 PM	Project Mgr :
Client Name : AECOM Technical Services		Project Name : NAVFAC NWIRP Bethpage	Report Type : Results Only NYS ASP B
Client Contact : Eleanor Vivadou		Receive DateTime : 12/6/2024 5:00:00 PM	EDD Type : EQUIS
Invoice Name : AECOM Technical Services		Purchase Order :	Hard Copy Date :
Invoice Contact : Eleanor Vivadou			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
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Relinquished By : 

Date / Time : 12-6-24 1725

Received By : 

Date / Time : 12/6/24 1725

Storage Area : VOA Refridgerator Room