

## **ANALYTICAL RESULTS SUMMARY**

SEMI-VOLATILE ORGANICS

**PROJECT NAME : NWIRP BETHPAGE 112G08005-WE13**

**TETRA TECH NUS, INC.**

**661 Andersen Drive**

**Suite 200**

**Pittsburgh, PA - 15220-2745**

**Phone No: 412-921-7090**

**ORDER ID : Q2063**

**ATTENTION : Ernie Wu**



**Laboratory Certification ID # 20012**



|                                     |    |
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## Cover Page

**Order ID :** Q2063

**Project ID :** NWIRP Bethpage 112G08005-WE13

**Client :** Tetra Tech NUS, Inc.

**Lab Sample Number**

Q2063-01  
Q2063-02  
Q2063-03

**Client Sample Number**

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

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

Signature : \_\_\_\_\_

Date: 5/26/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

## **CASE NARRATIVE**

**Tetra Tech NUS, Inc.**

**Project Name: NWIRP Bethpage 112G08005-WE13**

**Project Manager: Ernie Wu**

**Order ID # Q2063**

**Test Name: SVOC-SIMGroup1**

### **A. Number of Samples and Date of Receipt:**

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

### **B. Parameters**

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

### **C. Analytical Techniques:**

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

### **D. QA/ QC Samples:**

The Holding Times were met for all analysis.

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

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank Spike Duplicate met requirements for all samples .

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

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

The Tuning criteria met requirements.

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

### **E. Additional Comments:**

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

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

The not QT review data is reported in the Miscellaneous.

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

**F. Manual Integration Comments:**

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

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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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>U</b>  | 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.                                                                                                                                                                                                                                                                                      |
| <b>ND</b> | Indicates the analyte was analyzed for, but not detected                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>J</b>  | Indicates an estimated value. This flag is used: <ol style="list-style-type: none"> <li>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)</li> <li>(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.</li> </ol> |
| <b>B</b>  | Indicates the analyte was found in the blank as well as the sample report as “12 B”.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>E</b>  | Indicates the analyte ‘s concentration exceeds the calibrated range of the instrument for that specific analysis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>D</b>  | This flag identifies all compounds identified in an analysis at a secondary dilution factor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>P</b>  | 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”.                                                                                                                                                                                                                                                                                                                                                                             |
| <b>N</b>  | 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.                                                                                                                                                                                                                                                                       |
| <b>A</b>  | This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Q</b>  | Indicates the LCS did not meet the control limits requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## APPENDIX A

### QA REVIEW GENERAL DOCUMENTATION

Project #: Q2063

Completed

For thorough review, the report must have the following:

#### GENERAL:

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

✓

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

✓

Is the chain of custody signed and complete

✓

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

✓

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

✓

#### COVER PAGE:

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

✓

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

✓

#### CHAIN OF CUSTODY:

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

✓

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

✓

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

✓

Were the samples received within hold time

✓

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

✓

#### ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SOHIL JODHANI

Date: 05/26/2025

## LAB CHRONICLE

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

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



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

### Hit Summary Sheet SW-846

SDG No.: Q2063

Client: Tetra Tech NUS, Inc.

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



# SAMPLE DATA

## Report of Analysis

|                    |                               |                 |                |
|--------------------|-------------------------------|-----------------|----------------|
| Client:            | Tetra Tech NUS, Inc.          | Date Collected: | 05/15/25       |
| Project:           | NWIRP Bethpage 112G08005-WE13 | Date Received:  | 05/16/25       |
| Client Sample ID:  | RW5-SP100-20250515            | SDG No.:        | Q2063          |
| Lab Sample ID:     | Q2063-01                      | Matrix:         | Water          |
| Analytical Method: | SW8270ESIM                    | % Solid:        | 0              |
| Sample Wt/Vol:     | 1000 Units: mL                | Final Vol:      | 1000 uL        |
| Soil Aliquot Vol:  | uL                            | Test:           | SVOC-SIMGroup1 |
| Extraction Type :  | Decanted : N                  | Level :         | LOW            |
| Injection Volume : | GPC Factor : 1.0              | GPC Cleanup :   | N PH :         |
| Prep Method :      |                               |                 |                |

|                   |           |                |                |               |
|-------------------|-----------|----------------|----------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date      | Date Analyzed  | Prep Batch ID |
| BN037077.D        | 2         | 05/16/25 11:50 | 05/20/25 16:59 | PB168032      |

| CAS Number                | Parameter               | Conc. | Qualifier | MDL      | LOD  | LOQ / CRQL | Units    |
|---------------------------|-------------------------|-------|-----------|----------|------|------------|----------|
| <b>TARGETS</b>            |                         |       |           |          |      |            |          |
| 123-91-1                  | 1,4-Dioxane             | 5.60  |           | 0.13     | 0.40 | 0.40       | ug/L     |
| <b>SURROGATES</b>         |                         |       |           |          |      |            |          |
| 7297-45-2                 | 2-Methylnaphthalene-d10 | 0.30  |           | 30 - 150 |      | 75%        | SPK: 0.4 |
| 93951-69-0                | Fluoranthene-d10        | 0.35  |           | 30 - 150 |      | 86%        | SPK: 0.4 |
| 4165-60-0                 | Nitrobenzene-d5         | 0.30  |           | 55 - 111 |      | 75%        | SPK: 0.4 |
| 321-60-8                  | 2-Fluorobiphenyl        | 0.29  |           | 53 - 106 |      | 73%        | SPK: 0.4 |
| 1718-51-0                 | Terphenyl-d14           | 0.51  |           | 58 - 132 |      | 127%       | SPK: 0.4 |
| <b>INTERNAL STANDARDS</b> |                         |       |           |          |      |            |          |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4  | 1880  | 7.611     |          |      |            |          |
| 1146-65-2                 | Naphthalene-d8          | 5070  | 10.394    |          |      |            |          |
| 15067-26-2                | Acenaphthene-d10        | 2830  | 14.256    |          |      |            |          |
| 1517-22-2                 | Phenanthrene-d10        | 5700  | 17.009    |          |      |            |          |
| 1719-03-5                 | Chrysene-d12            | 4060  | 21.207    |          |      |            |          |
| 1520-96-3                 | Perylene-d12            | 3510  | 23.407    |          |      |            |          |

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

## Report of Analysis

|                    |                               |                 |                |
|--------------------|-------------------------------|-----------------|----------------|
| Client:            | Tetra Tech NUS, Inc.          | Date Collected: | 05/15/25       |
| Project:           | NWIRP Bethpage 112G08005-WE13 | Date Received:  | 05/16/25       |
| Client Sample ID:  | RW5-SP201-20250515            | SDG No.:        | Q2063          |
| Lab Sample ID:     | Q2063-02                      | Matrix:         | Water          |
| Analytical Method: | SW8270ESIM                    | % Solid:        | 0              |
| Sample Wt/Vol:     | 1000 Units: mL                | Final Vol:      | 1000 uL        |
| Soil Aliquot Vol:  | uL                            | Test:           | SVOC-SIMGroup1 |
| Extraction Type :  | Decanted : N                  | Level :         | LOW            |
| Injection Volume : | GPC Factor : 1.0              | GPC Cleanup :   | N PH :         |
| Prep Method :      |                               |                 |                |

|                   |           |                |                |               |
|-------------------|-----------|----------------|----------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date      | Date Analyzed  | Prep Batch ID |
| BN037078.D        | 1         | 05/16/25 11:50 | 05/20/25 17:35 | PB168032      |

| CAS Number                | Parameter               | Conc. | Qualifier | MDL      | LOD  | LOQ / CRQL | Units    |
|---------------------------|-------------------------|-------|-----------|----------|------|------------|----------|
| <b>TARGETS</b>            |                         |       |           |          |      |            |          |
| 123-91-1                  | 1,4-Dioxane             | 0.20  | U         | 0.070    | 0.20 | 0.20       | ug/L     |
| <b>SURROGATES</b>         |                         |       |           |          |      |            |          |
| 7297-45-2                 | 2-Methylnaphthalene-d10 | 0.29  |           | 30 - 150 |      | 73%        | SPK: 0.4 |
| 93951-69-0                | Fluoranthene-d10        | 0.35  |           | 30 - 150 |      | 88%        | SPK: 0.4 |
| 4165-60-0                 | Nitrobenzene-d5         | 0.29  |           | 55 - 111 |      | 72%        | SPK: 0.4 |
| 321-60-8                  | 2-Fluorobiphenyl        | 0.29  |           | 53 - 106 |      | 72%        | SPK: 0.4 |
| 1718-51-0                 | Terphenyl-d14           | 0.53  | *         | 58 - 132 |      | 133%       | SPK: 0.4 |
| <b>INTERNAL STANDARDS</b> |                         |       |           |          |      |            |          |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4  | 2020  | 7.611     |          |      |            |          |
| 1146-65-2                 | Naphthalene-d8          | 5260  | 10.394    |          |      |            |          |
| 15067-26-2                | Acenaphthene-d10        | 2990  | 14.256    |          |      |            |          |
| 1517-22-2                 | Phenanthrene-d10        | 6090  | 17.009    |          |      |            |          |
| 1719-03-5                 | Chrysene-d12            | 4330  | 21.207    |          |      |            |          |
| 1520-96-3                 | Perylene-d12            | 3600  | 23.407    |          |      |            |          |

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

## Report of Analysis

|                    |                               |                 |                |
|--------------------|-------------------------------|-----------------|----------------|
| Client:            | Tetra Tech NUS, Inc.          | Date Collected: | 05/15/25       |
| Project:           | NWIRP Bethpage 112G08005-WE13 | Date Received:  | 05/16/25       |
| Client Sample ID:  | RW5-SP303-20250515            | SDG No.:        | Q2063          |
| Lab Sample ID:     | Q2063-03                      | Matrix:         | Water          |
| Analytical Method: | SW8270ESIM                    | % Solid:        | 0              |
| Sample Wt/Vol:     | 1000 Units: mL                | Final Vol:      | 1000 uL        |
| Soil Aliquot Vol:  | uL                            | Test:           | SVOC-SIMGroup1 |
| Extraction Type :  | Decanted : N                  | Level :         | LOW            |
| Injection Volume : | GPC Factor : 1.0              | GPC Cleanup :   | N PH :         |
| Prep Method :      |                               |                 |                |

|                   |           |                |                |               |
|-------------------|-----------|----------------|----------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date      | Date Analyzed  | Prep Batch ID |
| BN037079.D        | 1         | 05/16/25 11:50 | 05/20/25 18:11 | PB168032      |

| CAS Number                | Parameter               | Conc. | Qualifier | MDL      | LOD  | LOQ / CRQL | Units    |
|---------------------------|-------------------------|-------|-----------|----------|------|------------|----------|
| <b>TARGETS</b>            |                         |       |           |          |      |            |          |
| 123-91-1                  | 1,4-Dioxane             | 0.20  | U         | 0.070    | 0.20 | 0.20       | ug/L     |
| <b>SURROGATES</b>         |                         |       |           |          |      |            |          |
| 7297-45-2                 | 2-Methylnaphthalene-d10 | 0.28  |           | 30 - 150 |      | 70%        | SPK: 0.4 |
| 93951-69-0                | Fluoranthene-d10        | 0.35  |           | 30 - 150 |      | 88%        | SPK: 0.4 |
| 4165-60-0                 | Nitrobenzene-d5         | 0.27  |           | 55 - 111 |      | 68%        | SPK: 0.4 |
| 321-60-8                  | 2-Fluorobiphenyl        | 0.27  |           | 53 - 106 |      | 67%        | SPK: 0.4 |
| 1718-51-0                 | Terphenyl-d14           | 0.45  |           | 58 - 132 |      | 113%       | SPK: 0.4 |
| <b>INTERNAL STANDARDS</b> |                         |       |           |          |      |            |          |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4  | 1610  | 7.611     |          |      |            |          |
| 1146-65-2                 | Naphthalene-d8          | 4340  | 10.394    |          |      |            |          |
| 15067-26-2                | Acenaphthene-d10        | 2540  | 14.256    |          |      |            |          |
| 1517-22-2                 | Phenanthrene-d10        | 5160  | 17.009    |          |      |            |          |
| 1719-03-5                 | Chrysene-d12            | 4020  | 21.206    |          |      |            |          |
| 1520-96-3                 | Perylene-d12            | 3490  | 23.409    |          |      |            |          |

U = Not Detected

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MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



# QC SUMMARY

### Surrogate Summary

SW-846

SDG No.: Q2063

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified

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

## Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2063

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified DataFile: BN037080.D

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

## Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2063

Client: Tetra Tech NUS, Inc.

Analytical Method: 8270-Modified DataFile: BN037081.D

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

|   |
|---|
| A |
| B |
| C |
| D |
| E |
| F |
| G |

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB168032BL

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM Case No.: Q2063

SAS No.: Q2063 SDG NO.: Q2063

Lab File ID: BN037075.D

Lab Sample ID: PB168032BL

Instrument ID: BNA\_N

Date Extracted: 05/16/2025

Matrix: (soil/water) Water

Date Analyzed: 05/20/2025

Level: (low/med) LOW

Time Analyzed: 15:45

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

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

COMMENTS: \_\_\_\_\_

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: Q2063

SDG NO.: Q2063

Lab File ID: BN036998.D

DFTPP Injection Date: 05/13/2025

Instrument ID: BNA\_N

DFTPP Injection Time: 17:02

| m/e | ION ABUNDANCE CRITERIA             | % RELATIVE ABUNDANCE |
|-----|------------------------------------|----------------------|
| 51  | 10.0 - 80.0% of mass 198           | 62.8                 |
| 68  | Less than 2.0% of mass 69          | 0.8 ( 1.4 ) 1        |
| 69  | Mass 69 relative abundance         | 55.6                 |
| 70  | Less than 2.0% of mass 69          | 0.3 ( 0.6 ) 1        |
| 127 | 10.0 - 80.0% of mass 198           | 52.7                 |
| 197 | Less than 2.0% of mass 198         | 0.0                  |
| 198 | Base Peak, 100% relative abundance | 100                  |
| 199 | 5.0 to 9.0% of mass 198            | 6.9                  |
| 275 | 10.0 - 60.0% of mass 198           | 23.8                 |
| 365 | Greater than 1% of mass 198        | 3.9                  |
| 441 | Present, but less than mass 443    | 8.7                  |
| 442 | Greater than 50% of mass 198       | 100                  |
| 443 | 15.0 - 24.0% of mass 442           | 10.4 ( 19 ) 2        |

1-Value is % mass 69

2-Value is % mass 442

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

| EPA<br>SAMPLE NO. | LAB<br>SAMPLE ID | LAB<br>FILE ID | DATE<br>ANALYZED | TIME<br>ANALYZED |
|-------------------|------------------|----------------|------------------|------------------|
| SSTDICC0.1        | SSTDICC0.1       | BN036999.D     | 05/13/2025       | 17:41            |
| SSTDICC0.2        | SSTDICC0.2       | BN037000.D     | 05/13/2025       | 18:17            |
| SSTDICCC0.4       | SSTDICCC0.4      | BN037001.D     | 05/13/2025       | 18:53            |
| SSTDICC0.8        | SSTDICC0.8       | BN037002.D     | 05/13/2025       | 19:29            |
| SSTDICC1.6        | SSTDICC1.6       | BN037003.D     | 05/13/2025       | 20:05            |
| SSTDICC3.2        | SSTDICC3.2       | BN037004.D     | 05/13/2025       | 20:41            |
| SSTDICC5.0        | SSTDICC5.0       | BN037005.D     | 05/13/2025       | 21:17            |

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: TETR06

Lab Code: CHEM

SAS No.: Q2063

SDG NO.: Q2063

Lab File ID: BN037073.D

DFTPP Injection Date: 05/20/2025

Instrument ID: BNA\_N

DFTPP Injection Time: 14:30

| m/e | ION ABUNDANCE CRITERIA             | % RELATIVE ABUNDANCE |
|-----|------------------------------------|----------------------|
| 51  | 10.0 - 80.0% of mass 198           | 69.3                 |
| 68  | Less than 2.0% of mass 69          | 0.0 ( 0.0 ) 1        |
| 69  | Mass 69 relative abundance         | 59.3                 |
| 70  | Less than 2.0% of mass 69          | 0.3 ( 0.4 ) 1        |
| 127 | 10.0 - 80.0% of mass 198           | 52.8                 |
| 197 | Less than 2.0% of mass 198         | 0.2                  |
| 198 | Base Peak, 100% relative abundance | 100                  |
| 199 | 5.0 to 9.0% of mass 198            | 6.9                  |
| 275 | 10.0 - 60.0% of mass 198           | 25.4                 |
| 365 | Greater than 1% of mass 198        | 3.7                  |
| 441 | Present, but less than mass 443    | 8.8                  |
| 442 | Greater than 50% of mass 198       | 100                  |
| 443 | 15.0 - 24.0% of mass 442           | 10.5 (19.4) 2        |

1-Value is % mass 69

2-Value is % mass 442

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

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

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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

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

Instrument ID: BNA\_N GC Column: ZB-GR ID: 0.25 (mm)

|                       | IS1 (DCB)<br>AREA # | RT #  | IS2 (NPT)<br>AREA # | RT #   | IS3 (ANT)<br>AREA # | RT #   |
|-----------------------|---------------------|-------|---------------------|--------|---------------------|--------|
| 12 HOUR STD           | 2240                | 7.611 | 6230                | 10.39  | 3461                | 14.26  |
| UPPER LIMIT           | 4480                | 8.111 | 12460               | 10.894 | 6922                | 14.756 |
| LOWER LIMIT           | 1120                | 7.111 | 3115                | 9.894  | 1730.5              | 13.756 |
| EPA SAMPLE NO.        |                     |       |                     |        |                     |        |
| 01 RW5-SP303-20250515 | 1605                | 7.61  | 4337                | 10.39  | 2543                | 14.26  |
| 02 PB168032BL         | 1695                | 7.61  | 4260                | 10.39  | 2468                | 14.26  |
| 03 RW5-SP100-20250515 | 1879                | 7.61  | 5069                | 10.39  | 2826                | 14.26  |
| 04 PB168032BS         | 1842                | 7.61  | 4702                | 10.39  | 2635                | 14.26  |
| 05 PB168032BSD        | 1841                | 7.61  | 4693                | 10.39  | 2613                | 14.26  |
| 06 RW5-SP201-20250515 | 2023                | 7.61  | 5257                | 10.39  | 2991                | 14.26  |

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

\* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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

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

Instrument ID: BNA\_N GC Column: ZB-GR ID: 0.25 (mm)

|                       | IS4 (PHN)<br>AREA # | RT #   | IS5 (CRY)<br>AREA # | RT #   | IS6 (PRY)<br>AREA # | RT #   |
|-----------------------|---------------------|--------|---------------------|--------|---------------------|--------|
| 12 HOUR STD           | 6762                | 17.009 | 4645                | 21.207 | 3820                | 23.407 |
| UPPER LIMIT           | 13524               | 17.509 | 9290                | 21.707 | 7640                | 23.907 |
| LOWER LIMIT           | 3381                | 16.509 | 2322.5              | 20.707 | 1910                | 22.907 |
| EPA SAMPLE NO.        |                     |        |                     |        |                     |        |
| 01 RW5-SP303-20250515 | 5161                | 17.01  | 4016                | 21.21  | 3494                | 23.41  |
| 02 PB168032BL         | 5072                | 17.01  | 3622                | 21.21  | 3128                | 23.41  |
| 03 RW5-SP100-20250515 | 5701                | 17.01  | 4060                | 21.21  | 3512                | 23.41  |
| 04 PB168032BS         | 5352                | 17.01  | 4047                | 21.21  | 3455                | 23.40  |
| 05 PB168032BSD        | 5111                | 17.01  | 3649                | 21.20  | 3038                | 23.40  |
| 06 RW5-SP201-20250515 | 6089                | 17.01  | 4329                | 21.21  | 3603                | 23.41  |

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

\* Values outside of QC limits.



# QC SAMPLE DATA

## Report of Analysis

|                    |                               |                  |                 |                |      |
|--------------------|-------------------------------|------------------|-----------------|----------------|------|
| Client:            | Tetra Tech NUS, Inc.          |                  | Date Collected: |                |      |
| Project:           | NWIRP Bethpage 112G08005-WE13 |                  | Date Received:  |                |      |
| Client Sample ID:  | PB168032BL                    |                  | SDG No.:        | Q2063          |      |
| Lab Sample ID:     | PB168032BL                    |                  | Matrix:         | Water          |      |
| Analytical Method: | SW8270ESIM                    |                  | % Solid:        | 0              |      |
| Sample Wt/Vol:     | 1000                          | Units: mL        | Final Vol:      | 1000           | uL   |
| Soil Aliquot Vol:  |                               | uL               | Test:           | SVOC-SIMGroup1 |      |
| Extraction Type :  |                               | Decanted : N     | Level :         | LOW            |      |
| Injection Volume : |                               | GPC Factor : 1.0 | GPC Cleanup :   | N              | PH : |
| Prep Method :      |                               |                  |                 |                |      |

|                   |           |                |                |               |
|-------------------|-----------|----------------|----------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date      | Date Analyzed  | Prep Batch ID |
| BN037075.D        | 1         | 05/16/25 11:50 | 05/20/25 15:45 | PB168032      |

| CAS Number                | Parameter               | Conc. | Qualifier | MDL      | LOD  | LOQ / CRQL | Units    |
|---------------------------|-------------------------|-------|-----------|----------|------|------------|----------|
| <b>TARGETS</b>            |                         |       |           |          |      |            |          |
| 123-91-1                  | 1,4-Dioxane             | 0.20  | U         | 0.070    | 0.20 | 0.20       | ug/L     |
| <b>SURROGATES</b>         |                         |       |           |          |      |            |          |
| 7297-45-2                 | 2-Methylnaphthalene-d10 | 0.36  |           | 30 - 150 |      | 90%        | SPK: 0.4 |
| 93951-69-0                | Fluoranthene-d10        | 0.34  |           | 30 - 150 |      | 84%        | SPK: 0.4 |
| 4165-60-0                 | Nitrobenzene-d5         | 0.32  |           | 55 - 111 |      | 81%        | SPK: 0.4 |
| 321-60-8                  | 2-Fluorobiphenyl        | 0.34  |           | 53 - 106 |      | 84%        | SPK: 0.4 |
| 1718-51-0                 | Terphenyl-d14           | 0.42  |           | 58 - 132 |      | 104%       | SPK: 0.4 |
| <b>INTERNAL STANDARDS</b> |                         |       |           |          |      |            |          |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4  | 1700  | 7.611     |          |      |            |          |
| 1146-65-2                 | Naphthalene-d8          | 4260  | 10.393    |          |      |            |          |
| 15067-26-2                | Acenaphthene-d10        | 2470  | 14.256    |          |      |            |          |
| 1517-22-2                 | Phenanthrene-d10        | 5070  | 17.008    |          |      |            |          |
| 1719-03-5                 | Chrysene-d12            | 3620  | 21.206    |          |      |            |          |
| 1520-96-3                 | Perylene-d12            | 3130  | 23.409    |          |      |            |          |

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

## Report of Analysis

|                    |                               |                  |                 |                |
|--------------------|-------------------------------|------------------|-----------------|----------------|
| Client:            | Tetra Tech NUS, Inc.          |                  | Date Collected: |                |
| Project:           | NWIRP Bethpage 112G08005-WE13 |                  | Date Received:  |                |
| Client Sample ID:  | PB168032BS                    |                  | SDG No.:        | Q2063          |
| Lab Sample ID:     | PB168032BS                    |                  | Matrix:         | Water          |
| Analytical Method: | SW8270ESIM                    |                  | % Solid:        | 0              |
| Sample Wt/Vol:     | 1000                          | Units: mL        | Final Vol:      | 1000 uL        |
| Soil Aliquot Vol:  |                               | uL               | Test:           | SVOC-SIMGroup1 |
| Extraction Type :  |                               | Decanted : N     | Level :         | LOW            |
| Injection Volume : |                               | GPC Factor : 1.0 | GPC Cleanup :   | N PH :         |
| Prep Method :      |                               |                  |                 |                |

|                   |           |                |                |               |
|-------------------|-----------|----------------|----------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date      | Date Analyzed  | Prep Batch ID |
| BN037080.D        | 1         | 05/16/25 11:50 | 05/20/25 18:47 | PB168032      |

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

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

## Report of Analysis

|                    |                               |                  |                 |                |      |
|--------------------|-------------------------------|------------------|-----------------|----------------|------|
| Client:            | Tetra Tech NUS, Inc.          |                  | Date Collected: |                |      |
| Project:           | NWIRP Bethpage 112G08005-WE13 |                  | Date Received:  |                |      |
| Client Sample ID:  | PB168032BSD                   |                  | SDG No.:        | Q2063          |      |
| Lab Sample ID:     | PB168032BSD                   |                  | Matrix:         | Water          |      |
| Analytical Method: | SW8270ESIM                    |                  | % Solid:        | 0              |      |
| Sample Wt/Vol:     | 1000                          | Units: mL        | Final Vol:      | 1000           | uL   |
| Soil Aliquot Vol:  |                               | uL               | Test:           | SVOC-SIMGroup1 |      |
| Extraction Type :  |                               | Decanted : N     | Level :         | LOW            |      |
| Injection Volume : |                               | GPC Factor : 1.0 | GPC Cleanup :   | N              | PH : |
| Prep Method :      |                               |                  |                 |                |      |

|                   |           |                |                |               |
|-------------------|-----------|----------------|----------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date      | Date Analyzed  | Prep Batch ID |
| BN037081.D        | 1         | 05/16/25 11:50 | 05/20/25 19:23 | PB168032      |

| CAS Number                | Parameter               | Conc. | Qualifier | MDL      | LOD  | LOQ / CRQL | Units    |
|---------------------------|-------------------------|-------|-----------|----------|------|------------|----------|
| <b>TARGETS</b>            |                         |       |           |          |      |            |          |
| 123-91-1                  | 1,4-Dioxane             | 0.32  |           | 0.070    | 0.20 | 0.20       | ug/L     |
| <b>SURROGATES</b>         |                         |       |           |          |      |            |          |
| 7297-45-2                 | 2-Methylnaphthalene-d10 | 0.39  |           | 30 - 150 |      | 98%        | SPK: 0.4 |
| 93951-69-0                | Fluoranthene-d10        | 0.33  |           | 30 - 150 |      | 83%        | SPK: 0.4 |
| 4165-60-0                 | Nitrobenzene-d5         | 0.35  |           | 55 - 111 |      | 88%        | SPK: 0.4 |
| 321-60-8                  | 2-Fluorobiphenyl        | 0.33  |           | 53 - 106 |      | 83%        | SPK: 0.4 |
| 1718-51-0                 | Terphenyl-d14           | 0.42  |           | 58 - 132 |      | 104%       | SPK: 0.4 |
| <b>INTERNAL STANDARDS</b> |                         |       |           |          |      |            |          |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4  | 1840  | 7.611     |          |      |            |          |
| 1146-65-2                 | Naphthalene-d8          | 4690  | 10.394    |          |      |            |          |
| 15067-26-2                | Acenaphthene-d10        | 2610  | 14.256    |          |      |            |          |
| 1517-22-2                 | Phenanthrene-d10        | 5110  | 17.009    |          |      |            |          |
| 1719-03-5                 | Chrysene-d12            | 3650  | 21.198    |          |      |            |          |
| 1520-96-3                 | Perylene-d12            | 3040  | 23.401    |          |      |            |          |

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



# CALIBRATION SUMMARY

Method Path : Z:\svoasrv\HPCHEM1\BNA\_N\Methods\  
 Method File : 8270-SIM-BN051425.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 Last Update : Wed May 14 11:26:32 2025  
 Response Via : Initial Calibration

## Calibration Files

0.1 =BN036999.D 0.2 =BN037000.D 0.4 =BN037001.D 0.8 =BN037002.D 1.6 =BN037003.D 3.2 =BN037004.D 5.0 =BN037005.D

|           | Compound              | 0.1            | 0.2   | 0.4   | 0.8   | 1.6   | 3.2   | 5.0   | Avg   | %RSD  |
|-----------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| -----     |                       |                |       |       |       |       |       |       |       |       |
| 1) I      | 1,4-Dichlorobenzen... | -----ISTD----- |       |       |       |       |       |       |       |       |
| 2)        | 1,4-Dioxane           | 0.510          | 0.512 | 0.487 | 0.514 | 0.467 | 0.454 | 0.491 | 5.25  |       |
| 3)        | n-Nitrosodimet...     | 1.465          | 0.974 | 0.980 | 0.971 | 1.075 | 0.967 | 0.950 | 1.054 | 17.59 |
| 4) S      | 2-Fluorophenol        | 1.101          | 1.134 | 1.024 | 1.093 | 0.964 | 0.971 | 1.048 | 6.87  |       |
| 5) S      | Phenol-d6             | 1.304          | 1.385 | 1.236 | 1.392 | 1.259 | 1.292 | 1.311 | 4.91  |       |
| 6)        | bis(2-Chloroet...     | 1.441          | 1.163 | 1.153 | 1.135 | 1.240 | 1.168 | 1.148 | 1.207 | 9.02  |
|           |                       |                |       |       |       |       |       |       |       |       |
| 7) I      | Naphthalene-d8        | -----ISTD----- |       |       |       |       |       |       |       |       |
| 8) S      | Nitrobenzene-d5       | 0.546          | 0.383 | 0.398 | 0.400 | 0.452 | 0.426 | 0.442 | 0.436 | 12.60 |
| 9)        | Naphthalene           | 1.326          | 1.140 | 1.144 | 1.122 | 1.226 | 1.152 | 1.165 | 1.182 | 6.05  |
| 10)       | Hexachlorobuta...     | 0.286          | 0.248 | 0.244 | 0.235 | 0.256 | 0.236 | 0.233 | 0.248 | 7.47  |
| 11) SURR2 | Methylnaphth...       | 0.529          | 0.547 | 0.552 | 0.548 | 0.603 | 0.574 | 0.588 | 0.563 | 4.65  |
| 12)       | 2-Methylnaphth...     | 0.754          | 0.724 | 0.736 | 0.733 | 0.814 | 0.770 | 0.790 | 0.760 | 4.34  |
|           |                       |                |       |       |       |       |       |       |       |       |
| 13) I     | Acenaphthene-d10      | -----ISTD----- |       |       |       |       |       |       |       |       |
| 14) S     | 2,4,6-Tribromo...     | 0.174          | 0.168 | 0.178 | 0.160 | 0.186 | 0.175 | 0.189 | 0.176 | 5.77  |
| 15) S     | 2-Fluorobiphenyl      | 1.912          | 1.801 | 1.901 | 1.802 | 1.927 | 1.672 | 1.807 | 1.832 | 4.90  |
| 16)       | Acenaphthylene        | 1.906          | 1.838 | 1.894 | 1.849 | 2.071 | 1.997 | 2.075 | 1.947 | 5.14  |
| 17)       | Acenaphthene          | 1.255          | 1.229 | 1.243 | 1.217 | 1.350 | 1.298 | 1.315 | 1.272 | 3.89  |
| 18)       | Fluorene              | 1.602          | 1.581 | 1.635 | 1.611 | 1.779 | 1.721 | 1.752 | 1.669 | 4.80  |
|           |                       |                |       |       |       |       |       |       |       |       |
| 19) I     | Phenanthrene-d10      | -----ISTD----- |       |       |       |       |       |       |       |       |
| 20)       | 4,6-Dinitro-2-...     | 0.060          | 0.073 | 0.079 | 0.102 | 0.103 | 0.124 | 0.090 | 26.02 |       |
| 21)       | 4-Bromophenyl-...     | 0.243          | 0.246 | 0.250 | 0.247 | 0.262 | 0.261 | 0.259 | 0.253 | 3.13  |
| 22)       | Hexachlorobenzene     | 0.267          | 0.269 | 0.281 | 0.259 | 0.281 | 0.270 | 0.267 | 0.270 | 3.03  |
| 23)       | Atrazine              | 0.199          | 0.207 | 0.211 | 0.213 | 0.237 | 0.234 | 0.242 | 0.220 | 7.64  |
| 24)       | Pentachlorophenol     | 0.133          | 0.134 | 0.141 | 0.137 | 0.159 | 0.162 | 0.177 | 0.149 | 11.45 |
| 25)       | Phenanthrene          | 1.259          | 1.272 | 1.292 | 1.263 | 1.367 | 1.337 | 1.361 | 1.307 | 3.56  |
| 26)       | Anthracene            | 1.099          | 1.104 | 1.166 | 1.130 | 1.269 | 1.259 | 1.300 | 1.190 | 7.13  |
| 27) SURR  | Fluoranthene-d10      | 1.033          | 1.033 | 1.078 | 1.042 | 1.153 | 1.161 | 1.178 | 1.097 | 5.95  |
| 28)       | Fluoranthene          | 1.461          | 1.439 | 1.500 | 1.496 | 1.670 | 1.672 | 1.693 | 1.562 | 7.13  |
|           |                       |                |       |       |       |       |       |       |       |       |
| 29) I     | Chrysene-d12          | -----ISTD----- |       |       |       |       |       |       |       |       |
| 30)       | Pyrene                | 1.744          | 1.708 | 1.727 | 1.656 | 1.790 | 1.641 | 1.711 | 1.711 | 2.96  |
| 31) S     | Terphenyl-d14         | 0.897          | 0.844 | 0.871 | 0.822 | 0.891 | 0.816 | 0.848 | 0.856 | 3.73  |
| 32)       | Benzo(a)anthra...     | 1.463          | 1.432 | 1.485 | 1.438 | 1.594 | 1.521 | 1.609 | 1.506 | 4.77  |
| 33)       | Chrysene              | 1.655          | 1.559 | 1.616 | 1.532 | 1.653 | 1.560 | 1.576 | 1.593 | 3.05  |
| 34)       | Bis(2-ethylhex...     | 0.955          | 0.919 | 0.906 | 0.855 | 0.941 | 0.903 | 1.011 | 0.927 | 5.27  |
|           |                       |                |       |       |       |       |       |       |       |       |
| 35) I     | Perylene-d12          | -----ISTD----- |       |       |       |       |       |       |       |       |

Method Path : Z:\svoasrv\HPCHEM1\BNA\_N\Methods\

Method File : 8270-SIM-BN051425.M

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

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(#) = Out of Range

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

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

Instrument ID: BNA\_N Calibration Date/Time: 05/20/2025 15:09

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

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

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

| COMPOUND                | RRF   | RRF0.4 | MIN<br>RRF | %D    | MAX%D |
|-------------------------|-------|--------|------------|-------|-------|
| 2-Methylnaphthalene-d10 | 0.563 | 0.573  |            | 1.8   | 20.0  |
| Fluoranthene-d10        | 1.097 | 1.010  |            | -7.9  | 20.0  |
| 2-Fluorophenol          | 1.048 | 0.964  |            | -8.0  | 20.0  |
| Phenol-d6               | 1.311 | 1.198  |            | -8.6  | 20.0  |
| Nitrobenzene-d5         | 0.436 | 0.402  |            | -7.8  | 20.0  |
| 2-Fluorobiphenyl        | 1.832 | 1.798  |            | -1.9  | 20.0  |
| 2,4,6-Tribromophenol    | 0.176 | 0.153  |            | -13.1 | 20.0  |
| Terphenyl-d14           | 0.856 | 0.940  |            | 9.8   | 20.0  |
| 1,4-Dioxane             | 0.491 | 0.488  |            | -0.6  | 20.0  |

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: TETR06

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

Instrument ID: BNA\_N Calibration Date/Time: 05/20/2025 19:59

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

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

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

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

All other compounds must meet a minimum RRF of 0.010.



# SHIPPING DOCUMENTS

|                                                                                                                                      |                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---|---|---|---|---|---|---|---|---|
| <b>CHEMTECH</b><br>CHAIN OF CUSTODY RECORD                                                                                           |                                  | 284 Sheffield Street, Mountainside, NJ 07092<br>(908) 789-8900 Fax: (908) 78-8922<br>www.chemtech.net                                                                                                                                                                                                                                                                                         |                             | Chemtech Project Number: <span style="font-size: 1.2em;">Q2063</span><br>COC Number:                                                                                                                              |              |   |   |   |   |   |   |   |   |   |
| <b>CLIENT INFORMATION</b>                                                                                                            |                                  | <b>PROJECT INFORMATION</b>                                                                                                                                                                                                                                                                                                                                                                    |                             | <b>BILLING INFORMATION</b>                                                                                                                                                                                        |              |   |   |   |   |   |   |   |   |   |
| COMPANY: Tetra Tech                                                                                                                  |                                  | PROJECT NAME: NWIRP Bethpage                                                                                                                                                                                                                                                                                                                                                                  |                             | BILL TO: PO#                                                                                                                                                                                                      |              |   |   |   |   |   |   |   |   |   |
| ADDRESS: 4433 Corporation Ln, Suite 300                                                                                              |                                  | PROJECT #: 112G08005-WE13 LOCATION: RW5B                                                                                                                                                                                                                                                                                                                                                      |                             | ADDRESS:                                                                                                                                                                                                          |              |   |   |   |   |   |   |   |   |   |
| CITY: Virginia Beach STATE: VA ZIP: 23462                                                                                            |                                  | PROJECT MANAGER: Ernie Wu                                                                                                                                                                                                                                                                                                                                                                     |                             | CITY: STATE: ZIP:                                                                                                                                                                                                 |              |   |   |   |   |   |   |   |   |   |
| ATTENTION: Ernie Wu                                                                                                                  |                                  | E-MAIL: ernie.wu@tetratech.com                                                                                                                                                                                                                                                                                                                                                                |                             | ATTENTION: PHONE:                                                                                                                                                                                                 |              |   |   |   |   |   |   |   |   |   |
| PHONE: 757-466-4901 FAX: 757-461-4148                                                                                                |                                  | PHONE: 757-466-4901 FAX: 757-461-4148                                                                                                                                                                                                                                                                                                                                                         |                             |                                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |
| <b>DATA TURNAROUND INFORMATION</b>                                                                                                   |                                  | <b>DATA DELIVERABLE INFORMATION</b>                                                                                                                                                                                                                                                                                                                                                           |                             | <b>ANALYSIS</b>                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |
| FAX: 10 DAYS*<br>HARD COPY: 10 DAYS*<br>EDD 10 DAYS*<br>* TO BE APPROVED BY CHEMTECH<br>STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS |                                  | <input type="checkbox"/> RESULTS ONLY <input type="checkbox"/> USEPA CLP<br><input type="checkbox"/> RESULTS + QC <input type="checkbox"/> New York State ASP "B"<br><input type="checkbox"/> New Jersey REDUCED <input type="checkbox"/> New York State ASP "A"<br><input type="checkbox"/> New Jersey CLP <input type="checkbox"/> Other _____<br><input type="checkbox"/> EDD Format _____ |                             | 1,4-Dioxane SW846 8270<br>SIM<br><table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td> </tr> </table> |              | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1                                                                                                                                    | 2                                | 3                                                                                                                                                                                                                                                                                                                                                                                             | 4                           | 5                                                                                                                                                                                                                 | 6            | 7 | 8 | 9 |   |   |   |   |   |   |
|                                                                                                                                      |                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                             | <b>PRESERVATIVES</b>                                                                                                                                                                                              |              |   |   |   |   |   |   |   |   |   |
|                                                                                                                                      |                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                             | <b>COMMENTS</b>                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |
| CHEMTECH<br>SAMPLE<br>ID                                                                                                             | PROJECT<br>SAMPLE IDENTIFICATION | SAMPLE<br>MATRIX                                                                                                                                                                                                                                                                                                                                                                              | SAMPLE<br>TYPE<br>COMP GRAB | SAMPLE<br>COLLECTION<br>DATE TIME                                                                                                                                                                                 | # of Bottles |   |   |   |   |   |   |   |   |   |
|                                                                                                                                      |                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |
| 1.                                                                                                                                   | RW5-SP100-20250515               | GW                                                                                                                                                                                                                                                                                                                                                                                            |                             | 5/15/25 10:45                                                                                                                                                                                                     | 1            |   |   |   |   |   |   |   |   |   |
| 2.                                                                                                                                   | RW5-SP201-20250515               | GW                                                                                                                                                                                                                                                                                                                                                                                            |                             | 5/15/25 10:47                                                                                                                                                                                                     | 1            |   |   |   |   |   |   |   |   |   |
| 3.                                                                                                                                   | RW5-SP303-20250515               | GW                                                                                                                                                                                                                                                                                                                                                                                            |                             | 5/15/25 10:53                                                                                                                                                                                                     | 1            |   |   |   |   |   |   |   |   |   |
| 4.                                                                                                                                   |                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |
| 5.                                                                                                                                   |                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |
| 6.                                                                                                                                   |                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |
| 7.                                                                                                                                   |                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |
| 8.                                                                                                                                   |                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |
| 9.                                                                                                                                   |                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |
| 10.                                                                                                                                  |                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                                                                                                                                                                                   |              |   |   |   |   |   |   |   |   |   |

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

|                         |              |                       |                                                                                                                                                                                                                                                                                            |
|-------------------------|--------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RELINQUISHED BY SAMPLER | DATE/TIME    | RECEIVED BY           | Conditions of bottles or coolers at receipt: <input type="checkbox"/> Compliant <input type="checkbox"/> Non Compliant <input type="checkbox"/> Cooler Temp <span style="font-size: 1.2em;">3.1°C</span><br>MeOH extraction requires an additional 4oz. Jar for percent solid<br>Comments: |
| 1. <i>[Signature]</i>   | 5/15/25 1200 | 1. <i>[Signature]</i> | Ice in Cooler?: <span style="font-size: 1.2em;">yes</span><br><br><span style="font-size: 1.2em;">If Gun #1</span>                                                                                                                                                                         |
| RELINQUISHED BY         | DATE/TIME    | RECEIVED BY           |                                                                                                                                                                                                                                                                                            |
| 2. <i>[Signature]</i>   | 5/16/25 1005 | 2. <i>[Signature]</i> |                                                                                                                                                                                                                                                                                            |
| RELINQUISHED BY         | DATE/TIME    | RECEIVED FOR LAB BY   | SHIPPED VIA: CLIENT: <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Overnight<br>CHEMTECH: <input type="checkbox"/> Picked Up <input type="checkbox"/> Overnight                                                                                                         |
| 3.                      |              | 3.                    | Page _____ of _____<br><b>Shipment Complete</b><br><input type="checkbox"/> YES <input type="checkbox"/> NO                                                                                                                                                                                |

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT
YELLOW - CHEMTECH COPY
PINK - SAMPLER COPY

### 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       |