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TASK 210 – SUBSURFACE SITE INVESTIGATION REPORT

CONNECTICUT DEPARTMENT OF TRANSPORTATION
MODERN ROUNDABOUT AT ROUTE 190 AND ROUTE 319
STAFFORD, CONNECTICUT

Prepared for:

Connecticut Department of Transportation
Division of Environmental Compliance
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BL Companies Project Number 18EC0065
ConnDOT Project No. 0134-0147
Assignment No. 318-5635

October 2018

This report was prepared by the individuals listed below. Any questions or comments regarding the information provided herein should be directed to these individuals.

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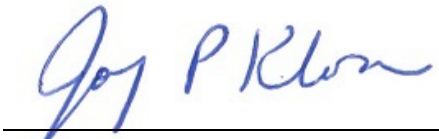

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1.0 INTRODUCTION

BL Companies was retained by the State of Connecticut Department of Transportation (ConnDOT) to conduct a Task 210 Subsurface Site Investigation (SSI) in support of ConnDOT Project No. 0134-0147, Modern Roundabout at Route 190 and Route 319 in Stafford, Connecticut. This report provides a brief description and history of the project area, a discussion of the local environment and receptors, the investigation rationale, a summary of the data obtained during the investigation, an interpretation of the results with respect to the appropriate regulatory criteria, and recommendations.

1.1 Background and Purpose

The project is located at the intersection of Route 190 and Route 319 in Stafford, Connecticut. This project consists of converting the intersection of Route 319 and Route 190 to a modern roundabout. The project includes the construction of raised splitter islands and a raised landscaped center island, the lowering of Route 319 to improve sightlines, and replacing existing bridge number 2812 and 42-inch CMPs with two structures with an open channel in between to convey West Stafford Brook through the entire project area. The site's location and pertinent features are depicted on the enclosed Site Location Map (**Figure 1**) and Site Investigation Plans (**ENV-01** through **ENV-03**).

The purpose of this Task 210 SSI is to attain soil and groundwater data to evaluate whether the proposed construction activities require management of contaminated soil and/or groundwater.

1.2 Scope of Work

BL Companies completed a Task 210 SSI work plan, dated August 16, 2018, which was approved by ConnDOT. The scope of work included the following tasks:

- Pre-drilling activities (1) obtain a Encroachment Permit from the Town of Stafford, (2) mark the location of each proposed drilling location with white paint, (2) contact Call-Before-You-Dig to request mark outs of subsurface utilities and review existing utility plans, and (3) meet on-site to discuss proposed drilling locations with representatives of ConnDOT, and other utility companies/agencies, if necessary;
- Completion of eight soil borings SB-01 through SB-08 to depths ranging from 10 to 15 feet below grade (ftbg) using a Geoprobe direct push rig;
- Installation of two temporary groundwater monitoring wells at SB-02 and SB-07;
- Recording lithology and field screening soil samples with a photoionization detector (PID);
- Collection and laboratory analysis of two to three soil samples per boring for one or more of the following:
    - Volatile Organic Compounds (VOCs) by EPA Method 8260;
    - Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270;
    - Extractable Total Petroleum Hydrocarbons (ETPH) by CT ETPH Method;

  - Total RCRA 8 Metals by EPA Methods 6010/ 7471;
  - Leachable RCRA 8 Metals using the Synthetic Precipitation Leaching Procedure (SPLP);
  - Polychlorinated Biphenyls (PCBs) by EPA Method 8082;
  - Pesticides by EPA Method 8081;
  - Ignitability; Reactivity; and pH.

- Collection and laboratory analysis of groundwater samples from two temporary wells for the following:
  - VOCs by EPA Method 8260;
  - SVOCs by EPA Method 8270;
  - ETPH by CT ETPH Method;
  - PCBs by EPA Method 8082;
  - Pesticides by EPA Method 8081; and
  - Total and Dissolved Lead, Copper, and Zinc by EPA Method 6010/7471.

2.0 LOCAL ENVIRONMENT AND RECEPTORS

2.1 Surficial Geology

According to the "Surficial Materials Map of Connecticut", dated 1992, surficial materials at the Site consist of sand and gravel. Based on observations during boring installation, surficial materials mostly consist of brown fine to coarse sand, with fine to coarse gravel. Boring logs are included as **Appendix C**.

2.2 Bedrock Geology

According to the "Bedrock Geological Map of Connecticut", dated 1985, the project area is underlain by the Glastonbury Gneiss, which is described as gray, medium to course-grained, massive to well-foliated granitoid gneiss composed of oligoclase, quartz, microcline, and biotite.

2.3 Groundwater

Based on a review of the Water Quality Classifications Map for Stafford, Connecticut, dated October 2017, the project area has been designated by Department of Energy and Environmental Protection (DEEP) as "GA" quality. The GA classification indicates that the Site is located within the area of influence of private and/or public water supply wells and is presumed suitable for direct human consumption without treatment. During this Task 210 SSI, groundwater was encountered at depths ranging from 3 to 5 ftbg.

Based on the presence of the West Stafford Brook, the general direction of groundwater flow is inferred to be west/northwest.

2.4 Surface Water

The West Stafford Brook, is located on the western portion of the project area. The West Stafford Brook River is classified as "A" surface water body, according to the above-referenced DEEP map. Class A surface waters are designated for use as habitat for fish and aquatic life and wildlife, recreation, navigation, public water supply.

3.0 FIELD INVESTIGATION AND SAMPLING METHODS

This Task 210 SSI included the advancement of eight soil borings, installation of two temporary wells and collection and laboratory analysis of eight soil samples and two groundwater samples. BL Companies subcontracted Cummins Envirotech, Inc., (CEI) of Old Lyme, Connecticut to advance the borings and to install the temporary wells. The soil boring locations are depicted on **ENV-01** through **ENV-03**.

Soil samples were analyzed for regulated constituents of concern associated with the roadway, and nearby property uses. **Table 1** in **Appendix B** provides a summary of the sampling rationale and the laboratory analyses requested for each soil sample. The following sections summarize the field investigation and sampling methodologies used during this investigation.

3.1 Soil Boring Installation and Sampling

On September 5, 2018, eight soil borings, identified as SB-01 through SB-08, were advanced to a depth of 10 to 15 ftbg using a track-mounted Geoprobe direct-push drill rig. Soil samples were obtained continuously during advancement of the borings using a 2-inch diameter, 5-foot long, sampling device equipped with disposable acetate liners.

A representative portion of each 5-foot soil core and shallow soil samples were screened with a PID to detect estimated quantities of total VOCs in vapor emitted from the soil. The PID was equipped with a 10.6 eV bulb and was calibrated to isobutylene standard gas (100 parts per million (ppm)). The results of the PID screening ranged from 0.0 to 0.3 ppm and are provided on the boring logs in **Appendix C**. No odors or staining were observed in any borings.

Soil samples were selected for laboratory analysis based upon observations (physical evidence of contamination and/or lithology change), the results of the field screening, and anticipated excavation depths. The samples were submitted under proper chain of custody to SGS Accutest of New England, a State of Connecticut Department of Public Health certified environmental testing laboratory.

3.2 Groundwater Sampling

Following soil sampling, a 1-inch diameter PVC screen and riser pipe were inserted into borings B-2 and B-7, as temporary groundwater wells. Prior to sampling, BL Companies developed the wells using a peristaltic pump and dedicated tubing to improve the hydraulic connection of the wells with the surrounding aquifer and to reduce turbidity. Samples were collected directly into pre-preserved sample containers provided by the laboratory. Dissolved metals were collected using an inline 0.45-micron filter.

4.0 REGULATORY CRITERIA

The soil analytical results were compared to the numeric criteria listed in the Connecticut DEEP Remediation Standard Regulations (RSRs), sections 22a-133k-1 through 22a-133k-3 of the Regulations of Connecticut State Agencies, dated June 2013, and compared to the published 2015 numeric criteria for additional polluting substances not promulgated in the June 2013 RSRs. The RSRs were developed by the DEEP to define the remediation performance standards for soil and groundwater to be protective of human health and the environment.

The RSRs apply specifically to sites at which remedial actions are required by the DEEP under Chapters 445 or 446k of the Connecticut General Statutes (CGS) such as under an administrative order, a transfer of an establishment under CGS Section 22a-134a, and sites that are enrolled in the Voluntary Remediation Program under CGS Sections 22a-133x or 22a-133y.

The Site is not regulated under any of the above State statutes; however, BL Companies used the numeric criteria stated above as guidelines to evaluate concentrations of regulated compounds detected in soil. DEEP defines polluted soil as containing any substance at a concentration above the analytical detection limit. Contaminated soil is defined as any substance whose concentration exceeds the numeric criteria of the RSRs. Both classifications require special handling, re-use, and disposal requirements.

Based on discussions between ConnDOT and DEEP, the numeric criteria in the RSRs do not provide the best method for construction projects to determine whether treatment of groundwater is necessary prior to discharge. In accordance with DEEP guidance, groundwater analytical results were compared to the effluent limits established under both DEEP General Permits for the Discharge of Groundwater Remediation Wastewater (to Sanitary or Surface Water) for proper groundwater management.

The following sections provide a summary of the soil criteria utilized during this Task 210 SSI.

4.1 Soil Criteria

Direct Exposure Criteria (DEC)

The DEC are designed to protect human health from risks associated with exposure to pollutants in contaminated soil within 15 feet of the ground surface. The RSRs provide two sets of DEC: residential land use (RES DEC) and industrial/commercial land use (I/C DEC). The CTDEEP RSRs define "residential activity" under CGS Section 22a-133k-1(a) to include any activity related to a residence or dwelling, or to a school, hospital, day care center, playground, or outdoor recreation area. Remediation to the RES DEC is required unless an ELUR is recorded that restricts residential use. For this project, BL Companies compared the soil analytical results to both the RES DEC and I/C DEC.

Pollutant Mobility Criteria (PMC)

The PMC are designed to protect groundwater quality by reducing or eliminating the potential for migration of pollutants to groundwater from contaminated soil. The RSRs provide two sets of PMC based on the groundwater classification of the Site, as designated by DEEP. The project is in a "GA" designated area. Therefore, soil analytical results were compared to the GA PMC, which apply to soil located from the ground surface to the depth of the seasonal low water table.

4.2 Groundwater Criteria

Maximum Concentration Limits (MCLs) Established in DEEP General Permits for Discharge of Groundwater Remediation Wastewater

MCLs established in DEEP General Permit for Discharge of Groundwater Remediation Wastewater (Appendix A and B) apply to impacted groundwater that is discharged during construction dewatering. To evaluate whether construction dewatering would require treatment prior to discharge, BL Companies compared the groundwater analytical results to the Discharge to Surface Water and Sanitary Sewer/POTW MCLs.

5.0 SUMMARY AND EVALUATION OF ANALYTICAL DATA

5.1 Soil Sample Analytical Results

Soil analytical results are summarized in **Table 2** in **Appendix B** along with the regulatory criteria. The soil analytical laboratory report is included in **Appendix D**.

VOCs

All soil samples were analyzed for VOCs by EPA Method 8260. Acetone, a common laboratory contaminant, was detected in soil samples SB-01 (1-3'), SB-02 (1-3'), SB-04 (6-8'), SB-05 (1-3'), SB-05 (7-9'), SB-06 (1-3'), SB-06 (7-9'), SB-07 (2-4'), SB-07 (7-9'), and SB-08 (8-10') at concentrations below the RSR criteria. VOCs were not detected in any other samples.

SVOCs

All soil samples were analyzed for SVOCs by EPA Method 8270. SVOCs were detected in soil samples SB-02 (1-3'), SB-06 (1-3'), and SB-07 (2-4') at concentrations above the RES DEC, I/C DEC, and/or GA PMC. SVOCs were detected in soil samples SB-01 (1-3'), SB-04 (1-3'), SB-05 (1-3'), SB-08 (1-3'), and SB-08 (8-10') at concentrations below the RSR criteria. SVOCs were not detected in any other samples.

ETPH

All soil samples were analyzed for ETPH by CT ETPH Method. ETPH was detected in soil samples SB-02 (1-3'), SB-05 (1-3'), and SB-07 (2-4') at concentrations above the RES DEC and GA PMC. ETPH was detected in soil samples SB-01 (1-3'), SB-02 (6-8'), SB-04 (1-3'), SB-04 (6-8'), SB-06 (1-3'), SB-07 (7-9'), and SB-08 (1-3') at concentrations below the RSR criteria. ETPH was not detected in any other samples.

Metals

All soil samples were analyzed for total RCRA 8 metals for comparison to the DEC.

- Arsenic was detected in soil samples SB-01 (1-3'), SB-02 (1-3'), SB-05 (1-3'), SB-07 (2-4') SB-07 (7-9'), and SB-08 (1-3') at concentrations ranging from 2.3 to 10 milligrams per kilogram (mg/kg), which are less than or equal to the RES DEC and I/C DEC. Arsenic was not detected in any other samples.
- Barium was detected in soil samples SB-01 (1-3'), SB-02 (6-8'), SB-03 (8-10'), SB-04 (1-3'), SB-04 (6-8'), SB-05 (1-3'), SB-06 (1-3'), SB-07 (7-9'), and SB-08 (8-10') at concentrations ranging from 21.7 to 99.5 mg/kg, which are below the RES DEC and I/C DEC.
- Cadmium was detected in soil sample SB-04 (1-3') at a concentration of 0.61 mg/kg, which is below the RES DEC and I/C DEC
- Chromium was detected in all soil samples at concentrations ranging from 1.4 to 13.3 mg/kg, which are below the RES DEC and I/C DEC.
- Lead was detected in soil samples SB-01 (1-3'), SB-02 (1-3'), SB-02 (6-8'), SB-04 (1-3'), SB-04 (6-8'), SB-05 (1-3'), SB-06 (1-3'), SB-07 (2-4'), SB-07 (7-9'), and

SB-08 (1-3') at concentrations ranging from 6.3 to 263 mg/kg, which are below the RES DEC and I/C DEC.
- Mercury was detected in soil samples SB-05 (1-3') and SB-08 (1-3') at concentrations of 0.041 and 0.043 mg/kg, respectively, which are below the RES DEC and I/C DEC.
- Silver and selenium were not detected in any soil samples.

The soil samples were additionally analyzed for leachable RCRA 8 metals by SPLP for comparison to the GA PMC.

- SPLP arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were not detected in any soil samples.

PCBs

All soil samples were analyzed for PCBs by EPA Method 8082. PCBs were not detected in any soil samples.

Pesticides

All soil samples were analyzed for pesticides by EPA Method 8081. 4,4-DDT was detected at a concentration of 0.0087 mg/kg in soil sample SB-04 (1-3'), which exceeds the GA PMC. Pesticides were not detected in any other soil samples.

Reactivity, Ignitability, and Corrosivity

Select soil samples were analyzed for reactive cyanide and sulfide, ignitability, and pH. Reactive sulfide and cyanide were not detected in any soil samples. Based on the laboratory results, the soil does not exhibit hazardous characteristics of reactivity, ignitability, and corrosivity.

5.2 Groundwater Analytical Results

Groundwater analytical results in comparison to the General Discharge Permit MCLs are summarized **Table 3** in **Appendix B** along with the regulatory criteria. The groundwater analytical laboratory report is included in **Appendix D**.

VOCs

Both groundwater samples were analyzed for VOCs by EPA Method 8260. VOCs were not detected in any groundwater sample.

SVOCs

Both groundwater samples were analyzed for SVOCs by EPA Method 8270. SVOCs were detected in groundwater samples TW-1 and TW-2 at concentrations below the General Permit MCLs.

ETPH

Both groundwater samples were analyzed for ETPH by CT ETPH Method. ETPH was detected in groundwater sample TW-1 at a concentration of 348 µg/L, which is below the General Permit MCLs. ETPH was not detected in groundwater sample TW-2.

Metals

All groundwater samples were analyzed for total and dissolved copper, lead, and zinc.

- Total copper was detected in both groundwater samples at concentrations exceeding General Permit MCL for surface water. Dissolved copper was detected in groundwater sample TW-1 below the General Permit MCL for surface water. Dissolved copper was not detected in TW-2.
- Total lead was detected in both groundwater samples at concentrations exceeding the SWPC and General Permit MCLs. Dissolved lead was detected in groundwater sample TW-1 below the General Permit MCLs. Dissolved lead was not detected in TW-2.
- Total zinc was detected in both groundwater samples at concentrations exceeding General Permit MCL for surface water. Dissolved zinc was detected in groundwater sample TW-1 below the General Permit MCLs. Dissolved zinc was not detected in TW-2.

PCBs

Both groundwater samples were analyzed for PCBs by EPA Method 8082. PCBs were not detected in either groundwater sample.

Pesticides

Both groundwater samples were analyzed for pesticides by EPA Method 8081. Pesticides were not detected in either groundwater sample.

5.3 Quality Assurance (QA)/Quality Control (QC) Results

All samples were analyzed using the DEEP Reasonable Confidence Protocol (RCP), where applicable, and meet the RCP requirements. BL Companies also reviewed the laboratory RCP Certification Report to evaluate the reliability of the analytical data. The case narratives do not indicate any non-conformances that would affect the usability of the data.

Soil

A trip blank sample was prepared at the laboratory and accompanied the sample containers from the laboratory, to the Site, and back to the laboratory. The purpose of a trip blank sample was to evaluate the potential for cross-contamination from the surrounding environment during transport. The trip blank sample was analyzed for VOCs. Acetone was detected in the trip blank at a concentration below RSR criteria. Acetone is a common laboratory contaminant, indicating that there was likely no cross-contamination of the samples during transportation.

A duplicate soil sample was obtained from one randomly selected soil sample location to evaluate the accuracy of the laboratory analytical data, measured as Relative Percent Difference (RPD) as defined by the CTDEEP Laboratory Quality Assurance and Quality Control Guidance Document, dated May 2009, revised December 2010. The duplicate was obtained from sample SB-02 (1-3') and analyzed for VOCs, SVOCs, ETPH, PCBs, pesticides, total and SPLP RCRA 8 metals. Analytical results were within the acceptable RPD of 50 for soil samples except for the following:

- Select PAHs and ETPH concentrations resulted in RPDs of greater than 50, which indicates the soil samples had a high degree of heterogeneity. This is typical for fill material; therefore, usability of the analytical data is not affected.

Groundwater

A field blank sample was collected by purging de-ionized water directly into the laboratory provided sample containers during field sampling operations on-Site. The purpose of a field blank sample is to evaluate the potential for on-Site field contamination. The field blank sample was analyzed for VOCs, SVOCs, ETPH, PCBs, and total and dissolved copper, zinc, and lead. Acetone, a common laboratory contaminant, was detected in the equipment blank at a concentration below the General Permit MCL for surface water.

Total barium and chromium were detected at low concentrations. No other constituents were detected in the field blank sample.

A trip blank sample was prepared at the laboratory and accompanied the sample containers from the laboratory, to the Site, and back to the laboratory. The purpose of a trip blank sample is to evaluate the potential for cross-contamination during transport. The trip blank sample was analyzed for VOCs. VOCs were not detected in the sample, indicating that there was likely no cross-contamination of the samples during transport.

A duplicate sample was collected from TW-1 to evaluate the accuracy of the laboratory analytical data, measured as RPD. The duplicate sample was analyzed for VOCs, SVOCs, ETPH, PCBs, Pesticides, and total and dissolved copper, zinc, and lead. Analytical results were within the acceptable RPD of 30 for aqueous samples except for the following:

- ETPH, total and dissolved zinc, dissolved copper and dissolved lead resulted in RPDs above 30; however, these constituents were all detected at low concentrations. Therefore, the usability of the analytical data is not affected.

6.0 POTENTIAL SOURCES OF CONTAMINATION, RECEPTORS, AND IDENTIFIED PRELIMINARY AREAS OF ENVIRONMENTAL CONCERN

The following provides a summary of the potential sources of soil contamination identified during completion of this Task 210 SSI, an evaluation of potential pathways for migration, and the identification of preliminary Areas of Environmental Concern (AOECs) within the project area.

Based on the Task 210 SSI results, the following AOECs were identified:

AOEC 1 (Site-Wide) – Contaminated Soil in the Vicinity of Borings SB-02, SB-04, SB-05, SB-06, and SB-07

SVOCs, ETPH, and pesticides were detected at concentrations exceeding RSR criteria in soil samples collected at depths ranging from 1 to 4 ftbg. Therefore, any soil removed from AOEC 1 should be reused onsite within AOEC 1 or handled as controlled material. The source of the elevated levels is likely associated with fill material and typical roadway operations.

Any soil removed from AOEC 1 should be handled as controlled material. Potential receptors of the impacted soil include workers involved in the construction activities.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical data collected by BL Companies, a preliminary site wide AOEC was identified within the project area, as summarized below:

- Soil within AOEC 1 (Site-Wide) contains SVOCs, ETPH, and pesticides, at concentrations above RSR criteria and therefore should be handled or managed as contaminated material.

Based on the results of this Task 210 SSI, BL Companies recommends that a Task 310 – Plans, Specifications, and Estimates be assigned to prepare plans and specifications for the proper management and/or disposal of contaminated materials (soil) that may be reused, removed, handled, transported, or disposed during construction activities and for the establishment of appropriate worker health and safety protocols.

8.0 LIMITATIONS

The conclusions stated above are based solely on the information described in this report. The data and observations generated during this investigation reflect the conditions found on the project site on the dates and at the locations specified. Where visual observations are included in the report, they represent conditions at the time of investigation, and may not be indicative of past or future conditions. The data cannot be extrapolated to locations on the site that were not tested, or to compounds for which tests were not conducted.

Latent conditions and other information may become evident in the future based on currently unavailable evidence. BL Companies assumes no responsibility for such conditions or for the inspection, engineering, or repair that might be required to discover or correct such factors. Should such evidence arise, it should be forwarded to BL Companies so that additional conclusions and recommendations may be evaluated as necessary.

This report has been completed solely for the benefit and individual use of the client. No part thereof, nor any copy of the same, shall be used for any purpose by anyone other than the client. No disclosure or reliance of this report may be made without the prior written consent of BL Companies.

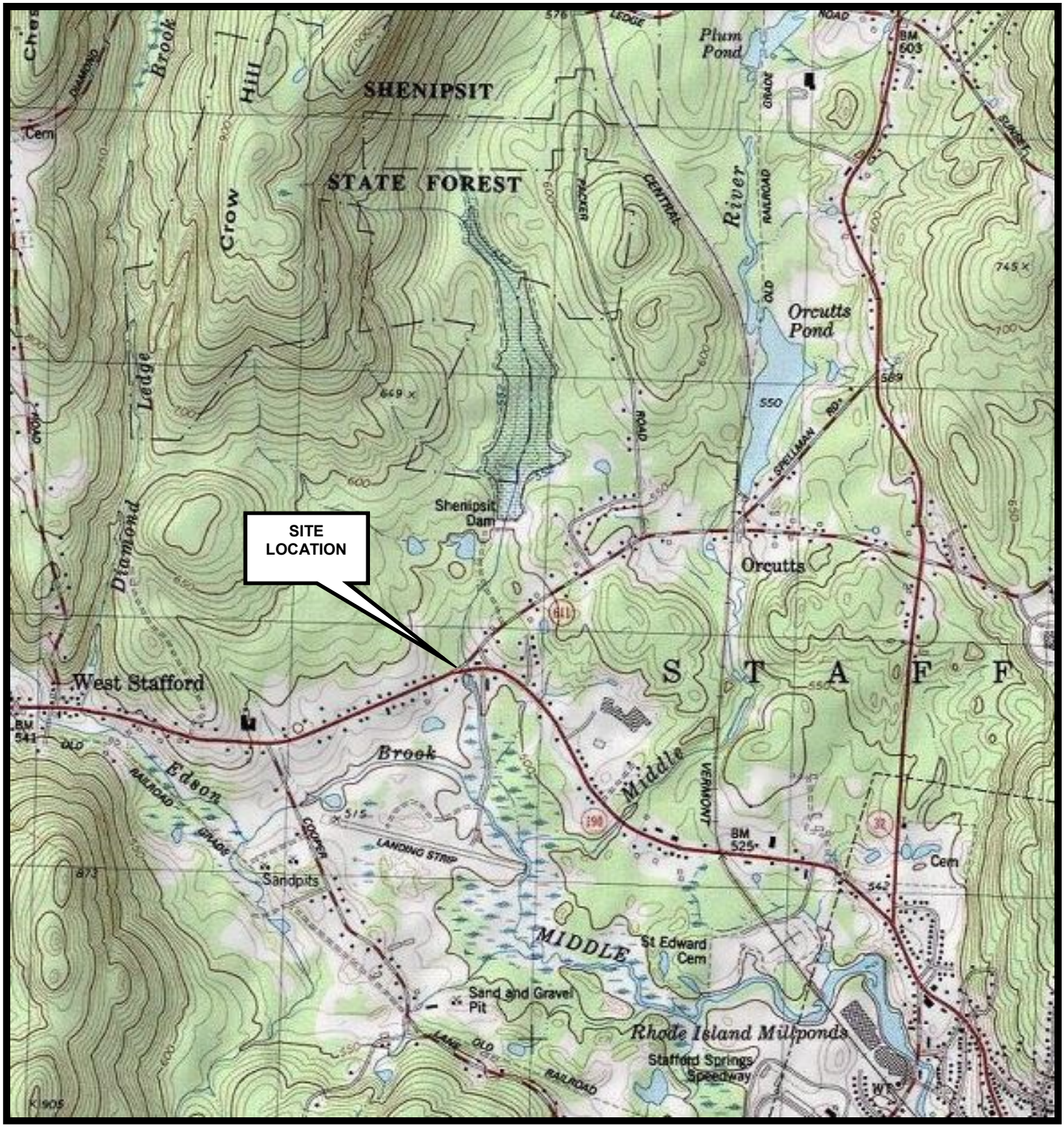
9.0 REFERENCES

1. State of Connecticut Department of Energy and Environmental Protection (CTDEEP), Remediation Standard Regulations, Sections 22a-133k-1 through –3 of the Regulations of Connecticut State Agencies, June 2013.
2. CTDEEP, "Water Quality Classifications Map of Stafford", November 2016.
3. CTDEEP, "Recommended Numeric Criteria for Common Additional Polluting Substances and Certain Alternative Criteria", December 10, 2015.
4. State of Connecticut Department of Transportation, Division of Environmental Compliance, "On-Call Contaminated Soil/Groundwater Scopes" manual, dated 2010.
5. Rogers, John, USGS, "Bedrock Geological Map of Connecticut", dated 1985.
6. Stone, J., USGS, "Surficial Materials Map of Connecticut", dated 1992.

APPENDIX A

FIGURES

Figure 1 – Site Location Map
ENV-01 through ENV-03 – Site Investigation Plans



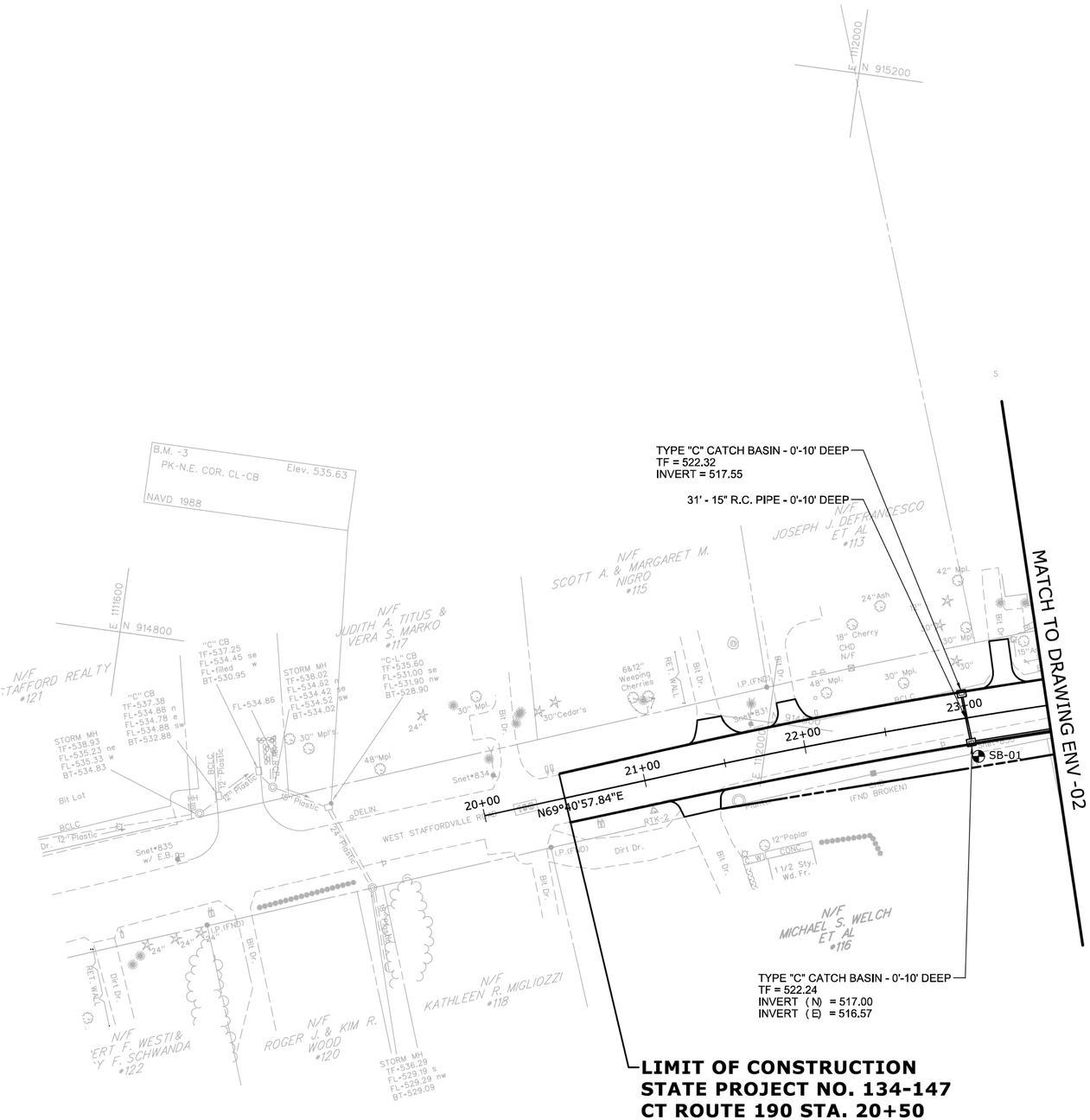
Base map is a reproduction of the U.S.G.S. 7.5 Minute
Topographic Quadrangle of Stafford Springs NW, Connecticut

BL Companies

SITE LOCATION MAP

Construction of Modern Roundabout
Intersection of Route 190 and Route 319
Stafford, Connecticut

Project No.
18EC0065



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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

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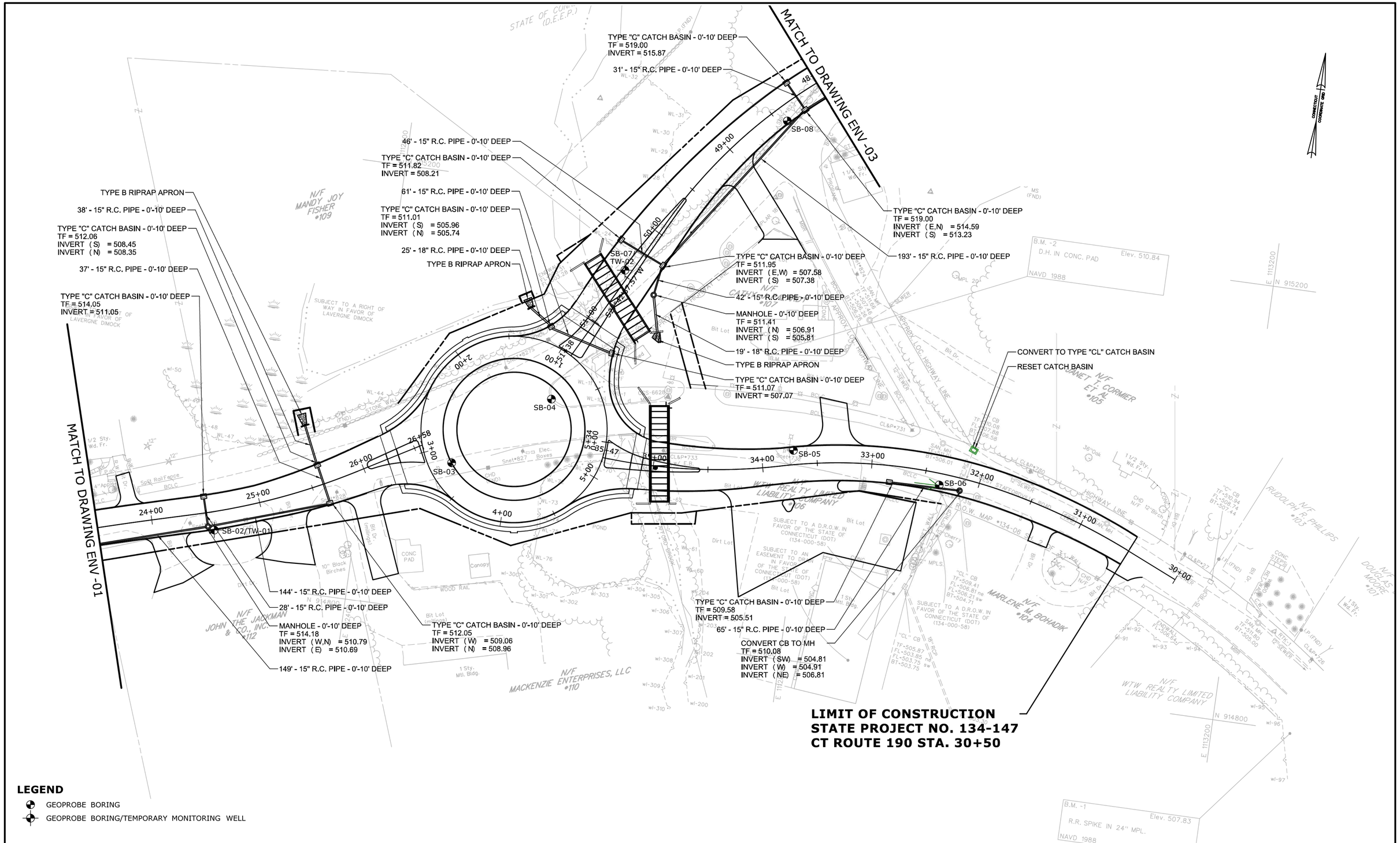
BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

PROJECT TITLE:
MODERN ROUNDABOUT AT ROUTE 190 AND ROUTE 319

TOWN: **STAFFORD**

DRAWING TITLE: **SITE INVESTIGATION PLAN**

PROJECT NO. **134-147**
DRAWING NO. **ENV-01**
SHEET NO.



LIMIT OF CONSTRUCTION
STATE PROJECT NO. 134-147
CT ROUTE 190 STA. 30+50

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ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

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MODERN ROUNDABOUT AT ROUTE 190 AND ROUTE 319

TOWN: **STAFFORD**

DRAWING TITLE:
SITE INVESTIGATION PLAN

PROJECT NO. **134-147**
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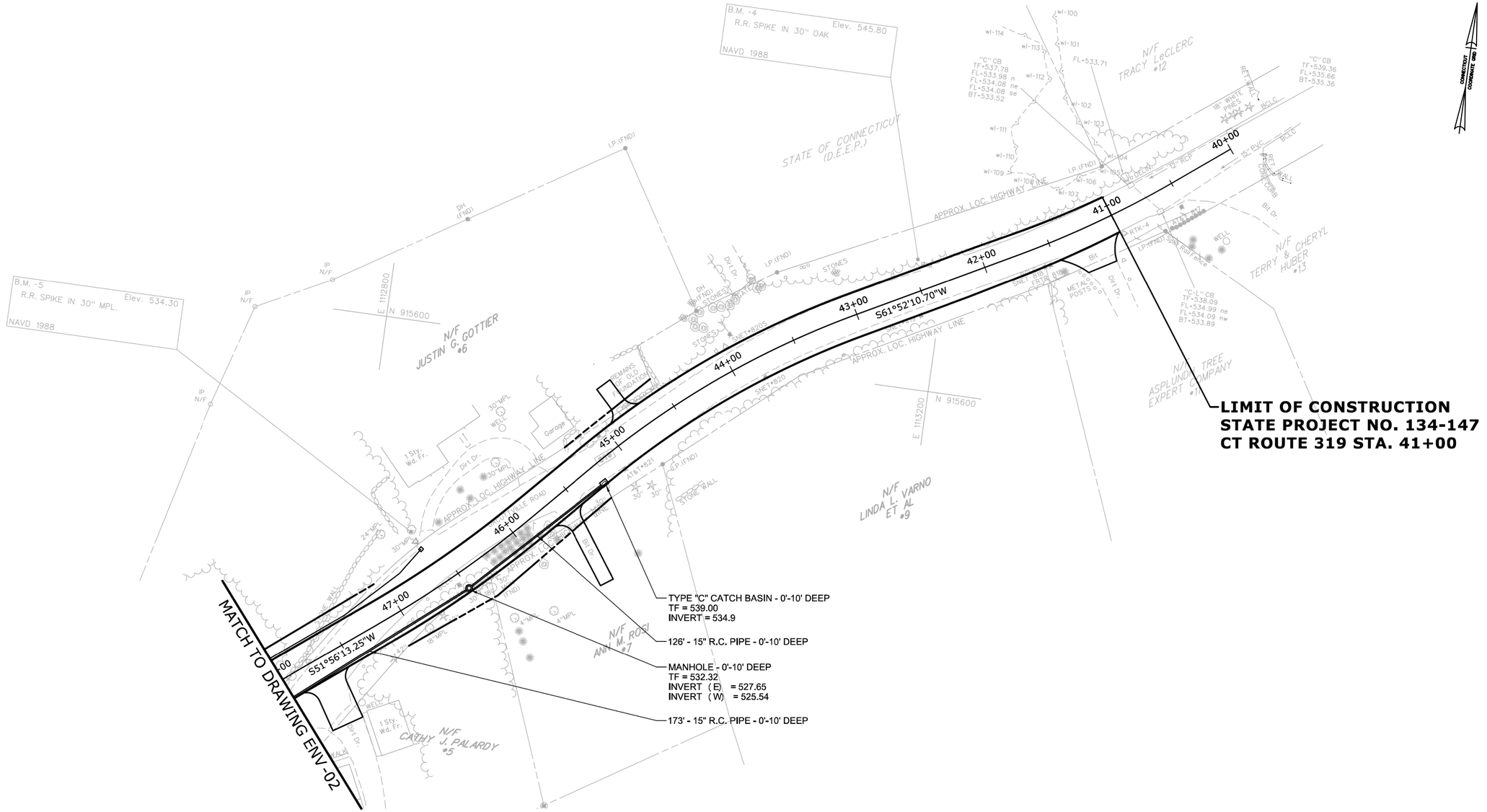

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BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

PROJECT TITLE:
MODERN ROUNDABOUT
AT ROUTE 190 AND ROUTE 319

TOWN: STAFFORD

DRAWING TITLE:
SITE INVESTIGATION PLAN

PROJECT NO. 134-147
DRAWING NO. ENV-03
SHEET NO.

APPENDIX B

TABLES

Table 1
Sample Location Rationale and Selected Analyses
Modern Roundabout at Route 190 and Route 319
Stafford, Connecticut
ConnDOT Project No. 0134-5635

Sample Identification	Matrix	Sample Interval	Location Rationale	VOCs (8260)	SVOCs (8270)	ETPH	PCBs (8082)	Pesticides (8081)	Total Metals	Dissolved Metals	SPLP Metals	Ignitability, Reactivity, pH
SB-01	Soil	1-3'	South of Route 190 in vicinity of proposed drainage structures.	X	X	X	X	X	X		X	X
SB-02	Soil	1-3'	South of Route 190 in vicinity of proposed drainage structures.	X	X	X	X	X	X		X	X
		6-8'		X	X	X	X	X	X		X	
SB-03	Soil	2-4'	South of Route 190 within proposed roundabout.	X	X	X	X	X	X		X	X
		8-10'		X	X	X	X	X	X		X	
SB-04	Soil	1-3'	Intersection of Route 190 and Route 319 within proposed roundabout.	X	X	X	X	X	X		X	X
		6-8'		X	X	X	X	X	X		X	
SB-05	Soil	1-3'	North of Route 190 in vicinity of propsoed roundabout.	X	X	X	X	X	X		X	X
		7-9'		X	X	X	X	X	X		X	
SB-06	Soil	1-3'	North of Route 190 in vicinity of proposed drainage structures.	X	X	X	X	X	X		X	X
		7-9'		X	X	X	X	X	X		X	
SB-07	Soil	2-4'	North of Route 319 in vicinity of proposed drainage structures.	X	X	X	X	X	X		X	X
		7-9'		X	X	X	X	X	X		X	
SB-08	Soil	1-3'	North of Route 319 in vicinity of proposed drainage structures.	X	X	X	X	X	X		X	X
		8-10'		X	X	X	X	X	X		X	
TW-1	Groundwater	Grab	South of Route 190 in vicinity of proposed drainaged structures.	X	X	X	X	X	X	X		
TW-2	Groundwater	Grab	North of Route 319 in vicinity of proposed drainage structures.	X	X	X	X	X	X	X		

Table 2
Soil Analytical Results
Modern Roundabout at Route 190 and Route 319
Stafford, Connecticut
ConnDOT Project No. 0134-5635

Parameters	CTDEEP RSR Numeric Criteria			Concentration of Compound in Sample															
	RES DEC	I/C DEC	GA PMC	SB-01 (1-3') 9/5/2018	SB-02 (1-3') 9/5/2018	SB-02 (1-3) Duplicate 9/5/2018	SB-02 (6-8') 9/5/2018	SB-03 (2-4') 9/5/2018	SB-03 (8-10') 9/5/2018	SB-04 (1-3') 9/5/2018	SB-04 (6-8') 9/5/2018	SB-05 (1-3') 9/5/2018	SB-05 (7-9') 9/5/2018	SB-06 (1-3') 9/5/2018	SB-06 (7-9') 9/5/2018	SB-07 (2-4') 9/5/2018	SB-07 (7-9') 9/5/2018	SB-08 (1-3') 9/5/2018	SB-08 (8-10') 9/5/2018	Tripblank 9/5/2018
ETPH (mg/kg)	500	2,500	500	102	118	**703**	73	ND	ND	289	53.5	**637**	ND	425	ND	**533**	27.1	21.2	ND	NA
VOCs (mg/kg)																				
Acetone	500	1,000	14	0.0122	ND	0.042	ND	ND	ND	ND	0.0434	0.0467	0.0271	0.102	0.0146	0.0516	0.0245	ND	0.0139	0.0139
SVOCs (mg/kg)																				
Acenaphthene	1,000*	2,500*	8.4*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0633	ND	ND	ND	NA
Acenaphthylene	1,000	2,500	8.4	0.0637	0.804	3.68	ND	ND	ND	0.108	ND	0.0785	ND	1.47	ND	1.72	ND	0.0399	0.0775	NA
Anthracene	1,000	2,500	40	0.0398	0.479	2.20	ND	ND	ND	0.0978	ND	0.0521	ND	0.852	ND	1.85	ND	ND	ND	NA
Benzo(a)anthracene	1	7.8	1	0.0453	**2.66**	**9.9**	ND	ND	ND	0.256	ND	0.21	ND	**2.6**	ND	**6.82**	ND	0.0658	0.11	NA
Benzo(a)pyrene	1	1	1	0.0767	**2.76**	**11**	ND	ND	ND	0.303	ND	0.319	ND	**3.54**	ND	**5.91**	ND	0.0932	0.138	NA
Benzo(b)fluoranthene	1	7.8	1	0.107	**3.76**	**14.9**	ND	ND	ND	0.426	ND	0.406	ND	**4.36**	ND	**7.81**	ND	0.123	0.167	NA
Benzo(g,h,i)perylene	8.4*	78*	1*	0.132	**2.36**	**9.33**	ND	ND	ND	0.282	ND	0.289	ND	**3.61**	ND	**4.06**	ND	0.114	0.123	NA
Benzo(k)fluoranthene	8.4	78	1	0.0389	**1.18**	**5.19**	ND	ND	ND	0.139	ND	0.138	ND	**1.53**	ND	**2.48**	ND	0.0429	ND	NA
Carbazole	31*	290*	0.2*	ND	0.127	**0.534**	ND	ND	ND	ND	ND	ND	ND	0.191	ND	**0.66**	ND	ND	ND	NA
Chrysene	84*	780*	1*	0.0638	**2.96**	**11.3**	ND	ND	ND	0.36	ND	0.272	ND	**3.34**	ND	**7.25**	ND	0.0886	0.141	NA
Dibenz(a,h)anthracene	1*	1*	1*	ND	0.597	**2.38**	ND	ND	ND	0.0539	ND	0.0686	ND	0.832	ND	**1.25**	ND	ND	ND	NA
Dibenzofuran	68*	1,000*	0.2*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.126	ND	ND	ND	NA
Fluoranthene	1,000	2,500	5.6	0.0701	3.62	**13.5**	ND	ND	ND	0.617	ND	0.248	ND	3.63	ND	**14.1**	ND	0.123	0.195	NA
Fluorene	1,000	2,500	5.6	ND	0.0539	0.257	ND	ND	ND	ND	ND	ND	ND	0.178	ND	0.458	ND			NA
Indeno(1,2,3-cd)pyrene	1*	7.8*	1*	0.124	**2.45**	**9.85**	ND	ND	ND	0.262	ND	0.268	ND	**3.18**	ND	**4.25**	ND	0.0975	0.0926	NA
2-Methylnaphthalene	270*	1,000*	0.56*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Naphthalene	1,000	2,500	5.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.047	ND	ND	ND	NA
Phenanthrene	1,000	2,500	4	ND	1.10	3.32	ND	ND	ND	0.44	ND	0.123	ND	1.3	ND	**8.03**	ND	0.0455	0.0858	NA
Pyrene	1,000	2,500	4	0.0847	3.60	**13.6**	ND	ND	ND	0.693	ND	0.314	ND	**4.44**	ND	**11.2**	ND	0.134	0.194	NA
Total RCRA 8 Metals (mg/kg)																				
Arsenic	10	10	--	5	2.4	2.8	ND	ND	ND	ND	ND	3.1	ND	ND	ND	10	2.3	2.6	ND	NA
Barium	4,700	140,000	--	21.7	ND	ND	68.9	ND	71	58.9	37.9	33.4	ND	22.2	ND	ND	65.9	ND	99.5	NA
Cadmium	34	1,000	--	ND	ND	ND	ND	ND	ND	0.61	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Chromium, Total	100**	100**	--	8.6	6.7	4.6	10.3	5.3	1.4	12.2	8.6	11.4	1.7	9.2	4.7	10.3	11.2	13.3	4.8	NA
Lead	400	1,000	--	18.1	6.4	5.5	3.1	ND	ND	91.6	2.5	7.1	ND	4.1	ND	10.3	3.8	5.8	ND	NA
Mercury	20	610	--	ND	ND	ND	ND	ND	ND	ND	ND	0.043	ND	ND	ND	ND	ND	0.041	ND	NA
Selenium	340	10000	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Silver	340	10,000	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
SPLP RCRA 8 Metals (mg/L)																				
Various	--	--	Various	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
PCBs (mg/kg)																				
Various	1	10	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Pesticides (mg/kg)																				
4,4' - DDT	1.8*	17*	0.003*	ND	ND	ND	ND	ND	ND	**0.0087**	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Ignitability (degrees F)	--	--	--	>200	>200	NA	NA	>200	NA	>200	NA	>200	NA	>200	NA	>200	NA	>200	NA	NA
pH	--	--	--	5.63	5.34	NA	NA	5.49	NA	5.3	NA	5.04	NA	5.87	NA	5.97	NA	4.5	NA	NA
Reactivity Cyanide (mg/kg)	--	--	--	ND	ND	NA	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	NA
Reactivity Sulfide (mg/kg)	--	--	--	ND	ND	NA	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	NA

CTDEEP = Connecticut Department of Energy and Environmental Protection
RSR = Remediation Standard Regulations
RES DEC = Residential Direct Exposure Criteria
I/C DEC = Industrial-Commercial Direct Exposure Criteria
GA PMC = GA Pollutant Mobility Criteria
mg/kg = milligrams per kilogram
mg/L = milligrams per liters
ND = Not detected above laboratory reporting limits
ND < = Not detected (noted when Detection Limit > Criteria)

NA = Not Analyzed
NE = Not Established
* = published 2015 numeric criteria for additional polluting substances not established in 2013 RSRs
** = hexavalent chromium criteria
-- = criteria does not apply
Only detected compounds are listed on table
Shade/Bold = Exceeds Numeric Criteria

Table 3
Groundwater Analytical Results
Modern Roundabout at Route 190 and Route 319
Stafford, Connecticut
ConnDOT Project No. 0134-5635

Parameters	General Permit MCLs		Concentration of Compound in Sample				
	Surface Water	Sanitary Sewer	TW-1	TW-2	TW-1 Duplicate	Field Blank	Trip Blank
			9/5/2018	9/5/2018	9/5/2018	9/5/2018	9/5/2018
ETPH (ug/L)	5,000	100,000	348	ND	ND	ND	NA
VOCs (µg/L)							
Acetone			ND	ND	ND	13.3	ND
Total VOCs	50	5,000	ND	ND	ND	13.3	ND
SVOCs (µg/L)							
Acenaphthylene	NE	NE	ND	0.121	ND	ND	NA
Anthracene	NE	NE	ND	ND	ND	ND	NA
Benzo(a)anthracene	0.49	NE	ND	0.408	ND	ND	NA
Benzo(a)pyrene	0.49	NE	ND	0.259	ND	ND	NA
Benzo(b)fluoranthene	NE	NE	ND	0.393	ND	ND	NA
Benzo(ghi)pyrene	NE	NE	ND	0.229	ND	ND	NA
Benzo(k)fluoranthene	0.49	NE	ND	0.145	ND	ND	NA
Chrysene	NE	NE	ND	0.256	ND	ND	NA
Fluoranthene	NE	NE	ND	0.329	ND	ND	NA
Indeno(1,2,3-cd)pyrene	0.49	NE	ND	0.193	ND	ND	NA
Phenanthrene	NE	NE	0.262	0.109	0.166	ND	NA
Pyrene	NE	NE	ND	0.373	ND	ND	NA
Total PAHs	5	500	0.262	2.706	0.166	ND	NA
PCBs (µg/L)							
Various	0.1	1	ND	ND	ND	ND	NA
Pesticides (µg/L)							
Various	NE	NE	ND	ND	ND	ND	NA
Total Metals (ug/L)							
Copper	48	480	**435**	**325**	**449**	ND	NA
Lead	9.8	100	**123**	**261**	**84**	ND	NA
Zinc	322	1,000	**530**	**396**	311	ND	NA
Dissolved Metals (ug/L)							
Copper	48	480	22.0	ND	ND	ND	NA
Lead	9.8	100	5.4	ND	ND	ND	NA
Zinc	322	1,000	25.5	ND	ND	ND	NA

MCL = maximum concentration limits listed in the DEEP General Permit for Discharge of Groundwater
mg/L = milligrams per liter
-- = criteria does not apply
ND = Not Detected above the Laboratory Reporting Limit
NE = None Established
* = published 2015 criteria for additional polluting substances not established in 2013 RSRs.
Shade /Bold = Exceeds Numeric Criteria

APPENDIX C

BORING LOGS

SOIL BORING LOG

Boring ID: **SB-01**

Job Name/Number: *Modern Roundabout Stafford, CT 18EC0065*

LOGGED BY: Eric A. Andruk

DRILLING DATE(S): 9/5/2018

Sample ID and Depth	Recovery (in)	P.I.D. (ppm)	Depth (ft)	Depth Interval	SOIL DESCRIPTION
SB-01 (1-3')	32	0.0	1 2 3 4 5		Millings and gravel - 5" SAND, dark brown, fine, dense, some gravel - 13" Crushed Stone - 2" SAND, medium brown, fine, dense, and gravel - 11" Crushed Stone - 1"

Drilling Information:

Driller: Cummins Enviro Tech Inc.
Method: Direct-Push Technology - Geoprobe

BL Companies, Inc.
355 Research Parkway
Meriden, CT 06405
(203) 630-1406

BL Companies

SOIL BORING LOG

Boring ID: **SB-02**

Job Name/Number: *Modern Roundabout Stafford, CT 18EC0065*

LOGGED BY: Eric A. Andruk

DRILLING DATE(S): 9/5/2018

Sample ID and Depth	Recovery (in)	P.I.D. (ppm)	Depth (ft)	Depth Interval	SOIL DESCRIPTION
SB-02 (1-3')	42	0.0	1 2 3 4 5		Millings and gravel - 7" SAND, medium to dark brown, fine, dense, little gravel - 9" Crushed Stone - 3" SAND, medium brown, fine, dense, some gravel - 22" Crushed Stone - 1"
SB-02 (6-8')	38	0.3	6 7 8 9 10		SAND, medium to dark brown, fine, dense, some gravel - 38"

Drilling Information:

Driller: Cummins Enviro Tech Inc.
Method: Direct-Push Technology - Geoprobe

BL Companies, Inc.
355 Research Parkway
Meriden, CT 06405
(203) 630-1406

BL Companies

SOIL BORING LOG

Boring ID: **SB-03**

Job Name/Number: *Modern Roundabout Stafford, CT 18EC0065*

LOGGED BY: Eric A. Andruk

DRILLING DATE(S): 9/5/2018

Sample ID and Depth	Recovery (in)	P.I.D. (ppm)	Depth (ft)	Depth Interval	SOIL DESCRIPTION
SB-03 (2-4')	34	0.3	1 2 3 4 5		Millings and gravel - 6" SAND, black, fine, dense, little gravel, musty odor - 5" SAND, medium brown, fine, dense, little gravel - 20" SAND, medium to dark brown, fine to coarse, dense, trace gravel, trace glass - 3"
SB-03 (8-10')	32	0.0	6 7 8 9 10		SAND, medium brown, coarse, dense, little gravel - 38" Crushed stone - 1" SAND, medium brown, coarse, dense, little gravel - 4"

Drilling Information:

Driller: Cummins Enviro Tech Inc.
Method: Direct-Push Technology - Geoprobe

BL Companies, Inc.
355 Research Parkway
Meriden, CT 06405
(203) 630-1406

SOIL BORING LOG

Boring ID: **SB-04**

Job Name/Number: *Modern Roundabout Stafford, CT 18EC0065*

LOGGED BY: Eric A. Andruk

DRILLING DATE(S): 9/5/2018

Sample ID and Depth	Recovery (in)	P.I.D. (ppm)	Depth (ft)	Depth Interval	SOIL DESCRIPTION
SB-04 (1-3')	19	0.0	1 2 3 4 5		Organics, grass, gravel - 3" SAND, light brown, fine, loose, some gravel - 12" Crushed stone - 4"
SB-04 (6-8')	36	0.0	6 7 8 9 10		SAND, light brown, fine, medium dense, some gravel/cobbles - 8" SAND, medium brown, fine to coarse, dense, little gravel - 14" Crushed stone - 2" SAND, medium brown, medium to coarse, dense, little gravel - 14"

Drilling Information:

Driller: Cummins Enviro Tech Inc.
Method: Direct-Push Technology - Geoprobe

BL Companies, Inc.
355 Research Parkway
Meriden, CT 06405
(203) 630-1406

BL Companies

SOIL BORING LOG

Boring ID: **SB-05**

Job Name/Number: *Modern Roundabout Stafford, CT 18EC0065*

LOGGED BY: Eric A. Andruk

DRILLING DATE(S): 9/5/2018

Sample ID and Depth	Recovery (in)	P.I.D. (ppm)	Depth (ft)	Depth Interval	SOIL DESCRIPTION
SB-05 (1-3')	29	0.0	1 2 3 4 5		Millings, gravel - 5" SAND, medium brown, fine, loose, some gravel - 15" Crushed stone - 3" SAND, medium brown, fine, loose, little gravel, trace clay -6"
SB-05 (6-8')	34	0.0	6 7 8 9 10		SAND, medium brown, fine, medium dense, little gravel, trace clay - 34"

Drilling Information:

Driller: Cummins Enviro Tech Inc.
Method: Direct-Push Technology - Geoprobe

BL Companies, Inc.
355 Research Parkway
Meriden, CT 06405
(203) 630-1406

BL Companies

SOIL BORING LOG

Boring ID: **SB-06**

Job Name/Number: *Modern Roundabout Stafford, CT 18EC0065*

LOGGED BY: Eric A. Andruk

DRILLING DATE(S): 9/5/2018

Sample ID and Depth	Recovery (in)	P.I.D. (ppm)	Depth (ft)	Depth Interval	SOIL DESCRIPTION
SB-06 (1-3')	36	0.1	1 2 3 4 5		Millings, gravel - 6" SAND, light to medium brown, fine, loose, some gravel - 19" SAND, black, fine, loose, trace gravel - 1" SAND, medium brown, medium to coarse, dense, little gravel -10"
SB-06 (7-9')	42	0.1	6 7 8 9 10		SAND, medium brown, medium to coarse, medium dense, trace gravel - 42"

Drilling Information:

Driller: Cummins Enviro Tech Inc.
Method: Direct-Push Technology - Geoprobe

BL Companies, Inc.
355 Research Parkway
Meriden, CT 06405
(203) 630-1406

BL Companies

SOIL BORING LOG

Boring ID: **SB-07**

Job Name/Number: *Modern Roundabout Stafford, CT 18EC0065*

LOGGED BY: Eric A. Andruk

DRILLING DATE(S): 9/5/2018

Sample ID and Depth	Recovery (in)	P.I.D. (ppm)	Depth (ft)	Depth Interval	SOIL DESCRIPTION
SB-07 (2-4')	38	0.2	1 2 3 4 5		Millings, gravel - 5" Crushed stone - 2" SAND, light brown, fine, loose, little gravel - 19" SAND, medium to dark brown, fine, dense, trace gravel -12"
SB-07 (7-9')	34	0.1	6 7 8 9 10		SAND, medium to dark brown, fine, dense, little gravel/cobbles - 28" Crushed stone - 2" SAND, medium brown, fine, dense, little gravel, little clay - 4"

Drilling Information:

Driller: Cummins Enviro Tech Inc.
Method: Direct-Push Technology - Geoprobe

BL Companies, Inc.
355 Research Parkway
Meriden, CT 06405
(203) 630-1406

BL Companies

SOIL BORING LOG

Boring ID: **SB-08**

Job Name/Number: *Modern Roundabout Stafford, CT 18EC0065*

LOGGED BY: Eric A. Andruk

DRILLING DATE(S): 9/5/2018

Sample ID and Depth	Recovery (in)	P.I.D. (ppm)	Depth (ft)	Depth Interval	SOIL DESCRIPTION
SB-08 (1-3')	41	0.1	1 2 3 4 5		Millings, gravel - 5" SAND, medium brown, fine, loose, some gravel - 26" Crushed stone - 3" SAND, light to medium brown, fine, loose, and gravel -7"
SB-08 (8-10')	38	0.0	6 7 8 9 10		SAND, light brown, fine, loose, and gravel - 4" Crushed stone - 5" SAND, light brown, find, loose, some gravel - 5" Crushed stone - 2" SAND, medium brown, fine, loose, some gravel - 22"

Drilling Information:

Driller: Cummins Enviro Tech Inc.
Method: Direct-Push Technology - Geoprobe

BL Companies, Inc.
355 Research Parkway
Meriden, CT 06405
(203) 630-1406

APPENDIX D

LABORATORY ANALYTICAL REPORTS

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

BL Companies

Stafford T-210, Stafford, CT

18EC0065

SGS Job Number: JC73307R

Sampling Date: 09/05/18

Report to:

BL Companies
355 Research Parkway
Meriden, CT 06450
jkloss@blcompanies.com; eandruk@blcompanies.com

ATTN: Joy Kloss

Total number of pages in report: **19**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A. Paul Ioannidis
General Manager

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

Sections: 1 2 3 4 5 6

Table of Contents

Sample Summary

BL Companies

Job No: JC73307R

Stafford T-210, Stafford, CT
Project No: 18EC0065

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JC73307-1R	09/05/18	12:40	EAA	09/06/18	SO	Soil	SB-01 1-3'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	BL Companies	**Job No**	JC73307R
Site:	Stafford T-210, Stafford, CT	**Report Date**	9/21/2018 4:10:04 PM

On 09/06/2018, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.7 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC73307R was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: SO **Batch ID:** OP15187

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JC73307R
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC73307-1R	**SB-01 1-3'**					

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SB-01 1-3'		
Lab Sample ID:	JC73307-1R	**Date Sampled:**	09/05/18
Matrix:	SO - Soil	**Date Received:**	09/06/18
Method:	SW846 8082A SW846 3546	**Percent Solids:**	95.5
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX236073.D	1	09/21/18 08:51	SK	09/20/18 09:00	OP15187	GXX6476
Run #2							

	Initial Weight	Final Volume
Run #1	15.8 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.033	mg/kg	
11104-28-2	Aroclor 1221	ND	0.033	mg/kg	
11141-16-5	Aroclor 1232	ND	0.033	mg/kg	
53469-21-9	Aroclor 1242	ND	0.033	mg/kg	
12672-29-6	Aroclor 1248	ND	0.033	mg/kg	
11097-69-1	Aroclor 1254	ND	0.033	mg/kg	
11096-82-5	Aroclor 1260	ND	0.033	mg/kg	
11100-14-4	Aroclor 1268	ND	0.033	mg/kg	
37324-23-5	Aroclor 1262	ND	0.033	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		24-152%
877-09-8	Tetrachloro-m-xylene	87%		24-152%
2051-24-3	Decachlorobiphenyl	75%		10-166%
2051-24-3	Decachlorobiphenyl	90%		10-166%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- RCP Form
- Sample Tracking Chronicle
- QC Evaluation: CT RCP Limits

SO
SL
SSTB

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

PAGE 1 OF 2

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: PM7_2017_519 | SGS Job #: JC73307

Client / Reporting Information

Company Name: BL Companies
Street Address: 355 Research Parkway
City: Meriden State: CT Zip: 06450
Project Contact: Jay Hess E-mail: JHess@BLcompanies.com
Phone #: 203-630-1406 Fax #: 203-630-2633
Sampler(s) Name(s): Eric Andrulz Phone #: 203-668-2486

Project Information

Project Name: Stafford T-210
Street:
City: Stafford State: CT
Project #: 18EC0065
Client Purchase Order #:
Project Manager: Jay Hess

Billing Information (if different from Report to)

Company Name: BL Companies
Street Address: 355 Research Parkway
City: Meriden State: CT Zip: 06450
Attention: ProjectAP@blcompanies.com

Requested Analysis (see TEST CODE sheet)

Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Preserved: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	VOC, by 8260	SVOCs by 8270	ETPH by CT ETPH Method	PCBs by 8082	Pesticides by 8081	Total RCRA 8 metals	SPLP TCLP 8 metals	Ignitability, Reactivity, pH	Matrix Codes / LAB USE ONLY
1	SB-01 1-3'		9/5/18	12:40	EAA	SO	6					3	1	2		X	X	X	X	X	X	X	X	D2
2	SB-02 1-3'			11:54												X	X	X	X	X	X	X	X	B13
3	SB-02 6-8'			12:00												X	X	X	X	X	X	X		P16
4	SB-03 2-4'			11:29												X	X	X	X	X	X	X	X	1406
5	SB-03 8-10'			11:33												X	X	X	X	X	X	X		4976
6	SB-04 1-3'			08:49												X	X	X	X	X	X	X	X	
7	SB-04 6-8'			08:53												X	X	X	X	X	X	X		
8	SB-05 1-3'			11:03												X	X	X	X	X	X	X	X	
9	SB-05 7-9'			11:06												X	X	X	X	X	X	X		
10	SB-06 1-3'			10:27												X	X	X	X	X	X	X	X	
11	SB-06 7-9'			10:33												X	X	X	X	X	X	X		

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [x] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available via LabLink

Approved by (SGS Project Manager)/Date:
INITIAL ASESSMENT 9/6
LABEL VERIFICATION

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other Data + RCP

Commercial "A" = Results Only; Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

★ 5-day Turnaround, Please Hold Samples for possible future analysis
★ one duplicate + one trip blank included

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Eric	9/5/18 16:00	1 BL Fridge	2	9/6 10:00	2
3	Relinquished by Sampler:	Date Time: 9-6-18 19:30	Received By: 3	Relinquished By: 4	Date Time: 9/6/18 20:30	Received By: 4
5	Relinquished by:	Date Time: 9-7-18 7:22	Received By: 5	Custody Seal # 2137 2138 2139 2140 2141	Intact / Not intact	Preserved where applicable	On Ice: 5 coolers	Cooler Temp. 04.3 C1P 02.6 C1P 01.8 C1P 02.1 C1P 02.8 C1P

SGS-ACCUTEST MARLBOR 9/4

Form:SM088-03C (revised 2/12/18)

http://www.sgs.com/en/terms-and-conditions.

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

FED-EX Tracking # | Bottle Order Control #
SGS Quote # PM7_2018 SIM | SGS Job # JC73307

Client / Reporting Information

Company Name: Same as Pg. 1
Street Address:
City State Zip:
Project Contact E-mail:
Phone # Fax #:
Sampler(s) Name(s) Phone #:

Project Information

Project Name: Same as Pg-1
Street:
City State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name: Same as Pg. 1
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Preserved: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	VOCs, SW 8260	SVOCs, SW 8270	ETPH	PCBs, SW 8082	Pesticides SW 8081	Total RCRA 8 metals	SPLP 1312 8 metals	Synthetic Precipitation, pH			LAB USE ONLY
12	SB-07 2-4'		9/5/18	09:20	EAA	SO	6					3	1	2		X	X	X	X	X	X	X	X			
13	SB-07 7-9'			09:25												X	X	X	X	X	X	X				
14	SB-08 1-3'			09:37												X	X	X	X	X	X	X	X			
15	SB-08 8-10'			10:01												X	X	X	X	X	X	X	X			
16	Duplicate		9/5/18	12:02	EAA	SO	6					3	1	2		X	X	X	X	X	X	X				
17	Trip blank		9/5/18	12:15	EAA	TB	3						1	2		X										

Turnaround Time (Business days)

- ~~Std. 10 Business Days~~
- [x] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Approved by (SGS Project Manager)/Date:

Emergency & Rush T/A data available via LabLink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] *NJ Data of Known Quality Protocol Reporting*
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other 2-day TAT

Commercial "A" = Results Only; Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

* 5-day Turnaround, Please hold for possible further analysis
* one duplicate + one trip blank included

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		9/5/18 16:00	1 BZ Fridge	2	9/6/18 10:00	2
3		9-6-18 1930	3 Thelma Ivey	4 Thelma Ivey	9/6/18 2020	4
5		9-7-18 2:33	5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐	On Ice ☑	Cooler Temp.

SGS-ACCUTEST MARLBOR
5 coolers

04-3 clr
02-6 clr
01-8 clr
02-1 clr
02-8 clr

SGS-ACCUTEST MARLBOR 9/6

Form:SM088-03C (revised 2/12/18)

SGS Sample Receipt Summary

Job Number: JC73307 **Client:** _____ **Project:** _____

Date / Time Received: 9/6/2018 7:30:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (4.3); Cooler 2: (2.0); Cooler 3: (1.8); Cooler 4: (2.1); Cooler 5: (2.8);

Cooler Temps (Corrected) °C: Cooler 1: (3.7); Cooler 2: (1.4); Cooler 3: (1.2); Cooler 4: (1.5); Cooler 5: (2.2);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	5		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 216017 pH 12+: 208717 Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

Job Change Order: JC73307

Requested Date:	9/18/2018	**Received Date:**	9/6/2018
Account Name:	BL Companies	**Due Date:**	9/13/2018
Project Description:	Stafford T-210, Stafford, CT	**Deliverable:**	CTRCP
C/O Initiated By:	TF **PM:** TM	**TAT (Days):**	2

Sample #: JC73307-1 **Change:** Please relog, re-extract, and re-analyze for P8082RCP.

Dept:

TAT: 2

SB-01 1-3'

Above Changes Per: Eric Andruk **Date/Time:** 9/18/2018 1:12:46 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Page 1 of 1

JC73307R: Chain of Custody
Page 4 of 4

Reasonable Confidence Protocol
Laboratory Analysis
QA/QC Certification Form

Laboratory Name: **SGS North America Inc.** **Client:** **BL Companies**

Project Location: **Stafford T-210, Stafford, CT** **Project Number:** **18EC0065**

Sampling Date(s): **9/5/2018**

Laboratory Sample ID(s): JC73307-1R

Methods: EPA 160.3 M, SW846 8082A

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes ☑ No ☐
1A	Where all the method specified preservation and holding time requirements met?	Yes ☑ No ☐
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes ☐ No ☐ NA ☑
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes ☑ No ☐
3	Were samples received at an appropriate temperature (<6° C)?	Yes ☑ No ☐
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes ☑ No ☐
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes ☑ No ☐
	b) Were these reporting limits met?	Yes ☑ No ☐
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes ☑ No ☐
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes ☐ No ☑

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: 

Position: General Manager

Printed Name: **A. Paul Ioannidis**

Date: 9/21/2018

Internal Sample Tracking Chronicle

BL Companies

Job No: JC73307R

Stafford T-210, Stafford, CT
Project No: 18EC0065

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC73307-1R SB-01 1-3'	Collected: 05-SEP-18 12:40 By: EAA			Received: 06-SEP-18 By: MH		
JC73307-1R	SW846 8082A	21-SEP-18 08:51	SK	20-SEP-18	NT	P8082RCP

QC Evaluation: CT RCP Limits

Job Number: JC73307R
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP15187	SW846 8082A						
OP15187-BS	12674-11-2	Aroclor 1016	BSP	REC	133	%	40-140
OP15187-BS	11096-82-5	Aroclor 1260	BSP	REC	133	%	40-140
OP15187-BS	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	124	%	30-150
OP15187-BS	877-09-8	Tetrachloro-m-xylene (sig#2)	BSP	SURR	121	%	30-150
OP15187-BS	2051-24-3	Decachlorobiphenyl (sig#1)	BSP	SURR	130	%	30-150
OP15187-BS	2051-24-3	Decachlorobiphenyl (sig#2)	BSP	SURR	132	%	30-150
OP15187-BSD	12674-11-2	Aroclor 1016	BSD	REC	138	%	40-140
OP15187-BSD	12674-11-2	Aroclor 1016	BSD	RPD	3	%	30
OP15187-BSD	11104-28-2	Aroclor 1221	BSD	RPD	0	%	30
OP15187-BSD	11141-16-5	Aroclor 1232	BSD	RPD	0	%	30
OP15187-BSD	53469-21-9	Aroclor 1242	BSD	RPD	0	%	30
OP15187-BSD	12672-29-6	Aroclor 1248	BSD	RPD	0	%	30
OP15187-BSD	11097-69-1	Aroclor 1254	BSD	RPD	0	%	30
OP15187-BSD	11096-82-5	Aroclor 1260	BSD	REC	133	%	40-140
OP15187-BSD	11096-82-5	Aroclor 1260	BSD	RPD	0	%	30
OP15187-BSD	11100-14-4	Aroclor 1268	BSD	RPD	0	%	30
OP15187-BSD	37324-23-5	Aroclor 1262	BSD	RPD	0	%	30
OP15187-BSD	877-09-8	Tetrachloro-m-xylene (sig#1)	BSD	SURR	127	%	30-150
OP15187-BSD	877-09-8	Tetrachloro-m-xylene (sig#2)	BSD	SURR	121	%	30-150
OP15187-BSD	2051-24-3	Decachlorobiphenyl (sig#1)	BSD	SURR	131	%	30-150
OP15187-BSD	2051-24-3	Decachlorobiphenyl (sig#2)	BSD	SURR	131	%	30-150
OP15187-MB1	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	130	%	30-150
OP15187-MB1	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	125	%	30-150
OP15187-MB1	2051-24-3	Decachlorobiphenyl (sig#1)	MB	SURR	132	%	30-150
OP15187-MB1	2051-24-3	Decachlorobiphenyl (sig#2)	MB	SURR	132	%	30-150
JC73307-1R	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	90	%	30-150
JC73307-1R	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	87	%	30-150
JC73307-1R	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	75	%	30-150
JC73307-1R	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	90	%	30-150

* Sample used for QC is not from job JC73307R

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JC73307R
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15187-MB1	XX236067.D	1	09/21/18	SK	09/20/18	OP15187	GXX6476

The QC reported here applies to the following samples: **Method:** SW846 8082A

JC73307-1R

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	33	ug/kg	
11104-28-2	Aroclor 1221	ND	33	ug/kg	
11141-16-5	Aroclor 1232	ND	33	ug/kg	
53469-21-9	Aroclor 1242	ND	33	ug/kg	
12672-29-6	Aroclor 1248	ND	33	ug/kg	
11097-69-1	Aroclor 1254	ND	33	ug/kg	
11096-82-5	Aroclor 1260	ND	33	ug/kg	
11100-14-4	Aroclor 1268	ND	33	ug/kg	
37324-23-5	Aroclor 1262	ND	33	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	130%	24-152%
877-09-8	Tetrachloro-m-xylene	125%	24-152%
2051-24-3	Decachlorobiphenyl	132%	10-166%
2051-24-3	Decachlorobiphenyl	132%	10-166%

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC73307R
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15187-BS	XX236068.D	1	09/21/18	SK	09/20/18	OP15187	GXX6476
OP15187-BSD	XX236069.D	1	09/21/18	SK	09/20/18	OP15187	GXX6476

The QC reported here applies to the following samples: **Method:** SW846 8082A

JC73307-1R

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	133	178	133	184	138	3	61-146/30
11104-28-2	Aroclor 1221		ND		ND		nc	70-130/30
11141-16-5	Aroclor 1232		ND		ND		nc	70-130/30
53469-21-9	Aroclor 1242		ND		ND		nc	70-130/30
12672-29-6	Aroclor 1248		ND		ND		nc	70-130/30
11097-69-1	Aroclor 1254		ND		ND		nc	70-130/30
11096-82-5	Aroclor 1260	133	178	133	178	133	0	62-148/30
11100-14-4	Aroclor 1268		ND		ND		nc	-/30
37324-23-5	Aroclor 1262		ND		ND		nc	-/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	124%	127%	24-152%
877-09-8	Tetrachloro-m-xylene	121%	121%	24-152%
2051-24-3	Decachlorobiphenyl	130%	131%	10-166%
2051-24-3	Decachlorobiphenyl	132%	131%	10-166%

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: JC73307R
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Method: SW846 8082A **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JC73307-1R	XX236073.D	90	87	75	90
OP15187-BS	XX236068.D	124	121	130	132
OP15187-BSD	XX236069.D	127	121	131	131
OP15187-MB1	XX236067.D	130	125	132	132

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	24-152%
S2 = Decachlorobiphenyl	10-166%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

BL Companies

Stafford T-210, Stafford, CT

18EC0065

SGS Job Number: JC73306

Sampling Date: 09/05/18

Report to:

BL Companies
355 Research Parkway
Meriden, CT 06450
jkloss@blcompanies.com; eandruk@blcompanies.com

ATTN: Joy Kloss

Total number of pages in report: **119**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A. Paul Ioannidis
General Manager

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

Sections: 1 2 3 4 5 6 7 8 9

Table of Contents

SGS North America Inc.

Sample Summary

BL Companies

Job No: JC73306

Stafford T-210, Stafford, CT
Project No: 18EC0065

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JC73306-1	09/05/18	12:38	EAA	09/06/18	AQ	Ground Water	TW-1
JC73306-1F	09/05/18	12:38	EAA	09/06/18	AQ	Groundwater Filtered	TW-1
JC73306-2	09/05/18	14:16	EAA	09/06/18	AQ	Ground Water	TW-2
JC73306-2F	09/05/18	14:16	EAA	09/06/18	AQ	Groundwater Filtered	TW-2
JC73306-3	09/05/18	13:33	EAA	09/06/18	AQ	Ground Water	DUPLICATE
JC73306-3F	09/05/18	13:33	EAA	09/06/18	AQ	Groundwater Filtered	DUPLICATE
JC73306-4	09/05/18	13:45	EAA	09/06/18	AQ	Equipment Blank	EQUIPMENT BLANK
JC73306-4F	09/05/18	13:45	EAA	09/06/18	AQ	Equip Blank Filtered	EQUIPMENT BLANK
JC73306-5	09/05/18	13:45	EAA	09/06/18	AQ	Trip Blank Water	TRIP BLANK

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	BL Companies	**Job No**	JC73306
Site:	Stafford T-210, Stafford, CT	**Report Date**	9/14/2018 5:31:25 PM

On 09/06/2018, 8 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.7 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC73306 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** V3D6020

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- JC73306-2 for Bromoform: Associated CCV outside of control limits high, sample was ND.
- JC73306-3 for Bromoform: Associated CCV outside of control limits high, sample was ND.
- JC73306-1 for Acetone: Response factor for this compound is below 0.05 in the inital and continuing calibrations.
- JC73306-1 for Bromoform: Associated CCV outside of control limits high, sample was ND.
- JC73306-5 for Acetone: Response factor for this compound is below 0.05 in the inital and continuing calibrations.
- JC73306-2 for Acetone: Response factor for this compound is below 0.05 in the inital and continuing calibrations.
- JC73306-4 for Acetone: Response factor for this compound is below 0.05 in the inital and continuing calibrations.
- JC73306-3 for Acetone: Response factor for this compound is below 0.05 in the inital and continuing calibrations.
- JC73306-5 for Bromoform: Associated CCV outside of control limits high, sample was ND.
- JC73306-4 for Bromoform: Associated CCV outside of control limits high, sample was ND.

MS Semi-volatiles By Method SW846 8270D

Matrix: AQ **Batch ID:** OP14905

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- JC73306-2 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.
- JC73306-1 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.
- JC73306-1 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC73306-1 for Pyridine: Associated CCV outside of control limits high, sample was ND.
- JC73306-1 for 2,4-Dinitrophenol: Associated CCV outside of control limits high, sample was ND. Quadratic regression was employed for this compound in associated ICAL.
- JC73306-2 for Pyridine: Associated CCV outside of control limits high, sample was ND.
- JC73306-3 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC73306-2 for 4,6-Dinitro-o-cresol: Quadratic regression was employed for this compound in associated ICAL.
- JC73306-2 for 2,4-Dinitrophenol: Quadratic regression was employed for this compound in associated ICAL. Associated CCV outside of control limits high, sample was ND.
- JC73306-4 for 4,6-Dinitro-o-cresol: Quadratic regression was employed for this compound in associated ICAL.
- JC73306-4 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.
- JC73306-3 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.
- JC73306-4 for 2,4-Dinitrophenol: Associated CCV outside of control limits high, sample was ND. Quadratic regression was employed for this compound in associated ICAL.
- JC73306-2 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC73306-4 for Pyridine: Associated CCV outside of control limits high, sample was ND.
- JC73306-4 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC73306-3 for 2,4-Dinitrophenol: Associated CCV outside of control limits high, sample was ND. Quadratic regression was employed for this compound in associated ICAL.
- JC73306-3 for 4,6-Dinitro-o-cresol: Quadratic regression was employed for this compound in associated ICAL.
- JC73306-1 for 4,6-Dinitro-o-cresol: Quadratic regression was employed for this compound in associated ICAL.
- JC73306-3 for Pyridine: Associated CCV outside of control limits high, sample was ND.

MS Semi-volatiles By Method SW846 8270D BY SIM

Matrix: AQ **Batch ID:** OP14905A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- JC73306-1 for Acenaphthylene: Associated CCV outside of control limits high, sample was ND.
- JC73306-2 for Benzo(a)anthracene: Associated CCV outside of control limits high.
- JC73306-2 for Acenaphthylene: Associated CCV outside of control limits high.
- JC73306-3 for Benzo(a)anthracene: Associated CCV outside of control limits high, sample was ND.
- JC73306-3 for Acenaphthylene: Associated CCV outside of control limits high, sample was ND.
- JC73306-1 for Benzo(a)anthracene: Associated CCV outside of control limits high, sample was ND.
- JC73306-4 for Benzo(a)anthracene: Associated CCV outside of control limits high, sample was ND.
- JC73306-4 for Acenaphthylene: Associated CCV outside of control limits high, sample was ND.

GC/LC Semi-volatiles By Method CT-ETPH

Matrix: AQ **Batch ID:** OP14914

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

GC/LC Semi-volatiles By Method SW846 8081B

Matrix: AQ **Batch ID:** OP14907

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- OP14907-BS1 for Heptachlor: Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.
- OP14907-BS1 for 4,4'-DDD: Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.
- OP14907-BS1 for gamma-BHC (Lindane): Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.
- OP14907-BSD for Endrin: Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.
- OP14907-BSD for gamma-BHC (Lindane): Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.
- OP14907-BSD for Heptachlor: Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.
- OP14907-BS1 for Endrin: Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: AQ **Batch ID:** OP14906

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Metals Analysis By Method SW846 6010D

Matrix: AQ **Batch ID:** MP9008

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC73360-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Copper, Lead are outside control limits for sample MP9008-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- JC73306-1 for Lead: Elevated sample detection limit due to difficult sample matrix.
- JC73306-3 for Zinc: Elevated sample detection limit due to difficult sample matrix.
- JC73306-3 for Lead: Elevated sample detection limit due to difficult sample matrix.
- JC73306-3 for Copper: Elevated sample detection limit due to difficult sample matrix.
- JC73306-2 for Zinc: Elevated sample detection limit due to difficult sample matrix.
- JC73306-2 for Lead: Elevated sample detection limit due to difficult sample matrix.
- JC73306-2 for Copper: Elevated sample detection limit due to difficult sample matrix.
- JC73306-1 for Zinc: Elevated sample detection limit due to difficult sample matrix.
- JC73306-1 for Copper: Elevated sample detection limit due to difficult sample matrix.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC73306-1	**TW-1**					
Phenanthrene		0.262	0.10		ug/l	SW846 8270D BY SIM
CT-DRO (C9-C36)		0.348	0.10		mg/l	CT-ETPH
Copper [a]		435	100		ug/l	SW846 6010D
Lead [a]		123	30		ug/l	SW846 6010D
Zinc [a]		530	200		ug/l	SW846 6010D
JC73306-1F	**TW-1**					
Copper		22.0	10		ug/l	SW846 6010D
Lead		5.4	3.0		ug/l	SW846 6010D
Zinc		25.5	20		ug/l	SW846 6010D
JC73306-2	**TW-2**					
Acenaphthylene [b]		0.121	0.10		ug/l	SW846 8270D BY SIM
Benzo(a)anthracene [b]		0.408	0.050		ug/l	SW846 8270D BY SIM
Benzo(a)pyrene		0.259	0.050		ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene		0.393	0.10		ug/l	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0.229	0.10		ug/l	SW846 8270D BY SIM
Benzo(k)fluoranthene		0.145	0.10		ug/l	SW846 8270D BY SIM
Chrysene		0.256	0.10		ug/l	SW846 8270D BY SIM
Fluoranthene		0.329	0.10		ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.193	0.10		ug/l	SW846 8270D BY SIM
Phenanthrene		0.109	0.10		ug/l	SW846 8270D BY SIM
Pyrene		0.373	0.10		ug/l	SW846 8270D BY SIM
Copper [a]		325	100		ug/l	SW846 6010D
Lead [a]		261	30		ug/l	SW846 6010D
Zinc [a]		396	200		ug/l	SW846 6010D
JC73306-2F	**TW-2**					
No hits reported in this sample.						
JC73306-3	**DUPLICATE**					
Phenanthrene		0.166	0.10		ug/l	SW846 8270D BY SIM
Copper [a]		449	100		ug/l	SW846 6010D
Lead [a]		84.0	30		ug/l	SW846 6010D
Zinc [a]		311	200		ug/l	SW846 6010D
JC73306-3F	**DUPLICATE**					
No hits reported in this sample.						

Summary of Hits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC73306-4	**EQUIPMENT BLANK**					
Acetone [c]		13.3	10		ug/l	SW846 8260C
JC73306-4F	**EQUIPMENT BLANK**					
No hits reported in this sample.						
JC73306-5	**TRIP BLANK**					
No hits reported in this sample.						

(a) Elevated sample detection limit due to difficult sample matrix.
(b) Associated CCV outside of control limits high.
(c) Response factor for this compound is below 0.05 in the inital and continuing calibrations.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	TW-1		
Lab Sample ID:	JC73306-1	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D141318.D	1	09/08/18 19:43	JTP	n/a	n/a	V3D6020
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
107-13-1	Acrylonitrile	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform [b]	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-1		
Lab Sample ID:	JC73306-1	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-1		
Lab Sample ID:	JC73306-1	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	105%		80-120%

(a) Response factor for this compound is below 0.05 in the inital and continuing calibrations.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-1		
Lab Sample ID:	JC73306-1	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P53671.D	1	09/09/18 23:59	KLS	09/09/18 05:30	OP14905	E5P2547
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN RCP list without PAHs

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	ug/l	
105-67-9	2,4-Dimethylphenol [a]	ND	5.0	ug/l	
51-28-5	2,4-Dinitrophenol [b]	ND	5.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol [c]	ND	5.0	ug/l	
95-48-7	2-Methylphenol	ND	2.0	ug/l	
	3&4-Methylphenol	ND	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	ug/l	
100-02-7	4-Nitrophenol	ND	10	ug/l	
87-86-5	Pentachlorophenol [a]	ND	4.0	ug/l	
108-95-2	Phenol	ND	2.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	ug/l	
62-53-3	Aniline	ND	2.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	ug/l	
86-74-8	Carbazole	ND	1.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	2.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	ug/l	
132-64-9	Dibenzofuran	ND	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-1		
Lab Sample ID:	JC73306-1	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

ABN RCP list without PAHs

CAS No.	Compound	Result	RL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	2.0	ug/l	
78-59-1	Isophorone	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	ug/l	
98-95-3	Nitrobenzene	ND	2.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
82-68-8	Pentachloronitrobenzene	ND	5.0	ug/l	
110-86-1	Pyridine [a]	ND	2.0	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		10-110%
4165-62-2	Phenol-d5	33%		10-110%
118-79-6	2,4,6-Tribromophenol	74%		36-151%
4165-60-0	Nitrobenzene-d5	97%		34-128%
321-60-8	2-Fluorobiphenyl	79%		38-119%
1718-51-0	Terphenyl-d14	81%		26-129%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits high, sample was ND. Quadratic regression was employed for this compound in associated ICAL.
(c) Quadratic regression was employed for this compound in associated ICAL.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-1		
Lab Sample ID:	JC73306-1	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P71147.D	1	09/11/18 05:22	SA	09/09/18 05:30	OP14905A	E3P3371
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene [a]	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.050	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.10	ug/l	
91-20-3	Naphthalene	ND	0.10	ug/l	
85-01-8	Phenanthrene	0.262	0.10	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	95%		29-124%
321-60-8	2-Fluorobiphenyl	67%		23-122%
1718-51-0	Terphenyl-d14	63%		22-130%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-1		
Lab Sample ID:	JC73306-1	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G94597.D	1	09/10/18 03:26	CP	09/08/18 12:00	OP14907	G4G2520
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

Pesticide RCP List

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	0.0050	ug/l	
15972-60-8	Alachlor	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.0050	ug/l	
319-85-7	beta-BHC	ND	0.0050	ug/l	
319-86-8	delta-BHC	ND	0.0050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.0050	ug/l	
12789-03-6	Chlordane	ND	0.25	ug/l	
60-57-1	Dieldrin	ND	0.0050	ug/l	
72-54-8	4,4'-DDD	ND	0.0050	ug/l	
72-55-9	4,4'-DDE	ND	0.0050	ug/l	
50-29-3	4,4'-DDT	ND	0.0050	ug/l	
72-20-8	Endrin	ND	0.0050	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.0050	ug/l	
7421-93-4	Endrin aldehyde	ND	0.0050	ug/l	
53494-70-5	Endrin ketone	ND	0.0050	ug/l	
959-98-8	Endosulfan-I	ND	0.0050	ug/l	
33213-65-9	Endosulfan-II	ND	0.0050	ug/l	
76-44-8	Heptachlor	ND	0.0050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.0050	ug/l	
72-43-5	Methoxychlor	ND	0.010	ug/l	
8001-35-2	Toxaphene	ND	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	94%		13-153%
877-09-8	Tetrachloro-m-xylene	88%		13-153%
2051-24-3	Decachlorobiphenyl	39%		10-138%
2051-24-3	Decachlorobiphenyl	32%		10-138%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-1		
Lab Sample ID:	JC73306-1	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX235358.D	1	09/11/18 00:56	SK	09/08/18 12:00	OP14906	GXX6467
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	107%		11-166%
877-09-8	Tetrachloro-m-xylene	89%		11-166%
2051-24-3	Decachlorobiphenyl	33%		10-150%
2051-24-3	Decachlorobiphenyl	36%		10-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TW-1
Lab Sample ID: JC73306-1
Matrix: AQ - Ground Water
Method: CT-ETPH SW846 3510C
Project: Stafford T-210, Stafford, CT

Date Sampled: 09/05/18
Date Received: 09/06/18
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8Y29981.D	1	09/12/18 19:44	TL	09/11/18 16:00	OP14914	G8Y1075
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-DRO (C9-C36)	0.348	0.10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	60%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-1		
Lab Sample ID:	JC73306-1	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	Stafford T-210, Stafford, CT		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Copper [a]	435	100	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Lead [a]	123	30	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Zinc [a]	530	200	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA45228
(2) Prep QC Batch: MP9008

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TW-1		
Lab Sample ID:	JC73306-1F	**Date Sampled:**	09/05/18
Matrix:	AQ - Groundwater Filtered	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	Stafford T-210, Stafford, CT		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Copper	22.0	10	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Lead	5.4	3.0	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Zinc	25.5	20	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA45228
(2) Prep QC Batch: MP9008

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TW-2		
Lab Sample ID:	JC73306-2	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D141320.D	1	09/08/18 20:33	JTP	n/a	n/a	V3D6020
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
107-13-1	Acrylonitrile	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform [b]	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-2		
Lab Sample ID:	JC73306-2	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-2		
Lab Sample ID:	JC73306-2	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	107%		80-120%

(a) Response factor for this compound is below 0.05 in the inital and continuing calibrations.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-2		
Lab Sample ID:	JC73306-2	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P53673.D	1	09/10/18 00:50	KLS	09/09/18 05:30	OP14905	E5P2547
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN RCP list without PAHs

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	ug/l	
105-67-9	2,4-Dimethylphenol [a]	ND	5.0	ug/l	
51-28-5	2,4-Dinitrophenol [b]	ND	5.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol [c]	ND	5.0	ug/l	
95-48-7	2-Methylphenol	ND	2.0	ug/l	
	3&4-Methylphenol	ND	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	ug/l	
100-02-7	4-Nitrophenol	ND	10	ug/l	
87-86-5	Pentachlorophenol [a]	ND	4.0	ug/l	
108-95-2	Phenol	ND	2.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	ug/l	
62-53-3	Aniline	ND	2.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	ug/l	
86-74-8	Carbazole	ND	1.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	2.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	ug/l	
132-64-9	Dibenzofuran	ND	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-2		
Lab Sample ID:	JC73306-2	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

ABN RCP list without PAHs

CAS No.	Compound	Result	RL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	2.0	ug/l	
78-59-1	Isophorone	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	ug/l	
98-95-3	Nitrobenzene	ND	2.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
82-68-8	Pentachloronitrobenzene	ND	5.0	ug/l	
110-86-1	Pyridine [a]	ND	2.0	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		10-110%
4165-62-2	Phenol-d5	27%		10-110%
118-79-6	2,4,6-Tribromophenol	67%		36-151%
4165-60-0	Nitrobenzene-d5	81%		34-128%
321-60-8	2-Fluorobiphenyl	67%		38-119%
1718-51-0	Terphenyl-d14	76%		26-129%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Quadratic regression was employed for this compound in associated ICAL. Associated CCV outside of control limits high, sample was ND.
(c) Quadratic regression was employed for this compound in associated ICAL.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-2		
Lab Sample ID:	JC73306-2	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P71160.D	1	09/11/18 10:24	SA	09/09/18 05:30	OP14905A	E3P3371
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene [a]	0.121	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene [a]	0.408	0.050	ug/l	
50-32-8	Benzo(a)pyrene	0.259	0.050	ug/l	
205-99-2	Benzo(b)fluoranthene	0.393	0.10	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.229	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	0.145	0.10	ug/l	
218-01-9	Chrysene	0.256	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	0.329	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.193	0.10	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.10	ug/l	
91-20-3	Naphthalene	ND	0.10	ug/l	
85-01-8	Phenanthrene	0.109	0.10	ug/l	
129-00-0	Pyrene	0.373	0.10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		29-124%
321-60-8	2-Fluorobiphenyl	55%		23-122%
1718-51-0	Terphenyl-d14	61%		22-130%

(a) Associated CCV outside of control limits high.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-2		
Lab Sample ID:	JC73306-2	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G94598.D	1	09/10/18 03:43	CP	09/08/18 12:00	OP14907	G4G2520
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

Pesticide RCP List

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	0.0050	ug/l	
15972-60-8	Alachlor	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.0050	ug/l	
319-85-7	beta-BHC	ND	0.0050	ug/l	
319-86-8	delta-BHC	ND	0.0050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.0050	ug/l	
12789-03-6	Chlordane	ND	0.25	ug/l	
60-57-1	Dieldrin	ND	0.0050	ug/l	
72-54-8	4,4'-DDD	ND	0.0050	ug/l	
72-55-9	4,4'-DDE	ND	0.0050	ug/l	
50-29-3	4,4'-DDT	ND	0.0050	ug/l	
72-20-8	Endrin	ND	0.0050	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.0050	ug/l	
7421-93-4	Endrin aldehyde	ND	0.0050	ug/l	
53494-70-5	Endrin ketone	ND	0.0050	ug/l	
959-98-8	Endosulfan-I	ND	0.0050	ug/l	
33213-65-9	Endosulfan-II	ND	0.0050	ug/l	
76-44-8	Heptachlor	ND	0.0050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.0050	ug/l	
72-43-5	Methoxychlor	ND	0.010	ug/l	
8001-35-2	Toxaphene	ND	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%		13-153%
877-09-8	Tetrachloro-m-xylene	82%		13-153%
2051-24-3	Decachlorobiphenyl	53%		10-138%
2051-24-3	Decachlorobiphenyl	47%		10-138%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-2		
Lab Sample ID:	JC73306-2	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX235359.D	1	09/11/18 01:14	SK	09/08/18 12:00	OP14906	GXX6467
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	84%		11-166%
877-09-8	Tetrachloro-m-xylene	87%		11-166%
2051-24-3	Decachlorobiphenyl	52%		10-150%
2051-24-3	Decachlorobiphenyl	57%		10-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TW-2
Lab Sample ID: JC73306-2
Matrix: AQ - Ground Water
Method: CT-ETPH SW846 3510C
Project: Stafford T-210, Stafford, CT

Date Sampled: 09/05/18
Date Received: 09/06/18
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8Y29982.D	1	09/12/18 20:22	TL	09/11/18 16:00	OP14914	G8Y1075
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-DRO (C9-C36)	ND	0.10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	56%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-2		
Lab Sample ID:	JC73306-2	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	Stafford T-210, Stafford, CT		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Copper [a]	325	100	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Lead [a]	261	30	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Zinc [a]	396	200	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA45228
(2) Prep QC Batch: MP9008

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TW-2		
Lab Sample ID:	JC73306-2F	**Date Sampled:**	09/05/18
Matrix:	AQ - Groundwater Filtered	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	Stafford T-210, Stafford, CT		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Copper	< 10	10	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Lead	< 3.0	3.0	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Zinc	< 20	20	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA45228
(2) Prep QC Batch: MP9008

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JC73306-3	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D141319.D	1	09/08/18 20:08	JTP	n/a	n/a	V3D6020
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
107-13-1	Acrylonitrile	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform [b]	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JC73306-3	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JC73306-3	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	105%		80-120%

(a) Response factor for this compound is below 0.05 in the inital and continuing calibrations.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JC73306-3	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P53672.D	1	09/10/18 00:25	KLS	09/09/18 05:30	OP14905	E5P2547
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN RCP list without PAHs

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	ug/l	
105-67-9	2,4-Dimethylphenol [a]	ND	5.0	ug/l	
51-28-5	2,4-Dinitrophenol [b]	ND	5.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol [c]	ND	5.0	ug/l	
95-48-7	2-Methylphenol	ND	2.0	ug/l	
	3&4-Methylphenol	ND	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	ug/l	
100-02-7	4-Nitrophenol	ND	10	ug/l	
87-86-5	Pentachlorophenol [a]	ND	4.0	ug/l	
108-95-2	Phenol	ND	2.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	ug/l	
62-53-3	Aniline	ND	2.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	ug/l	
86-74-8	Carbazole	ND	1.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	2.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	ug/l	
132-64-9	Dibenzofuran	ND	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JC73306-3	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

ABN RCP list without PAHs

CAS No.	Compound	Result	RL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	2.0	ug/l	
78-59-1	Isophorone	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	ug/l	
98-95-3	Nitrobenzene	ND	2.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
82-68-8	Pentachloronitrobenzene	ND	5.0	ug/l	
110-86-1	Pyridine [a]	ND	2.0	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		10-110%
4165-62-2	Phenol-d5	26%		10-110%
118-79-6	2,4,6-Tribromophenol	62%		36-151%
4165-60-0	Nitrobenzene-d5	87%		34-128%
321-60-8	2-Fluorobiphenyl	71%		38-119%
1718-51-0	Terphenyl-d14	82%		26-129%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits high, sample was ND. Quadratic regression was employed for this compound in associated ICAL.
(c) Quadratic regression was employed for this compound in associated ICAL.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JC73306-3	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P71148.D	1	09/11/18 05:45	SA	09/09/18 05:30	OP14905A	E3P3371
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene [a]	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.050	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.10	ug/l	
91-20-3	Naphthalene	ND	0.10	ug/l	
85-01-8	Phenanthrene	0.166	0.10	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	85%		29-124%
321-60-8	2-Fluorobiphenyl	60%		23-122%
1718-51-0	Terphenyl-d14	65%		22-130%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JC73306-3	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G94599.D	1	09/10/18 04:00	CP	09/08/18 12:00	OP14907	G4G2520
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

Pesticide RCP List

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	0.0050	ug/l	
15972-60-8	Alachlor	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.0050	ug/l	
319-85-7	beta-BHC	ND	0.0050	ug/l	
319-86-8	delta-BHC	ND	0.0050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.0050	ug/l	
12789-03-6	Chlordane	ND	0.25	ug/l	
60-57-1	Dieldrin	ND	0.0050	ug/l	
72-54-8	4,4'-DDD	ND	0.0050	ug/l	
72-55-9	4,4'-DDE	ND	0.0050	ug/l	
50-29-3	4,4'-DDT	ND	0.0050	ug/l	
72-20-8	Endrin	ND	0.0050	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.0050	ug/l	
7421-93-4	Endrin aldehyde	ND	0.0050	ug/l	
53494-70-5	Endrin ketone	ND	0.0050	ug/l	
959-98-8	Endosulfan-I	ND	0.0050	ug/l	
33213-65-9	Endosulfan-II	ND	0.0050	ug/l	
76-44-8	Heptachlor	ND	0.0050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.0050	ug/l	
72-43-5	Methoxychlor	ND	0.010	ug/l	
8001-35-2	Toxaphene	ND	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	79%		13-153%
877-09-8	Tetrachloro-m-xylene	77%		13-153%
2051-24-3	Decachlorobiphenyl	36%		10-138%
2051-24-3	Decachlorobiphenyl	30%		10-138%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JC73306-3	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX235360.D	1	09/11/18 01:32	SK	09/08/18 12:00	OP14906	GXX6467
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	88%		11-166%
877-09-8	Tetrachloro-m-xylene	88%		11-166%
2051-24-3	Decachlorobiphenyl	36%		10-150%
2051-24-3	Decachlorobiphenyl	39%		10-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JC73306-3	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
Method:	CT-ETPH SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8Z29974.D	1	09/12/18 15:20	TL	09/11/18 16:00	OP14914	G8Z1146
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-DRO (C9-C36)	ND	0.10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	67%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JC73306-3	**Date Sampled:**	09/05/18
Matrix:	AQ - Ground Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	Stafford T-210, Stafford, CT		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Copper [a]	449	100	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Lead [a]	84.0	30	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Zinc [a]	311	200	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA45228
(2) Prep QC Batch: MP9008

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JC73306-3F	**Date Sampled:**	09/05/18
Matrix:	AQ - Groundwater Filtered	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	Stafford T-210, Stafford, CT		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Copper	< 10	10	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Lead	< 3.0	3.0	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Zinc	< 20	20	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA45228
(2) Prep QC Batch: MP9008

RL = Reporting Limit

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JC73306-4	**Date Sampled:**	09/05/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D141314.D	1	09/08/18 18:02	JTP	n/a	n/a	V3D6020
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	13.3	10	ug/l	
107-13-1	Acrylonitrile	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform [b]	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JC73306-4	**Date Sampled:**	09/05/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%

ND = Not detected
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E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JC73306-4	**Date Sampled:**	09/05/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	98%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

(a) Response factor for this compound is below 0.05 in the inital and continuing calibrations.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JC73306-4	**Date Sampled:**	09/05/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P53666.D	1	09/09/18 21:54	KLS	09/09/18 05:30	OP14905	E5P2547
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN RCP list without PAHs

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	4.8	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	ug/l	
120-83-2	2,4-Dichlorophenol	ND	1.9	ug/l	
105-67-9	2,4-Dimethylphenol [a]	ND	4.8	ug/l	
51-28-5	2,4-Dinitrophenol [b]	ND	4.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol [c]	ND	4.8	ug/l	
95-48-7	2-Methylphenol	ND	1.9	ug/l	
	3&4-Methylphenol	ND	1.9	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	ug/l	
100-02-7	4-Nitrophenol	ND	9.6	ug/l	
87-86-5	Pentachlorophenol [a]	ND	3.8	ug/l	
108-95-2	Phenol	ND	1.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	ug/l	
62-53-3	Aniline	ND	1.9	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	1.9	ug/l	
85-68-7	Butyl benzyl phthalate	ND	1.9	ug/l	
91-58-7	2-Chloronaphthalene	ND	1.9	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	ug/l	
86-74-8	Carbazole	ND	0.96	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	1.9	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.9	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	1.9	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1.9	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.96	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.96	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	1.9	ug/l	
132-64-9	Dibenzofuran	ND	4.8	ug/l	
84-74-2	Di-n-butyl phthalate	ND	1.9	ug/l	
117-84-0	Di-n-octyl phthalate	ND	1.9	ug/l	
84-66-2	Diethyl phthalate	ND	1.9	ug/l	
131-11-3	Dimethyl phthalate	ND	1.9	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JC73306-4	**Date Sampled:**	09/05/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

ABN RCP list without PAHs

CAS No.	Compound	Result	RL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1.9	ug/l	
118-74-1	Hexachlorobenzene	ND	0.96	ug/l	
87-68-3	Hexachlorobutadiene	ND	0.96	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.6	ug/l	
67-72-1	Hexachloroethane	ND	1.9	ug/l	
78-59-1	Isophorone	ND	1.9	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.96	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	ug/l	
98-95-3	Nitrobenzene	ND	1.9	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	1.9	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	ug/l	
82-68-8	Pentachloronitrobenzene	ND	4.8	ug/l	
110-86-1	Pyridine [a]	ND	1.9	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1.9	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		10-110%
4165-62-2	Phenol-d5	26%		10-110%
118-79-6	2,4,6-Tribromophenol	66%		36-151%
4165-60-0	Nitrobenzene-d5	89%		34-128%
321-60-8	2-Fluorobiphenyl	74%		38-119%
1718-51-0	Terphenyl-d14	62%		26-129%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits high, sample was ND. Quadratic regression was employed for this compound in associated ICAL.
(c) Quadratic regression was employed for this compound in associated ICAL.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JC73306-4	**Date Sampled:**	09/05/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P71142.D	1	09/11/18 03:26	SA	09/09/18 05:30	OP14905A	E3P3371
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.096	ug/l	
208-96-8	Acenaphthylene [a]	ND	0.096	ug/l	
120-12-7	Anthracene	ND	0.096	ug/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.048	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.048	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.096	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.096	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.096	ug/l	
218-01-9	Chrysene	ND	0.096	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.096	ug/l	
206-44-0	Fluoranthene	ND	0.096	ug/l	
86-73-7	Fluorene	ND	0.096	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.096	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.096	ug/l	
91-20-3	Naphthalene	ND	0.096	ug/l	
85-01-8	Phenanthrene	ND	0.096	ug/l	
129-00-0	Pyrene	ND	0.096	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		29-124%
321-60-8	2-Fluorobiphenyl	63%		23-122%
1718-51-0	Terphenyl-d14	48%		22-130%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JC73306-4	**Date Sampled:**	09/05/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G94600.D	1	09/10/18 04:17	CP	09/08/18 12:00	OP14907	G4G2520
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

Pesticide RCP List

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	0.0050	ug/l	
15972-60-8	Alachlor	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.0050	ug/l	
319-85-7	beta-BHC	ND	0.0050	ug/l	
319-86-8	delta-BHC	ND	0.0050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.0050	ug/l	
12789-03-6	Chlordane	ND	0.25	ug/l	
60-57-1	Dieldrin	ND	0.0050	ug/l	
72-54-8	4,4'-DDD	ND	0.0050	ug/l	
72-55-9	4,4'-DDE	ND	0.0050	ug/l	
50-29-3	4,4'-DDT	ND	0.0050	ug/l	
72-20-8	Endrin	ND	0.0050	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.0050	ug/l	
7421-93-4	Endrin aldehyde	ND	0.0050	ug/l	
53494-70-5	Endrin ketone	ND	0.0050	ug/l	
959-98-8	Endosulfan-I	ND	0.0050	ug/l	
33213-65-9	Endosulfan-II	ND	0.0050	ug/l	
76-44-8	Heptachlor	ND	0.0050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.0050	ug/l	
72-43-5	Methoxychlor	ND	0.010	ug/l	
8001-35-2	Toxaphene	ND	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		13-153%
877-09-8	Tetrachloro-m-xylene	98%		13-153%
2051-24-3	Decachlorobiphenyl	90%		10-138%
2051-24-3	Decachlorobiphenyl	74%		10-138%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JC73306-4	**Date Sampled:**	09/05/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX235361.D	1	09/11/18 01:51	SK	09/08/18 12:00	OP14906	GXX6467
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	109%		11-166%
877-09-8	Tetrachloro-m-xylene	108%		11-166%
2051-24-3	Decachlorobiphenyl	88%		10-150%
2051-24-3	Decachlorobiphenyl	95%		10-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JC73306-4	**Date Sampled:**	09/05/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	CT-ETPH SW846 3510C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8Z29975.D	1	09/12/18 15:57	TL	09/11/18 16:00	OP14914	G8Z1146
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-DRO (C9-C36)	ND	0.10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	57%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JC73306-4	**Date Sampled:**	09/05/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	Stafford T-210, Stafford, CT		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Copper	< 10	10	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Lead	< 3.0	3.0	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Zinc	< 20	20	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA45228
(2) Prep QC Batch: MP9008

RL = Reporting Limit

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JC73306-4F	**Date Sampled:**	09/05/18
Matrix:	AQ - Equip Blank Filtered	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	Stafford T-210, Stafford, CT		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Copper	< 10	10	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Lead	< 3.0	3.0	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]
Zinc	< 20	20	ug/l	1	09/10/18	09/11/18	GT	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA45228
(2) Prep QC Batch: MP9008

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	JC73306-5	**Date Sampled:**	09/05/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D141315.D	1	09/08/18 18:28	JTP	n/a	n/a	V3D6020
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
107-13-1	Acrylonitrile	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform [b]	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	JC73306-5	**Date Sampled:**	09/05/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	JC73306-5	**Date Sampled:**	09/05/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Stafford T-210, Stafford, CT		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	106%		80-120%

(a) Response factor for this compound is below 0.05 in the inital and continuing calibrations.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle
- QC Evaluation: CT RCP Limits

Parameter Certification Exceptions

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Alachlor	15972-60-8	SW846 8081B	AQ	SGS is not certified for this parameter.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

SGS

GW, EB WTB

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

PAGE 1 OF 1

FED-EX Tracking #	Bottle Order Control #
SGS Quote # Pm7-2-8-519	SGS Job # JC73306

Client / Reporting Information

- Company Name: BL Companies
- Street Address: 355 Research Parkway
- City: Meriden State: CT Zip: 06450
- Project Contact: Joy Kloss E-mail: Jkloss@blcompanies.com
- Phone #: 203-630-1406 Fax #: 203-630-2615
- Sampler(s) Name(s): Eric Andrulat Phone #: 203 608 2446

Project Information

- Project Name: Stafford T-210
- Street: -
- City: Stafford State: CT
- Project #: 18EC0065
- Client Purchase Order #:
- Project Manager: Joy Kloss

Billing Information (if different from Report to)

- Company Name: BL Companies
- Street Address: 355 Research Parkway
- City: Meriden State: CT Zip: 06450
- Attention: Project AP@blcompanies.com

Requested Analysis (see TEST CODE sheet): VOCs by 8260; SVOCs by 8270; ETPH by CT ETPH Method; PCBs by 8082; Pesticides by 8081; Total Lead, Copper, Zinc; Dissolved Lead, Copper, Zinc

Matrix Codes: ~~DW - Drinking Water~~; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	VOCs 8260	SVOCs 8270	ETPH	PCBs 8082	Pesticides 8081	Total Lead, Copper, Zinc	Dissolved Lead, Copper, Zinc	LAB USE ONLY
1F	TW-1		9/5/18	12:38	EAA	GW	13	3		2		8				X	X	X	X	X	X	X	
2F	TW-2		↓	14:16	↓	↓	↓	↓		↓		↓				X	X	X	X	X	X	X	EFLK
3F	Duplicate		↓	13:33	↓	↓	↓	↓		↓		↓				X	X	X	X	X	X	X	A29
4F	Equipment Blank		↓	13:45	↓	EB	↓	↓		↓		↓				X	X	X	X	X	X	X	V244
5	Trip blank		↓	15:00	↓	TB	2	2								X							

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [x] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available via LabLink

Approved by (SGS Project Manager)/Date:

INITIAL ASSESSMENT 3A

LABEL VERIFICATION

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other Data + RCP

Commercial "A" = Results Only; Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

* 5-day Turnaround
* One duplicate, Equipment, and trip blank included
* Dissolved metals filtered in field

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	9/5/18 16:00	1 BL Fridge	2 [signature]	9/6 1000	2 [signature]
3 [signature]	9-6-18 1930	3 [signature]	4 [signature]	9/6/18 2030	4 [signature]
5 [signature]	9-7-18 2:33	5 [signature]	Custody Seal # 8137	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp.

8137, 8139, 8140, 8104

SGS-ACCUTEST MARLBOR

5 coolers

04.3 C/P
02.6 C/P
01.8 C/P
02.1 C/P
02.8 C/P

SGS-ACCUTEST MARLBOR 9/6

Form:SM088-03C (revised 2/12/18)

http://www.sgs.com/en/terms-and-conditions.

JC73306: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JC73306 **Client:** _____ **Project:** _____

Date / Time Received: 9/6/2018 7:30:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (4.3); Cooler 2: (2.6); Cooler 3: (1.8); Cooler 4: (2.1); Cooler 5: (2.8);

Cooler Temps (Corrected) °C: Cooler 1: (3.7); Cooler 2: (2.0); Cooler 3: (1.2); Cooler 4: (1.5); Cooler 5: (2.2);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	5		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 216017 pH 12+: 208717 Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

Reasonable Confidence Protocol
Laboratory Analysis
QA/QC Certification Form

Laboratory Name: SGS North America Inc. **Client:** BL Companies

Project Location: Stafford T-210, Stafford, CT **Project Number:** 18EC0065

Sampling Date(s): 9/5/2018

Laboratory Sample ID(s): JC73306-1, JC73306-2, JC73306-3, JC73306-4, JC73306-5, JC73306-1F, JC73306-2F, JC73306-3F, JC73306-4F

Methods: Refer to case narrative.

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes ☑ No ☐
1A	Where all the method specified preservation and holding time requirements met?	Yes ☑ No ☐
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes ☐ No ☐ NA ☑
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes ☑ No ☐
3	Were samples received at an appropriate temperature (<6° C)?	Yes ☑ No ☐
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes ☐ No ☑
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes ☑ No ☐
	b) Were these reporting limits met?	Yes ☐ No ☑
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes ☐ No ☑
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes ☐ No ☑

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: Position: General Manager

Printed Name: **A. Paul Ioannidis** Date: 9/14/2018

Internal Sample Tracking Chronicle

BL Companies

Job No: JC73306

Stafford T-210, Stafford, CT
Project No: 18EC0065

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC73306-1 TW-1	Collected: 05-SEP-18 12:38 By: EAA		Received: 06-SEP-18 By: MH			
JC73306-1	SW846 8260C	08-SEP-18 19:43	JTP			V8260RCP
JC73306-1	SW846 8270D	09-SEP-18 23:59	KLS	09-SEP-18	AA	AB8270RCP-PAH
JC73306-1	SW846 8081B	10-SEP-18 03:26	CP	08-SEP-18	VP	P8081RCP
JC73306-1	SW846 8082A	11-SEP-18 00:56	SK	08-SEP-18	VP	P8082RCP
JC73306-1	SW846 6010D	11-SEP-18 03:37	GT	10-SEP-18	RM	CU,PB,ZN
JC73306-1	SW846 8270D BY SIM	11-SEP-18 05:22	SA	09-SEP-18	AA	B8270SIMPAH+2MNAP
JC73306-1	CT-ETPH	12-SEP-18 19:44	TL	11-SEP-18	SA	BCTTPH
JC73306-2 TW-2	Collected: 05-SEP-18 14:16 By: EAA		Received: 06-SEP-18 By: MH			
JC73306-2	SW846 8260C	08-SEP-18 20:33	JTP			V8260RCP
JC73306-2	SW846 8270D	10-SEP-18 00:50	KLS	09-SEP-18	AA	AB8270RCP-PAH
JC73306-2	SW846 8081B	10-SEP-18 03:43	CP	08-SEP-18	VP	P8081RCP
JC73306-2	SW846 8082A	11-SEP-18 01:14	SK	08-SEP-18	VP	P8082RCP
JC73306-2	SW846 6010D	11-SEP-18 03:42	GT	10-SEP-18	RM	CU,PB,ZN
JC73306-2	SW846 8270D BY SIM	11-SEP-18 10:24	SA	09-SEP-18	AA	B8270SIMPAH+2MNAP
JC73306-2	CT-ETPH	12-SEP-18 20:22	TL	11-SEP-18	SA	BCTTPH
JC73306-3 DUPLICATE	Collected: 05-SEP-18 13:33 By: EAA		Received: 06-SEP-18 By: MH			
JC73306-3	SW846 8260C	08-SEP-18 20:08	JTP			V8260RCP
JC73306-3	SW846 8270D	10-SEP-18 00:25	KLS	09-SEP-18	AA	AB8270RCP-PAH
JC73306-3	SW846 8081B	10-SEP-18 04:00	CP	08-SEP-18	VP	P8081RCP
JC73306-3	SW846 8082A	11-SEP-18 01:32	SK	08-SEP-18	VP	P8082RCP
JC73306-3	SW846 6010D	11-SEP-18 03:48	GT	10-SEP-18	RM	CU,PB,ZN
JC73306-3	SW846 8270D BY SIM	11-SEP-18 05:45	SA	09-SEP-18	AA	B8270SIMPAH+2MNAP
JC73306-3	CT-ETPH	12-SEP-18 15:20	TL	11-SEP-18	SA	BCTTPH
JC73306-4 EQUIPMENT BLANK	Collected: 05-SEP-18 13:45 By: EAA		Received: 06-SEP-18 By: MH			
JC73306-4	SW846 8260C	08-SEP-18 18:02	JTP			V8260RCP
JC73306-4	SW846 8270D	09-SEP-18 21:54	KLS	09-SEP-18	AA	AB8270RCP-PAH
JC73306-4	SW846 8081B	10-SEP-18 04:17	CP	08-SEP-18	VP	P8081RCP
JC73306-4	SW846 8082A	11-SEP-18 01:51	SK	08-SEP-18	VP	P8082RCP

Internal Sample Tracking Chronicle

BL Companies

Job No: JC73306

Stafford T-210, Stafford, CT
Project No: 18EC0065

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC73306-4	SW846 8270D BY SIM	11-SEP-18 03:26	SA	09-SEP-18	AA	B8270SIMPAH + 2MNAP
JC73306-4	SW846 6010D	11-SEP-18 03:53	GT	10-SEP-18	RM	CU,PB,ZN
JC73306-4	CT-ETPH	12-SEP-18 15:57	TL	11-SEP-18	SA	BCTTPH
JC73306-5	Collected: 05-SEP-18 13:45 By: EAA		Received: 06-SEP-18 By: MH			
TRIP BLANK						
JC73306-5	SW846 8260C	08-SEP-18 18:28	JTP			V8260RCP
JC73306-1F	Collected: 05-SEP-18 12:38 By: EAA		Received: 06-SEP-18 By: MH			
TW-1						
JC73306-1F	SW846 6010D	11-SEP-18 03:59	GT	10-SEP-18	RM	CU,PB,ZN
JC73306-2F	Collected: 05-SEP-18 14:16 By: EAA		Received: 06-SEP-18 By: MH			
TW-2						
JC73306-2F	SW846 6010D	11-SEP-18 04:04	GT	10-SEP-18	RM	CU,PB,ZN
JC73306-3F	Collected: 05-SEP-18 13:33 By: EAA		Received: 06-SEP-18 By: MH			
DUPLICATE						
JC73306-3F	SW846 6010D	11-SEP-18 04:20	GT	10-SEP-18	RM	CU,PB,ZN
JC73306-4F	Collected: 05-SEP-18 13:45 By: EAA		Received: 06-SEP-18 By: MH			
EQUIPMENT BLANK						
JC73306-4F	SW846 6010D	11-SEP-18 04:26	GT	10-SEP-18	RM	CU,PB,ZN

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V3D6020	SW846 8260C						
V3D6020-BS	67-64-1	Acetone	BSP	REC	100	%	70-130
V3D6020-BS	107-13-1	Acrylonitrile	BSP	REC	104	%	70-130
V3D6020-BS	71-43-2	Benzene	BSP	REC	100	%	70-130
V3D6020-BS	108-86-1	Bromobenzene	BSP	REC	107	%	70-130
V3D6020-BS	75-27-4	Bromodichloromethane	BSP	REC	111	%	70-130
V3D6020-BS	75-25-2	Bromoform	BSP	REC	123	%	70-130
V3D6020-BS	74-83-9	Bromomethane	BSP	REC	79	%	70-130
V3D6020-BS	78-93-3	2-Butanone (MEK)	BSP	REC	99	%	70-130
V3D6020-BS	104-51-8	n-Butylbenzene	BSP	REC	108	%	70-130
V3D6020-BS	135-98-8	sec-Butylbenzene	BSP	REC	105	%	70-130
V3D6020-BS	98-06-6	tert-Butylbenzene	BSP	REC	105	%	70-130
V3D6020-BS	75-15-0	Carbon disulfide	BSP	REC	103	%	70-130
V3D6020-BS	56-23-5	Carbon tetrachloride	BSP	REC	102	%	70-130
V3D6020-BS	108-90-7	Chlorobenzene	BSP	REC	100	%	70-130
V3D6020-BS	75-00-3	Chloroethane	BSP	REC	76	%	70-130
V3D6020-BS	67-66-3	Chloroform	BSP	REC	96	%	70-130
V3D6020-BS	74-87-3	Chloromethane	BSP	REC	87	%	70-130
V3D6020-BS	95-49-8	o-Chlorotoluene	BSP	REC	106	%	70-130
V3D6020-BS	106-43-4	p-Chlorotoluene	BSP	REC	104	%	70-130
V3D6020-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	113	%	70-130
V3D6020-BS	124-48-1	Dibromochloromethane	BSP	REC	117	%	70-130
V3D6020-BS	106-93-4	1,2-Dibromoethane	BSP	REC	106	%	70-130
V3D6020-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	102	%	70-130
V3D6020-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	104	%	70-130
V3D6020-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	103	%	70-130
V3D6020-BS	110-57-6	trans-1,4-Dichloro-2-Butene	BSP	REC	109	%	70-130
V3D6020-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	87	%	70-130
V3D6020-BS	75-34-3	1,1-Dichloroethane	BSP	REC	99	%	70-130
V3D6020-BS	107-06-2	1,2-Dichloroethane	BSP	REC	92	%	70-130
V3D6020-BS	75-35-4	1,1-Dichloroethene	BSP	REC	102	%	70-130
V3D6020-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	100	%	70-130
V3D6020-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	99	%	70-130
V3D6020-BS	78-87-5	1,2-Dichloropropane	BSP	REC	104	%	70-130
V3D6020-BS	142-28-9	1,3-Dichloropropane	BSP	REC	100	%	70-130
V3D6020-BS	594-20-7	2,2-Dichloropropane	BSP	REC	95	%	70-130
V3D6020-BS	563-58-6	1,1-Dichloropropene	BSP	REC	99	%	70-130
V3D6020-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	104	%	70-130
V3D6020-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	109	%	70-130
V3D6020-BS	100-41-4	Ethylbenzene	BSP	REC	101	%	70-130
V3D6020-BS	76-13-1	Freon 113	BSP	REC	97	%	70-130
V3D6020-BS	87-68-3	Hexachlorobutadiene	BSP	REC	104	%	70-130
V3D6020-BS	591-78-6	2-Hexanone	BSP	REC	107	%	70-130

* Sample used for QC is not from job JC73306

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V3D6020-BS	98-82-8	Isopropylbenzene	BSP	REC	102	%	70-130
V3D6020-BS	99-87-6	p-Isopropyltoluene	BSP	REC	105	%	70-130
V3D6020-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	98	%	70-130
V3D6020-BS	108-10-1	4-Methyl-2-pentanone(MIBK)	BSP	REC	105	%	70-130
V3D6020-BS	74-95-3	Methylene bromide	BSP	REC	101	%	70-130
V3D6020-BS	75-09-2	Methylene chloride	BSP	REC	94	%	70-130
V3D6020-BS	91-20-3	Naphthalene	BSP	REC	107	%	70-130
V3D6020-BS	103-65-1	n-Propylbenzene	BSP	REC	105	%	70-130
V3D6020-BS	100-42-5	Styrene	BSP	REC	103	%	70-130
V3D6020-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	107	%	70-130
V3D6020-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	106	%	70-130
V3D6020-BS	127-18-4	Tetrachloroethene	BSP	REC	108	%	70-130
V3D6020-BS	109-99-9	Tetrahydrofuran	BSP	REC	99	%	70-130
V3D6020-BS	108-88-3	Toluene	BSP	REC	100	%	70-130
V3D6020-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	109	%	70-130
V3D6020-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	112	%	70-130
V3D6020-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	99	%	70-130
V3D6020-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	106	%	70-130
V3D6020-BS	79-01-6	Trichloroethene	BSP	REC	102	%	70-130
V3D6020-BS	75-69-4	Trichlorofluoromethane	BSP	REC	96	%	70-130
V3D6020-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	103	%	70-130
V3D6020-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	100	%	70-130
V3D6020-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	105	%	70-130
V3D6020-BS	75-01-4	Vinyl chloride	BSP	REC	79	%	70-130
V3D6020-BS		m,p-Xylene	BSP	REC	100	%	70-130
V3D6020-BS	95-47-6	o-Xylene	BSP	REC	102	%	70-130
V3D6020-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	96	%	70-130
V3D6020-BS	2037-26-5	Toluene-D8	BSP	SURR	99	%	70-130
V3D6020-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	102	%	70-130
V3D6020-MB	1868-53-7	Dibromofluoromethane	MB	SURR	97	%	70-130
V3D6020-MB	2037-26-5	Toluene-D8	MB	SURR	99	%	70-130
V3D6020-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	103	%	70-130
JC73306-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	70-130
JC73306-1	2037-26-5	Toluene-D8	SAMP	SURR	99	%	70-130
JC73306-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	105	%	70-130
JC73306-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	70-130
JC73306-2	2037-26-5	Toluene-D8	SAMP	SURR	99	%	70-130
JC73306-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	107	%	70-130
JC73306-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	101	%	70-130
JC73306-3	2037-26-5	Toluene-D8	SAMP	SURR	100	%	70-130
JC73306-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	105	%	70-130
JC73306-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	70-130
JC73306-4	2037-26-5	Toluene-D8	SAMP	SURR	99	%	70-130
JC73306-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	104	%	70-130
JC73306-5	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	70-130

* Sample used for QC is not from job JC73306

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC73306-5	2037-26-5	Toluene-D8	SAMP	SURR	100	%	70-130
JC73306-5	460-00-4	4-Bromofluorobenzene	SAMP	SURR	106	%	70-130
OP14905	SW846 8270D						
OP14905-BS1	95-57-8	2-Chlorophenol	BSP	REC	76	%	30-130
OP14905-BS1	59-50-7	4-Chloro-3-methyl phenol	BSP	REC	86	%	30-130
OP14905-BS1	120-83-2	2,4-Dichlorophenol	BSP	REC	83	%	30-130
OP14905-BS1	105-67-9	2,4-Dimethylphenol	BSP	REC	105	%	30-130
OP14905-BS1	51-28-5	2,4-Dinitrophenol	BSP	REC	81	%	30-130
OP14905-BS1	534-52-1	4,6-Dinitro-o-cresol	BSP	REC	86	%	30-130
OP14905-BS1	95-48-7	2-Methylphenol	BSP	REC	78	%	30-130
OP14905-BS1		3&4-Methylphenol	BSP	REC	76	%	30-130
OP14905-BS1	88-75-5	2-Nitrophenol	BSP	REC	81	%	30-130
OP14905-BS1	100-02-7	4-Nitrophenol	BSP	REC	49	%	30-130
OP14905-BS1	87-86-5	Pentachlorophenol	BSP	REC	106	%	30-130
OP14905-BS1	108-95-2	Phenol	BSP	REC	48	%	30-130
OP14905-BS1	95-95-4	2,4,5-Trichlorophenol	BSP	REC	77	%	30-130
OP14905-BS1	88-06-2	2,4,6-Trichlorophenol	BSP	REC	83	%	30-130
OP14905-BS1	62-53-3	Aniline	BSP	REC	76	%	40-140
OP14905-BS1	101-55-3	4-Bromophenyl phenyl ether	BSP	REC	90	%	40-140
OP14905-BS1	85-68-7	Butyl benzyl phthalate	BSP	REC	78	%	40-140
OP14905-BS1	91-58-7	2-Chloronaphthalene	BSP	REC	66	%	40-140
OP14905-BS1	106-47-8	4-Chloroaniline	BSP	REC	50	%	40-140
OP14905-BS1	86-74-8	Carbazole	BSP	REC	82	%	40-140
OP14905-BS1	111-91-1	bis(2-Chloroethoxy)methane	BSP	REC	96	%	40-140
OP14905-BS1	111-44-4	bis(2-Chloroethyl)ether	BSP	REC	95	%	40-140
OP14905-BS1	108-60-1	2,2'-Oxybis(1-chloropropane)	BSP	REC	104	%	40-140
OP14905-BS1	7005-72-3	4-Chlorophenyl phenyl ether	BSP	REC	80	%	40-140
OP14905-BS1	121-14-2	2,4-Dinitrotoluene	BSP	REC	77	%	40-140
OP14905-BS1	606-20-2	2,6-Dinitrotoluene	BSP	REC	77	%	40-140
OP14905-BS1	91-94-1	3,3'-Dichlorobenzidine	BSP	REC	54	%	40-140
OP14905-BS1	132-64-9	Dibenzofuran	BSP	REC	73	%	40-140
OP14905-BS1	84-74-2	Di-n-butyl phthalate	BSP	REC	81	%	40-140
OP14905-BS1	117-84-0	Di-n-octyl phthalate	BSP	REC	76	%	40-140
OP14905-BS1	84-66-2	Diethyl phthalate	BSP	REC	76	%	40-140
OP14905-BS1	131-11-3	Dimethyl phthalate	BSP	REC	77	%	40-140
OP14905-BS1	117-81-7	bis(2-Ethylhexyl)phthalate	BSP	REC	79	%	40-140
OP14905-BS1	118-74-1	Hexachlorobenzene	BSP	REC	85	%	40-140
OP14905-BS1	87-68-3	Hexachlorobutadiene	BSP	REC	72	%	40-140
OP14905-BS1	77-47-4	Hexachlorocyclopentadiene	BSP	REC	63	%	40-140
OP14905-BS1	67-72-1	Hexachloroethane	BSP	REC	61	%	40-140
OP14905-BS1	78-59-1	Isophorone	BSP	REC	95	%	40-140
OP14905-BS1	91-57-6	2-Methylnaphthalene	BSP	REC	70	%	40-140
OP14905-BS1	88-74-4	2-Nitroaniline	BSP	REC	86	%	40-140

* Sample used for QC is not from job JC73306

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP14905-BS1	99-09-2	3-Nitroaniline	BSP	REC	56	%	40-140
OP14905-BS1	100-01-6	4-Nitroaniline	BSP	REC	69	%	40-140
OP14905-BS1	98-95-3	Nitrobenzene	BSP	REC	93	%	40-140
OP14905-BS1	621-64-7	N-Nitroso-di-n-propylamine	BSP	REC	93	%	40-140
OP14905-BS1	86-30-6	N-Nitrosodiphenylamine	BSP	REC	77	%	40-140
OP14905-BS1	82-68-8	Pentachloronitrobenzene	BSP	REC	77	%	40-140
OP14905-BS1	110-86-1	Pyridine	BSP	REC	61	%	40-140
OP14905-BS1	95-94-3	1,2,4,5-Tetrachlorobenzene	BSP	REC	50	%	40-140
OP14905-BS1	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	70	%	40-140
OP14905-BS1	367-12-4	2-Fluorophenol	BSP	SURR	59	%	15-110
OP14905-BS1	4165-62-2	Phenol-d5	BSP	SURR	44	%	15-110
OP14905-BS1	118-79-6	2,4,6-Tribromophenol	BSP	SURR	80	%	15-110
OP14905-BS1	4165-60-0	Nitrobenzene-d5	BSP	SURR	88	%	30-130
OP14905-BS1	321-60-8	2-Fluorobiphenyl	BSP	SURR	70	%	30-130
OP14905-BS1	1718-51-0	Terphenyl-d14	BSP	SURR	91	%	30-130
OP14905-BSD	95-57-8	2-Chlorophenol	BSD	REC	76	%	30-130
OP14905-BSD	95-57-8	2-Chlorophenol	BSD	RPD	1	%	20
OP14905-BSD	59-50-7	4-Chloro-3-methyl phenol	BSD	REC	88	%	30-130
OP14905-BSD	59-50-7	4-Chloro-3-methyl phenol	BSD	RPD	3	%	20
OP14905-BSD	120-83-2	2,4-Dichlorophenol	BSD	REC	86	%	30-130
OP14905-BSD	120-83-2	2,4-Dichlorophenol	BSD	RPD	4	%	20
OP14905-BSD	105-67-9	2,4-Dimethylphenol	BSD	REC	111	%	30-130
OP14905-BSD	105-67-9	2,4-Dimethylphenol	BSD	RPD	5	%	20
OP14905-BSD	51-28-5	2,4-Dinitrophenol	BSD	REC	88	%	30-130
OP14905-BSD	51-28-5	2,4-Dinitrophenol	BSD	RPD	8	%	20
OP14905-BSD	534-52-1	4,6-Dinitro-o-cresol	BSD	REC	89	%	30-130
OP14905-BSD	534-52-1	4,6-Dinitro-o-cresol	BSD	RPD	4	%	20
OP14905-BSD	95-48-7	2-Methylphenol	BSD	REC	79	%	30-130
OP14905-BSD	95-48-7	2-Methylphenol	BSD	RPD	2	%	20
OP14905-BSD		3&4-Methylphenol	BSD	REC	77	%	30-130
OP14905-BSD		3&4-Methylphenol	BSD	RPD	1	%	20
OP14905-BSD	88-75-5	2-Nitrophenol	BSD	REC	84	%	30-130
OP14905-BSD	88-75-5	2-Nitrophenol	BSD	RPD	3	%	20
OP14905-BSD	100-02-7	4-Nitrophenol	BSD	REC	54	%	30-130
OP14905-BSD	100-02-7	4-Nitrophenol	BSD	RPD	9	%	20
OP14905-BSD	87-86-5	Pentachlorophenol	BSD	REC	110	%	30-130
OP14905-BSD	87-86-5	Pentachlorophenol	BSD	RPD	4	%	20
OP14905-BSD	108-95-2	Phenol	BSD	REC	48	%	30-130
OP14905-BSD	108-95-2	Phenol	BSD	RPD	0	%	20
OP14905-BSD	95-95-4	2,4,5-Trichlorophenol	BSD	REC	86	%	30-130
OP14905-BSD	95-95-4	2,4,5-Trichlorophenol	BSD	RPD	11	%	20
OP14905-BSD	88-06-2	2,4,6-Trichlorophenol	BSD	REC	86	%	30-130
OP14905-BSD	88-06-2	2,4,6-Trichlorophenol	BSD	RPD	4	%	20
OP14905-BSD	62-53-3	Aniline	BSD	REC	76	%	40-140
OP14905-BSD	62-53-3	Aniline	BSD	RPD	1	%	20

* Sample used for QC is not from job JC73306

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP14905-BSD	101-55-3	4-Bromophenyl phenyl ether	BSD	REC	91	%	40-140
OP14905-BSD	101-55-3	4-Bromophenyl phenyl ether	BSD	RPD	1	%	20
OP14905-BSD	85-68-7	Butyl benzyl phthalate	BSD	REC	83	%	40-140
OP14905-BSD	85-68-7	Butyl benzyl phthalate	BSD	RPD	5	%	20
OP14905-BSD	91-58-7	2-Chloronaphthalene	BSD	REC	68	%	40-140
OP14905-BSD	91-58-7	2-Chloronaphthalene	BSD	RPD	3	%	20
OP14905-BSD	106-47-8	4-Chloroaniline	BSD	REC	53	%	40-140
OP14905-BSD	106-47-8	4-Chloroaniline	BSD	RPD	5	%	20
OP14905-BSD	86-74-8	Carbazole	BSD	REC	86	%	40-140
OP14905-BSD	86-74-8	Carbazole	BSD	RPD	5	%	20
OP14905-BSD	111-91-1	bis(2-Chloroethoxy)methane	BSD	REC	101	%	40-140
OP14905-BSD	111-91-1	bis(2-Chloroethoxy)methane	BSD	RPD	5	%	20
OP14905-BSD	111-44-4	bis(2-Chloroethyl)ether	BSD	REC	99	%	40-140
OP14905-BSD	111-44-4	bis(2-Chloroethyl)ether	BSD	RPD	4	%	20
OP14905-BSD	108-60-1	2,2'-Oxybis(1-chloropropane)	BSD	REC	110 [a]	%	40-140
OP14905-BSD	108-60-1	2,2'-Oxybis(1-chloropropane)	BSD	RPD	5	%	20
OP14905-BSD	7005-72-3	4-Chlorophenyl phenyl ether	BSD	REC	84	%	40-140
OP14905-BSD	7005-72-3	4-Chlorophenyl phenyl ether	BSD	RPD	5	%	20
OP14905-BSD	121-14-2	2,4-Dinitrotoluene	BSD	REC	85	%	40-140
OP14905-BSD	121-14-2	2,4-Dinitrotoluene	BSD	RPD	11	%	20
OP14905-BSD	606-20-2	2,6-Dinitrotoluene	BSD	REC	84	%	40-140
OP14905-BSD	606-20-2	2,6-Dinitrotoluene	BSD	RPD	8	%	20
OP14905-BSD	91-94-1	3,3'-Dichlorobenzidine	BSD	REC	61	%	40-140
OP14905-BSD	91-94-1	3,3'-Dichlorobenzidine	BSD	RPD	12	%	20
OP14905-BSD	132-64-9	Dibenzofuran	BSD	REC	75	%	40-140
OP14905-BSD	132-64-9	Dibenzofuran	BSD	RPD	4	%	20
OP14905-BSD	84-74-2	Di-n-butyl phthalate	BSD	REC	86	%	40-140
OP14905-BSD	84-74-2	Di-n-butyl phthalate	BSD	RPD	6	%	20
OP14905-BSD	117-84-0	Di-n-octyl phthalate	BSD	REC	80	%	40-140
OP14905-BSD	117-84-0	Di-n-octyl phthalate	BSD	RPD	5	%	20
OP14905-BSD	84-66-2	Diethyl phthalate	BSD	REC	82	%	40-140
OP14905-BSD	84-66-2	Diethyl phthalate	BSD	RPD	9	%	20
OP14905-BSD	131-11-3	Dimethyl phthalate	BSD	REC	83	%	40-140
OP14905-BSD	131-11-3	Dimethyl phthalate	BSD	RPD	8	%	20
OP14905-BSD	117-81-7	bis(2-Ethylhexyl)phthalate	BSD	REC	82	%	40-140
OP14905-BSD	117-81-7	bis(2-Ethylhexyl)phthalate	BSD	RPD	4	%	20
OP14905-BSD	118-74-1	Hexachlorobenzene	BSD	REC	93	%	40-140
OP14905-BSD	118-74-1	Hexachlorobenzene	BSD	RPD	9	%	20
OP14905-BSD	87-68-3	Hexachlorobutadiene	BSD	REC	74	%	40-140
OP14905-BSD	87-68-3	Hexachlorobutadiene	BSD	RPD	4	%	20
OP14905-BSD	77-47-4	Hexachlorocyclopentadiene	BSD	REC	61	%	40-140
OP14905-BSD	77-47-4	Hexachlorocyclopentadiene	BSD	RPD	2	%	20
OP14905-BSD	67-72-1	Hexachloroethane	BSD	REC	62	%	40-140
OP14905-BSD	67-72-1	Hexachloroethane	BSD	RPD	3	%	20
OP14905-BSD	78-59-1	Isophorone	BSD	REC	101	%	40-140

* Sample used for QC is not from job JC73306

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP14905-BSD	78-59-1	Isophorone	BSD	RPD	6	%	20
OP14905-BSD	91-57-6	2-Methylnaphthalene	BSD	REC	70	%	40-140
OP14905-BSD	91-57-6	2-Methylnaphthalene	BSD	RPD	1	%	20
OP14905-BSD	88-74-4	2-Nitroaniline	BSD	REC	91	%	40-140
OP14905-BSD	88-74-4	2-Nitroaniline	BSD	RPD	6	%	20
OP14905-BSD	99-09-2	3-Nitroaniline	BSD	REC	59	%	40-140
OP14905-BSD	99-09-2	3-Nitroaniline	BSD	RPD	6	%	20
OP14905-BSD	100-01-6	4-Nitroaniline	BSD	REC	76	%	40-140
OP14905-BSD	100-01-6	4-Nitroaniline	BSD	RPD	9	%	20
OP14905-BSD	98-95-3	Nitrobenzene	BSD	REC	99	%	40-140
OP14905-BSD	98-95-3	Nitrobenzene	BSD	RPD	6	%	20
OP14905-BSD	621-64-7	N-Nitroso-di-n-propylamine	BSD	REC	98	%	40-140
OP14905-BSD	621-64-7	N-Nitroso-di-n-propylamine	BSD	RPD	6	%	20
OP14905-BSD	86-30-6	N-Nitrosodiphenylamine	BSD	REC	78	%	40-140
OP14905-BSD	86-30-6	N-Nitrosodiphenylamine	BSD	RPD	2	%	20
OP14905-BSD	82-68-8	Pentachloronitrobenzene	BSD	REC	81	%	40-140
OP14905-BSD	82-68-8	Pentachloronitrobenzene	BSD	RPD	5	%	20
OP14905-BSD	110-86-1	Pyridine	BSD	REC	61	%	40-140
OP14905-BSD	110-86-1	Pyridine	BSD	RPD	0	%	20
OP14905-BSD	95-94-3	1,2,4,5-Tetrachlorobenzene	BSD	REC	49	%	40-140
OP14905-BSD	95-94-3	1,2,4,5-Tetrachlorobenzene	BSD	RPD	1	%	20
OP14905-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	REC	71	%	40-140
OP14905-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	RPD	2	%	20
OP14905-BSD	367-12-4	2-Fluorophenol	BSD	SURR	60	%	15-110
OP14905-BSD	4165-62-2	Phenol-d5	BSD	SURR	44	%	15-110
OP14905-BSD	118-79-6	2,4,6-Tribromophenol	BSD	SURR	85	%	15-110
OP14905-BSD	4165-60-0	Nitrobenzene-d5	BSD	SURR	92	%	30-130
OP14905-BSD	321-60-8	2-Fluorobiphenyl	BSD	SURR	72	%	30-130
OP14905-BSD	1718-51-0	Terphenyl-d14	BSD	SURR	92	%	30-130
OP14905-MB1	367-12-4	2-Fluorophenol	MB	SURR	47	%	15-110
OP14905-MB1	4165-62-2	Phenol-d5	MB	SURR	33	%	15-110
OP14905-MB1	118-79-6	2,4,6-Tribromophenol	MB	SURR	67	%	15-110
OP14905-MB1	4165-60-0	Nitrobenzene-d5	MB	SURR	85	%	30-130
OP14905-MB1	321-60-8	2-Fluorobiphenyl	MB	SURR	67	%	30-130
OP14905-MB1	1718-51-0	Terphenyl-d14	MB	SURR	71	%	30-130
JC73306-1	367-12-4	2-Fluorophenol	SAMP	SURR	48	%	15-110
JC73306-1	4165-62-2	Phenol-d5	SAMP	SURR	33	%	15-110
JC73306-1	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	74	%	15-110
JC73306-1	4165-60-0	Nitrobenzene-d5	SAMP	SURR	97	%	30-130
JC73306-1	321-60-8	2-Fluorobiphenyl	SAMP	SURR	79	%	30-130
JC73306-1	1718-51-0	Terphenyl-d14	SAMP	SURR	81	%	30-130
JC73306-2	367-12-4	2-Fluorophenol	SAMP	SURR	39	%	15-110
JC73306-2	4165-62-2	Phenol-d5	SAMP	SURR	27	%	15-110
JC73306-2	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	67	%	15-110
JC73306-2	4165-60-0	Nitrobenzene-d5	SAMP	SURR	81	%	30-130

* Sample used for QC is not from job JC73306

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC73306-2	321-60-8	2-Fluorobiphenyl	SAMP	SURR	67	%	30-130
JC73306-2	1718-51-0	Terphenyl-d14	SAMP	SURR	76	%	30-130
JC73306-3	367-12-4	2-Fluorophenol	SAMP	SURR	36	%	15-110
JC73306-3	4165-62-2	Phenol-d5	SAMP	SURR	26	%	15-110
JC73306-3	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	62	%	15-110
JC73306-3	4165-60-0	Nitrobenzene-d5	SAMP	SURR	87	%	30-130
JC73306-3	321-60-8	2-Fluorobiphenyl	SAMP	SURR	71	%	30-130
JC73306-3	1718-51-0	Terphenyl-d14	SAMP	SURR	82	%	30-130
JC73306-4	367-12-4	2-Fluorophenol	SAMP	SURR	36	%	15-110
JC73306-4	4165-62-2	Phenol-d5	SAMP	SURR	26	%	15-110
JC73306-4	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	66	%	15-110
JC73306-4	4165-60-0	Nitrobenzene-d5	SAMP	SURR	89	%	30-130
JC73306-4	321-60-8	2-Fluorobiphenyl	SAMP	SURR	74	%	30-130
JC73306-4	1718-51-0	Terphenyl-d14	SAMP	SURR	62	%	30-130
OP14905A	SW846 8270D BY SIM						
OP14905A-BS12	83-32-9	Acenaphthene	BSP	REC	82	%	40-140
OP14905A-BS12	208-96-8	Acenaphthylene	BSP	REC	91	%	40-140
OP14905A-BS12	120-12-7	Anthracene	BSP	REC	80	%	40-140
OP14905A-BS12	56-55-3	Benzo(a)anthracene	BSP	REC	92	%	40-140
OP14905A-BS12	50-32-8	Benzo(a)pyrene	BSP	REC	69	%	40-140
OP14905A-BS12	205-99-2	Benzo(b)fluoranthene	BSP	REC	79	%	40-140
OP14905A-BS12	191-24-2	Benzo(g,h,i)perylene	BSP	REC	59	%	40-140
OP14905A-BS12	207-08-9	Benzo(k)fluoranthene	BSP	REC	71	%	40-140
OP14905A-BS12	218-01-9	Chrysene	BSP	REC	84	%	40-140
OP14905A-BS12	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	46	%	40-140
OP14905A-BS12	206-44-0	Fluoranthene	BSP	REC	72	%	40-140
OP14905A-BS12	86-73-7	Fluorene	BSP	REC	79	%	40-140
OP14905A-BS12	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	58	%	40-140
OP14905A-BS12	91-57-6	2-Methylnaphthalene	BSP	REC	86	%	40-140
OP14905A-BS12	91-20-3	Naphthalene	BSP	REC	82	%	40-140
OP14905A-BS12	85-01-8	Phenanthrene	BSP	REC	71	%	40-140
OP14905A-BS12	129-00-0	Pyrene	BSP	REC	79	%	40-140
OP14905A-BS12	4165-60-0	Nitrobenzene-d5	BSP	SURR	91	%	30-130
OP14905A-BS12	321-60-8	2-Fluorobiphenyl	BSP	SURR	66	%	30-130
OP14905A-BS12	1718-51-0	Terphenyl-d14	BSP	SURR	52	%	30-130
OP14905A-BSD12	83-32-9	Acenaphthene	BSD	REC	88	%	40-140
OP14905A-BSD12	83-32-9	Acenaphthene	BSD	RPD	7	%	20
OP14905A-BSD12	208-96-8	Acenaphthylene	BSD	REC	99	%	40-140
OP14905A-BSD12	208-96-8	Acenaphthylene	BSD	RPD	8	%	20
OP14905A-BSD12	120-12-7	Anthracene	BSD	REC	87	%	40-140
OP14905A-BSD12	120-12-7	Anthracene	BSD	RPD	9	%	20
OP14905A-BSD12	56-55-3	Benzo(a)anthracene	BSD	REC	103	%	40-140
OP14905A-BSD12	56-55-3	Benzo(a)anthracene	BSD	RPD	11	%	20

* Sample used for QC is not from job JC73306

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP14905A-BSD12	50-32-8	Benzo(a)pyrene	BSD	REC	77	%	40-140
OP14905A-BSD12	50-32-8	Benzo(a)pyrene	BSD	RPD	12	%	20
OP14905A-BSD12	205-99-2	Benzo(b)fluoranthene	BSD	REC	78	%	40-140
OP14905A-BSD12	205-99-2	Benzo(b)fluoranthene	BSD	RPD	1	%	20
OP14905A-BSD12	191-24-2	Benzo(g,h,i)perylene	BSD	REC	79	%	40-140
OP14905A-BSD12	191-24-2	Benzo(g,h,i)perylene	BSD	RPD	30	%	20
OP14905A-BSD12	207-08-9	Benzo(k)fluoranthene	BSD	REC	93	%	40-140
OP14905A-BSD12	207-08-9	Benzo(k)fluoranthene	BSD	RPD	27	%	20
OP14905A-BSD12	218-01-9	Chrysene	BSD	REC	94	%	40-140
OP14905A-BSD12	218-01-9	Chrysene	BSD	RPD	11	%	20
OP14905A-BSD12	53-70-3	Dibenzo(a,h)anthracene	BSD	REC	74	%	40-140
OP14905A-BSD12	53-70-3	Dibenzo(a,h)anthracene	BSD	RPD	46	%	20
OP14905A-BSD12	206-44-0	Fluoranthene	BSD	REC	78	%	40-140
OP14905A-BSD12	206-44-0	Fluoranthene	BSD	RPD	9	%	20
OP14905A-BSD12	86-73-7	Fluorene	BSD	REC	86	%	40-140
OP14905A-BSD12	86-73-7	Fluorene	BSD	RPD	9	%	20
OP14905A-BSD12	193-39-5	Indeno(1,2,3-cd)pyrene	BSD	REC	80	%	40-140
OP14905A-BSD12	193-39-5	Indeno(1,2,3-cd)pyrene	BSD	RPD	32	%	20
OP14905A-BSD12	91-57-6	2-Methylnaphthalene	BSD	REC	86	%	40-140
OP14905A-BSD12	91-57-6	2-Methylnaphthalene	BSD	RPD	0	%	20
OP14905A-BSD12	91-20-3	Naphthalene	BSD	REC	84	%	40-140
OP14905A-BSD12	91-20-3	Naphthalene	BSD	RPD	2	%	20
OP14905A-BSD12	85-01-8	Phenanthrene	BSD	REC	77	%	40-140
OP14905A-BSD12	85-01-8	Phenanthrene	BSD	RPD	7	%	20
OP14905A-BSD12	129-00-0	Pyrene	BSD	REC	88	%	40-140
OP14905A-BSD12	129-00-0	Pyrene	BSD	RPD	10	%	20
OP14905A-BSD12	4165-60-0	Nitrobenzene-d5	BSD	SURR	98	%	30-130
OP14905A-BSD12	321-60-8	2-Fluorobiphenyl	BSD	SURR	72	%	30-130
OP14905A-BSD12	1718-51-0	Terphenyl-d14	BSD	SURR	80	%	30-130
OP14905A-MB1	4165-60-0	Nitrobenzene-d5	MB	SURR	81	%	30-130
OP14905A-MB1	321-60-8	2-Fluorobiphenyl	MB	SURR	57	%	30-130
OP14905A-MB1	1718-51-0	Terphenyl-d14	MB	SURR	61	%	30-130
JC73306-1	4165-60-0	Nitrobenzene-d5	SAMP	SURR	95	%	30-130
JC73306-1	321-60-8	2-Fluorobiphenyl	SAMP	SURR	67	%	30-130
JC73306-1	1718-51-0	Terphenyl-d14	SAMP	SURR	63	%	30-130
JC73306-2	4165-60-0	Nitrobenzene-d5	SAMP	SURR	73	%	30-130
JC73306-2	321-60-8	2-Fluorobiphenyl	SAMP	SURR	55	%	30-130
JC73306-2	1718-51-0	Terphenyl-d14	SAMP	SURR	61	%	30-130
JC73306-3	4165-60-0	Nitrobenzene-d5	SAMP	SURR	85	%	30-130
JC73306-3	321-60-8	2-Fluorobiphenyl	SAMP	SURR	60	%	30-130
JC73306-3	1718-51-0	Terphenyl-d14	SAMP	SURR	65	%	30-130
JC73306-4	4165-60-0	Nitrobenzene-d5	SAMP	SURR	87	%	30-130
JC73306-4	321-60-8	2-Fluorobiphenyl	SAMP	SURR	63	%	30-130
JC73306-4	1718-51-0	Terphenyl-d14	SAMP	SURR	48	%	30-130

* Sample used for QC is not from job JC73306

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP14906	SW846 8082A						
OP14906-BS1	12674-11-2	Aroclor 1016	BSP	REC	105	%	40-140
OP14906-BS1	11096-82-5	Aroclor 1260	BSP	REC	110	%	40-140
OP14906-BS1	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	108	%	30-150
OP14906-BS1	877-09-8	Tetrachloro-m-xylene (sig#2)	BSP	SURR	108	%	30-150
OP14906-BS1	2051-24-3	Decachlorobiphenyl (sig#1)	BSP	SURR	110	%	30-150
OP14906-BS1	2051-24-3	Decachlorobiphenyl (sig#2)	BSP	SURR	113	%	30-150
OP14906-BSD	12674-11-2	Aroclor 1016	BSD	REC	110	%	40-140
OP14906-BSD	12674-11-2	Aroclor 1016	BSD	RPD	5	%	20
OP14906-BSD	11104-28-2	Aroclor 1221	BSD	RPD	0	%	20
OP14906-BSD	11141-16-5	Aroclor 1232	BSD	RPD	0	%	20
OP14906-BSD	53469-21-9	Aroclor 1242	BSD	RPD	0	%	20
OP14906-BSD	12672-29-6	Aroclor 1248	BSD	RPD	0	%	20
OP14906-BSD	11097-69-1	Aroclor 1254	BSD	RPD	0	%	20
OP14906-BSD	11096-82-5	Aroclor 1260	BSD	REC	115	%	40-140
OP14906-BSD	11096-82-5	Aroclor 1260	BSD	RPD	4	%	20
OP14906-BSD	11100-14-4	Aroclor 1268	BSD	RPD	0	%	20
OP14906-BSD	37324-23-5	Aroclor 1262	BSD	RPD	0	%	20
OP14906-BSD	877-09-8	Tetrachloro-m-xylene (sig#1)	BSD	SURR	104	%	30-150
OP14906-BSD	877-09-8	Tetrachloro-m-xylene (sig#2)	BSD	SURR	104	%	30-150
OP14906-BSD	2051-24-3	Decachlorobiphenyl (sig#1)	BSD	SURR	112	%	30-150
OP14906-BSD	2051-24-3	Decachlorobiphenyl (sig#2)	BSD	SURR	121	%	30-150
OP14906-MB1	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	105	%	30-150
OP14906-MB1	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	106	%	30-150
OP14906-MB1	2051-24-3	Decachlorobiphenyl (sig#1)	MB	SURR	109	%	30-150
OP14906-MB1	2051-24-3	Decachlorobiphenyl (sig#2)	MB	SURR	112	%	30-150
JC73306-1	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	107	%	30-150
JC73306-1	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	89	%	30-150
JC73306-1	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	33	%	30-150
JC73306-1	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	36	%	30-150
JC73306-2	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	84	%	30-150
JC73306-2	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	87	%	30-150
JC73306-2	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	52	%	30-150
JC73306-2	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	57	%	30-150
JC73306-3	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	88	%	30-150
JC73306-3	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	88	%	30-150
JC73306-3	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	36	%	30-150
JC73306-3	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	39	%	30-150
JC73306-4	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	109	%	30-150
JC73306-4	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	108	%	30-150
JC73306-4	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	88	%	30-150
JC73306-4	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	95	%	30-150

* Sample used for QC is not from job JC73306

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP14907	SW846 8081B						
OP14907-BS1	309-00-2	Aldrin	BSP	REC	100	%	40-140
OP14907-BS1	15972-60-8	Alachlor	BSP	REC	116	%	40-140
OP14907-BS1	319-84-6	alpha-BHC	BSP	REC	120	%	40-140
OP14907-BS1	319-85-7	beta-BHC	BSP	REC	108	%	40-140
OP14907-BS1	319-86-8	delta-BHC	BSP	REC	124	%	40-140
OP14907-BS1	58-89-9	gamma-BHC (Lindane)	BSP	REC	96 [b]	%	40-140
OP14907-BS1	60-57-1	Dieldrin	BSP	REC	116	%	40-140
OP14907-BS1	72-54-8	4,4'-DDD	BSP	REC	96 [b]	%	40-140
OP14907-BS1	72-55-9	4,4'-DDE	BSP	REC	104	%	40-140
OP14907-BS1	50-29-3	4,4'-DDT	BSP	REC	112	%	40-140
OP14907-BS1	72-20-8	Endrin	BSP	REC	104 [b]	%	40-140
OP14907-BS1	1031-07-8	Endosulfan sulfate	BSP	REC	116	%	40-140
OP14907-BS1	7421-93-4	Endrin aldehyde	BSP	REC	112	%	40-140
OP14907-BS1	53494-70-5	Endrin ketone	BSP	REC	116	%	40-140
OP14907-BS1	959-98-8	Endosulfan-I	BSP	REC	100	%	40-140
OP14907-BS1	33213-65-9	Endosulfan-II	BSP	REC	96	%	40-140
OP14907-BS1	76-44-8	Heptachlor	BSP	REC	100 [b]	%	40-140
OP14907-BS1	1024-57-3	Heptachlor epoxide	BSP	REC	108	%	40-140
OP14907-BS1	72-43-5	Methoxychlor	BSP	REC	100	%	40-140
OP14907-BS1	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	96	%	30-150
OP14907-BS1	877-09-8	Tetrachloro-m-xylene (sig#2)	BSP	SURR	96	%	30-150
OP14907-BS1	2051-24-3	Decachlorobiphenyl (sig#1)	BSP	SURR	103	%	30-150
OP14907-BS1	2051-24-3	Decachlorobiphenyl (sig#2)	BSP	SURR	89	%	30-150
OP14907-BSD	309-00-2	Aldrin	BSD	REC	96	%	40-140
OP14907-BSD	309-00-2	Aldrin	BSD	RPD	4	%	20
OP14907-BSD	15972-60-8	Alachlor	BSD	REC	112	%	40-140
OP14907-BSD	319-84-6	alpha-BHC	BSD	REC	116	%	40-140
OP14907-BSD	319-84-6	alpha-BHC	BSD	RPD	3	%	20
OP14907-BSD	319-85-7	beta-BHC	BSD	REC	104	%	40-140
OP14907-BSD	319-85-7	beta-BHC	BSD	RPD	4	%	20
OP14907-BSD	319-86-8	delta-BHC	BSD	REC	124	%	40-140
OP14907-BSD	319-86-8	delta-BHC	BSD	RPD	0	%	20
OP14907-BSD	58-89-9	gamma-BHC (Lindane)	BSD	REC	96 [b]	%	40-140
OP14907-BSD	58-89-9	gamma-BHC (Lindane)	BSD	RPD	0 [b]	%	20
OP14907-BSD	60-57-1	Dieldrin	BSD	REC	112	%	40-140
OP14907-BSD	60-57-1	Dieldrin	BSD	RPD	4	%	20
OP14907-BSD	72-54-8	4,4'-DDD	BSD	REC	92 [b]	%	40-140
OP14907-BSD	72-54-8	4,4'-DDD	BSD	RPD	4	%	20
OP14907-BSD	72-55-9	4,4'-DDE	BSD	REC	100	%	40-140
OP14907-BSD	72-55-9	4,4'-DDE	BSD	RPD	4	%	20
OP14907-BSD	50-29-3	4,4'-DDT	BSD	REC	108	%	40-140
OP14907-BSD	50-29-3	4,4'-DDT	BSD	RPD	4	%	20

* Sample used for QC is not from job JC73306

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP14907-BSD	72-20-8	Endrin	BSD	REC	100 [b]	%	40-140
OP14907-BSD	72-20-8	Endrin	BSD	RPD	4 [b]	%	20
OP14907-BSD	1031-07-8	Endosulfan sulfate	BSD	REC	112	%	40-140
OP14907-BSD	1031-07-8	Endosulfan sulfate	BSD	RPD	4	%	20
OP14907-BSD	7421-93-4	Endrin aldehyde	BSD	REC	108	%	40-140
OP14907-BSD	7421-93-4	Endrin aldehyde	BSD	RPD	4	%	20
OP14907-BSD	53494-70-5	Endrin ketone	BSD	REC	116	%	40-140
OP14907-BSD	53494-70-5	Endrin ketone	BSD	RPD	0	%	20
OP14907-BSD	959-98-8	Endosulfan-I	BSD	REC	96	%	40-140
OP14907-BSD	959-98-8	Endosulfan-I	BSD	RPD	4	%	20
OP14907-BSD	33213-65-9	Endosulfan-II	BSD	REC	92	%	40-140
OP14907-BSD	33213-65-9	Endosulfan-II	BSD	RPD	4	%	20
OP14907-BSD	76-44-8	Heptachlor	BSD	REC	96 [b]	%	40-140
OP14907-BSD	76-44-8	Heptachlor	BSD	RPD	4 [b]	%	20
OP14907-BSD	1024-57-3	Heptachlor epoxide	BSD	REC	104	%	40-140
OP14907-BSD	1024-57-3	Heptachlor epoxide	BSD	RPD	4	%	20
OP14907-BSD	72-43-5	Methoxychlor	BSD	REC	100	%	40-140
OP14907-BSD	72-43-5	Methoxychlor	BSD	RPD	0	%	20
OP14907-BSD	877-09-8	Tetrachloro-m-xylene (sig#1)	BSD	SURR	89	%	30-150
OP14907-BSD	877-09-8	Tetrachloro-m-xylene (sig#2)	BSD	SURR	90	%	30-150
OP14907-BSD	2051-24-3	Decachlorobiphenyl (sig#1)	BSD	SURR	97	%	30-150
OP14907-BSD	2051-24-3	Decachlorobiphenyl (sig#2)	BSD	SURR	84	%	30-150
OP14907-MB1	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	92	%	30-150
OP14907-MB1	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	93	%	30-150
OP14907-MB1	2051-24-3	Decachlorobiphenyl (sig#1)	MB	SURR	101	%	30-150
OP14907-MB1	2051-24-3	Decachlorobiphenyl (sig#2)	MB	SURR	88	%	30-150
JC73306-1	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	94	%	30-150
JC73306-1	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	88	%	30-150
JC73306-1	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	39	%	30-150
JC73306-1	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	32	%	30-150
JC73306-2	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	83	%	30-150
JC73306-2	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	82	%	30-150
JC73306-2	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	53	%	30-150
JC73306-2	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	47	%	30-150
JC73306-3	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	79	%	30-150
JC73306-3	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	77	%	30-150
JC73306-3	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	36	%	30-150
JC73306-3	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	30	%	30-150
JC73306-4	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	101	%	30-150
JC73306-4	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	98	%	30-150
JC73306-4	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	90	%	30-150
JC73306-4	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	74	%	30-150

(a) Outside of in house control limits, but within reasonable method recovery limits.
(b) Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it

* Sample used for QC is not from job JC73306

QC Evaluation: CT RCP Limits

Job Number: JC73306
Account: BL Companies
Project: Stafford T-210, Stafford, CT
Collected: 09/05/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

being used for confirmation only.

* Sample used for QC is not from job JC73306

MS Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D6020-MB	3D141298.D	1	09/08/18	JTP	n/a	n/a	V3D6020

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC73306-1, JC73306-2, JC73306-3, JC73306-4, JC73306-5

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
107-13-1	Acrylonitrile	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	

Method Blank Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D6020-MB	3D141298.D	1	09/08/18	JTP	n/a	n/a	V3D6020

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC73306-1, JC73306-2, JC73306-3, JC73306-4, JC73306-5

CAS No.	Compound	Result	RL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

Method Blank Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D6020-MB	3D141298.D	1	09/08/18	JTP	n/a	n/a	V3D6020

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC73306-1, JC73306-2, JC73306-3, JC73306-4, JC73306-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	80-120%
17060-07-0	1,2-Dichloroethane-D4	96%	81-124%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	103%	80-120%

Blank Spike Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D6020-BS	3D141296.D	1	09/08/18	JTP	n/a	n/a	V3D6020

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC73306-1, JC73306-2, JC73306-3, JC73306-4, JC73306-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	200	100	42-150
107-13-1	Acrylonitrile	50	51.9	104	70-135
71-43-2	Benzene	50	49.9	100	80-120
108-86-1	Bromobenzene	50	53.7	107	82-118
75-27-4	Bromodichloromethane	50	55.6	111	83-120
75-25-2	Bromoform	50	61.7	123	76-129
74-83-9	Bromomethane	50	39.6	79	57-138
78-93-3	2-Butanone (MEK)	200	198	99	64-137
104-51-8	n-Butylbenzene	50	54.2	108	81-123
135-98-8	sec-Butylbenzene	50	52.5	105	84-121
98-06-6	tert-Butylbenzene	50	52.6	105	83-122
75-15-0	Carbon disulfide	50	51.6	103	64-137
56-23-5	Carbon tetrachloride	50	51.1	102	75-135
108-90-7	Chlorobenzene	50	50.0	100	84-117
75-00-3	Chloroethane	50	37.8	76	63-132
67-66-3	Chloroform	50	48.1	96	80-119
74-87-3	Chloromethane	50	43.6	87	46-136
95-49-8	o-Chlorotoluene	50	52.8	106	84-118
106-43-4	p-Chlorotoluene	50	51.9	104	83-116
96-12-8	1,2-Dibromo-3-chloropropane	50	56.6	113	72-127
124-48-1	Dibromochloromethane	50	58.4	117	80-123
106-93-4	1,2-Dibromoethane	50	53.1	106	84-117
95-50-1	1,2-Dichlorobenzene	50	50.8	102	84-119
541-73-1	1,3-Dichlorobenzene	50	52.0	104	81-117
106-46-7	1,4-Dichlorobenzene	50	51.5	103	82-117
110-57-6	trans-1,4-Dichloro-2-Butene	50	54.5	109	32-148
75-71-8	Dichlorodifluoromethane	50	43.6	87	36-149
75-34-3	1,1-Dichloroethane	50	49.4	99	79-120
107-06-2	1,2-Dichloroethane	50	46.2	92	78-126
75-35-4	1,1-Dichloroethene	50	50.9	102	69-126
156-59-2	cis-1,2-Dichloroethene	50	50.1	100	80-120
156-60-5	trans-1,2-Dichloroethene	50	49.6	99	76-120
78-87-5	1,2-Dichloropropane	50	52.0	104	82-121
142-28-9	1,3-Dichloropropane	50	50.2	100	83-115
594-20-7	2,2-Dichloropropane	50	47.3	95	65-133
563-58-6	1,1-Dichloropropene	50	49.4	99	80-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D6020-BS	3D141296.D	1	09/08/18	JTP	n/a	n/a	V3D6020

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC73306-1, JC73306-2, JC73306-3, JC73306-4, JC73306-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	52.0	104	83-120
10061-02-6	trans-1,3-Dichloropropene	50	54.6	109	82-121
100-41-4	Ethylbenzene	50	50.7	101	80-120
76-13-1	Freon 113	50	48.5	97	62-182
87-68-3	Hexachlorobutadiene	50	52.0	104	75-129
591-78-6	2-Hexanone	200	214	107	65-132
98-82-8	Isopropylbenzene	50	51.2	102	83-120
99-87-6	p-Isopropyltoluene	50	52.4	105	83-122
1634-04-4	Methyl Tert Butyl Ether	50	49.0	98	80-119
108-10-1	4-Methyl-2-pentanone(MIBK)	200	209	105	71-131
74-95-3	Methylene bromide	50	50.7	101	85-120
75-09-2	Methylene chloride	50	46.9	94	77-120
91-20-3	Naphthalene	50	53.3	107	73-131
103-65-1	n-Propylbenzene	50	52.6	105	82-119
100-42-5	Styrene	50	51.4	103	82-122
630-20-6	1,1,1,2-Tetrachloroethane	50	53.7	107	82-121
79-34-5	1,1,2,2-Tetrachloroethane	50	52.9	106	76-119
127-18-4	Tetrachloroethene	50	54.0	108	70-131
109-99-9	Tetrahydrofuran	50	49.7	99	64-129
108-88-3	Toluene	50	50.0	100	80-120
87-61-6	1,2,3-Trichlorobenzene	50	54.5	109	76-134
120-82-1	1,2,4-Trichlorobenzene	50	55.9	112	79-132
71-55-6	1,1,1-Trichloroethane	50	49.6	99	81-128
79-00-5	1,1,2-Trichloroethane	50	52.8	106	83-118
79-01-6	Trichloroethene	50	51.0	102	80-120
75-69-4	Trichlorofluoromethane	50	47.8	96	64-136
96-18-4	1,2,3-Trichloropropane	50	51.7	103	79-120
95-63-6	1,2,4-Trimethylbenzene	50	50.2	100	84-120
108-67-8	1,3,5-Trimethylbenzene	50	52.6	105	83-119
75-01-4	Vinyl chloride	50	39.5	79	51-135
	m,p-Xylene	100	100	100	80-120
95-47-6	o-Xylene	50	50.9	102	80-120

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D6020-BS	3D141296.D	1	09/08/18	JTP	n/a	n/a	V3D6020

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC73306-1, JC73306-2, JC73306-3, JC73306-4, JC73306-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	80-120%
17060-07-0	1,2-Dichloroethane-D4	95%	81-124%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	102%	80-120%

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Check Std:	V3D6020-CC5963	**Injection Date:**	09/08/18
Lab File ID:	3D141295.D	**Injection Time:**	09:26
Instrument ID:	GCMS3D	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	117109	3.09	195225	4.31	267600	4.87	223360	7.28	103888	9.48
Upper Limit [a]	234218	3.59	390450	4.81	535200	5.37	446720	7.78	207776	9.98
Lower Limit [b]	58555	2.59	97613	3.81	133800	4.37	111680	6.78	51944	8.98

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3D6020-BS	118266	3.09	198635	4.31	266905	4.87	220420	7.28	102773	9.48
V3D6020-MB	119157	3.08	190802	4.31	262230	4.87	214389	7.28	98973	9.48
ZZZZZZ	122085	3.08	191842	4.31	264645	4.88	212859	7.28	100110	9.48
JC73304-8	124423	3.08	190099	4.31	266453	4.87	219494	7.28	101905	9.48
JC73304-11	109879	3.08	178420	4.31	249992	4.87	207005	7.28	96687	9.48
ZZZZZZ	116440	3.08	176887	4.31	248970	4.87	205587	7.28	96094	9.48
ZZZZZZ	114441	3.08	182575	4.31	255180	4.87	210564	7.28	98241	9.48
ZZZZZZ	114156	3.08	183327	4.31	258292	4.88	211801	7.28	97632	9.48
ZZZZZZ	112092	3.08	177737	4.31	251348	4.87	206818	7.28	96597	9.48
ZZZZZZ	116282	3.08	173812	4.31	244954	4.88	206095	7.28	97348	9.48
ZZZZZZ	117639	3.08	174891	4.31	249427	4.87	207434	7.28	96273	9.48
ZZZZZZ	114744	3.08	173775	4.31	248496	4.87	204952	7.28	94828	9.48
JC73304-8MS	111547	3.09	187537	4.31	264935	4.87	218811	7.28	99047	9.48
JC73304-11DUP	113074	3.08	175832	4.31	250629	4.88	204321	7.28	92879	9.48
JC73306-4	110005	3.08	177369	4.31	252830	4.88	207307	7.28	94545	9.48
JC73306-5	112511	3.08	177076	4.31	252536	4.88	208642	7.28	95145	9.48
ZZZZZZ	113428	3.08	170729	4.31	245685	4.87	202301	7.28	92692	9.48
ZZZZZZ	107777	3.08	174599	4.31	251296	4.87	207434	7.28	94811	9.48
JC73306-1	118428	3.08	175131	4.31	253081	4.87	210375	7.28	96379	9.48
JC73306-3	112709	3.08	175990	4.31	251689	4.88	205145	7.28	93778	9.48
JC73306-2	114068	3.08	177081	4.31	256295	4.87	212078	7.28	95907	9.48

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC73306-1	3D141318.D	104	101	99	105
JC73306-2	3D141320.D	104	101	99	107
JC73306-3	3D141319.D	101	101	100	105
JC73306-4	3D141314.D	100	98	99	104
JC73306-5	3D141315.D	102	101	100	106
V3D6020-BS	3D141296.D	96	95	99	102
V3D6020-MB	3D141298.D	97	96	99	103

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	81-124%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	80-120%

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14905-MB1	5P53662.D	1	09/09/18	KLS	09/09/18	OP14905	E5P2547

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	5.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.0	ug/l	
95-48-7	2-Methylphenol	ND	2.0	ug/l	
	3&4-Methylphenol	ND	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	ug/l	
100-02-7	4-Nitrophenol	ND	10	ug/l	
87-86-5	Pentachlorophenol	ND	4.0	ug/l	
108-95-2	Phenol	ND	2.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	ug/l	
62-53-3	Aniline	ND	2.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	ug/l	
86-74-8	Carbazole	ND	1.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	2.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	ug/l	
132-64-9	Dibenzofuran	ND	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	

Method Blank Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14905-MB1	5P53662.D	1	09/09/18	KLS	09/09/18	OP14905	E5P2547

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Result	RL	Units	Q
67-72-1	Hexachloroethane	ND	2.0	ug/l	
78-59-1	Isophorone	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	ug/l	
98-95-3	Nitrobenzene	ND	2.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
82-68-8	Pentachloronitrobenzene	ND	5.0	ug/l	
110-86-1	Pyridine	ND	2.0	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	47%	10-110%
4165-62-2	Phenol-d5	33%	10-110%
118-79-6	2,4,6-Tribromophenol	67%	36-151%
4165-60-0	Nitrobenzene-d5	85%	34-128%
321-60-8	2-Fluorobiphenyl	67%	38-119%
1718-51-0	Terphenyl-d14	71%	26-129%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.56	5.6	ug/l	J
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14905A-MB1	3P71135.D	1	09/11/18	SA	09/09/18	OP14905A	E3P3371

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.050	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.10	ug/l	
91-20-3	Naphthalene	ND	0.10	ug/l	
85-01-8	Phenanthrene	ND	0.10	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	50%	15-110%
4165-62-2	Phenol-d5	35%	12-110%
118-79-6	2,4,6-Tribromophenol	63%	32-143%
4165-60-0	Nitrobenzene-d5	81%	29-124%
321-60-8	2-Fluorobiphenyl	57%	23-122%
1718-51-0	Terphenyl-d14	61%	22-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14905-BS1	5P53663A.D	1	09/09/18	KLS	09/09/18	OP14905	E5P2547
OP14905-BSD	5P53664.D	1	09/09/18	KLS	09/09/18	OP14905	E5P2547

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	50	37.8	76	38.1	76	1	39-106/27
59-50-7	4-Chloro-3-methyl phenol	50	42.8	86	44.2	88	3	45-118/23
120-83-2	2,4-Dichlorophenol	50	41.4	83	42.9	86	4	43-115/26
105-67-9	2,4-Dimethylphenol	50	52.7	105	55.4	111	5	38-125/23
51-28-5	2,4-Dinitrophenol	100	80.6	81	87.7	88	8	35-137/22
534-52-1	4,6-Dinitro-o-cresol	50	42.9	86	44.5	89	4	45-134/23
95-48-7	2-Methylphenol	50	39.0	78	39.7	79	2	34-106/24
	3&4-Methylphenol	50	37.8	76	38.3	77	1	31-110/25
88-75-5	2-Nitrophenol	50	40.7	81	42.1	84	3	41-118/28
100-02-7	4-Nitrophenol	50	24.6	49	26.9	54	9	10-113/31
87-86-5	Pentachlorophenol	50	52.8	106	55.0	110	4	21-134/25
108-95-2	Phenol	50	23.8	48	23.9	48	0	10-110/27
95-95-4	2,4,5-Trichlorophenol	50	38.4	77	42.8	86	11	45-117/26
88-06-2	2,4,6-Trichlorophenol	50	41.4	83	43.0	86	4	47-125/35
62-53-3	Aniline	50	37.8	76	38.1	76	1	13-91/37
101-55-3	4-Bromophenyl phenyl ether	50	45.2	90	45.7	91	1	47-122/25
85-68-7	Butyl benzyl phthalate	50	39.2	78	41.4	83	5	50-124/22
91-58-7	2-Chloronaphthalene	50	32.9	66	34.0	68	3	33-112/26
106-47-8	4-Chloroaniline	50	24.9	50	26.3	53	5	17-87/39
86-74-8	Carbazole	50	40.9	82	42.9	86	5	54-118/21
111-91-1	bis(2-Chloroethoxy)methane	50	48.0	96	50.7	101	5	38-116/24
111-44-4	bis(2-Chloroethyl)ether	50	47.5	95	49.6	99	4	38-118/23
108-60-1	2,2'-Oxybis(1-chloropropane)	50	52.2	104	54.8	110* [a]	5	29-108/23
7005-72-3	4-Chlorophenyl phenyl ether	50	40.0	80	42.2	84	5	40-122/21
121-14-2	2,4-Dinitrotoluene	50	38.4	77	42.7	85	11	54-129/21
606-20-2	2,6-Dinitrotoluene	50	38.5	77	41.8	84	8	53-131/21
91-94-1	3,3'-Dichlorobenzidine	100	54.0	54	60.6	61	12	28-91/44
132-64-9	Dibenzofuran	50	36.3	73	37.6	75	4	46-118/16
84-74-2	Di-n-butyl phthalate	50	40.3	81	42.8	86	6	54-124/23
117-84-0	Di-n-octyl phthalate	50	38.1	76	40.1	80	5	41-137/22
84-66-2	Diethyl phthalate	50	37.8	76	41.2	82	9	49-122/20
131-11-3	Dimethyl phthalate	50	38.4	77	41.5	83	8	51-118/20
117-81-7	bis(2-Ethylhexyl)phthalate	50	39.4	79	41.0	82	4	47-128/36
118-74-1	Hexachlorobenzene	50	42.6	85	46.6	93	9	45-124/23
87-68-3	Hexachlorobutadiene	50	35.9	72	37.2	74	4	10-120/35
77-47-4	Hexachlorocyclopentadiene	100	62.7	63	61.3	61	2	10-110/43

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14905-BS1	5P53663A.D	1	09/09/18	KLS	09/09/18	OP14905	E5P2547
OP14905-BSD	5P53664.D	1	09/09/18	KLS	09/09/18	OP14905	E5P2547

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-72-1	Hexachloroethane	50	30.3	61	31.2	62	3	11-110/38
78-59-1	Isophorone	50	47.6	95	50.3	101	6	43-115/20
91-57-6	2-Methylnaphthalene	50	35.2	70	34.8	70	1	37-111/21
88-74-4	2-Nitroaniline	50	42.8	86	45.3	91	6	40-144/18
99-09-2	3-Nitroaniline	50	28.0	56	29.7	59	6	31-104/42
100-01-6	4-Nitroaniline	50	34.6	69	38.0	76	9	48-119/20
98-95-3	Nitrobenzene	50	46.5	93	49.3	99	6	35-118/21
621-64-7	N-Nitroso-di-n-propylamine	50	46.3	93	49.0	98	6	38-116/22
86-30-6	N-Nitrosodiphenylamine	50	38.3	77	39.1	78	2	49-114/22
82-68-8	Pentachloronitrobenzene	50	38.4	77	40.3	81	5	55-114/30
110-86-1	Pyridine	50	30.6	61	30.5	61	0	10-110/49
95-94-3	1,2,4,5-Tetrachlorobenzene	50	24.8	50	24.6	49	1	21-124/32
120-82-1	1,2,4-Trichlorobenzene	50	34.9	70	35.7	71	2	19-110/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	59%	60%	10-110%
4165-62-2	Phenol-d5	44%	44%	10-110%
118-79-6	2,4,6-Tribromophenol	80%	85%	36-151%
4165-60-0	Nitrobenzene-d5	88%	92%	34-128%
321-60-8	2-Fluorobiphenyl	70%	72%	38-119%
1718-51-0	Terphenyl-d14	91%	92%	26-129%

(a) Outside of in house control limits, but within reasonable method recovery limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14905A-BS12	3P71136.D	1	09/11/18	SA	09/09/18	OP14905A	E3P3371
OP14905A-BSD12	3P71137.D	1	09/11/18	SA	09/09/18	OP14905A	E3P3371

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	1	0.821	82	0.877	88	7	31-135/38
208-96-8	Acenaphthylene	1	0.913	91	0.988	99	8	28-130/42
120-12-7	Anthracene	1	0.798	80	0.873	87	9	40-125/32
56-55-3	Benzo(a)anthracene	1	0.924	92	1.03	103	11	38-132/31
50-32-8	Benzo(a)pyrene	1	0.689	69	0.774	77	12	31-110/37
205-99-2	Benzo(b)fluoranthene	1	0.793	79	0.783	78	1	31-113/37
191-24-2	Benzo(g,h,i)perylene	1	0.589	59	0.793	79	30	18-110/54
207-08-9	Benzo(k)fluoranthene	1	0.710	71	0.934	93	27	31-119/43
218-01-9	Chrysene	1	0.842	84	0.940	94	11	43-119/33
53-70-3	Dibenzo(a,h)anthracene	1	0.459	46	0.735	74	46	20-112/50
206-44-0	Fluoranthene	1	0.716	72	0.784	78	9	48-118/27
86-73-7	Fluorene	1	0.790	79	0.864	86	9	42-123/34
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.576	58	0.796	80	32	18-113/49
91-57-6	2-Methylnaphthalene	1	0.859	86	0.863	86	0	26-126/37
91-20-3	Naphthalene	1	0.824	82	0.843	84	2	30-114/40
85-01-8	Phenanthrene	1	0.713	71	0.768	77	7	45-125/31
129-00-0	Pyrene	1	0.792	79	0.879	88	10	48-125/29

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	53%	64%	15-110%
4165-62-2	Phenol-d5	37%	43%	12-110%
118-79-6	2,4,6-Tribromophenol	72%	79%	32-143%
4165-60-0	Nitrobenzene-d5	91%	98%	29-124%
321-60-8	2-Fluorobiphenyl	66%	72%	23-122%
1718-51-0	Terphenyl-d14	52%	80%	22-130%

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Check Std:	E3P3371-CC3356	**Injection Date:**	09/10/18
Lab File ID:	3P71133.D	**Injection Time:**	23:37
Instrument ID:	GCMS3P	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	19917	6.55	24273	8.00	37975	10.10	26858	12.74
Upper Limit [a]	39834	7.05	48546	8.50	75950	10.60	53716	13.24
Lower Limit [b]	9959	6.05	12137	7.50	18988	9.60	13429	12.24

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
OP14905A-MB1	18363	6.55	23031	8.00	34256	10.09	24193	12.73
OP14905A-BS12	14644	6.55	17902	7.99	27609	10.09	19066	12.73
OP14905A-BSD12	15804	6.55	18788	8.00	28678	10.09	19964	12.73
OP14915A-MB1	17170	6.55	21180	8.00	32043	10.09	21874	12.73
OP14915A-BS12	17222	6.55	20247	8.00	31166	10.09	20894	12.73
OP14915A-BSD12	16796	6.55	19799	8.00	31369	10.09	21380	12.73
ZZZZZZ								
JC73306-4	15439	6.55	18812	8.00	29377	10.09	19696	12.73
ZZZZZZ	15747	6.55	20485	8.00	29259	10.09	19876	12.73
ZZZZZZ	20567	6.55	21891	8.00	32336	10.09	22781	12.73
ZZZZZZ	17281	6.55	21955	7.99	34196	10.10	22630	12.73
ZZZZZZ	15802	6.55	20038	8.00	30098	10.09	20496	12.73
JC73306-1	15991	6.54	19787	8.00	30082	10.09	20409	12.73
JC73306-3	15347	6.55	18832	7.99	28382	10.09	18544	12.73
ZZZZZZ	14291	6.55	17446	8.00	26386	10.09	17105	12.74
ZZZZZZ	14578	6.55	18164	7.99	28022	10.09	18101	12.73
ZZZZZZ	14433	6.55	17336	8.00	27929	10.09	18188	12.74
ZZZZZZ	13013	6.55	15761	8.00	24415	10.09	15371	12.73
ZZZZZZ	14296	6.55	18449	7.99	26868	10.09	17270	12.74
ZZZZZZ	14707	6.55	19089	8.00	27856	10.09	18958	12.73
ZZZZZZ	14389	6.55	18117	8.00	27553	10.09	18699	12.73
ZZZZZZ	15540	6.55	22285	8.00	29741	10.09	20496	12.73
ZZZZZZ	17196	6.55	20211	7.99	30827	10.09	20768	12.73
ZZZZZZ	23387	6.56	68217*	8.03	45502	10.11	25587	12.74
ZZZZZZ	17410	6.55	40691	8.00	37762	10.10	25746	12.74
JC73306-2	16503	6.55	21089	8.00	32617	10.09	23361	12.73

IS 1 = 1-Methylnaphthalene-d10
IS 2 = Fluorene-d10
IS 3 = Fluoranthene-d10
IS 4 = Benzo(a)pyrene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.3.1

Internal Standard Area Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Check Std:	E5P2547-CC2536	**Injection Date:**	09/09/18
Lab File ID:	5P53657.D	**Injection Time:**	17:22
Instrument ID:	GCMS5P	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	148971	4.66	542997	5.85	289590	7.56	575966	9.06	568353	12.56	602500	14.58
Upper Limit [a]	297942	5.16	1085994	6.35	579180	8.06	1151932	9.56	1136706	13.06	1205000	15.08
Lower Limit [b]	74486	4.16	271499	5.35	144795	7.06	287983	8.56	284177	12.06	301250	14.08

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP14879-MB1	132316	4.66	487950	5.85	268423	7.56	452140	9.06	415913	12.55	390552	14.58
OP14879-BS1	97203	4.66	359341	5.85	202631	7.56	345981	9.06	319863	12.55	329445	14.58
OP14879-BS13	107439	4.66	402581	5.85	222069	7.56	375260	9.06	349122	12.55	330963	14.57
OP14905-MB1	104196	4.65	390192	5.85	223298	7.56	391038	9.06	384358	12.55	368925	14.57
OP14905-BS1	97348	4.66	360946	5.85	206319	7.56	342317	9.06	318532	12.55	318819	14.58
OP14905-BSD	95776	4.66	352033	5.85	201280	7.56	349820	9.06	335871	12.55	344037	14.58
ZZZZZZ	99164	4.65	379659	5.85	214360	7.56	370757	9.06	365926	12.55	344623	14.57
JC73306-4	96716	4.65	364578	5.85	208128	7.56	364676	9.06	346013	12.55	328660	14.57
ZZZZZZ	101460	4.65	376957	5.85	207703	7.56	360755	9.06	347775	12.55	329405	14.57
ZZZZZZ	86254	4.66	324940	5.85	202670	7.56	364483	9.06	367198	12.55	352339	14.57
ZZZZZZ	105036	4.65	396454	5.85	223028	7.56	386512	9.06	370725	12.55	355416	14.58
ZZZZZZ	100894	4.65	373964	5.85	213940	7.56	374677	9.06	364246	12.55	346356	14.57
JC73306-1	92577	4.65	354506	5.85	197616	7.56	348141	9.06	331082	12.55	328204	14.58
JC73306-3	96629	4.65	359718	5.85	201561	7.56	347775	9.06	329255	12.55	313486	14.57
JC73306-2	100235	4.65	374337	5.85	204649	7.56	357928	9.06	335242	12.55	316944	14.58
ZZZZZZ	93042	4.66	350296	5.85	190011	7.56	324185	9.06	306446	12.55	295360[c]	14.58
ZZZZZZ	89968	4.66	338187	5.85	192011	7.56	319148	9.06	300365	12.55	293645[c]	14.58
JC72053-2B	98128	4.66	367912	5.85	199256	7.56	337307	9.06	306995	12.55	290727[c]	14.57
OP14879-MS [d]	87785	4.66	326851	5.85	187285	7.56	318304	9.06	291318	12.56	302426	14.58
OP14879-MSD [d]	90720	4.66	333564	5.85	190276	7.56	320849	9.06	297523	12.56	300713[c]	14.58
ZZZZZZ	97772	4.65	361813	5.85	201131	7.56	348451	9.06	335949	12.55	333525	14.58
ZZZZZZ	96618	4.66	366246	5.85	200327	7.56	341352	9.06	319240	12.55	315475	14.58
ZZZZZZ	104671	4.66	392865	5.85	215226	7.56	366322	9.06	323352	12.55	305977	14.58
ZZZZZZ	95269	4.65	359338	5.85	198776	7.56	338922	9.06	311485	12.55	303669	14.58

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits. Target compounds not assoicate with this internal standard.

Internal Standard Area Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Check Std:	E5P2547-CC2536	**Injection Date:**	09/09/18
Lab File ID:	5P53657.D	**Injection Time:**	17:22
Instrument ID:	GCMS5P	**Method:**	SW846 8270D

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT	IS 5 AREA	IS 5 RT	IS 6 AREA	IS 6 RT

(d) Sample extracted outside the holding time.

Surrogate Recovery Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Method: SW846 8270D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JC73306-1	5P53671.D	48	33	74	97	79	81
JC73306-2	5P53673.D	39	27	67	81	67	76
JC73306-3	5P53672.D	36	26	62	87	71	82
JC73306-4	5P53666.D	36	26	66	89	74	62
OP14905-BS1	5P53663A.D	59	44	80	88	70	91
OP14905-BSD	5P53664.D	60	44	85	92	72	92
OP14905-MB1	5P53662.D	47	33	67	85	67	71

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	10-110%
S2 = Phenol-d5	10-110%
S3 = 2,4,6-Tribromophenol	36-151%
S4 = Nitrobenzene-d5	34-128%
S5 = 2-Fluorobiphenyl	38-119%
S6 = Terphenyl-d14	26-129%

Surrogate Recovery Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Method: SW846 8270D BY SIM **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JC73306-1	3P71147.D	95	67	63
JC73306-2	3P71160.D	73	55	61
JC73306-3	3P71148.D	85	60	65
JC73306-4	3P71142.D	87	63	48
OP14905A-BS12	3P71136.D	91	66	52
OP14905A-BSD12	3P71137.D	98	72	80
OP14905A-MB1	3P71135.D	81	57	61

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	29-124%
S2 = 2-Fluorobiphenyl	23-122%
S3 = Terphenyl-d14	22-130%

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- DDT/Endrin Breakdown Checks
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14914-MB1	8Z29968.D	1	09/12/18	TL	09/11/18	OP14914	G8Z1146

The QC reported here applies to the following samples: **Method:** CT-ETPH

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Result	RL	Units	Q
	CT-DRO (C9-C36)	ND	0.10	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	65%	50-150%

Method Blank Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14914-MB1	8Y29972.D	1	09/12/18	TL	09/11/18	OP14914	G8Y1075

The QC reported here applies to the following samples: **Method:** CT-ETPH

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Result	RL	Units	Q
	CT-DRO (C9-C36)	ND	0.10	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	63%	50-150%

Method Blank Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14907-MB1	4G94594.D	1	09/10/18	CP	09/08/18	OP14907	G4G2520

The QC reported here applies to the following samples: **Method:** SW846 8081B

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	0.0050	ug/l	
15972-60-8	Alachlor	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.0050	ug/l	
319-85-7	beta-BHC	ND	0.0050	ug/l	
319-86-8	delta-BHC	ND	0.0050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.0050	ug/l	
12789-03-6	Chlordane	ND	0.25	ug/l	
60-57-1	Dieldrin	ND	0.0050	ug/l	
72-54-8	4,4'-DDD	ND	0.0050	ug/l	
72-55-9	4,4'-DDE	ND	0.0050	ug/l	
50-29-3	4,4'-DDT	ND	0.0050	ug/l	
72-20-8	Endrin	ND	0.0050	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.0050	ug/l	
7421-93-4	Endrin aldehyde	ND	0.0050	ug/l	
53494-70-5	Endrin ketone	ND	0.0050	ug/l	
959-98-8	Endosulfan-I	ND	0.0050	ug/l	
33213-65-9	Endosulfan-II	ND	0.0050	ug/l	
76-44-8	Heptachlor	ND	0.0050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.0050	ug/l	
72-43-5	Methoxychlor	ND	0.010	ug/l	
8001-35-2	Toxaphene	ND	0.13	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	92%	13-153%
877-09-8	Tetrachloro-m-xylene	93%	13-153%
2051-24-3	Decachlorobiphenyl	101%	10-138%
2051-24-3	Decachlorobiphenyl	88%	10-138%

Method Blank Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14906-MB1	XX235348.D	1	09/10/18	SK	09/08/18	OP14906	GXX6467

The QC reported here applies to the following samples: **Method:** SW846 8082A

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	105%	11-166%
877-09-8	Tetrachloro-m-xylene	106%	11-166%
2051-24-3	Decachlorobiphenyl	109%	10-150%
2051-24-3	Decachlorobiphenyl	112%	10-150%

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14914-BS1	8Z29969.D	1	09/12/18	TL	09/11/18	OP14914	G8Z1146
OP14914-BSD	8Z29970.D	1	09/12/18	TL	09/11/18	OP14914	G8Z1146

The QC reported here applies to the following samples: **Method:** CT-ETPH

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	CT-DRO (C9-C36)	0.8	0.833	104	0.884	111	6	60-120/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	78%	89%	50-150%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14907-BS1	4G94595.D	1	09/10/18	CP	09/08/18	OP14907	G4G2520
OP14907-BSD	4G94596.D	1	09/10/18	CP	09/08/18	OP14907	G4G2520

The QC reported here applies to the following samples: **Method:** SW846 8081B

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	0.25	0.25	100	0.24	96	4	13-135/52
15972-60-8	Alachlor	0.25	0.29	116	0.28	112	4	40-140/25
319-84-6	alpha-BHC	0.25	0.30	120	0.29	116	3	36-139/42
319-85-7	beta-BHC	0.25	0.27	108	0.26	104	4	44-136/40
319-86-8	delta-BHC	0.25	0.31	124	0.31	124	0	40-139/45
58-89-9	gamma-BHC (Lindane)	0.25	0.24	96 [a]	0.24	96 [a]	0 [a]	43-136/45
60-57-1	Dieldrin	0.25	0.29	116	0.28	112	4	39-142/41
72-54-8	4,4'-DDD	0.25	0.24	96 [a]	0.23	92 [a]	4	36-142/39
72-55-9	4,4'-DDE	0.25	0.26	104	0.25	100	4	27-140/43
50-29-3	4,4'-DDT	0.25	0.28	112	0.27	108	4	30-144/39
72-20-8	Endrin	0.25	0.26	104 [a]	0.25	100 [a]	4 [a]	44-151/49
1031-07-8	Endosulfan sulfate	0.25	0.29	116	0.28	112	4	41-144/39
7421-93-4	Endrin aldehyde	0.25	0.28	112	0.27	108	4	42-144/42
53494-70-5	Endrin ketone	0.25	0.29	116	0.29	116	0	41-149/42
959-98-8	Endosulfan-I	0.25	0.25	100	0.24	96	4	40-136/45
33213-65-9	Endosulfan-II	0.25	0.24	96	0.23	92	4	42-140/42
76-44-8	Heptachlor	0.25	0.25	100 [a]	0.24	96 [a]	4 [a]	11-140/52
1024-57-3	Heptachlor epoxide	0.25	0.27	108	0.26	104	4	41-138/38
72-43-5	Methoxychlor	0.25	0.25	100	0.25	100	0	31-149/42

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	96%	89%	13-153%
877-09-8	Tetrachloro-m-xylene	96%	90%	13-153%
2051-24-3	Decachlorobiphenyl	103%	97%	10-138%
2051-24-3	Decachlorobiphenyl	89%	84%	10-138%

(a) Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14906-BS1	XX235349.D	1	09/10/18	SK	09/08/18	OP14906	GXX6467
OP14906-BSD	XX235350.D	1	09/10/18	SK	09/08/18	OP14906	GXX6467

The QC reported here applies to the following samples: **Method:** SW846 8082A

JC73306-1, JC73306-2, JC73306-3, JC73306-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	2	2.1	105	2.2	110	5	37-164/43
11104-28-2	Aroclor 1221		ND		ND		nc	70-130/20
11141-16-5	Aroclor 1232		ND		ND		nc	70-130/20
53469-21-9	Aroclor 1242		ND		ND		nc	70-130/20
12672-29-6	Aroclor 1248		ND		ND		nc	70-130/20
11097-69-1	Aroclor 1254		ND		ND		nc	70-130/20
11096-82-5	Aroclor 1260	2	2.2	110	2.3	115	4	36-155/46
11100-14-4	Aroclor 1268		ND		ND		nc	-/20
37324-23-5	Aroclor 1262		ND		ND		nc	-/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	108%	104%	11-166%
877-09-8	Tetrachloro-m-xylene	108%	104%	11-166%
2051-24-3	Decachlorobiphenyl	110%	112%	10-150%
2051-24-3	Decachlorobiphenyl	113%	121%	10-150%

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Check Std:	G4G2520-CC2514	**Injection Date:**	09/09/18
Lab File ID:	4G94582.D	**Injection Time:**	23:04
Instrument ID:	GC4G	**Method:**	SW846 8081B

	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
Check Std	1422729656	2.03	294973108	1.79
Upper Limit [a]	2845459312	2.53	589946216	2.29
Lower Limit [b]	711364828	1.53	147486554	1.29

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
OP14816-MB2	1584430314	2.03	301130762	1.80
OP14816-BS2	1547860230	2.03	312424929	1.79
ZZZZZZ	1040888412	2.02	271526660	1.80
ZZZZZZ	1609239544	2.03	314327337	1.80
ZZZZZZ	976388132	2.04	241796508	1.81
ZZZZZZ	898089224	2.03	236861503	1.80
ZZZZZZ	1747118985	2.03	349907976	1.81
OP14816-LB31	1556095849	2.03	311779087	1.80
OP14816-LB30	1449220973	2.03	291807534	1.80
OP14867-LB39	1630522098	2.03	318997631	1.80
OP14907-MB1	1523395904	2.03	299797259	1.80
OP14907-BS1	1532910846	2.04	303252655	1.80
OP14907-BSD	1620176939	2.03	320390986	1.80
JC73306-1	1571163703	2.03	284558144	1.80
JC73306-2	1641577475	2.03	316250180	1.80
JC73306-3	1790240935	2.03	339018088	1.80
JC73306-4	1671933849	2.03	318518512	1.80

IS 1 = 1-Bromo-2-nitrobenzene (Signal #2)
IS 2 = 1-Bromo-2-nitrobenzene (Signal #1)

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

DDT/Endrin Breakdown Check

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample:	G4G2514-DDT	**Injection Date:**	08/31/18
Lab File ID:	4G94334.D	**Injection Time:**	13:15
Instrument ID:	GC4G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	13546054	81705922
4,4'-DDE	10648539	71061630
4,4'-DDT	338445850	3269967999
DDT Breakdown [a]	6.7 %	4.5 %
Endrin aldehyde	1349225	11883917
Endrin ketone	3882158	26539336
Endrin	296616704	2087613471
Endrin Breakdown [b]	1.7 %	1.8 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
G4G2514-IC2514	4G94336.D	08/31/18	13:49	00:34	Initial cal 1
G4G2514-IC2514	4G94337.D	08/31/18	14:06	00:51	Initial cal 2
G4G2514-IC2514	4G94338.D	08/31/18	14:23	01:08	Initial cal 5
G4G2514-IC2514	4G94339.D	08/31/18	14:40	01:25	Initial cal 10
G4G2514-ICC2514	4G94340.D	08/31/18	14:57	01:42	Initial cal 25
G4G2514-IC2514	4G94341.D	08/31/18	15:14	01:59	Initial cal 50
G4G2514-IC2514	4G94342.D	08/31/18	15:31	02:16	Initial cal 75
G4G2514-IC2514	4G94343.D	08/31/18	15:48	02:33	Initial cal 100
G4G2514-IC2514	4G94344.D	08/31/18	16:05	02:50	Initial cal 500
G4G2514-IC2514	4G94345.D	08/31/18	16:22	03:07	Initial cal 500
G4G2514-ICV2514	4G94346.D	08/31/18	16:39	03:24	Initial cal verification 25
G4G2514-ICV2514	4G94347.D	08/31/18	16:56	03:41	Initial cal verification 500
G4G2514-ICV2514	4G94348.D	08/31/18	17:13	03:58	Initial cal verification 500
G4G2514-ICV2514	4G94349.D	08/31/18	17:30	04:15	Initial cal verification 50
G4G2514-ICV2514	4G94350.D	08/31/18	17:47	04:32	Initial cal verification 50
G4G2515-CC2514	4G94351.D	08/31/18	18:04	04:49	Continuing cal 50
G4G2515-CC2514	4G94352.D	08/31/18	18:21	05:06	Continuing cal 500
G4G2515-CC2514	4G94353.D	08/31/18	18:38	05:23	Continuing cal 500
ZZZZZZ	4G94356.D	08/31/18	19:29	06:14	(unrelated sample)
ZZZZZZ	4G94357.D	08/31/18	19:46	06:31	(unrelated sample)
ZZZZZZ	4G94359.D	08/31/18	20:20	07:05	(unrelated sample)
ZZZZZZ	4G94360.D	08/31/18	20:37	07:22	(unrelated sample)
ZZZZZZ	4G94361.D	08/31/18	20:54	07:39	(unrelated sample)
ZZZZZZ	4G94362.D	08/31/18	21:11	07:56	(unrelated sample)

DDT/Endrin Breakdown Check

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample:	G4G2514-DDT	**Injection Date:**	08/31/18
Lab File ID:	4G94334.D	**Injection Time:**	13:15
Instrument ID:	GC4G		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
G4G2515-ECC2514	4G94364.D	08/31/18	21:45	08:30	Ending cal 25

DDT/Endrin Breakdown Check

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Sample:	G4G2520-DDT	**Injection Date:**	09/09/18
Lab File ID:	4G94581.D	**Injection Time:**	22:47
Instrument ID:	GC4G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	16641130	86731709
4,4'-DDE	10621122	56491307
4,4'-DDT	306088546	1947926165
DDT Breakdown [a]	8.2 %	6.8 %
Endrin aldehyde	845295	3003363
Endrin ketone	3112917	12424415
Endrin	311456971	1450698828
Endrin Breakdown [b]	1.3 %	1.1 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
G4G2520-CC2514	4G94582.D	09/09/18	23:04	00:17	Continuing cal 25
OP14816-MB2	4G94584.D	09/09/18	23:45	00:58	Method Blank
OP14816-BS2	4G94585.D	09/10/18	00:02	01:15	Blank Spike
ZZZZZZ	4G94586.D	09/10/18	00:19	01:32	(unrelated sample)
ZZZZZZ	4G94587.D	09/10/18	00:36	01:49	(unrelated sample)
ZZZZZZ	4G94588.D	09/10/18	00:53	02:06	(unrelated sample)
ZZZZZZ	4G94589.D	09/10/18	01:10	02:23	(unrelated sample)
ZZZZZZ	4G94590.D	09/10/18	01:27	02:40	(unrelated sample)
OP14816-LB31	4G94591.D	09/10/18	01:44	02:57	Leachate Blank
OP14816-LB30	4G94592.D	09/10/18	02:01	03:14	Leachate Blank
OP14867-LB39	4G94593.D	09/10/18	02:18	03:31	Leachate Blank
OP14907-MB1	4G94594.D	09/10/18	02:35	03:48	Method Blank
OP14907-BS1	4G94595.D	09/10/18	02:52	04:05	Blank Spike
OP14907-BSD	4G94596.D	09/10/18	03:09	04:22	Blank Spike Duplicate
JC73306-1	4G94597.D	09/10/18	03:26	04:39	TW-1
JC73306-2	4G94598.D	09/10/18	03:43	04:56	TW-2
JC73306-3	4G94599.D	09/10/18	04:00	05:13	DUPLICATE
JC73306-4	4G94600.D	09/10/18	04:17	05:30	EQUIPMENT BLANK

Surrogate Recovery Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Method: SW846 8081B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JC73306-1	4G94597.D	94	88	39	32
JC73306-2	4G94598.D	83	82	53	47
JC73306-3	4G94599.D	79	77	36	30
JC73306-4	4G94600.D	101	98	90	74
OP14907-BS1	4G94595.D	96	96	103	89
OP14907-BSD	4G94596.D	89	90	97	84
OP14907-MB1	4G94594.D	92	93	101	88

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	13-153%
S2 = Decachlorobiphenyl	10-138%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

Surrogate Recovery Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Method: SW846 8082A **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JC73306-1	XX235358.D	107	89	33	36
JC73306-2	XX235359.D	84	87	52	57
JC73306-3	XX235360.D	88	88	36	39
JC73306-4	XX235361.D	109	108	88	95
OP14906-BS1	XX235349.D	108	108	110	113
OP14906-BSD	XX235350.D	104	104	112	121
OP14906-MB1	XX235348.D	105	106	109	112

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	11-166%
S2 = Decachlorobiphenyl	10-150%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

Surrogate Recovery Summary

Job Number: JC73306
Account: BLCTM BL Companies
Project: Stafford T-210, Stafford, CT

Method: CT-ETPH **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
JC73306-1	8Y29981.D	60
JC73306-2	8Y29982.D	56
JC73306-3	8Z29974.D	67
JC73306-4	8Z29975.D	57
OP14914-BS1	8Z29969.D	78
OP14914-BSD	8Z29970.D	89
OP14914-MB1	8Z29968.D	65
OP14914-MB1	8Y29972.D	63

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	50-150%

(a) Recovery from GC signal #1

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC73306
Account: BLCTM - BL Companies
Project: Stafford T-210, Stafford, CT

QC Batch ID: MP9008
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date:					09/10/18		09/10/18
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	8.8	46				
Antimony	6.0	1	4.7				
Arsenic	3.0	1.2	2.8				
Barium	200	.2	13				
Beryllium	1.0	.1	.5				
Bismuth	20	1.2	4				
Boron	100	1.8	63				
Cadmium	3.0	.1	1				
Calcium	5000	3.2	99				
Chromium	10	.3	2				
Cobalt	50	.3	2.6				
Copper	10	1.3	5.9	-0.60	<10	-0.40	<10
Iron	100	1.9	32				
Lead	3.0	1.2	1.8	0.40	<3.0	0.40	<3.0
Lithium	50	.8	7.3				
Magnesium	5000	16	140				
Manganese	15	.1	1.4				
Molybdenum	20	.4	3.6				
Nickel	10	.3	1.7				
Phosphorus	50	1.5	18				
Potassium	10000	46	200				
Selenium	10	2	4.9				
Silicon	200	1.7	100				
Silver	10	.4	1.9				
Sodium	10000	9.8	570				
Strontium	10	.1	1				
Sulfur	50	3.7	45				
Thallium	10	2.4	1.8				
Tin	10	.9	3.7				
Titanium	10	.1	2.5				
Tungsten	50	2.1	40				
Vanadium	50	.2	1.8				
Zinc	20	.1	6.9	2.0	<20	3.6	<20

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC73306
Account: BLCTM - BL Companies
Project: Stafford T-210, Stafford, CT

QC Batch ID: MP9008
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date:				09/10/18		09/10/18	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Zirconium	10	.2	4.1				

Associated samples MP9008: JC73306-1, JC73306-2, JC73306-3, JC73306-4, JC73306-1F, JC73306-2F, JC73306-3F, JC73306-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC73306
Account: BLCTM - BL Companies
Project: Stafford T-210, Stafford, CT

QC Batch ID: MP9008
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date:			09/10/18				09/10/18	
Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum								
Antimony								
Arsenic	anr							
Barium	anr							
Beryllium								
Bismuth								
Boron								
Cadmium	anr							
Calcium								
Chromium	anr							
Cobalt								
Copper	2040	2000	102.0	80-120	1940	2000	97.0	80-120
Iron	anr							
Lead	2000	2000	100.0	80-120	1910	2000	95.5	80-120
Lithium								
Magnesium								
Manganese	anr							
Molybdenum								
Nickel								
Phosphorus								
Potassium								
Selenium	anr							
Silicon								
Silver	anr							
Sodium								
Strontium								
Sulfur								
Thallium								
Tin								
Titanium								
Tungsten								
Vanadium								
Zinc	1960	2000	98.0	80-120	1890	2000	94.5	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC73306
Account: BLCTM - BL Companies
Project: Stafford T-210, Stafford, CT

QC Batch ID: MP9008
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date:				09/10/18				09/10/18
Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium								

Associated samples MP9008: JC73306-1, JC73306-2, JC73306-3, JC73306-4, JC73306-1F, JC73306-2F, JC73306-3F, JC73306-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC73306
Account: BLCTM - BL Companies
Project: Stafford T-210, Stafford, CT

QC Batch ID: MP9008
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/10/18

Metal	JC73360-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Bismuth				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	16.7	12.9	22.8 (a)	0-10
Iron	anr			
Lead	6.80	8.10	19.1 (a)	0-10
Lithium				
Magnesium				
Manganese	anr			
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Sulfur				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	39.7	41.7	5.0	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC73306
Account: BLCTM - BL Companies
Project: Stafford T-210, Stafford, CT

QC Batch ID: MP9008
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/10/18

Metal	JC73360-1 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP9008: JC73306-1, JC73306-2, JC73306-3, JC73306-4, JC73306-1F, JC73306-2F, JC73306-3F, JC73306-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).