



NOTICE OF INTENT FOR REMEDiation GENERAL PERMIT

Outfalls 001 and 002

980 Washington Street, Suite 325
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woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

Prepared for:
Schneider Electric
Systems USA, Inc.
38 Neponset Avenue
Foxborough, MA

March 2020

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ATTACHMENTS

- Attachment 1: Outfall 001 – Notice of Intent
- Attachment 2: Outfall 002 – Notice of Intent
- Attachment 3: Outfall 001 – Laboratory Analytical Reports
- Attachment 4: Outfall 001 – Dilution Factor Confirmation from State and StreamStats 7Q10 Data
- Attachment 5: Outfall 001 – Appendix V Calculation Spreadsheet
- Attachment 6: Outfall 002 – Laboratory Analytical Reports
- Attachment 7: Outfall 002 – StreamStats 7Q10 Data
- Attachment 8: Outfall 002 – Appendix V Calculation Spreadsheet

1. INFORMATION APPLICABLE TO BOTH OUTFALL 001 AND OUTFALL 002

1.1 Facility Information

Facility Owner Name and Address: Schneider Electric Systems USA, Inc.
38 Neponset Avenue
Foxborough, Massachusetts 02035

Facility Owner Contact: Paul Ahearn
Director, Environmental Projects
70 Mechanic Street, C41-32
Foxborough, Massachusetts 02035
Telephone: (508) 549-4946
Email: paul.ahearn@se.com

County Norfolk

A Facility Location Map for Schneider Electric Systems USA, Inc. (Schneider Electric or the Facility) is provided as **Figure 1**. The Notice of Intent (NOI) for Outfall 001 is provided as **Attachment 1**. The NOI for Outfall 002 is provided as **Attachment 2**.

1.2 Endangered Species Act Eligibility Determination

The criterion for which the discharges are eligible for coverage under the Remediation General Permit (RGP) permit is "Criterion C".

Woodard & Curran has determined that the discharge and related activities will have "no effect" on any federally threatened or endangered listed species or designated critical habitat.

According to the U.S. Fish and Wildlife Service (USFWS) Endangered Species listing, the northern long eared bat, red knot, piping plover, hawksbill sea turtle, and leatherback sea turtle are listed as threatened or endangered species in Norfolk County, Massachusetts.

The discharge and the receiving waters associated with Outfall 001 and Outfall 002 are not located in an area within USFWS designated critical habitat. The initial discharge at both outfalls will be diluted after entering the receiving water and therefore will have "no effect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the USFWS.

1.3 National Historic Preservation Act Eligibility Determination

The criterion which the discharge is eligible for coverage under this general permit is "Criterion A":

Woodard & Curran searched the Massachusetts Cultural Resource Information System (MACRIS) and the National Register of Historic Places databases for historic properties located in the Town of Foxborough. No historic properties are present in the vicinity of Outfall 001 or Outfall 002.

Although historic properties are present within the Town of Foxborough, the discharges and discharge-related activities at Outfall 001 and Outfall 002 are not anticipated to have the potential to affect these historic properties.

1.4 Stormwater Pollution Prevention Plan (SWPPP)/Best Management Practices

Schneider Electric has prepared and operates under a SWPPP for the entire Neponset Avenue Facility. Records of compliance with this plan and annual reporting to USEPA are performed by the Facility. This SWPPP meets the general requirements for a Best Management Practices Plan as described in Part 2.5.1.c of the RGP.

2. INFORMATION SPECIFIC TO OUTFALL 001 (NEPONSET NORTH)

2.1 Location of the Discharge and Component of Flow Subject to RGP Coverage

- Outfall 001 is located in Foxborough, Massachusetts at the northern end of Neponset Avenue across Chestnut Street from the Neponset North manufacturing facility.
 - The latitude and longitude are: 42°04'31" N and -71°15'03" W, respectively.
 - The discharge at Outfall 001 is an indirect discharge of groundwater into a regional municipal and private shared stormwater drainage system shared by Town of Foxborough and Schneider Electric.
 - The Facility's contribution to Outfall 001 is in the form of:
 - Stormwater that is generated in the Neponset North manufacturing area and administrative parking lots in the Outfall 001 drainage area. Such stormwater is not industrially-impacted ("no exposure"), is managed under the Facility's SWPPP, and is not subject to coverage under the RGP.
 - Groundwater beneath the Neponset North manufacturing area that enters the 70+ year old drainlines via cracks/gaps in the various drainline segments. Because of high regional groundwater conditions, approximately 95% of the 6,600-foot long drainline system is at an elevation that is partially or fully below the water table. The infiltrating groundwater is subject to the RGP coverage.

2.2 Source of Water Subject to RGP Coverage, Duration of Discharge and RPG Activity Category

- The source of the water to be covered under the RGP for Outfall 001 is groundwater that infiltrates into the subsurface drainage system beneath the Facility. The Drainline Configuration Schematic Diagram for Outfall 001 is provided as **Figure 2**.
- Infiltrating groundwater that enters the Facility Trunk Line is captured at manhole #1 (MH-1) and treated by the Dry Weather Treatment System (DWTS), an air stripper unit, and then is discharged into the Facility's stormwater conveyance leading to Outfall 001. The Treatment System Configuration Schematic Diagram is provided as **Figure 3**.
 - The DWTS functions only during dry-weather (i.e., non-storm periods) to remove any chlorinated volatile organic compounds (VOCs).
 - Substantial characterization of the source water has previously been performed and submitted to United States Environmental Protection Agency (USEPA) as part of the 2016-19 National Pollutant Discharge Elimination System (NPDES) Work.
 - The source water has not been previously chlorinated and does not otherwise contain residual chlorine.
 - The infiltrating groundwater also contain residual concentrations of cadmium.
- Outfall 001 is considered to be an existing discharge.
 - Since the 1990s, the Facility has operated the DWTS to remove halogenated VOCs (e.g., trichloroethylene or "TCE"), via the air stripping technology, that are present in the infiltrating groundwater.
 - The discharge flow is 0.036 million gallons per day (mgd), equivalent to 25 gallons per minute (gpm), which corresponds to the design flow of the DWTS.
 - The discharge is ongoing and is expected to occur over a duration of 12 months or more.
- The applicable RPG Activity Category is
 - Category VII: Collection Structure Dewatering/Remediation.

2.3 Receiving Waters¹

- The receiving water for the indirect discharge of groundwater from the Facility is the Neponset Reservoir.
 - The Massachusetts Department of Environmental Protection (MassDEP) Division of Water Pollution Control waterbody identification number for the Neponset Reservoir is MA73034.
 - The receiving water classification is Class B.
 - The Neponset Reservoir is listed in the state's Integrated List of Waters (Section 303(d)) of Clean Water Act.
 - The designated uses which are impaired on the state integrated list is "non-native aquatic plants, excessive algae growth, and turbidity."
 - Neponset Reservoir does not have a total maximum daily load (TMDL) assessment.
 - The Neponset Reservoir is located at the headwaters of a portion of the Neponset River/Boston Harbor drainage basin.

2.4 Characterization of Source Water Subject to RGP Coverage

- The infiltrating groundwater subject to RGP coverage is known to be impacted by the following groups of RGP contaminant types (A) Inorganics; and (C) Halogenated Volatile Organic Compounds.
 - Based on test data developed during 2016-19 NPDES Work required under the 2016 Order and through 2018-19 discussions with USEPA, the source water contaminants of focus for the Outfall 001 RGP NOI have been identified as TCE and cadmium.
- Cadmium
 - On November 5, 2019, a post-treatment effluent sample was collected from the DWTS.
 - The sample was collected during dry conditions (i.e., non-storm period) when the groundwater table was between its seasonally-high/low levels; as such, the sample is representative of groundwater that has infiltrated into the Facility's subsurface drainline system but that has not been commingled with stormwater.
 - The sample was submitted for laboratory analyses for cadmium, copper, lead, zinc, pH and total hardness.
 - Sample results are provided on **Table 1**, and a copy of the laboratory analytical report is provided as **Attachment 3**.
 - The cadmium concentration value used in the RGP calculations is 0.40 ug/l
- TCE
 - Between June 9, 2017 and June 21, 2019, 12 samples were collected for laboratory analysis of TCE from the influent and effluent of the dry weather treatment system.
 - TCE influent concentrations ranged from 9.2 to 27.3 µg/L.

¹ Woodard & Curran has not attached a summary of receiving water sampling results as indicated in Part 4.2 of the RGP, since the results of the historically widespread sampling and characterization of the Outfall 001 drainage system have already been reported to MassDEP and USEPA. As noted in Section 1.4 above.

- TCE effluent concentrations were less than 1 µg/L during all sampling events.
- A summary of the analytical results is also provided in **Table 1**. Copies of the laboratory analytical reports are provided as **Attachment 3**.

2.5 7Q10 Value and WQBEL Dilution Factor

- USGS StreamStats was used to derive the 7Q10 of the receiving water.
 - The StreamStats Report is provided in **Attachment 4**.
 - The calculated 7Q10 value is 0.045 mgd.
- The dilution factor for the calculation of water quality based effluent limitations (WQBELs) was determined in accordance with the instructions in Appendix V.
 - The calculated dilution factor is 2.25.
- MassDEP Confirmation of the 7Q10 value and dilution factor.
 - The MassDEP concurs with the 7Q10 value and dilution factor derived by Woodard & Curran.
 - A copy of the December 10, 2019 email correspondence from Ms. Cathy Vakalopolous of MassDEP to Woodard & Curran is provided in **Attachment 4**.

2.6 Sensitive Receptors

- According to the MassGIS Oliver database and the MassDEP Bureau of Waste Site Cleanup (BWSC) Receptor Map (which also uses the MassGIS database), sensitive receptors present near Outfall 001 include a certified vernal pool located approximately 1,200 feet southwest of Outfall 001 and freshwater wetlands which are located approximately 200 feet southeast and 500 feet northwest of Outfall 001.
- A BWSC Receptor Map that identifies environmental receptors within a 500 foot and one-half mile radius of Outfall 001 is provided as **Figure 5**.

2.7 Calculation of Applicable Discharge Limits for Outfall 001 under RGP

- The Appendix V calculation spreadsheet was used to determine discharge limits applicable to Outfall 001.
 - A copy of the Appendix V calculation spreadsheet is provided as **Attachment 5**.
- Input parameters used in the calculations included the following:
 - Upstream flow = 0
 - Discharge flow (groundwater influent) = 0.036 mgd
 - Downstream 7Q10 = 0.045 mgd
 - Influent hardness = 75.2 mg/L CaCO₃
 - Receiving water hardness = 72 mg/L CaCO₃ ⁽¹⁾
 - Receiving water pH = 6.24 ⁽¹⁾
 - Receiving water temperature in degrees C = 17 ⁽¹⁾

⁽¹⁾ These data are derived from the September 2019 WET test analytical results.

2.8 Description of Dry Weather Treatment System

- The DWTS was initially installed at the Facility in the 1990s.

- System components have been updated and replaced periodically since then, with the most-recent major overhaul of the until and electrical control completed in Summer 2019.
- The DWTS is used to treat low levels of VOCs emanating from the groundwater from underneath the Facility.
 - The system collects the groundwater that has entered the subsurface storm drainage system under the Facility at MH-1 and pumps the water through a four-tray air stripper with a design flow rate of 25 gpm.
 - Flow into the system is initiated within the MH-1 manhole through a series of float switches that activate the pumping system. The air stripper is comprised of four trays, each with a series of perforations (holes) that run along their base.
 - Each tray is 'U-shaped', ending with a weir. During operation, water is introduced into the top of the air stripper, where it flows into the first tray. The tray fills with water until it reaches the top of the weir, at which point it cascades over the weir and runs through a down-comer (or chute), directing the water to the next tray below. This process continues over four concurrent trays, ending when water reaches the holding sump at the bottom of the air stripper. As the sump fills, the treated water flows by gravity through the effluent pipe back to MH-1, where the flow is discharged back to the storm drain system.
 - The pump run status, flow rate, and air pressure of the air stripper are continuously monitored through a local supervisory control and data acquisition (SCADA) system.
- An Operation & Maintenance (O&M) manual for operation of the system has been prepared by Woodard & Curran.
 - The system is operated under Schneider Electric facility personnel with routine oversight and assistance by Woodard & Curran.
- A schematic of flow in accordance with the instructions is attached as **Figure 3**.

2.9 Chemicals and Additives

- No chemicals or additives will be applied to the effluent prior to discharge or that may otherwise be present in discharge.

3. INFORMATION SPECIFIC TO OUTFALL 002 (NEPONSET SOUTH)

3.1 Location of the Discharge and Component of Flow Subject to RGP Coverage

- Outfall 002 is located approximately 1,800 feet southeast of Outfall 001 in the Neponset South portion of the Facility.
 - The latitude and longitude are: 42°04'14" N and -71°14'53" W, respectively.
 - The discharge at Outfall 002 is an indirect discharge of groundwater into a regional municipal and private stormwater drainage system shared by Town of Foxborough and Schneider Electric.
 - The Facility's contribution to Outfall 002 is in the form of:
 - Stormwater that is generated in the 19.6-acre offsite Town of Foxborough drainage area (a residential area).
 - Groundwater beneath the Neponset South manufacturing area that was built from the 1890s to the 1940s. The majority of drainlines located below the Neponset South Facility sit below the groundwater water table for a significant portion of the year. There is a variety of drain pipe materials and construction, including a significant length of a "beehive" style drainline, that features a pervious cobblestone bottom designed to relieve groundwater. In addition, there is minimal variation in drainline elevation. Stagnant water is present in the drainlines during periods of seasonally high water table; flow occurs primarily during and after precipitation events and/or snowmelt. The infiltrating groundwater is subject to the RGP coverage.

3.2 Source of Water Subject to RGP Coverage, Duration of Discharge and RPG Activity Category

- The source of the water to be covered under the RGP for Outfall 002 is groundwater that infiltrates into the beehive drainage system beneath the Facility. The drainline configuration schematic diagram for Outfall 002 is provided as **Figure 4**.
 - The source water has not been previously chlorinated and does not otherwise contain residual chlorine.
- Outfall 002 is considered to be an existing discharge.
 - The average effluent flow rate ranges from 0 to 0.036 mgd (25 gpm).
 - The discharge is ongoing and is expected to occur over a duration of 12 months or more.
- The applicable RPG Activity Category is
 - Category VII: Collection Structure Dewatering/Remediation.

3.3 Receiving Waters¹

- The receiving water for the indirect discharge of groundwater from the Facility is Robinson Brook via an 1,800 foot long unnamed ditch.
 - The MassDEP Division of Water Pollution Control waterbody identification number for Robinson Brook is MA62-14.

¹ Woodard & Curran has not attached a summary of receiving water sampling results as indicated in Part 4.2 of the RGP, since sampling of the drainage system has occurred and been reported to USEPA already (adjacent upstream railroad ditch FOX-IN via technical reporting under the Order/Individual Permit). Sampling of Robinson Brook has not been conducted and is not warranted.

- The receiving water classification is Class B.
- Robinson Brook is listed in the state's Integrated List of Waters (Section 303(d)) of Clean Water Act.
- The designated uses which are impaired on the state integrated list is "aquatic macroinvertebrate bioassessments."
- Robinson Brook does not have a total maximum daily load (TMDL) assessment.
- This discharge is located at the headwaters of a portion of the Ten Mile River/Narragansett Bay drainage basin.

3.4 Characterization of Source Water Subject to RGP Coverage

- The infiltrating groundwater subject to RGP coverage is known to be impacted by the following groups of RGP contaminant types (A) Inorganics; and (C) Halogenated Volatile Organic Compounds.
 - Based on test data developed during 2016-19 NPDES Work required under the 2016 Order and on 2018-19 discussions with USEPA, the source water contaminants of focus for the Outfall 001 RGP NOI have been identified as TCE, lead and cadmium.
- Groundwater influent samples were collected from two manholes, MH-26 and MH-39, located inside the Facility building; these locations are considered representative of groundwater influent/source. All of the samples were collected during high water table, dry conditions.
- Cadmium and lead
 - Samples from each manhole were collected during six events, for a total of 12 samples.
 - The detection limit for cadmium is 0.2 µg/L. The cadmium daily maximum and daily average are 0.23 µg/L and 0.0758 µg/L, respectively.
 - The detection limit for lead is 0.5 µg/L. The lead daily maximum and daily average are 1.5 µg/L and 0.966 µg/L, respectively.
- TCE
 - Samples were collected from each manhole during four events, for a total of eight samples.
 - The detection limit for TCE is 1.0 µg/L. The TCE daily maximum and daily average are 1.0 µg/L and 0.375 µg/L.

A summary of the sample results for cadmium, lead and TCE is provided on **Table 2**. Copies of the laboratory analytical reports are provided as **Attachment 6**.

3.5 7Q10 Value and WQBEL Dilution Factor

- USGS StreamStats was used to derive the 7Q10 of the receiving water.
 - The StreamStats Report is provided in **Attachment 7**.
 - The 7Q10 value is 0.
- The dilution factor for the calculation of WQBELs was determined in accordance with the instructions in Appendix V.
 - The calculated dilution factor is 0.
 - Since the dilution factor is 0, the operator did not seek confirmation from the state for the 7Q10 and dilution factor indicated.

3.6 Sensitive Receptors

- According to the MassGIS Oliver database and the MassDEP Bureau of Waste Site Cleanup (BWSC) Receptor Map (which also uses the MassGIS database), sensitive receptors present near Outfall 002 include a potential vernal pool approximately 800 feet to the west and freshwater wetlands which are located approximately 900 feet to the northeast. However, these receptors are located in the Neponset River/Boston Harbor watershed.
- A BWSC Receptor Map that identifies environmental receptors within a 500 foot and one-half mile radius of Outfall 001 is provided as **Figure 6**.

3.7 Calculation of Applicable Discharge Limits for Outfall 002 under RGP

- The Appendix V calculation spreadsheet was used to determine discharge limits applicable to Outfall 002.
 - A copy of the Appendix V calculation spreadsheet is provided as **Attachment 8**.
 - Input parameters used in the calculations included the following:
 - Upstream flow = 0
 - Discharge flow (groundwater influent) = 0.036 mgd
 - Downstream 7Q10 = 0
 - Influent hardness = 83 mg/L CaCO_3
 - Receiving water hardness = 50 mg/L CaCO_3 ⁽²⁾
 - Receiving water pH = 6.5 ⁽²⁾
 - Receiving water temperature in degrees C = 18 ⁽²⁾
- ⁽²⁾ These data are derived from the sampling efforts performed as part of the 2016 Order and previously reported to USEPA.

3.8 Chemicals and Additives

- No chemicals or additives will be applied to the effluent prior to discharge or that may otherwise be present in discharge.

TABLES

Table 1: Outfall 001 - Summary of Analytical Results

Table 2: Outfall 002 - Summary of Analytical Results

TABLE 1
OUTFALL 001
SUMMARY OF ANALYTICAL RESULTS

SCHNEIDER ELECTRIC NEPONSET AVENUE FACILITY
FOXBOROUGH, MASSACHUSETTS

Sampling Date	Influent TCE Concentration (µg/L)	Effluent TCE Concentration (µg/L)
6/9/2017	13.8	<1
8/16/2017	13.8	<1
11/1/2017	25.0	<1
3/22/2018	12.0	<1
6/19/2018	27.3	<1
9/26/2018	12.5	<1
12/4/2018	11.2	<1
12/28/2018	13.3	<1
1/31/2019	9.2	<1
3/20/2019	9.8	<1
6/21/2019	13.8	<1
11/21/2019	17.7	<1

Parameter	Reporting Limit (µg/L)	Sample Date	Effluent Concentration (µg/L)
Cadmium	0.2	11/5/2019	0.4
Copper	2	11/5/2019	7.8
Lead	0.5	11/5/2019	1.1
Zinc	50	11/5/2019	62.1
Hardness	82.4	11/5/2019	75,200

Table 2
 Outfall 002 Drainline Water Quality Sample Results
 Schneider Electric Neponset Avenue Facility
 Foxborough, Massachusetts

Sample Date	11/7/2018	11/30/2018	1/7/2019	2/20/2019	3/20/2019	4/10/2019
Water Table	High	High	High	High	High	High
Flow Conditions	Dry	Dry	Dry	Dry	Dry	Dry
Sample Location	MH39					
Cadmium	ND (0.2)	ND (0.2)	ND (0.2)	0.24	0.21	ND (0.2)
Lead	1.5	0.9	0.8	ND (0.5)	0.7	0.8
Trichloroethene	NA	NA	ND (1.0)	1	ND (1.0)	ND (1.0)
Sample Location	MH26					
Cadmium	ND (0.2)	ND (0.2)	ND (0.2)	0.25	0.21	ND (0.2)
Lead	1.6	0.9	1.5	0.9	0.7	1.3
Trichloroethene	NA	NA	ND (1.0)	1	1	ND (1.0)

Notes:

All values are presented in units of micrograms per liter (ug/L)

ND = Not detected above presented laboratory reporting limit

NA = Not analyzed

FIGURES

Figure 1: Facility Location Map

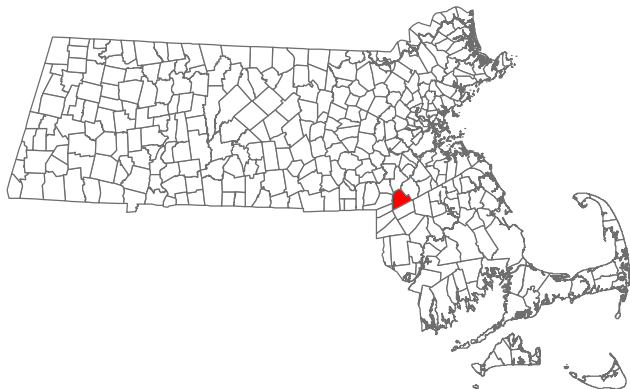
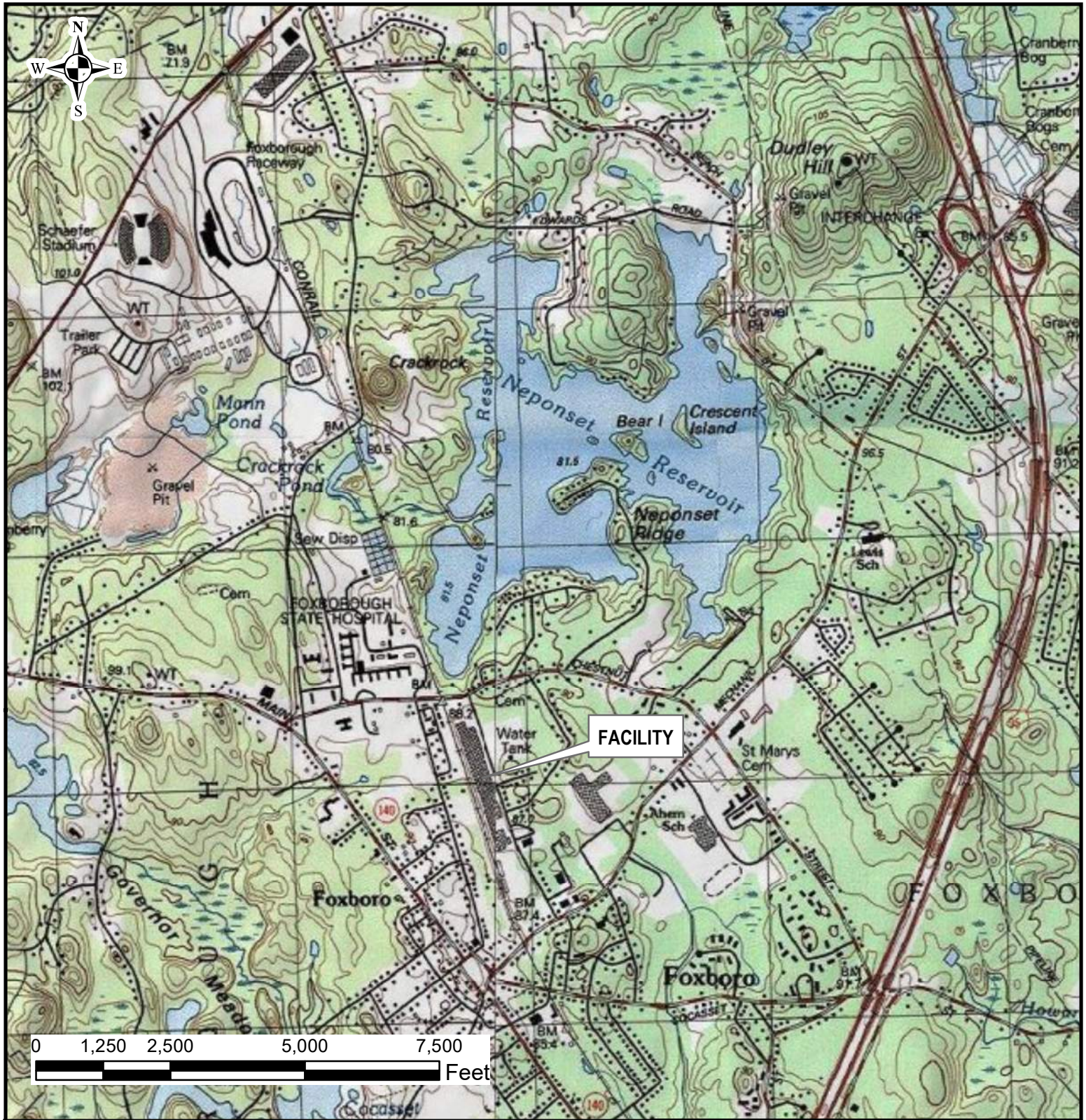
Figure 2: Outfall 001 - Drainline Configuration Schematic Diagram

Figure 3: Outfall 001 - Treatment System Configuration Schematic Diagram

Figure 4: Outfall 002 - Drainline Configuration Schematic Diagram

Figure 5: Outfall 001 - Bureau of Waste Site Cleanup Receptors Map

Figure 6: Outfall 002 - Bureau of Waste Site Cleanup Receptors Map



Scheider Electric Neponset Avenue Facility
Foxborough, Massachusetts

Facility Location

FIGURE 1



SCALE: 1" =2500'	DOC: FacilityLocation.MXD
DATE: OCTOBER 2019	JOB NO.: 223812
DRAWN BY: NK	SOURCE: ESRI/ MassGIS



Legend

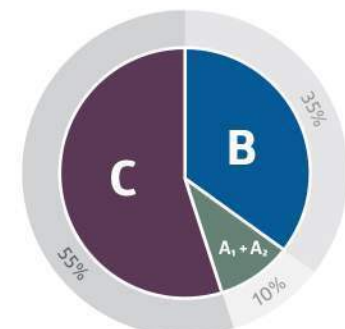
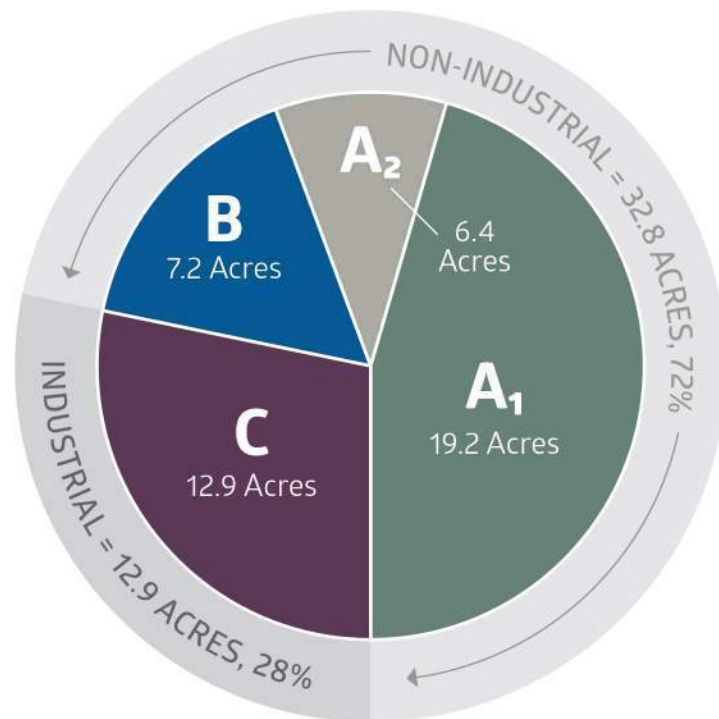
← Subsurface Flow Direction Through Piping

A1. Foxhill Road Neighborhood

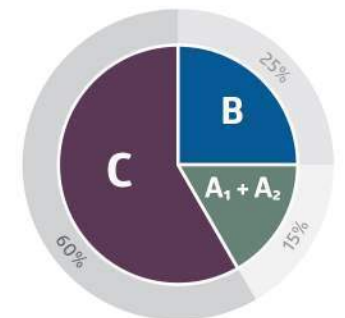
A2. Bradford Street Neighborhood

B. North Parking Lot

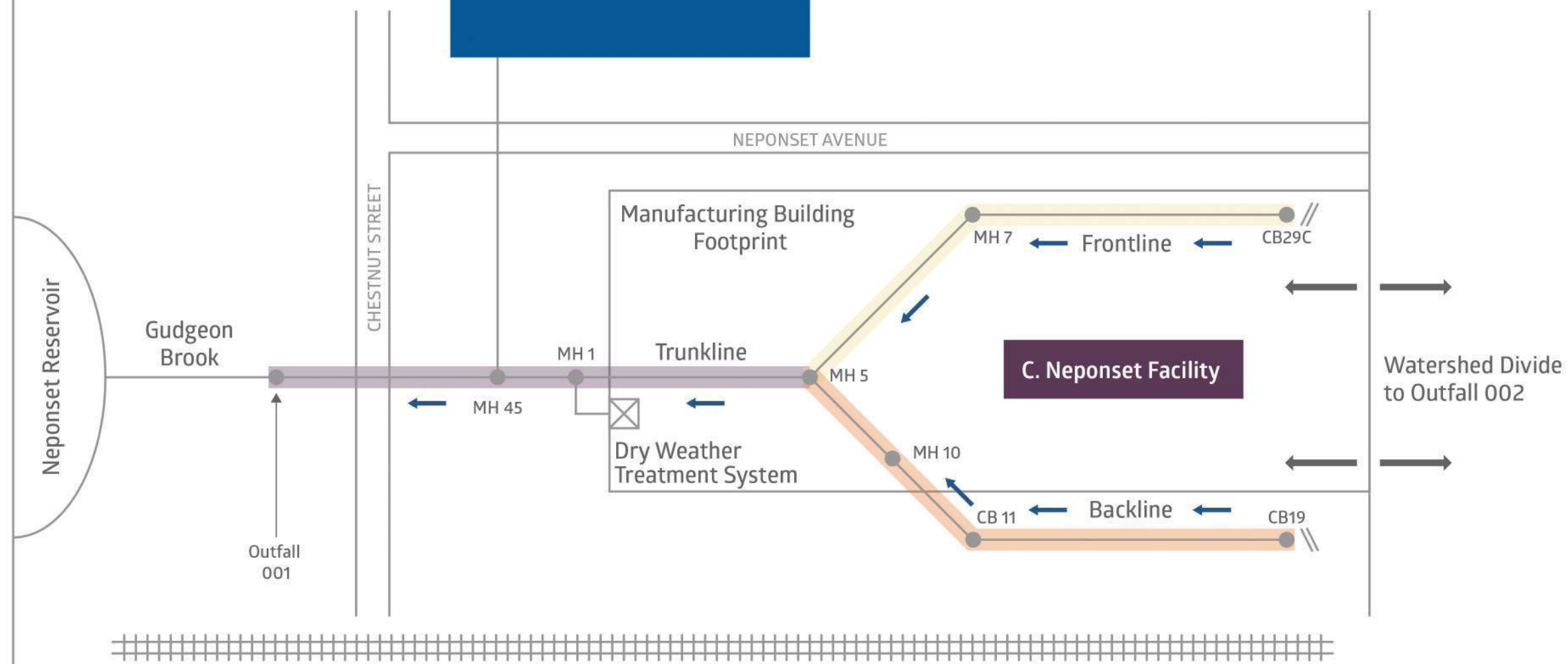
Watershed Contribution, by Acres



Storm Flow Contribution (High or Low Water Table)



High Water Table Non-Storm Contribution



Outfall 001: Simplified (not to scale)

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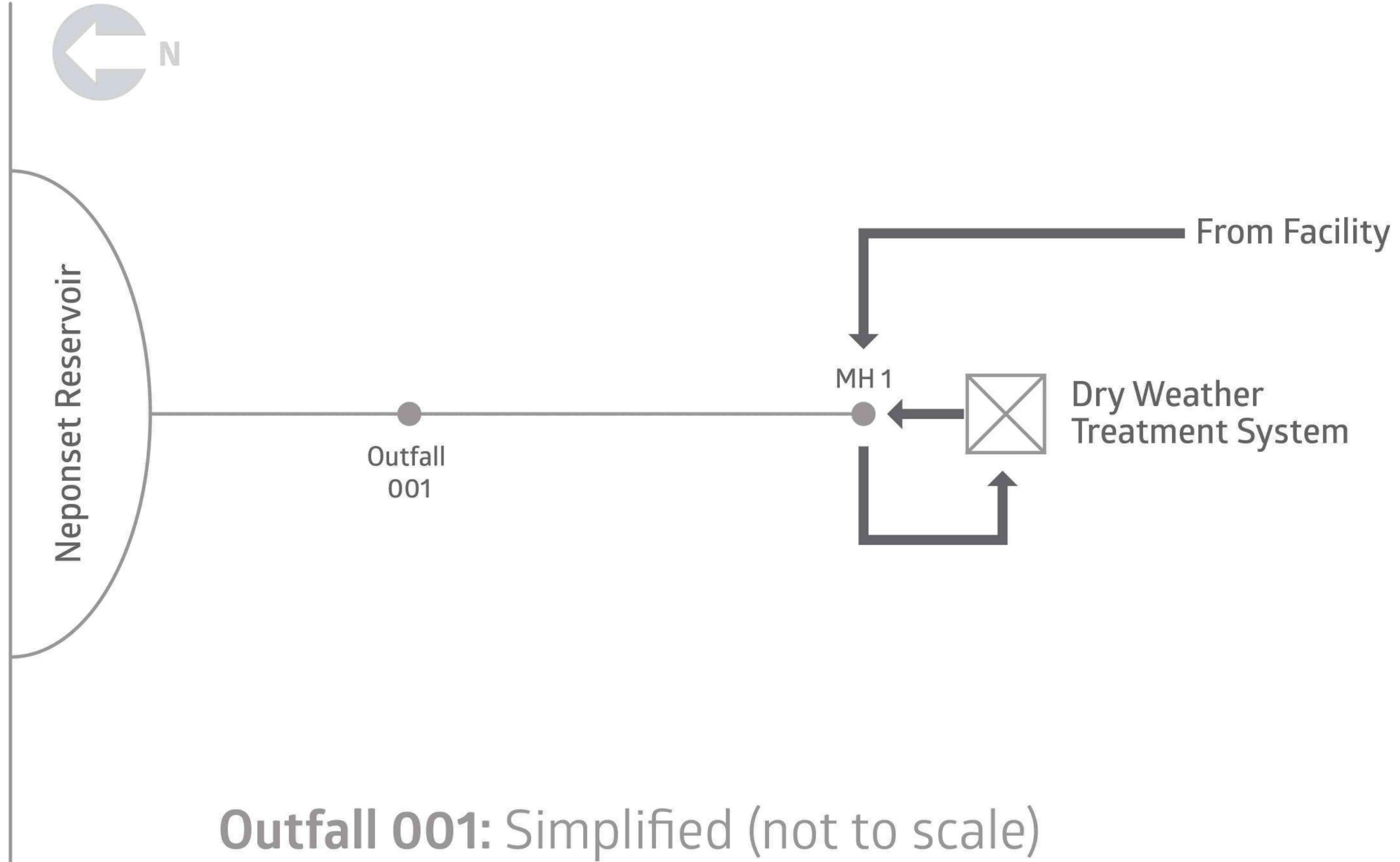
COMMITMENT & INTEGRITY DRIVE RESULTS

OUTFALL 001
DRAINLINE CONFIGURATION
SCHEMATIC DIAGRAM

SCHNEIDER ELECTRIC

FOXBOROUGH, MA

FIGURE 2



Outfall 001: Simplified (not to scale)

SCHNEIDER ELECTRIC

FOXBOROUGH, MA

OUTFALL 001
DRY WEATHER TREATMENT
SYSTEM SCHEMATIC DIAGRAM



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COMMITMENT & INTEGRITY DRIVE RESULTS

Outfall 002 Drainline Configuration Schematic Diagram

Figure 4

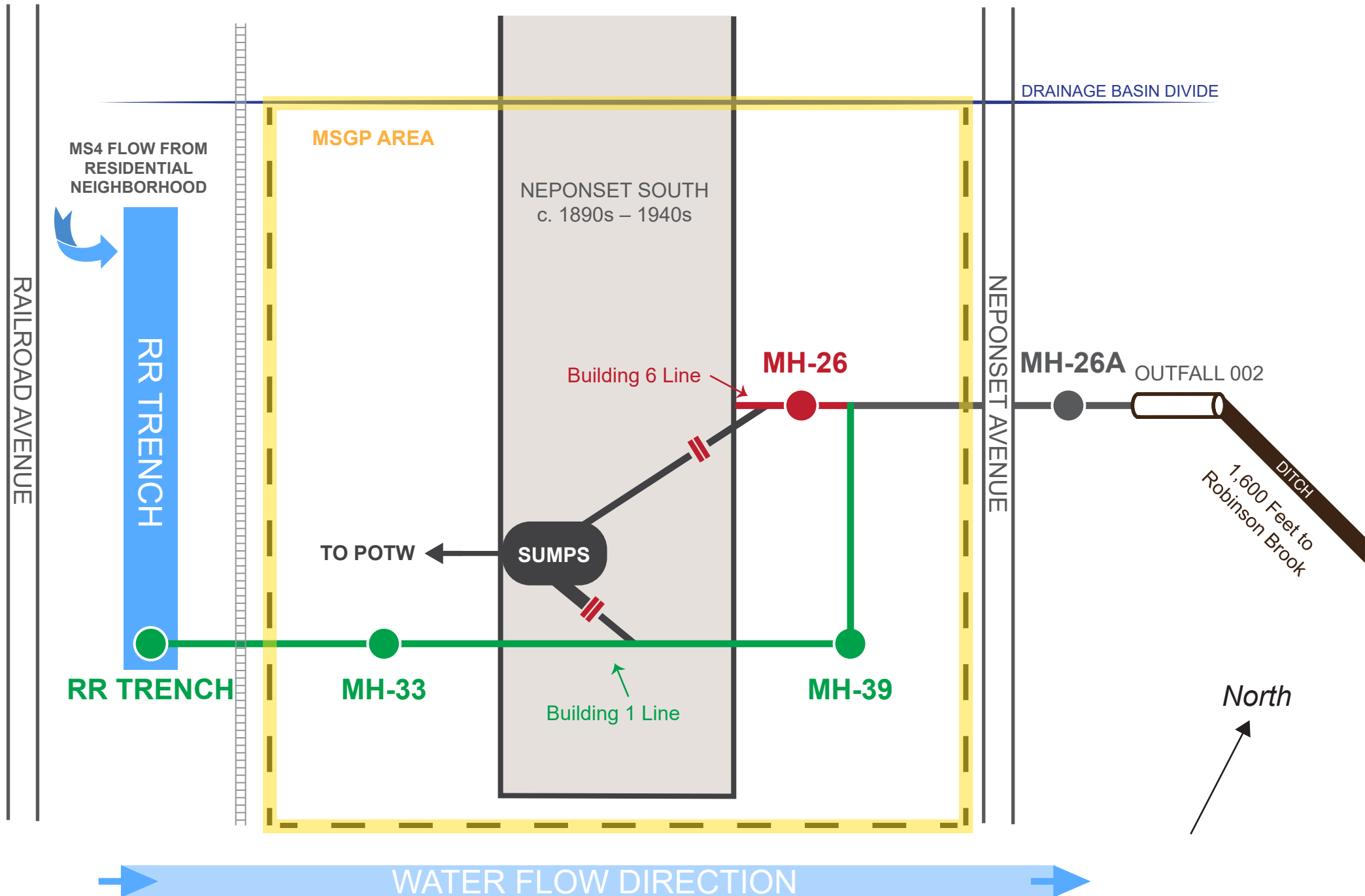


Figure 5

MassDEP - Bureau of Waste Site Cleanup**Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii**

Schneider Electric, Outfall 001

Site Information:

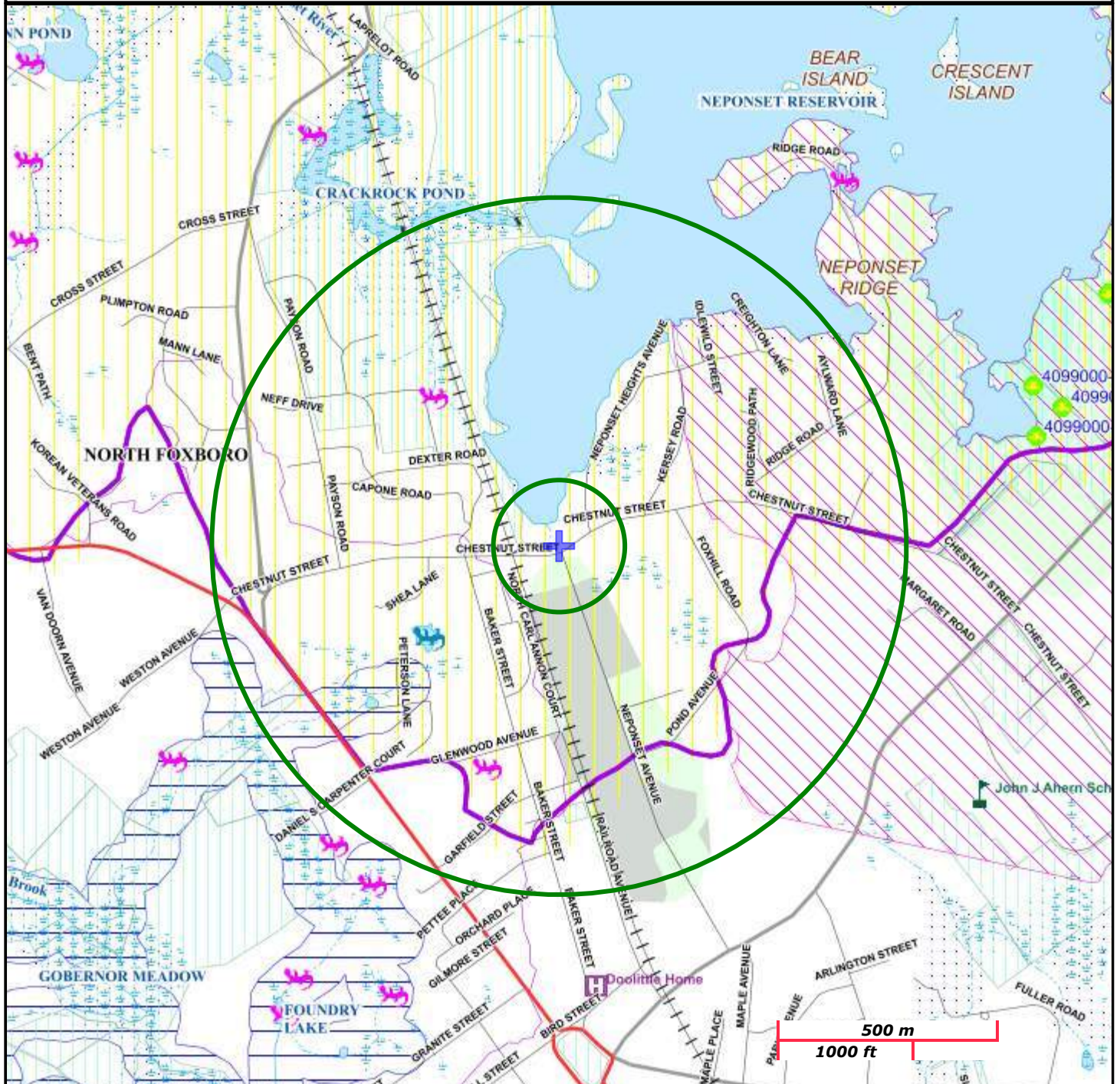
38 NEPONSET AVENUE FOXBOROUGH, MA

NAD83 UTM Meters:

4660604mN , 313789mE (Zone: 19)

October 10, 2019

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<https://www.mass.gov/orgs/massgis-bureau-of-geographic-information>

**MassDEP**Commonwealth of Massachusetts
Department of Environmental Protection

Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source.....

Non Potential Drinking Water Source Area: Medium, High (Yield)...

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.

Figure 6

MassDEP - Bureau of Waste Site Cleanup**Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii**

Schneider Electric - Outfall 002

Site Information:

38 NEPONSET AVENUE FOXBOROUGH, MA

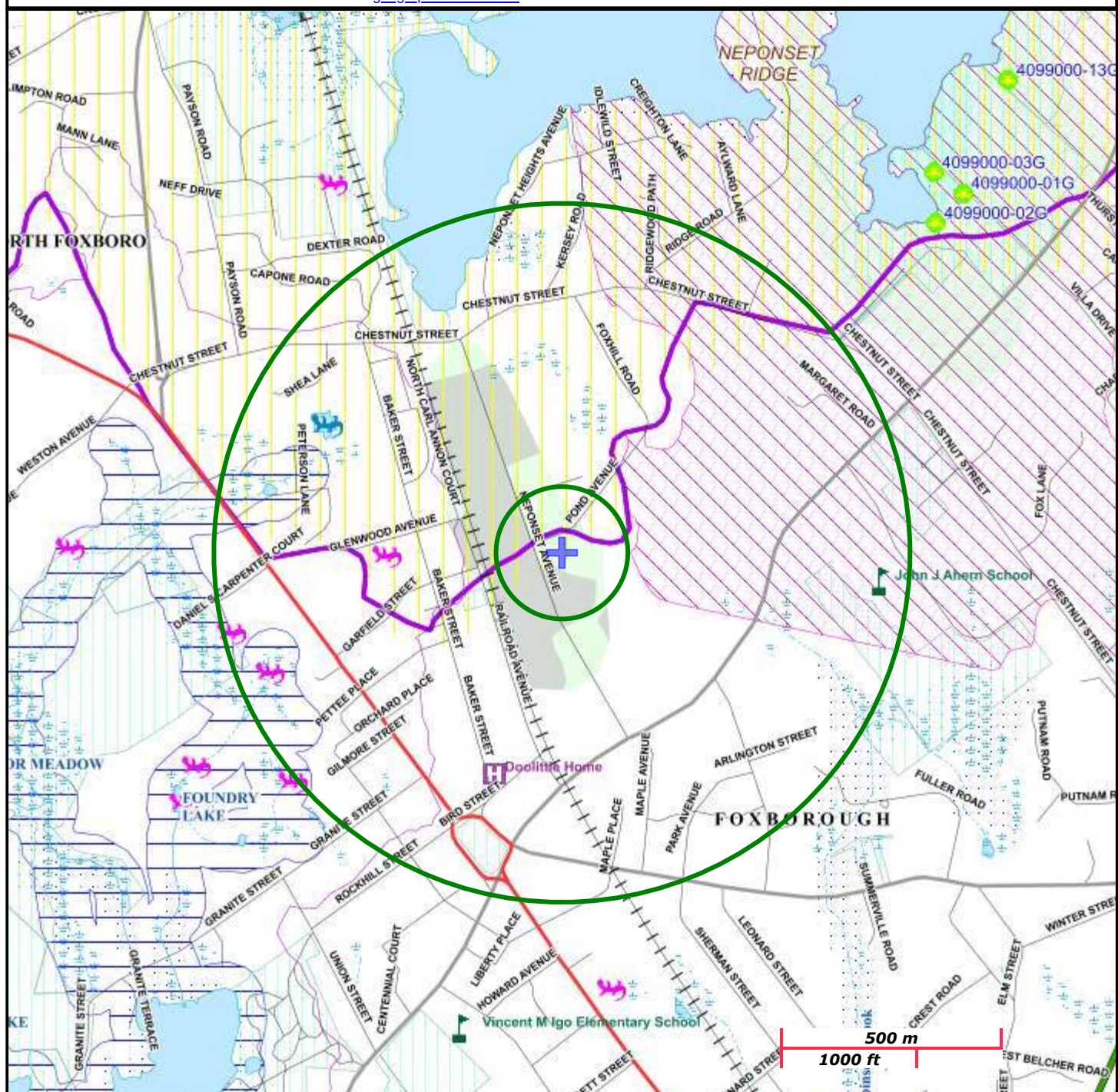
NAD83 UTM Meters:

4660091mN , 314016mE (Zone: 19)

September 19, 2019

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:

<https://www.mass.gov/orgs/massgis-bureau-of-geographic-information>

**MassDEP**Commonwealth of Massachusetts
Department of Environmental Protection

Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.

ATTACHMENT A: OUTFALL 001 – NOTICE OF INTENT

II. Suggested Format for the Remediation General Permit Notice of Intent (NOI)

A. General site information:

1. Name of site: Schneider Electric Systems USA, Inc. Outfall 001	Site address: 38 Neponset Avenue Street:		
2. Site owner Schneider Electric Systems USA, Inc. Owner is (check one): ☐ Federal ☐ State/Tribal ☒ Private ☐ Other; if so, specify:	City: Foxborough	State: MA	Zip: 02035
3. Site operator, if different than owner NA	Contact Person: Paul Ahearn Telephone: 508-549-4949 Email: paul.ahearn@se.com Mailing address: 70 Mechanic Street, C41-32 Street: City: Foxborough State: MA Zip: 02035		
4. NPDES permit number assigned by EPA: MA0004120 NPDES permit is (check all that apply): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☒ Individual NPDES permit ☐ Other; if so, specify:	5. Other regulatory program(s) that apply to the site (check all that apply): ☐ MA Chapter 21e; list RTN(s): ☐ CERCLA ☐ NH Groundwater Management Permit or ☐ UIC Program Groundwater Release Detection Permit: ☐ POTW Pretreatment ☐ CWA Section 404		

B. Receiving water information:

1. Name of receiving water(s): Neponset Reservoir	Waterbody identification of receiving water(s): MA73034	Classification of receiving water(s): Class B
Receiving water is (check any that apply): ☐ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River		
2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ☒ Yes ☐ No Are sensitive receptors present near the site? (check one): ☒ Yes ☐ No If yes, specify: vernal pool located 1,200 feet southwest of Outfall 001. Freshwater wetlands located 200 feet southeast and 500 feet northwest of Outfall 001 +		
3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. non-native aquatic plants, excessive algae growth, turbidity; final TMDL not available.		
4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.		0.045 MGD
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.		2.25
6. Has the operator received confirmation from the appropriate State for the 7Q10 and dilution factor indicated? (check one): ☒ Yes ☐ No If yes, indicate date confirmation received: December 10, 2019		
7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☒ No		

C. Source water information:

1. Source water(s) is (check any that apply):			
☒ Contaminated groundwater Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☒ Yes ☐ No	☐ Contaminated surface water Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☐ No	☐ The receiving water	☐ Potable water; if so, indicate municipality or origin: ☐ Other; if so, specify:
		☐ A surface water other than the receiving water; if so, indicate waterbody:	

2. Source water contaminants: cadmium, trichloroethene (TCE)	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ☒ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ☒ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☒ Existing discharge ☐ New discharge ☐ New source	
Outfall(s): Neponset North Facility (Outfall 001)	Outfall location(s): (Latitude, Longitude) 42 04' 31" N -71 15' 03" W
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ☒ Indirect discharge, if so, specify: Groundwater seepage into underground stormwater conveyance system that flows to the Neponset Reservoir. ☐ A private storm sewer system ☐ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ☐ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: NA Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): ongoing	
Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ☒ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ☒ Yes ☐ No	

2. Activity Category: (check all that apply)	3. Contamination Type Category: (check all that apply)	
☐ I – Petroleum-Related Site Remediation ☐ II – Non-Petroleum-Related Site Remediation ☐ III – Contaminated Site Dewatering ☐ IV – Dewatering of Pipelines and Tanks ☐ V – Aquifer Pump Testing ☐ VI – Well Development/Rehabilitation ☒ VII – Collection Structure Dewatering/Remediation ☐ VIII – Dredge-Related Dewatering	a. If Activity Category I or II: (check all that apply) ☐ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☐ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters	
	b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)	
	<table border="1"> <tr> <td data-bbox="970 799 1419 873">☒ G. Sites with Known Contamination</td><td data-bbox="1419 799 2003 873">☐ H. Sites with Unknown Contamination</td></tr> </table>	☒ G. Sites with Known Contamination
☒ G. Sites with Known Contamination	☐ H. Sites with Unknown Contamination	
<table border="1"> <tr> <td data-bbox="970 873 1419 1409"> c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply) ☒ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☒ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters </td><td data-bbox="1419 873 2003 1409"> d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply </td></tr> </table>	c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply) ☒ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☒ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters	d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply
c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply) ☒ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☒ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters	d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply	

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia								Report mg/L	---
Chloride								Report µg/l	---
Total Residual Chlorine								0.2 mg/L	
Total Suspended Solids								30 mg/L	---
Antimony								206 µg/L	
Arsenic								104 µg/L	
Cadmium		✓	1	200.8	0.2	0.4	0.4	10.2 µg/L	
Chromium III								323 µg/L	
Chromium VI								323 µg/L	
Copper		✓	1	200.7	2.0	7.8	7.8	242 µg/L	
Iron								5,000 µg/L	
Lead		✓	1	200.8	0.5	1.1	1.1	160 µg/L	
Mercury								0.739 µg/L	
Nickel								1,450 µg/L	
Selenium								235.8 µg/L	
Silver								35.1 µg/L	
Zinc		✓	1	200.7	50.0	62.1	62.1	420 µg/L	
Cyanide								178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX								100 µg/L	---
Benzene								5.0 µg/L	---
1,4 Dioxane								200 µg/L	---
Acetone								7.97 mg/L	---
Phenol								1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride								4.4 µg/L	
1,2 Dichlorobenzene								600 µg/L	---
1,3 Dichlorobenzene								320 µg/L	---
1,4 Dichlorobenzene								5.0 µg/L	---
Total dichlorobenzene								763 µg/L in NH	---
1,1 Dichloroethane								70 µg/L	---
1,2 Dichloroethane								5.0 µg/L	---
1,1 Dichloroethylene								3.2 µg/L	---
Ethylene Dibromide								0.05 µg/L	---
Methylene Chloride								4.6 µg/L	---
1,1,1 Trichloroethane								200 µg/L	---
1,1,2 Trichloroethane								5.0 µg/L	---
Trichloroethylene	✓	✓	12	8260B	1.0	1.0	1.0	5.0 µg/L	---
Tetrachloroethylene								5.0 µg/L	
cis-1,2 Dichloroethylene								70 µg/L	---
Vinyl Chloride								2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates								190 µg/L	
Diethylhexyl phthalate								101 µg/L	
Total Group I PAHs								1.0 µg/L	---
Benzo(a)anthracene								As Total PAHs	
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(k)fluoranthene									
Chrysene									
Dibenzo(a,h)anthracene									
Indeno(1,2,3-cd)pyrene									

[illegible]

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply) ☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☒ Air Stripping ☐ Granulated Activated Carbon (“GAC”)/Liquid Phase Carbon Adsorption ☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ☐ Separation/Filtration ☐ Other; if so, specify: The dry weather treatment system (air stripper) is used to treat influent volatile organic compounds, such as trichloroethene.	
2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge. See attached narrative report Identify each major treatment component (check any that apply): ☐ Fractionation tanks ☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter ☐ Chemical feed tank ☐ Air stripping unit ☐ Bag filter ☐ Other; if so, specify: NA Indicate if either of the following will occur (check any that apply): ☐ Chlorination ☐ De-chlorination	
3. Provide the design flow capacity in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: NA Is use of a flow meter feasible? (check one): ☐ Yes ☐ No, if so, provide justification: NA	25
Provide the proposed maximum effluent flow in gpm.	25
Provide the average effluent flow in gpm.	25
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	NA
4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ☒ Yes ☐ No	

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply) ☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify: NA
2. Provide the following information for each chemical/additive, using attachments, if necessary: NA a. Product name, chemical formula, and manufacturer of the chemical/additive; b. Purpose or use of the chemical/additive or remedial agent; c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive; d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive; e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).
3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): ☐ Yes ☒ No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive? (check one): ☐ Yes ☐ No

G. Endangered Species Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit: ☐ FWS Criterion A: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the “action area”. ☐ FWS Criterion B: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are “not likely to adversely affect” listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ☐ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No ☒ FWS Criterion C: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have “no effect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ☒ the operator ☐ EPA ☐ Other; if so, specify:

- ☐ **NMFS Criterion:** A determination made by EPA is affirmed by the operator that the discharges and related activities will have “no effect” or are “not likely to adversely affect” any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and will not result in any take of listed species. Has the operator previously completed consultation with NMFS? (check one): ☐ Yes ☐ No

2. Has the operator attached supporting documentation of ESA eligibility in accordance with the instructions in Appendix I, and G, above? (check one): ☐ Yes ☒ No

Does the supporting documentation include any written concurrence or finding provided by the Services? (check one): ☐ Yes ☐ No; if yes, attach.

H. National Historic Preservation Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

- ☒ **Criterion A:** No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.
- ☐ **Criterion B:** Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.
- ☐ **Criterion C:** Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

2. Has the operator attached supporting documentation of NHPA eligibility in accordance with the instructions in H, above? (check one): ☐ Yes ☒ No

Does the supporting documentation include any written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the operator will carry out to mitigate or prevent any adverse effects on historic properties? (check one): ☐ Yes ☐ No

I. Supplemental information

Describe any supplemental information being provided with the NOI. Include attachments if required or otherwise necessary.

See attached report

Has the operator attached data, including any laboratory case narrative and chain of custody used to support the application? (check one): ☒ Yes ☐ No

Has the operator attached the certification requirement for the Best Management Practices Plan (BMPP)? (check one): ☒ Yes ☐ No

J. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The Stormwater Pollution Prevention Plan (SWPPP) prepared for the Facility under the 2015 Multi-Sector General Permit
BMPP certification statement: (MSGP) meets the general requirements for a BMPP as described in Part 2.5.1.c of the Remediation General Permit.

Notification provided to the appropriate State, including a copy of this NOI, if required.

Check one: Yes ☒ No ☐

Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.

Check one: Yes ☒ No ☐

Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.

Check one: Yes ☐ No ☐ NA ☒

Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.

Check one: Yes ☐ No ☐ NA ☒

Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit
☐ Other; if so, specify:

Check one: Yes ☐ No ☐ NA ☒

Signature:



Date:

03-16-2020

Print Name and Title: **Paul A. Ahearn, Director, Environmental Projects**

ATTACHMENT 2: OUTFALL 002 – NOTICE OF INTENT

II. Suggested Format for the Remediation General Permit Notice of Intent (NOI)

A. General site information:

1. Name of site: Schneider Electric Systems USA, Inc. Outfall 002	Site address: 38 Neponset Avenue Street:		
2. Site owner Schneider Electric Systems USA, Inc. Owner is (check one): ☐ Federal ☐ State/Tribal ☒ Private ☐ Other; if so, specify:	City: Foxborough	State: MA	Zip: 02035
3. Site operator, if different than owner NA	Contact Person: Paul Ahearn Telephone: 508-549-4949 Email: paul.ahearn@se.com		
4. NPDES permit number assigned by EPA: NPDES permit is (check all that apply): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☒ Individual NPDES permit ☐ Other; if so, specify:	Mailing address: 70 Mechanic Street, C41-32 Street: City: Foxborough State: MA Zip: 02035		
3. Site operator, if different than owner NA	Contact Person: NA Telephone: NA Email: NA		
4. NPDES permit number assigned by EPA: NPDES permit is (check all that apply): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☒ Individual NPDES permit ☐ Other; if so, specify:	Mailing address: NA Street: City: NA State: NA Zip: NA		
4. NPDES permit number assigned by EPA: NPDES permit is (check all that apply): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☒ Individual NPDES permit ☐ Other; if so, specify:	5. Other regulatory program(s) that apply to the site (check all that apply): ☐ MA Chapter 21e; list RTN(s): ☐ NH Groundwater Management Permit or Groundwater Release Detection Permit: ☐ CERCLA ☐ UIC Program ☐ POTW Pretreatment ☐ CWA Section 404		

B. Receiving water information:

1. Name of receiving water(s): Robinson Brook	Waterbody identification of receiving water(s): MA62-14	Classification of receiving water(s): Class B
Receiving water is (check any that apply): ☐ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River		
2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ☒ Yes ☐ No Are sensitive receptors present near the site? (check one): ☒ Yes ☐ No If yes, specify: vernal pool located 800 feet west of Outfall 002. Freshwater wetlands located 900 feet northeast of Outfall 002 +		
3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. aquatic macroinvertebrate bioassessments; final TMDL not available.		
4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.		0
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.		0
6. Has the operator received confirmation from the appropriate State for the 7Q10 and dilution factor indicated? (check one): ☐ Yes ☒ No If yes, indicate date confirmation received:		
7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☒ No		

C. Source water information:

1. Source water(s) is (check any that apply):			
☒ Contaminated groundwater Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☒ Yes ☐ No	☐ Contaminated surface water Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☐ No	☐ The receiving water	☐ Potable water; if so, indicate municipality or origin: ☐ Other; if so, specify:
		☐ A surface water other than the receiving water; if so, indicate waterbody:	

2. Source water contaminants: cadmium, lead, trichloroethene (TCE)	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ☒ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ☒ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☒ Existing discharge ☐ New discharge ☐ New source	
Outfall(s): Neponset South Facility (Outfall 002)	Outfall location(s): (Latitude, Longitude) 42 04' 14" N -71 14' 53" W
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ☒ Indirect discharge, if so, specify: Groundwater seepage into stormwater conveyance system that flows to an unnamed drainage ditch, then to Robinson Brook located 1,600' downstream. ☐ A private storm sewer system ☐ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ☐ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: NA Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): ongoing	
Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ☒ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ☒ Yes ☐ No	

2. Activity Category: (check all that apply)	3. Contamination Type Category: (check all that apply)	
☐ I – Petroleum-Related Site Remediation ☐ II – Non-Petroleum-Related Site Remediation ☐ III – Contaminated Site Dewatering ☐ IV – Dewatering of Pipelines and Tanks ☐ V – Aquifer Pump Testing ☐ VI – Well Development/Rehabilitation ☒ VII – Collection Structure Dewatering/Remediation ☐ VIII – Dredge-Related Dewatering	a. If Activity Category I or II: (check all that apply) ☐ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☐ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters	
	b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)	
	<table border="1"> <tr> <td data-bbox="970 800 1419 873">☒ G. Sites with Known Contamination</td><td data-bbox="1419 800 2003 873">☐ H. Sites with Unknown Contamination</td></tr> </table>	☒ G. Sites with Known Contamination
☒ G. Sites with Known Contamination	☐ H. Sites with Unknown Contamination	
<table border="1"> <tr> <td data-bbox="970 873 1419 1409"> c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply) ☒ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☒ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters </td><td data-bbox="1419 873 2003 1409"> d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply </td></tr> </table>	c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply) ☒ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☒ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters	d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply
c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply) ☒ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☒ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters	d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply	

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit ($\mu\text{g/l}$)	Influent		Effluent Limitations	
						Daily maximum ($\mu\text{g/l}$)	Daily average ($\mu\text{g/l}$)	TBEL	WQBEL
A. Inorganics									
Ammonia								Report mg/L	---
Chloride								Report $\mu\text{g/l}$	---
Total Residual Chlorine								0.2 mg/L	
Total Suspended Solids								30 mg/L	---
Antimony								206 $\mu\text{g/L}$	
Arsenic								104 $\mu\text{g/L}$	
Cadmium		✓	12	200.8	0.2	0.23	0.0758	10.2 $\mu\text{g/L}$	
Chromium III								323 $\mu\text{g/L}$	
Chromium VI								323 $\mu\text{g/L}$	
Copper								242 $\mu\text{g/L}$	
Iron								5,000 $\mu\text{g/L}$	
Lead		✓	12	200.8	0.2	1.5	0.966	160 $\mu\text{g/L}$	
Mercury								0.739 $\mu\text{g/L}$	
Nickel								1,450 $\mu\text{g/L}$	
Selenium								235.8 $\mu\text{g/L}$	
Silver								35.1 $\mu\text{g/L}$	
Zinc								420 $\mu\text{g/L}$	
Cyanide								178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX								100 $\mu\text{g/L}$	---
Benzene								5.0 $\mu\text{g/L}$	---
1,4 Dioxane								200 $\mu\text{g/L}$	---
Acetone								7.97 mg/L	---
Phenol								1,080 $\mu\text{g/L}$	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride								4.4 µg/L	
1,2 Dichlorobenzene								600 µg/L	---
1,3 Dichlorobenzene								320 µg/L	---
1,4 Dichlorobenzene								5.0 µg/L	---
Total dichlorobenzene								763 µg/L in NH	---
1,1 Dichloroethane								70 µg/L	---
1,2 Dichloroethane								5.0 µg/L	---
1,1 Dichloroethylene								3.2 µg/L	---
Ethylene Dibromide								0.05 µg/L	---
Methylene Chloride								4.6 µg/L	---
1,1,1 Trichloroethane								200 µg/L	---
1,1,2 Trichloroethane								5.0 µg/L	---
Trichloroethylene		✓	8	8260B	1.0	1.0	0.375	5.0 µg/L	---
Tetrachloroethylene								5.0 µg/L	
cis-1,2 Dichloroethylene								70 µg/L	---
Vinyl Chloride								2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates								190 µg/L	
Diethylhexyl phthalate								101 µg/L	
Total Group I PAHs								1.0 µg/L	---
Benzo(a)anthracene								As Total PAHs	
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(k)fluoranthene									
Chrysene									
Dibenzo(a,h)anthracene									
Indeno(1,2,3-cd)pyrene									

[illegible]

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply) ☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ☐ Granulated Activated Carbon (“GAC”)/Liquid Phase Carbon Adsorption ☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ☐ Separation/Filtration ☐ Other; if so, specify: NA	
2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge. NA Identify each major treatment component (check any that apply): ☐ Fractionation tanks ☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter ☐ Chemical feed tank ☐ Air stripping unit ☐ Bag filter ☐ Other; if so, specify: NA Indicate if either of the following will occur (check any that apply): ☐ Chlorination ☐ De-chlorination	
3. Provide the design flow capacity in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: NA Is use of a flow meter feasible? (check one): ☐ Yes ☐ No, if so, provide justification: NA	
Provide the proposed maximum effluent flow in gpm.	25
Provide the average effluent flow in gpm.	0 to 25
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	NA
4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ☐ Yes ☒ No	

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply) ☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify: NA
2. Provide the following information for each chemical/additive, using attachments, if necessary: NA a. Product name, chemical formula, and manufacturer of the chemical/additive; b. Purpose or use of the chemical/additive or remedial agent; c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive; d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive; e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).
3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): ☐ Yes ☒ No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive? (check one): ☐ Yes ☐ No

G. Endangered Species Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit: ☐ FWS Criterion A: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the “action area”. ☐ FWS Criterion B: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are “not likely to adversely affect” listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ☐ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No ☒ FWS Criterion C: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have “no effect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ☒ the operator ☐ EPA ☐ Other; if so, specify:

- ☐ **NMFS Criterion:** A determination made by EPA is affirmed by the operator that the discharges and related activities will have “no effect” or are “not likely to adversely affect” any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and will not result in any take of listed species. Has the operator previously completed consultation with NMFS? (check one): ☐ Yes ☐ No

2. Has the operator attached supporting documentation of ESA eligibility in accordance with the instructions in Appendix I, and G, above? (check one): ☐ Yes ☒ No

Does the supporting documentation include any written concurrence or finding provided by the Services? (check one): ☐ Yes ☐ No; if yes, attach.

H. National Historic Preservation Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

- ☒ **Criterion A:** No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.
- ☐ **Criterion B:** Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.
- ☐ **Criterion C:** Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

2. Has the operator attached supporting documentation of NHPA eligibility in accordance with the instructions in H, above? (check one): ☐ Yes ☒ No

Does the supporting documentation include any written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the operator will carry out to mitigate or prevent any adverse effects on historic properties? (check one): ☐ Yes ☐ No

I. Supplemental information

Describe any supplemental information being provided with the NOI. Include attachments if required or otherwise necessary.

See attached report

Has the operator attached data, including any laboratory case narrative and chain of custody used to support the application? (check one): ☒ Yes ☐ No

Has the operator attached the certification requirement for the Best Management Practices Plan (BMPP)? (check one): ☒ Yes ☐ No

J. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The Stormwater Pollution Prevention Plan (SWPPP) prepared for the Facility under the 2015 Multi-Sector General Permit
BMPP certification statement: (MSGP) meets the general requirements for a BMPP as described in Part 2.5.1.c of the Remediation General Permit.

Notification provided to the appropriate State, including a copy of this NOI, if required.

Check one: Yes ☒ No ☐

Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.

Check one: Yes ☒ No ☐

Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.

Check one: Yes ☐ No ☐ NA ☒

Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.

Check one: Yes ☐ No ☐ NA ☒

Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit
☐ Other; if so, specify:

Check one: Yes ☐ No ☐ NA ☒

Signature:



Date:

3-16-2020

Print Name and Title:

Paul A. Ahearn, Director, Environmental Projects

ATTACHMENT 3: OUTFALL 001 – LABORATORY ANALYTICAL REPORTS



CERTIFICATE OF ANALYSIS

Susan O'Brien
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric (223812.03)
ESS Laboratory Work Order Number: 19K0129

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 2:43 pm, Nov 07, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19K0129

SAMPLE RECEIPT

The following samples were received on November 05, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
19K0129-01	Air Stripper Effluent	Aqueous	200.7, 200.8, 4500 H+ B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19K0129

PROJECT NARRATIVE

Classical Chemistry

19K0129-01

[The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.](#)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19K0129

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Air Stripper Effluent
Date Sampled: 11/05/19 11:15
Percent Solids: N/A

ESS Laboratory Work Order: 19K0129
ESS Laboratory Sample ID: 19K0129-01
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	0.4 (0.2)		200.8	0.2	5	NAR	11/06/19 15:26	100	10	CK90601
Copper	7.8 (2.0)		200.7	0.5	1	KJK	11/06/19 15:18	100	10	CK90601
Hardness	75200 (82.4)		200.7		1	KJK	11/06/19 15:18	1	1	[CALC]
Lead	1.1 (0.5)		200.8	0.5	5	NAR	11/06/19 15:26	100	10	CK90601
Zinc	62.1 (50.0)		200.7	5	1	KJK	11/05/19 23:26	50	50	CK90545



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Air Stripper Effluent
Date Sampled: 11/05/19 11:15
Percent Solids: N/A

ESS Laboratory Work Order: 19K0129
ESS Laboratory Sample ID: 19K0129-01
Sample Matrix: Aqueous

All methods used are in accordance with 40 CFR 136.

Classical Chemistry

MA - Permit									
<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
pH	7.09 (N/A)		4500 H+ B		1	CCP	11/05/19 20:04	S.U.	CK90524
pH Sample Temp	Aqueous pH measured in water at 17.1 °C. (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19K0129

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CK90545 - 3005A/200.7										
Blank										
Zinc	ND	50.0	ug/L							
LCS										
Zinc	477	50.0	ug/L	500.0		95	85-115			
LCS Dup										
Zinc	459	50.0	ug/L	500.0		92	85-115	4	20	
Batch CK90601 - 3005A/200.7										
Blank										
Copper	ND	2.0	ug/L							
Blank										
Cadmium	ND	0.2	ug/L							
Lead	ND	0.5	ug/L							
LCS										
Copper	51.6	2.0	ug/L	50.00		103	85-115			
LCS										
Cadmium	25.4	1.0	ug/L	25.00		102	85-115			
Lead	49.1	2.5	ug/L	50.00		98	85-115			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19K0129

Notes and Definitions

Z16	Aqueous pH measured in water at 17.1 °C.
U	Analyte included in the analysis, but not detected
HT	The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19K0129

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM

ESS Project ID: 19K0129

Date Received: 11/5/2019

Project Due Date: 11/7/2019

Days for Project: 2 Day

Shipped/Delivered Via: ESS Courier

1. Air bill manifest present? No
Air No.: NA

6. Does COC match bottles? Yes

2. Were custody seals present? No

7. Is COC complete and correct? Yes

3. Is radiation count <100 CPM? Yes

8. Were samples received intact? Yes

4. Is a Cooler Present? Yes

9. Were labs informed about short holds & rushes? Yes / No / NA

Temp: 2.5 Iced with: Ice

10. Were any analyses received outside of hold time? Yes No

5. Was COC signed and dated by client? Yes

11. Any Subcontracting needed? Yes / No

12. Were VOAs received? Yes / No

ESS Sample IDs: _____

a. Air bubbles in aqueous VOAs? Yes / No / NA

Analysis: _____

b. Does methanol cover soil completely? Yes / No / NA

TAT: _____

13. Are the samples properly preserved? Yes / No

a. If metals preserved upon receipt: _____

b. Low Level VOA vials frozen: _____

Date: _____

Time: _____

By: _____

Date: _____

Time: _____

By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No

a. Was there a need to contact the client? Yes / No

Who was contacted? _____

Date: _____

Time: _____

By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	409626	Yes	NA	Yes	1L Poly - Unpres	NP	
01	409627	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	

2nd Review

Were all containers scanned into storage/lab?

Initials: M

Are barcode labels on correct containers?

Yes / No

Are all Flashpoint stickers attached/container ID # circled?

Yes / No / NA

Are all Hex Chrome stickers attached?

Yes / No / NA

Are all QC stickers attached?

Yes / No / NA

Are VOA stickers attached if bubbles noted?

Yes / No / NA

Completed

By: [Signature]

Date & Time: 11/5/19 1804

Reviewed

By: [Signature]

Date & Time: 11/5/19 1820

Delivered

By: [Signature]

Date & Time: 11/5/19 1820

19K0129

www.esslaboratory.com

☐ Other (Please Specify →)

Sobrien@woodardcurran.com

[illegible]

Number of Containers per Sample:

↳ low detection limits i.e. $Cd = 0.2 \mu g/L$

Received By: (Signature, Date & Time)



CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric (223812.03)
ESS Laboratory Work Order Number: 1706534

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 5:32 pm, Jun 27, 2017

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1706534

SAMPLE RECEIPT

The following samples were received on June 20, 2017 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

Lab Number	Sample Name	Matrix	Analysis
1706534-01	AS-Influent	Waste Water	8260B
1706534-02	AS-Effluent	Waste Water	8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1706534

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1706534

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH / VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: AS-Influent
Date Sampled: 06/09/17 13:28
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1706534
ESS Laboratory Sample ID: 1706534-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B	5	1	06/23/17 16:09	C7F0370	CF72334
1,1,1-Trichloroethane	ND (1.0)		8260B	200	1	06/23/17 16:09	C7F0370	CF72334
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B	2	1	06/23/17 16:09	C7F0370	CF72334
1,1,2-Trichloroethane	ND (1.0)		8260B	5	1	06/23/17 16:09	C7F0370	CF72334
1,1-Dichloroethane	ND (1.0)		8260B	70	1	06/23/17 16:09	C7F0370	CF72334
1,1-Dichloroethene	ND (1.0)		8260B	7	1	06/23/17 16:09	C7F0370	CF72334
1,1-Dichloropropene	ND (2.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
1,2,3-Trichloropropane	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
1,2,4-Trichlorobenzene	ND (1.0)		8260B	70	1	06/23/17 16:09	C7F0370	CF72334
1,2,4-Trimethylbenzene	ND (1.0)		8260B	200	1	06/23/17 16:09	C7F0370	CF72334
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
1,2-Dibromoethane	ND (1.0)		8260B	0.02	1	06/23/17 16:09	C7F0370	CF72334
1,2-Dichlorobenzene	ND (1.0)		8260B	600	1	06/23/17 16:09	C7F0370	CF72334
1,2-Dichloroethane	ND (1.0)		8260B	5	1	06/23/17 16:09	C7F0370	CF72334
1,2-Dichloropropane	ND (1.0)		8260B	5	1	06/23/17 16:09	C7F0370	CF72334
1,3,5-Trimethylbenzene	ND (1.0)		8260B	200	1	06/23/17 16:09	C7F0370	CF72334
1,3-Dichlorobenzene	ND (1.0)		8260B	40	1	06/23/17 16:09	C7F0370	CF72334
1,3-Dichloropropane	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
1,4-Dichlorobenzene	ND (1.0)		8260B	5	1	06/23/17 16:09	C7F0370	CF72334
1,4-Dioxane - Screen	ND (500)		8260B	3	1	06/23/17 16:09	C7F0370	CF72334
2,2-Dichloropropane	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
2-Butanone	ND (10.0)		8260B	4000	1	06/23/17 16:09	C7F0370	CF72334
2-Chlorotoluene	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
2-Hexanone	ND (10.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
4-Chlorotoluene	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
4-Isopropyltoluene	ND (1.0)		8260B	200	1	06/23/17 16:09	C7F0370	CF72334
4-Methyl-2-Pentanone	ND (10.0)		8260B	350	1	06/23/17 16:09	C7F0370	CF72334
Acetone	ND (10.0)		8260B	6300	1	06/23/17 16:09	C7F0370	CF72334
Benzene	ND (1.0)		8260B	5	1	06/23/17 16:09	C7F0370	CF72334
Bromobenzene	ND (2.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
Bromochloromethane	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: AS-Influent
Date Sampled: 06/09/17 13:28
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1706534
ESS Laboratory Sample ID: 1706534-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B	3	1	06/23/17 16:09	C7F0370	CF72334
Bromoform	ND (1.0)		8260B	4	1	06/23/17 16:09	C7F0370	CF72334
Bromomethane	ND (2.0)		8260B	10	1	06/23/17 16:09	C7F0370	CF72334
Carbon Disulfide	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
Carbon Tetrachloride	ND (1.0)		8260B	5	1	06/23/17 16:09	C7F0370	CF72334
Chlorobenzene	ND (1.0)		8260B	100	1	06/23/17 16:09	C7F0370	CF72334
Chloroethane	ND (2.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
Chloroform	ND (1.0)		8260B	70	1	06/23/17 16:09	C7F0370	CF72334
Chloromethane	ND (2.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
cis-1,2-Dichloroethene	3.3 (1.0)		8260B	70	1	06/23/17 16:09	C7F0370	CF72334
cis-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	06/23/17 16:09	C7F0370	CF72334
Dibromochloromethane	ND (1.0)		8260B	2	1	06/23/17 16:09	C7F0370	CF72334
Dibromomethane	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
Dichlorodifluoromethane	ND (2.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
Diethyl Ether	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
Di-isopropyl ether	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
Ethylbenzene	ND (1.0)		8260B	700	1	06/23/17 16:09	C7F0370	CF72334
Hexachlorobutadiene	ND (0.6)		8260B	0.6	1	06/23/17 16:09	C7F0370	CF72334
Hexachloroethane	ND (1.0)		8260B	8	1	06/23/17 16:09	C7F0370	CF72334
Isopropylbenzene	ND (1.0)		8260B	200	1	06/23/17 16:09	C7F0370	CF72334
Methyl tert-Butyl Ether	ND (1.0)		8260B	70	1	06/23/17 16:09	C7F0370	CF72334
Methylene Chloride	ND (2.0)		8260B	5	1	06/23/17 16:09	C7F0370	CF72334
Naphthalene	ND (1.0)		8260B	140	1	06/23/17 16:09	C7F0370	CF72334
n-Butylbenzene	ND (1.0)		8260B	200	1	06/23/17 16:09	C7F0370	CF72334
n-Propylbenzene	ND (1.0)		8260B	200	1	06/23/17 16:09	C7F0370	CF72334
sec-Butylbenzene	ND (1.0)		8260B	200	1	06/23/17 16:09	C7F0370	CF72334
Styrene	ND (1.0)		8260B	100	1	06/23/17 16:09	C7F0370	CF72334
tert-Butylbenzene	ND (1.0)		8260B	200	1	06/23/17 16:09	C7F0370	CF72334
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
Tetrachloroethene	ND (1.0)		8260B	5	1	06/23/17 16:09	C7F0370	CF72334
Tetrahydrofuran	ND (5.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: AS-Influent
Date Sampled: 06/09/17 13:28
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1706534
ESS Laboratory Sample ID: 1706534-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B	1000	1	06/23/17 16:09	C7F0370	CF72334
trans-1,2-Dichloroethene	ND (1.0)		8260B	100	1	06/23/17 16:09	C7F0370	CF72334
trans-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	06/23/17 16:09	C7F0370	CF72334
Trichloroethene	13.8 (1.0)		8260B	5	1	06/23/17 16:09	C7F0370	CF72334
Trichlorofluoromethane	ND (1.0)		8260B		1	06/23/17 16:09	C7F0370	CF72334
Vinyl Chloride	ND (1.0)		8260B	2	1	06/23/17 16:09	C7F0370	CF72334
Xylene O	ND (1.0)		8260B	10000	1	06/23/17 16:09	C7F0370	CF72334
Xylene P,M	ND (2.0)		8260B	10000	1	06/23/17 16:09	C7F0370	CF72334
Xylenes (Total)	ND (2.0)		8260B		1	06/23/17 16:09		[CALC]

	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
Surrogate: 1,2-Dichloroethane-d4	88 %		70-130
Surrogate: 4-Bromofluorobenzene	142 %		70-130
Surrogate: Dibromofluoromethane	92 %		70-130
Surrogate: Toluene-d8	95 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: AS-Effluent
Date Sampled: 06/09/17 13:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1706534
ESS Laboratory Sample ID: 1706534-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B	5	1	06/23/17 15:42	C7F0370	CF72334
1,1,1-Trichloroethane	ND (1.0)		8260B	200	1	06/23/17 15:42	C7F0370	CF72334
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B	2	1	06/23/17 15:42	C7F0370	CF72334
1,1,2-Trichloroethane	ND (1.0)		8260B	5	1	06/23/17 15:42	C7F0370	CF72334
1,1-Dichloroethane	ND (1.0)		8260B	70	1	06/23/17 15:42	C7F0370	CF72334
1,1-Dichloroethene	ND (1.0)		8260B	7	1	06/23/17 15:42	C7F0370	CF72334
1,1-Dichloropropene	ND (2.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
1,2,3-Trichloropropane	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
1,2,4-Trichlorobenzene	ND (1.0)		8260B	70	1	06/23/17 15:42	C7F0370	CF72334
1,2,4-Trimethylbenzene	ND (1.0)		8260B	200	1	06/23/17 15:42	C7F0370	CF72334
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
1,2-Dibromoethane	ND (1.0)		8260B	0.02	1	06/23/17 15:42	C7F0370	CF72334
1,2-Dichlorobenzene	ND (1.0)		8260B	600	1	06/23/17 15:42	C7F0370	CF72334
1,2-Dichloroethane	ND (1.0)		8260B	5	1	06/23/17 15:42	C7F0370	CF72334
1,2-Dichloropropane	ND (1.0)		8260B	5	1	06/23/17 15:42	C7F0370	CF72334
1,3,5-Trimethylbenzene	ND (1.0)		8260B	200	1	06/23/17 15:42	C7F0370	CF72334
1,3-Dichlorobenzene	ND (1.0)		8260B	40	1	06/23/17 15:42	C7F0370	CF72334
1,3-Dichloropropane	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
1,4-Dichlorobenzene	ND (1.0)		8260B	5	1	06/23/17 15:42	C7F0370	CF72334
1,4-Dioxane - Screen	ND (500)		8260B	3	1	06/23/17 15:42	C7F0370	CF72334
2,2-Dichloropropane	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
2-Butanone	ND (10.0)		8260B	4000	1	06/23/17 15:42	C7F0370	CF72334
2-Chlorotoluene	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
2-Hexanone	ND (10.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
4-Chlorotoluene	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
4-Isopropyltoluene	ND (1.0)		8260B	200	1	06/23/17 15:42	C7F0370	CF72334
4-Methyl-2-Pentanone	ND (10.0)		8260B	350	1	06/23/17 15:42	C7F0370	CF72334
Acetone	ND (10.0)		8260B	6300	1	06/23/17 15:42	C7F0370	CF72334
Benzene	ND (1.0)		8260B	5	1	06/23/17 15:42	C7F0370	CF72334
Bromobenzene	ND (2.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
Bromochloromethane	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: AS-Effluent
Date Sampled: 06/09/17 13:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1706534
ESS Laboratory Sample ID: 1706534-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B	3	1	06/23/17 15:42	C7F0370	CF72334
Bromoform	ND (1.0)		8260B	4	1	06/23/17 15:42	C7F0370	CF72334
Bromomethane	ND (2.0)		8260B	10	1	06/23/17 15:42	C7F0370	CF72334
Carbon Disulfide	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
Carbon Tetrachloride	ND (1.0)		8260B	5	1	06/23/17 15:42	C7F0370	CF72334
Chlorobenzene	ND (1.0)		8260B	100	1	06/23/17 15:42	C7F0370	CF72334
Chloroethane	ND (2.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
Chloroform	ND (1.0)		8260B	70	1	06/23/17 15:42	C7F0370	CF72334
Chloromethane	ND (2.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
cis-1,2-Dichloroethene	ND (1.0)		8260B	70	1	06/23/17 15:42	C7F0370	CF72334
cis-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	06/23/17 15:42	C7F0370	CF72334
Dibromochloromethane	ND (1.0)		8260B	2	1	06/23/17 15:42	C7F0370	CF72334
Dibromomethane	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
Dichlorodifluoromethane	ND (2.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
Diethyl Ether	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
Di-isopropyl ether	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
Ethylbenzene	ND (1.0)		8260B	700	1	06/23/17 15:42	C7F0370	CF72334
Hexachlorobutadiene	ND (0.6)		8260B	0.6	1	06/23/17 15:42	C7F0370	CF72334
Hexachloroethane	ND (1.0)		8260B	8	1	06/23/17 15:42	C7F0370	CF72334
Isopropylbenzene	ND (1.0)		8260B	200	1	06/23/17 15:42	C7F0370	CF72334
Methyl tert-Butyl Ether	ND (1.0)		8260B	70	1	06/23/17 15:42	C7F0370	CF72334
Methylene Chloride	ND (2.0)		8260B	5	1	06/23/17 15:42	C7F0370	CF72334
Naphthalene	ND (1.0)		8260B	140	1	06/23/17 15:42	C7F0370	CF72334
n-Butylbenzene	ND (1.0)		8260B	200	1	06/23/17 15:42	C7F0370	CF72334
n-Propylbenzene	ND (1.0)		8260B	200	1	06/23/17 15:42	C7F0370	CF72334
sec-Butylbenzene	ND (1.0)		8260B	200	1	06/23/17 15:42	C7F0370	CF72334
Styrene	ND (1.0)		8260B	100	1	06/23/17 15:42	C7F0370	CF72334
tert-Butylbenzene	ND (1.0)		8260B	200	1	06/23/17 15:42	C7F0370	CF72334
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
Tetrachloroethene	ND (1.0)		8260B	5	1	06/23/17 15:42	C7F0370	CF72334
Tetrahydrofuran	ND (5.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: AS-Effluent
Date Sampled: 06/09/17 13:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1706534
ESS Laboratory Sample ID: 1706534-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B	1000	1	06/23/17 15:42	C7F0370	CF72334
trans-1,2-Dichloroethene	ND (1.0)		8260B	100	1	06/23/17 15:42	C7F0370	CF72334
trans-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	06/23/17 15:42	C7F0370	CF72334
Trichloroethene	ND (1.0)		8260B	5	1	06/23/17 15:42	C7F0370	CF72334
Trichlorofluoromethane	ND (1.0)		8260B		1	06/23/17 15:42	C7F0370	CF72334
Vinyl Chloride	ND (1.0)		8260B	2	1	06/23/17 15:42	C7F0370	CF72334
Xylene O	ND (1.0)		8260B	10000	1	06/23/17 15:42	C7F0370	CF72334
Xylene P,M	ND (2.0)		8260B	10000	1	06/23/17 15:42	C7F0370	CF72334
Xylenes (Total)	ND (2.0)		8260B		1	06/23/17 15:42		[CALC]

	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
Surrogate: 1,2-Dichloroethane-d4	92 %		70-130
Surrogate: 4-Bromofluorobenzene	122 %		70-130
Surrogate: Dibromofluoromethane	101 %		70-130
Surrogate: Toluene-d8	99 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1706534

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF72334 - 5030B

Blank

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloropropene	ND	2.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,4-Dioxane - Screen	ND	500	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
2-Butanone	ND	10.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
2-Hexanone	ND	10.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
4-Isopropyltoluene	ND	1.0	ug/L
4-Methyl-2-Pentanone	ND	10.0	ug/L
Acetone	ND	10.0	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	2.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	0.6	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon Disulfide	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	0.4	ug/L
Dibromochloromethane	ND	1.0	ug/L



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1706534

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF72334 - 5030B

Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Hexachloroethane	ND	1.0	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Xylenes (Total)	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	22.0		ug/L	25.00		88	70-130			
Surrogate: 4-Bromofluorobenzene	23.8		ug/L	25.00		95	70-130			
Surrogate: Dibromofluoromethane	23.4		ug/L	25.00		94	70-130			
Surrogate: Toluene-d8	23.9		ug/L	25.00		96	70-130			

LCS

1,1,1,2-Tetrachloroethane	9.9		ug/L	10.00		99	70-130			
1,1,1-Trichloroethane	10.1		ug/L	10.00		101	70-130			
1,1,2,2-Tetrachloroethane	10.8		ug/L	10.00		108	70-130			
1,1,2-Trichloroethane	10.4		ug/L	10.00		104	70-130			
1,1-Dichloroethane	9.9		ug/L	10.00		99	70-130			
1,1-Dichloroethene	9.9		ug/L	10.00		99	70-130			
1,1-Dichloropropene	10.1		ug/L	10.00		101	70-130			
1,2,3-Trichlorobenzene	11.4		ug/L	10.00		114	70-130			
1,2,3-Trichloropropane	10.4		ug/L	10.00		104	70-130			
1,2,4-Trichlorobenzene	11.4		ug/L	10.00		114	70-130			
1,2,4-Trimethylbenzene	10.5		ug/L	10.00		105	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1706534

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF72334 - 5030B

1,2-Dibromo-3-Chloropropane	9.1		ug/L	10.00		91	70-130			
1,2-Dibromoethane	10.3		ug/L	10.00		103	70-130			
1,2-Dichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2-Dichloroethane	10.2		ug/L	10.00		102	70-130			
1,2-Dichloropropane	10.5		ug/L	10.00		105	70-130			
1,3,5-Trimethylbenzene	10.4		ug/L	10.00		104	70-130			
1,3-Dichlorobenzene	10.8		ug/L	10.00		108	70-130			
1,3-Dichloropropane	10.6		ug/L	10.00		106	70-130			
1,4-Dichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,4-Dioxane - Screen	222		ug/L	200.0		111	0-332			
2,2-Dichloropropane	10.0		ug/L	10.00		100	70-130			
2-Butanone	49.8		ug/L	50.00		100	70-130			
2-Chlorotoluene	10.3		ug/L	10.00		103	70-130			
2-Hexanone	56.2		ug/L	50.00		112	70-130			
4-Chlorotoluene	10.4		ug/L	10.00		104	70-130			
4-Isopropyltoluene	10.7		ug/L	10.00		107	70-130			
4-Methyl-2-Pentanone	53.1		ug/L	50.00		106	70-130			
Acetone	47.4		ug/L	50.00		95	70-130			
Benzene	10.1		ug/L	10.00		101	70-130			
Bromobenzene	10.6		ug/L	10.00		106	70-130			
Bromochloromethane	10.0		ug/L	10.00		100	70-130			
Bromodichloromethane	9.3		ug/L	10.00		93	70-130			
Bromoform	9.8		ug/L	10.00		98	70-130			
Bromomethane	11.3		ug/L	10.00		113	70-130			
Carbon Disulfide	10.9		ug/L	10.00		109	70-130			
Carbon Tetrachloride	9.0		ug/L	10.00		90	70-130			
Chlorobenzene	10.0		ug/L	10.00		100	70-130			
Chloroethane	9.0		ug/L	10.00		90	70-130			
Chloroform	10.1		ug/L	10.00		101	70-130			
Chloromethane	9.6		ug/L	10.00		96	70-130			
cis-1,2-Dichloroethene	9.9		ug/L	10.00		99	70-130			
cis-1,3-Dichloropropene	9.3		ug/L	10.00		93	70-130			
Dibromochloromethane	9.6		ug/L	10.00		96	70-130			
Dibromomethane	10.0		ug/L	10.00		100	70-130			
Dichlorodifluoromethane	8.4		ug/L	10.00		84	70-130			
Diethyl Ether	10.1		ug/L	10.00		101	70-130			
Di-isopropyl ether	9.8		ug/L	10.00		98	70-130			
Ethyl tertiary-butyl ether	9.8		ug/L	10.00		98	70-130			
Ethylbenzene	10.3		ug/L	10.00		103	70-130			
Hexachlorobutadiene	11.2		ug/L	10.00		112	70-130			
Hexachloroethane	9.1		ug/L	10.00		91	70-130			
Isopropylbenzene	10.1		ug/L	10.00		101	70-130			
Methyl tert-Butyl Ether	10.3		ug/L	10.00		103	70-130			
Methylene Chloride	10.1		ug/L	10.00		101	70-130			
Naphthalene	10.7		ug/L	10.00		107	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1706534

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF72334 - 5030B

n-Butylbenzene	10.5		ug/L	10.00		105	70-130			
n-Propylbenzene	10.5		ug/L	10.00		105	70-130			
sec-Butylbenzene	10.6		ug/L	10.00		106	70-130			
Styrene	9.1		ug/L	10.00		91	70-130			
tert-Butylbenzene	10.4		ug/L	10.00		104	70-130			
Tertiary-amyl methyl ether	9.8		ug/L	10.00		98	70-130			
Tetrachloroethene	7.9		ug/L	10.00		79	70-130			
Tetrahydrofuran	11.1		ug/L	10.00		111	70-130			
Toluene	10.0		ug/L	10.00		100	70-130			
trans-1,2-Dichloroethene	9.3		ug/L	10.00		93	70-130			
trans-1,3-Dichloropropene	9.4		ug/L	10.00		94	70-130			
Trichloroethene	10.4		ug/L	10.00		104	70-130			
Trichlorofluoromethane	8.8		ug/L	10.00		88	70-130			
Vinyl Chloride	9.8		ug/L	10.00		98	70-130			
Xylene O	10.2		ug/L	10.00		102	70-130			
Xylene P,M	17.9		ug/L	20.00		90	70-130			
Xylenes (Total)	28.1		ug/L							
Surrogate: 1,2-Dichloroethane-d4	24.1		ug/L	25.00		96	70-130			
Surrogate: 4-Bromofluorobenzene	24.3		ug/L	25.00		97	70-130			
Surrogate: Dibromofluoromethane	25.7		ug/L	25.00		103	70-130			
Surrogate: Toluene-d8	25.5		ug/L	25.00		102	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	9.9		ug/L	10.00		99	70-130	0.8	20	
1,1,1-Trichloroethane	10.3		ug/L	10.00		103	70-130	2	20	
1,1,2,2-Tetrachloroethane	10.3		ug/L	10.00		103	70-130	5	20	
1,1,2-Trichloroethane	10.1		ug/L	10.00		101	70-130	3	20	
1,1-Dichloroethane	9.9		ug/L	10.00		99	70-130	0.3	20	
1,1-Dichloroethene	10.2		ug/L	10.00		102	70-130	2	20	
1,1-Dichloropropene	10.1		ug/L	10.00		101	70-130	0.4	20	
1,2,3-Trichlorobenzene	10.8		ug/L	10.00		108	70-130	5	20	
1,2,3-Trichloropropane	10.3		ug/L	10.00		103	70-130	0.8	20	
1,2,4-Trichlorobenzene	11.0		ug/L	10.00		110	70-130	3	20	
1,2,4-Trimethylbenzene	10.6		ug/L	10.00		106	70-130	1	20	
1,2-Dibromo-3-Chloropropane	9.5		ug/L	10.00		95	70-130	5	20	
1,2-Dibromoethane	10.3		ug/L	10.00		103	70-130	0.4	20	
1,2-Dichlorobenzene	10.6		ug/L	10.00		106	70-130	2	20	
1,2-Dichloroethane	10.1		ug/L	10.00		101	70-130	0.8	20	
1,2-Dichloropropane	10.6		ug/L	10.00		106	70-130	0.7	20	
1,3,5-Trimethylbenzene	10.4		ug/L	10.00		104	70-130	0.3	20	
1,3-Dichlorobenzene	10.6		ug/L	10.00		106	70-130	2	20	
1,3-Dichloropropane	10.6		ug/L	10.00		106	70-130	0.2	20	
1,4-Dichlorobenzene	10.2		ug/L	10.00		102	70-130	0.4	20	
1,4-Dioxane - Screen	182		ug/L	200.0		91	0-332	20	200	
2,2-Dichloropropane	10.0		ug/L	10.00		100	70-130	0.1	20	
2-Butanone	47.6		ug/L	50.00		95	70-130	4	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1706534

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF72334 - 5030B

2-Chlorotoluene	10.5		ug/L	10.00		105	70-130	2	20	
2-Hexanone	54.3		ug/L	50.00		109	70-130	4	20	
4-Chlorotoluene	10.6		ug/L	10.00		106	70-130	2	20	
4-Isopropyltoluene	10.3		ug/L	10.00		103	70-130	4	20	
4-Methyl-2-Pentanone	50.0		ug/L	50.00		100	70-130	6	20	
Acetone	45.2		ug/L	50.00		90	70-130	5	20	
Benzene	10.0		ug/L	10.00		100	70-130	0.9	20	
Bromobenzene	10.6		ug/L	10.00		106	70-130	0.5	20	
Bromochloromethane	10.0		ug/L	10.00		100	70-130	0.2	20	
Bromodichloromethane	9.5		ug/L	10.00		95	70-130	2	20	
Bromoform	9.6		ug/L	10.00		96	70-130	2	20	
Bromomethane	11.5		ug/L	10.00		115	70-130	2	20	
Carbon Disulfide	10.9		ug/L	10.00		109	70-130	0.09	20	
Carbon Tetrachloride	9.1		ug/L	10.00		91	70-130	1	20	
Chlorobenzene	10.1		ug/L	10.00		101	70-130	0.5	20	
Chloroethane	8.8		ug/L	10.00		88	70-130	2	20	
Chloroform	9.9		ug/L	10.00		99	70-130	1	20	
Chloromethane	9.6		ug/L	10.00		96	70-130	0	20	
cis-1,2-Dichloroethene	10.2		ug/L	10.00		102	70-130	3	20	
cis-1,3-Dichloropropene	9.2		ug/L	10.00		92	70-130	1	20	
Dibromochloromethane	9.5		ug/L	10.00		95	70-130	0.9	20	
Dibromomethane	10.0		ug/L	10.00		100	70-130	0.7	20	
Dichlorodifluoromethane	8.3		ug/L	10.00		83	70-130	2	20	
Diethyl Ether	9.7		ug/L	10.00		97	70-130	4	20	
Di-isopropyl ether	9.7		ug/L	10.00		97	70-130	2	20	
Ethyl tertiary-butyl ether	9.7		ug/L	10.00		97	70-130	1	20	
Ethylbenzene	9.9		ug/L	10.00		99	70-130	4	20	
Hexachlorobutadiene	10.1		ug/L	10.00		101	70-130	11	20	
Hexachloroethane	9.2		ug/L	10.00		92	70-130	0.4	20	
Isopropylbenzene	10.1		ug/L	10.00		101	70-130	0	20	
Methyl tert-Butyl Ether	10.1		ug/L	10.00		101	70-130	2	20	
Methylene Chloride	9.9		ug/L	10.00		99	70-130	2	20	
Naphthalene	10.4		ug/L	10.00		104	70-130	2	20	
n-Butylbenzene	10.2		ug/L	10.00		102	70-130	3	20	
n-Propylbenzene	10.5		ug/L	10.00		105	70-130	0.3	20	
sec-Butylbenzene	10.3		ug/L	10.00		103	70-130	3	20	
Styrene	9.0		ug/L	10.00		90	70-130	0.1	20	
tert-Butylbenzene	10.5		ug/L	10.00		105	70-130	1	20	
Tertiary-amyl methyl ether	9.6		ug/L	10.00		96	70-130	2	20	
Tetrachloroethene	7.8		ug/L	10.00		78	70-130	1	20	
Tetrahydrofuran	10.8		ug/L	10.00		108	70-130	2	20	
Toluene	9.9		ug/L	10.00		99	70-130	0.3	20	
trans-1,2-Dichloroethene	10.2		ug/L	10.00		102	70-130	9	20	
trans-1,3-Dichloropropene	9.4		ug/L	10.00		94	70-130	0.3	20	
Trichloroethene	10.0		ug/L	10.00		100	70-130	4	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1706534

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF72334 - 5030B

Trichlorofluoromethane	9.0		ug/L	10.00		90	70-130	2	20	
Vinyl Chloride	9.8		ug/L	10.00		98	70-130	0.2	20	
Xylene O	10.2		ug/L	10.00		102	70-130	0.2	20	
Xylene P,M	17.8		ug/L	20.00		89	70-130	0.7	20	
Xylenes (Total)	27.9		ug/L							
Surrogate: 1,2-Dichloroethane-d4	23.6		ug/L	25.00		94	70-130			
Surrogate: 4-Bromofluorobenzene	23.6		ug/L	25.00		94	70-130			
Surrogate: Dibromofluoromethane	25.6		ug/L	25.00		102	70-130			
Surrogate: Toluene-d8	25.4		ug/L	25.00		102	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1706534

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1706534

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

Division of Thielsch Engineering, Inc.
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Turn Time	Rush
Regulatory State	
Is this project for any of the following?:	
☐ CT RCP	☐ MA MCP
☐ RGP	

1706531

Electronic ☐ Limit Checker ☐ Standard Excel
Deliverables ☐ Other (Please Specify →)

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CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric (223812)
ESS Laboratory Work Order Number: 1708457

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 4:13 pm, Aug 28, 2017

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

SAMPLE RECEIPT

The following samples were received on August 18, 2017 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

VOA results for 1708457-02 did not match. Both sets of data are included in this report.

Lab Number	Sample Name	Matrix	Analysis
1708457-01	Influent	Waste Water	8260B
1708457-02	Effluent	Waste Water	8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

PROJECT NARRATIVE

8260B Volatile Organic Compounds

C7H0267-CCV1 [Continuing Calibration %Diff/Drift is below control limit \(CD-\).](#)

Tetrachloroethene (26% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH / VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Influent
Date Sampled: 08/16/17 10:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1708457
ESS Laboratory Sample ID: 1708457-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,1-Dichloroethane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,1-Dichloroethene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,1-Dichloropropene	ND (2.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,2-Dibromoethane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,2-Dichloroethane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,2-Dichloropropane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,3-Dichloropropane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
1,4-Dioxane - Screen	ND (500)		8260B		1	08/18/17 19:02	C7H0267	CH71818
2,2-Dichloropropane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
2-Butanone	ND (10.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
2-Chlorotoluene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
2-Hexanone	ND (10.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
4-Chlorotoluene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
4-Isopropyltoluene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Acetone	ND (10.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Benzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Bromobenzene	ND (2.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Bromochloromethane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Influent
Date Sampled: 08/16/17 10:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1708457
ESS Laboratory Sample ID: 1708457-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromodichloromethane	ND (0.6)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Bromoform	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Bromomethane	ND (2.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Carbon Disulfide	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Carbon Tetrachloride	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Chlorobenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Chloroethane	ND (2.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Chloroform	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Chloromethane	ND (2.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
cis-1,2-Dichloroethene	5.6 (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Dibromochloromethane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Dibromomethane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Diethyl Ether	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Di-isopropyl ether	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Ethylbenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Hexachlorobutadiene	ND (0.6)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Hexachloroethane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Isopropylbenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Methylene Chloride	ND (2.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Naphthalene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
n-Butylbenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
n-Propylbenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
sec-Butylbenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Styrene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
tert-Butylbenzene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Tetrachloroethene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Tetrahydrofuran	ND (5.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Influent
Date Sampled: 08/16/17 10:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1708457
ESS Laboratory Sample ID: 1708457-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Toluene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Trichloroethene	13.8 (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Trichlorofluoromethane	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Vinyl Chloride	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Xylene O	ND (1.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Xylene P,M	ND (2.0)		8260B		1	08/18/17 19:02	C7H0267	CH71818
Xylenes (Total)	ND (2.0)		8260B		1	08/18/17 19:02		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>107 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>105 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>91 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 08/16/17 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1708457
ESS Laboratory Sample ID: 1708457-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,1-Dichloroethane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,1-Dichloroethene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,1-Dichloropropene	ND (2.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,2-Dibromoethane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,2-Dichloroethane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,2-Dichloropropane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,3-Dichloropropane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
1,4-Dioxane - Screen	ND (500)		8260B		1	08/18/17 18:34	C7H0267	CH71818
2,2-Dichloropropane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
2-Butanone	ND (10.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
2-Chlorotoluene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
2-Hexanone	ND (10.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
4-Chlorotoluene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
4-Isopropyltoluene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Acetone	12.6 (10.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Benzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Bromobenzene	ND (2.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Bromochloromethane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 08/16/17 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1708457
ESS Laboratory Sample ID: 1708457-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromodichloromethane	ND (0.6)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Bromoform	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Bromomethane	ND (2.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Carbon Disulfide	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Carbon Tetrachloride	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Chlorobenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Chloroethane	ND (2.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Chloroform	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Chloromethane	ND (2.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Dibromochloromethane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Dibromomethane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Diethyl Ether	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Di-isopropyl ether	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Ethylbenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Hexachlorobutadiene	ND (0.6)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Hexachloroethane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Isopropylbenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Methylene Chloride	ND (2.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Naphthalene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
n-Butylbenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
n-Propylbenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
sec-Butylbenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Styrene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
tert-Butylbenzene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Tetrachloroethene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Tetrahydrofuran	29.8 (5.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 08/16/17 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1708457
ESS Laboratory Sample ID: 1708457-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Toluene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Trichloroethene	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Trichlorofluoromethane	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Vinyl Chloride	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Xylene O	ND (1.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Xylene P,M	ND (2.0)		8260B		1	08/18/17 18:34	C7H0267	CH71818
Xylenes (Total)	ND (2.0)		8260B		1	08/18/17 18:34		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	108 %		70-130
Surrogate: 4-Bromofluorobenzene	101 %		70-130
Surrogate: Dibromofluoromethane	102 %		70-130
Surrogate: Toluene-d8	94 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 08/16/17 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1708457
ESS Laboratory Sample ID: 1708457-02RE1
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,1-Dichloroethane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,1-Dichloroethene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,1-Dichloropropene	ND (2.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,2-Dibromoethane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,2-Dichloroethane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,2-Dichloropropane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,3-Dichloropropane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
1,4-Dioxane - Screen	ND (500)		8260B		1	08/25/17 18:21	C7H0371	CH72534
2,2-Dichloropropane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
2-Butanone	ND (10.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
2-Chlorotoluene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
2-Hexanone	ND (10.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
4-Chlorotoluene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
4-Isopropyltoluene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Acetone	ND (10.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Benzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Bromobenzene	ND (2.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Bromochloromethane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 08/16/17 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1708457
ESS Laboratory Sample ID: 1708457-02RE1
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromodichloromethane	ND (0.6)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Bromoform	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Bromomethane	ND (2.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Carbon Disulfide	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Carbon Tetrachloride	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Chlorobenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Chloroethane	ND (2.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Chloroform	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Chloromethane	ND (2.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Dibromochloromethane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Dibromomethane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Diethyl Ether	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Di-isopropyl ether	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Ethylbenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Hexachlorobutadiene	ND (0.6)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Hexachloroethane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Isopropylbenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Methylene Chloride	ND (2.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Naphthalene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
n-Butylbenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
n-Propylbenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
sec-Butylbenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Styrene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
tert-Butylbenzene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Tetrachloroethene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Tetrahydrofuran	ND (5.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 08/16/17 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1708457
ESS Laboratory Sample ID: 1708457-02RE1
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Toluene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Trichloroethene	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Trichlorofluoromethane	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Vinyl Chloride	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Xylene O	ND (1.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Xylene P,M	ND (2.0)		8260B		1	08/25/17 18:21	C7H0371	CH72534
Xylenes (Total)	ND (2.0)		8260B		1	08/25/17 18:21		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	100 %		70-130
Surrogate: 4-Bromofluorobenzene	96 %		70-130
Surrogate: Dibromofluoromethane	106 %		70-130
Surrogate: Toluene-d8	114 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CH71818 - 5030B

Blank

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloropropene	ND	2.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,4-Dioxane - Screen	ND	500	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
2-Butanone	ND	10.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
2-Hexanone	ND	10.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
4-Isopropyltoluene	ND	1.0	ug/L
4-Methyl-2-Pentanone	ND	10.0	ug/L
Acetone	ND	10.0	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	2.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	0.6	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon Disulfide	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	0.4	ug/L
Dibromochloromethane	ND	1.0	ug/L



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CH71818 - 5030B

Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Hexachloroethane	ND	1.0	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Xylenes (Total)	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	26.7		ug/L	25.00		107	70-130			
Surrogate: 4-Bromofluorobenzene	27.7		ug/L	25.00		111	70-130			
Surrogate: Dibromofluoromethane	25.5		ug/L	25.00		102	70-130			
Surrogate: Toluene-d8	26.1		ug/L	25.00		104	70-130			

LCS

1,1,1,2-Tetrachloroethane	10.6		ug/L	10.00		106	70-130			
1,1,1-Trichloroethane	11.6		ug/L	10.00		116	70-130			
1,1,2,2-Tetrachloroethane	10.2		ug/L	10.00		102	70-130			
1,1,2-Trichloroethane	10.9		ug/L	10.00		109	70-130			
1,1-Dichloroethane	10.7		ug/L	10.00		107	70-130			
1,1-Dichloroethene	11.0		ug/L	10.00		110	70-130			
1,1-Dichloropropene	11.2		ug/L	10.00		112	70-130			
1,2,3-Trichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2,3-Trichloropropane	10.1		ug/L	10.00		101	70-130			
1,2,4-Trichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,2,4-Trimethylbenzene	10.3		ug/L	10.00		103	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CH71818 - 5030B

1,2-Dibromo-3-Chloropropane	9.5		ug/L	10.00		95	70-130			
1,2-Dibromoethane	10.4		ug/L	10.00		104	70-130			
1,2-Dichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2-Dichloroethane	11.6		ug/L	10.00		116	70-130			
1,2-Dichloropropane	10.6		ug/L	10.00		106	70-130			
1,3,5-Trimethylbenzene	10.7		ug/L	10.00		107	70-130			
1,3-Dichlorobenzene	10.2		ug/L	10.00		102	70-130			
1,3-Dichloropropane	11.2		ug/L	10.00		112	70-130			
1,4-Dichlorobenzene	10.6		ug/L	10.00		106	70-130			
1,4-Dioxane - Screen	234		ug/L	200.0		117	0-332			
2,2-Dichloropropane	11.3		ug/L	10.00		113	70-130			
2-Butanone	55.2		ug/L	50.00		110	70-130			
2-Chlorotoluene	10.2		ug/L	10.00		102	70-130			
2-Hexanone	55.6		ug/L	50.00		111	70-130			
4-Chlorotoluene	10.4		ug/L	10.00		104	70-130			
4-Isopropyltoluene	10.4		ug/L	10.00		104	70-130			
4-Methyl-2-Pentanone	54.3		ug/L	50.00		109	70-130			
Acetone	56.1		ug/L	50.00		112	70-130			
Benzene	10.8		ug/L	10.00		108	70-130			
Bromobenzene	10.3		ug/L	10.00		103	70-130			
Bromochloromethane	11.1		ug/L	10.00		111	70-130			
Bromodichloromethane	9.9		ug/L	10.00		99	70-130			
Bromoform	10.0		ug/L	10.00		100	70-130			
Bromomethane	11.3		ug/L	10.00		113	70-130			
Carbon Disulfide	8.6		ug/L	10.00		86	70-130			
Carbon Tetrachloride	9.6		ug/L	10.00		96	70-130			
Chlorobenzene	10.5		ug/L	10.00		105	70-130			
Chloroethane	11.4		ug/L	10.00		114	70-130			
Chloroform	11.2		ug/L	10.00		112	70-130			
Chloromethane	11.8		ug/L	10.00		118	70-130			
cis-1,2-Dichloroethene	10.3		ug/L	10.00		103	70-130			
cis-1,3-Dichloropropene	11.1		ug/L	10.00		111	70-130			
Dibromochloromethane	9.2		ug/L	10.00		92	70-130			
Dibromomethane	10.5		ug/L	10.00		105	70-130			
Dichlorodifluoromethane	10.6		ug/L	10.00		106	70-130			
Diethyl Ether	9.6		ug/L	10.00		96	70-130			
Di-isopropyl ether	10.7		ug/L	10.00		107	70-130			
Ethyl tertiary-butyl ether	9.6		ug/L	10.00		96	70-130			
Ethylbenzene	10.5		ug/L	10.00		105	70-130			
Hexachlorobutadiene	10.7		ug/L	10.00		107	70-130			
Hexachloroethane	10.6		ug/L	10.00		106	70-130			
Isopropylbenzene	9.8		ug/L	10.00		98	70-130			
Methyl tert-Butyl Ether	9.3		ug/L	10.00		93	70-130			
Methylene Chloride	10.5		ug/L	10.00		105	70-130			
Naphthalene	10.2		ug/L	10.00		102	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CH71818 - 5030B

n-Butylbenzene	10.2		ug/L	10.00		102	70-130			
n-Propylbenzene	10.4		ug/L	10.00		104	70-130			
sec-Butylbenzene	10.1		ug/L	10.00		101	70-130			
Styrene	10.3		ug/L	10.00		103	70-130			
tert-Butylbenzene	10.2		ug/L	10.00		102	70-130			
Tertiary-amyl methyl ether	9.6		ug/L	10.00		96	70-130			
Tetrachloroethene	7.6		ug/L	10.00		76	70-130			
Tetrahydrofuran	9.4		ug/L	10.00		94	70-130			
Toluene	10.9		ug/L	10.00		109	70-130			
trans-1,2-Dichloroethene	10.7		ug/L	10.00		107	70-130			
trans-1,3-Dichloropropene	8.4		ug/L	10.00		84	70-130			
Trichloroethene	10.9		ug/L	10.00		109	70-130			
Trichlorofluoromethane	11.7		ug/L	10.00		117	70-130			
Vinyl Chloride	11.0		ug/L	10.00		110	70-130			
Xylene O	10.8		ug/L	10.00		108	70-130			
Xylene P,M	21.4		ug/L	20.00		107	70-130			
Xylenes (Total)	32.2		ug/L							
Surrogate: 1,2-Dichloroethane-d4	28.0		ug/L	25.00		112	70-130			
Surrogate: 4-Bromofluorobenzene	26.7		ug/L	25.00		107	70-130			
Surrogate: Dibromofluoromethane	28.5		ug/L	25.00		114	70-130			
Surrogate: Toluene-d8	25.8		ug/L	25.00		103	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	10.8		ug/L	10.00		108	70-130	2	20	
1,1,1-Trichloroethane	11.7		ug/L	10.00		117	70-130	0.7	20	
1,1,2,2-Tetrachloroethane	10.2		ug/L	10.00		102	70-130	0.5	20	
1,1,2-Trichloroethane	10.5		ug/L	10.00		105	70-130	4	20	
1,1-Dichloroethane	10.8		ug/L	10.00		108	70-130	1	20	
1,1-Dichloroethene	10.8		ug/L	10.00		108	70-130	1	20	
1,1-Dichloropropene	11.2		ug/L	10.00		112	70-130	0.8	20	
1,2,3-Trichlorobenzene	10.3		ug/L	10.00		103	70-130	0	20	
1,2,3-Trichloropropane	10.0		ug/L	10.00		100	70-130	1	20	
1,2,4-Trichlorobenzene	10.2		ug/L	10.00		102	70-130	1	20	
1,2,4-Trimethylbenzene	10.5		ug/L	10.00		105	70-130	2	20	
1,2-Dibromo-3-Chloropropane	9.0		ug/L	10.00		90	70-130	6	20	
1,2-Dibromoethane	10.6		ug/L	10.00		106	70-130	2	20	
1,2-Dichlorobenzene	10.4		ug/L	10.00		104	70-130	1	20	
1,2-Dichloroethane	11.4		ug/L	10.00		114	70-130	2	20	
1,2-Dichloropropane	10.6		ug/L	10.00		106	70-130	0.5	20	
1,3,5-Trimethylbenzene	10.8		ug/L	10.00		108	70-130	0.5	20	
1,3-Dichlorobenzene	10.3		ug/L	10.00		103	70-130	1	20	
1,3-Dichloropropane	11.0		ug/L	10.00		110	70-130	2	20	
1,4-Dichlorobenzene	10.5		ug/L	10.00		105	70-130	0.6	20	
1,4-Dioxane - Screen	232		ug/L	200.0		116	0-332	1	200	
2,2-Dichloropropane	11.2		ug/L	10.00		112	70-130	1	20	
2-Butanone	52.9		ug/L	50.00		106	70-130	4	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CH71818 - 5030B

2-Chlorotoluene	10.4		ug/L	10.00		104	70-130	1	20	
2-Hexanone	55.0		ug/L	50.00		110	70-130	1	20	
4-Chlorotoluene	10.4		ug/L	10.00		104	70-130	0.7	20	
4-Isopropyltoluene	10.4		ug/L	10.00		104	70-130	0.4	20	
4-Methyl-2-Pentanone	52.8		ug/L	50.00		106	70-130	3	20	
Acetone	53.0		ug/L	50.00		106	70-130	6	20	
Benzene	10.8		ug/L	10.00		108	70-130	0.6	20	
Bromobenzene	10.4		ug/L	10.00		104	70-130	0.9	20	
Bromochloromethane	11.4		ug/L	10.00		114	70-130	3	20	
Bromodichloromethane	9.8		ug/L	10.00		98	70-130	0.7	20	
Bromoform	9.8		ug/L	10.00		98	70-130	2	20	
Bromomethane	11.1		ug/L	10.00		111	70-130	2	20	
Carbon Disulfide	8.8		ug/L	10.00		88	70-130	2	20	
Carbon Tetrachloride	9.7		ug/L	10.00		97	70-130	0.5	20	
Chlorobenzene	10.6		ug/L	10.00		106	70-130	0.9	20	
Chloroethane	11.2		ug/L	10.00		112	70-130	2	20	
Chloroform	11.1		ug/L	10.00		111	70-130	0.2	20	
Chloromethane	11.4		ug/L	10.00		114	70-130	3	20	
cis-1,2-Dichloroethene	10.3		ug/L	10.00		103	70-130	0.3	20	
cis-1,3-Dichloropropene	11.2		ug/L	10.00		112	70-130	0.7	20	
Dibromochloromethane	9.3		ug/L	10.00		93	70-130	0.4	20	
Dibromomethane	10.3		ug/L	10.00		103	70-130	2	20	
Dichlorodifluoromethane	10.7		ug/L	10.00		107	70-130	1	20	
Diethyl Ether	9.8		ug/L	10.00		98	70-130	2	20	
Di-isopropyl ether	10.6		ug/L	10.00		106	70-130	1	20	
Ethyl tertiary-butyl ether	9.8		ug/L	10.00		98	70-130	2	20	
Ethylbenzene	10.7		ug/L	10.00		107	70-130	2	20	
Hexachlorobutadiene	10.4		ug/L	10.00		104	70-130	3	20	
Hexachloroethane	10.8		ug/L	10.00		108	70-130	2	20	
Isopropylbenzene	9.8		ug/L	10.00		98	70-130	0.3	20	
Methyl tert-Butyl Ether	9.4		ug/L	10.00		94	70-130	1	20	
Methylene Chloride	10.8		ug/L	10.00		108	70-130	3	20	
Naphthalene	10.0		ug/L	10.00		100	70-130	2	20	
n-Butylbenzene	10.2		ug/L	10.00		102	70-130	0.6	20	
n-Propylbenzene	10.5		ug/L	10.00		105	70-130	1	20	
sec-Butylbenzene	10.3		ug/L	10.00		103	70-130	1	20	
Styrene	10.2		ug/L	10.00		102	70-130	0.9	20	
tert-Butylbenzene	10.3		ug/L	10.00		103	70-130	1	20	
Tertiary-amyl methyl ether	9.3		ug/L	10.00		93	70-130	2	20	
Tetrachloroethene	7.6		ug/L	10.00		76	70-130	0	20	
Tetrahydrofuran	9.6		ug/L	10.00		96	70-130	2	20	
Toluene	10.7		ug/L	10.00		107	70-130	2	20	
trans-1,2-Dichloroethene	10.7		ug/L	10.00		107	70-130	0.09	20	
trans-1,3-Dichloropropene	8.4		ug/L	10.00		84	70-130	0.1	20	
Trichloroethene	10.8		ug/L	10.00		108	70-130	0.5	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CH71818 - 5030B

Trichlorofluoromethane	12.0		ug/L	10.00		120	70-130	2	20	
Vinyl Chloride	10.7		ug/L	10.00		107	70-130	3	20	
Xylene O	10.7		ug/L	10.00		107	70-130	0.09	20	
Xylene P,M	21.4		ug/L	20.00		107	70-130	0.1	20	
Xylenes (Total)	32.2		ug/L							
Surrogate: 1,2-Dichloroethane-d4	27.4		ug/L	25.00		109	70-130			
Surrogate: 4-Bromofluorobenzene	26.3		ug/L	25.00		105	70-130			
Surrogate: Dibromofluoromethane	27.7		ug/L	25.00		111	70-130			
Surrogate: Toluene-d8	25.7		ug/L	25.00		103	70-130			

Batch CH72534 - 5030B

Blank										
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							
1,1,1-Trichloroethane	ND	1.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L							
1,1,2-Trichloroethane	ND	1.0	ug/L							
1,1-Dichloroethane	ND	1.0	ug/L							
1,1-Dichloroethene	ND	1.0	ug/L							
1,1-Dichloropropene	ND	2.0	ug/L							
1,2,3-Trichlorobenzene	ND	1.0	ug/L							
1,2,3-Trichloropropane	ND	1.0	ug/L							
1,2,4-Trichlorobenzene	ND	1.0	ug/L							
1,2,4-Trimethylbenzene	ND	1.0	ug/L							
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L							
1,2-Dibromoethane	ND	1.0	ug/L							
1,2-Dichlorobenzene	ND	1.0	ug/L							
1,2-Dichloroethane	ND	1.0	ug/L							
1,2-Dichloropropane	ND	1.0	ug/L							
1,3,5-Trimethylbenzene	ND	1.0	ug/L							
1,3-Dichlorobenzene	ND	1.0	ug/L							
1,3-Dichloropropane	ND	1.0	ug/L							
1,4-Dichlorobenzene	ND	1.0	ug/L							
1,4-Dioxane - Screen	ND	500	ug/L							
2,2-Dichloropropane	ND	1.0	ug/L							
2-Butanone	ND	10.0	ug/L							
2-Chlorotoluene	ND	1.0	ug/L							
2-Hexanone	ND	10.0	ug/L							
4-Chlorotoluene	ND	1.0	ug/L							
4-Isopropyltoluene	ND	1.0	ug/L							
4-Methyl-2-Pentanone	ND	10.0	ug/L							
Acetone	ND	10.0	ug/L							
Benzene	ND	1.0	ug/L							
Bromobenzene	ND	2.0	ug/L							
Bromochloromethane	ND	1.0	ug/L							
Bromodichloromethane	ND	0.6	ug/L							
Bromoform	ND	1.0	ug/L							



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CH72534 - 5030B

Bromomethane	ND	2.0	ug/L							
Carbon Disulfide	ND	1.0	ug/L							
Carbon Tetrachloride	ND	1.0	ug/L							
Chlorobenzene	ND	1.0	ug/L							
Chloroethane	ND	2.0	ug/L							
Chloroform	ND	1.0	ug/L							
Chloromethane	ND	2.0	ug/L							
cis-1,2-Dichloroethene	ND	1.0	ug/L							
cis-1,3-Dichloropropene	ND	0.4	ug/L							
Dibromochloromethane	ND	1.0	ug/L							
Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Hexachloroethane	ND	1.0	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Xylenes (Total)	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	24.8		ug/L	25.00		99	70-130			
Surrogate: 4-Bromofluorobenzene	24.9		ug/L	25.00		100	70-130			
Surrogate: Dibromofluoromethane	25.8		ug/L	25.00		103	70-130			
Surrogate: Toluene-d8	28.7		ug/L	25.00		115	70-130			

LCS

1,1,1,2-Tetrachloroethane	9.2		ug/L	10.00		92	70-130			
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CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CH72534 - 5030B

1,1,1-Trichloroethane	10.0		ug/L	10.00		100	70-130			
1,1,2,2-Tetrachloroethane	9.5		ug/L	10.00		95	70-130			
1,1,2-Trichloroethane	9.2		ug/L	10.00		92	70-130			
1,1-Dichloroethane	9.6		ug/L	10.00		96	70-130			
1,1-Dichloroethene	11.0		ug/L	10.00		110	70-130			
1,1-Dichloropropene	10.2		ug/L	10.00		102	70-130			
1,2,3-Trichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2,3-Trichloropropane	9.9		ug/L	10.00		99	70-130			
1,2,4-Trichlorobenzene	10.1		ug/L	10.00		101	70-130			
1,2,4-Trimethylbenzene	10.6		ug/L	10.00		106	70-130			
1,2-Dibromo-3-Chloropropane	9.0		ug/L	10.00		90	70-130			
1,2-Dibromoethane	10.2		ug/L	10.00		102	70-130			
1,2-Dichlorobenzene	10.0		ug/L	10.00		100	70-130			
1,2-Dichloroethane	9.7		ug/L	10.00		97	70-130			
1,2-Dichloropropane	9.3		ug/L	10.00		93	70-130			
1,3,5-Trimethylbenzene	10.5		ug/L	10.00		105	70-130			
1,3-Dichlorobenzene	9.8		ug/L	10.00		98	70-130			
1,3-Dichloropropane	10.8		ug/L	10.00		108	70-130			
1,4-Dichlorobenzene	10.1		ug/L	10.00		101	70-130			
1,4-Dioxane - Screen	166		ug/L	200.0		83	0-332			
2,2-Dichloropropane	10.0		ug/L	10.00		100	70-130			
2-Butanone	46.4		ug/L	50.00		93	70-130			
2-Chlorotoluene	10.2		ug/L	10.00		102	70-130			
2-Hexanone	53.1		ug/L	50.00		106	70-130			
4-Chlorotoluene	10.5		ug/L	10.00		105	70-130			
4-Isopropyltoluene	10.1		ug/L	10.00		101	70-130			
4-Methyl-2-Pentanone	47.9		ug/L	50.00		96	70-130			
Acetone	42.9		ug/L	50.00		86	70-130			
Benzene	10.0		ug/L	10.00		100	70-130			
Bromobenzene	10.2		ug/L	10.00		102	70-130			
Bromochloromethane	9.5		ug/L	10.00		95	70-130			
Bromodichloromethane	8.6		ug/L	10.00		86	70-130			
Bromoform	9.7		ug/L	10.00		97	70-130			
Bromomethane	10.8		ug/L	10.00		108	70-130			
Carbon Disulfide	8.7		ug/L	10.00		87	70-130			
Carbon Tetrachloride	8.7		ug/L	10.00		87	70-130			
Chlorobenzene	10.0		ug/L	10.00		100	70-130			
Chloroethane	9.9		ug/L	10.00		99	70-130			
Chloroform	9.9		ug/L	10.00		99	70-130			
Chloromethane	10.4		ug/L	10.00		104	70-130			
cis-1,2-Dichloroethene	9.3		ug/L	10.00		93	70-130			
cis-1,3-Dichloropropene	9.0		ug/L	10.00		90	70-130			
Dibromochloromethane	8.2		ug/L	10.00		82	70-130			
Dibromomethane	9.2		ug/L	10.00		92	70-130			
Dichlorodifluoromethane	10.5		ug/L	10.00		105	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CH72534 - 5030B

Diethyl Ether	9.9		ug/L	10.00		99	70-130			
Di-isopropyl ether	9.7		ug/L	10.00		97	70-130			
Ethyl tertiary-butyl ether	9.5		ug/L	10.00		95	70-130			
Ethylbenzene	10.5		ug/L	10.00		105	70-130			
Hexachlorobutadiene	10.1		ug/L	10.00		101	70-130			
Hexachloroethane	10.3		ug/L	10.00		103	70-130			
Isopropylbenzene	9.9		ug/L	10.00		99	70-130			
Methyl tert-Butyl Ether	9.1		ug/L	10.00		91	70-130			
Methylene Chloride	9.7		ug/L	10.00		97	70-130			
Naphthalene	10.2		ug/L	10.00		102	70-130			
n-Butylbenzene	10.2		ug/L	10.00		102	70-130			
n-Propylbenzene	10.5		ug/L	10.00		105	70-130			
sec-Butylbenzene	10.4		ug/L	10.00		104	70-130			
Styrene	9.8		ug/L	10.00		98	70-130			
tert-Butylbenzene	10.5		ug/L	10.00		105	70-130			
Tertiary-amyl methyl ether	9.7		ug/L	10.00		97	70-130			
Tetrachloroethene	10.0		ug/L	10.00		100	70-130			
Tetrahydrofuran	8.6		ug/L	10.00		86	70-130			
Toluene	9.7		ug/L	10.00		97	70-130			
trans-1,2-Dichloroethene	9.9		ug/L	10.00		99	70-130			
trans-1,3-Dichloropropene	7.8		ug/L	10.00		78	70-130			
Trichloroethene	9.5		ug/L	10.00		95	70-130			
Trichlorofluoromethane	10.4		ug/L	10.00		104	70-130			
Vinyl Chloride	11.0		ug/L	10.00		110	70-130			
Xylene O	10.6		ug/L	10.00		106	70-130			
Xylene P,M	21.4		ug/L	20.00		107	70-130			
Xylenes (Total)	31.9		ug/L							
Surrogate: 1,2-Dichloroethane-d4	23.9		ug/L	25.00		95	70-130			
Surrogate: 4-Bromofluorobenzene	25.1		ug/L	25.00		101	70-130			
Surrogate: Dibromofluoromethane	26.8		ug/L	25.00		107	70-130			
Surrogate: Toluene-d8	26.9		ug/L	25.00		108	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	9.2		ug/L	10.00		92	70-130	0.9	20	
1,1,1-Trichloroethane	10.2		ug/L	10.00		102	70-130	3	20	
1,1,2,2-Tetrachloroethane	9.4		ug/L	10.00		94	70-130	1	20	
1,1,2-Trichloroethane	8.9		ug/L	10.00		89	70-130	3	20	
1,1-Dichloroethane	9.7		ug/L	10.00		97	70-130	1	20	
1,1-Dichloroethene	11.3		ug/L	10.00		113	70-130	3	20	
1,1-Dichloropropene	10.2		ug/L	10.00		102	70-130	0.7	20	
1,2,3-Trichlorobenzene	10.2		ug/L	10.00		102	70-130	0.4	20	
1,2,3-Trichloropropane	9.5		ug/L	10.00		95	70-130	4	20	
1,2,4-Trichlorobenzene	10.1		ug/L	10.00		101	70-130	0.7	20	
1,2,4-Trimethylbenzene	10.7		ug/L	10.00		107	70-130	1	20	
1,2-Dibromo-3-Chloropropane	9.2		ug/L	10.00		92	70-130	2	20	
1,2-Dibromoethane	10.0		ug/L	10.00		100	70-130	2	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

8260B Volatile Organic Compounds

Batch CH72534 - 5030B

1,2-Dichlorobenzene	10.1		ug/L	10.00		101	70-130	0.6	20	
1,2-Dichloroethane	9.8		ug/L	10.00		98	70-130	0.5	20	
1,2-Dichloropropane	9.1		ug/L	10.00		91	70-130	2	20	
1,3,5-Trimethylbenzene	10.7		ug/L	10.00		107	70-130	2	20	
1,3-Dichlorobenzene	10.1		ug/L	10.00		101	70-130	2	20	
1,3-Dichloropropane	10.9		ug/L	10.00		109	70-130	0.8	20	
1,4-Dichlorobenzene	9.9		ug/L	10.00		99	70-130	2	20	
1,4-Dioxane - Screen	178		ug/L	200.0		89	0-332	7	200	
2,2-Dichloropropane	10.0		ug/L	10.00		100	70-130	0.1	20	
2-Butanone	44.9		ug/L	50.00		90	70-130	3	20	
2-Chlorotoluene	10.5		ug/L	10.00		105	70-130	3	20	
2-Hexanone	52.1		ug/L	50.00		104	70-130	2	20	
4-Chlorotoluene	10.4		ug/L	10.00		104	70-130	0.6	20	
4-Isopropyltoluene	10.1		ug/L	10.00		101	70-130	0.2	20	
4-Methyl-2-Pentanone	46.4		ug/L	50.00		93	70-130	3	20	
Acetone	42.6		ug/L	50.00		85	70-130	0.9	20	
Benzene	10.0		ug/L	10.00		100	70-130	0.2	20	
Bromobenzene	10.3		ug/L	10.00		103	70-130	1	20	
Bromochloromethane	9.7		ug/L	10.00		97	70-130	3	20	
Bromodichloromethane	8.8		ug/L	10.00		88	70-130	2	20	
Bromoform	9.6		ug/L	10.00		96	70-130	1	20	
Bromomethane	10.7		ug/L	10.00		107	70-130	1	20	
Carbon Disulfide	8.9		ug/L	10.00		89	70-130	1	20	
Carbon Tetrachloride	8.9		ug/L	10.00		89	70-130	2	20	
Chlorobenzene	10.0		ug/L	10.00		100	70-130	0.5	20	
Chloroethane	9.3		ug/L	10.00		93	70-130	7	20	
Chloroform	9.7		ug/L	10.00		97	70-130	2	20	
Chloromethane	10.4		ug/L	10.00		104	70-130	0.1	20	
cis-1,2-Dichloroethene	9.4		ug/L	10.00		94	70-130	1	20	
cis-1,3-Dichloropropene	8.7		ug/L	10.00		87	70-130	2	20	
Dibromochloromethane	8.2		ug/L	10.00		82	70-130	0.1	20	
Dibromomethane	9.0		ug/L	10.00		90	70-130	2	20	
Dichlorodifluoromethane	10.4		ug/L	10.00		104	70-130	0.7	20	
Diethyl Ether	9.6		ug/L	10.00		96	70-130	3	20	
Di-isopropyl ether	9.7		ug/L	10.00		97	70-130	0.1	20	
Ethyl tertiary-butyl ether	9.6		ug/L	10.00		96	70-130	0.2	20	
Ethylbenzene	10.4		ug/L	10.00		104	70-130	0.2	20	
Hexachlorobutadiene	10.0		ug/L	10.00		100	70-130	0.2	20	
Hexachloroethane	10.4		ug/L	10.00		104	70-130	1	20	
Isopropylbenzene	10.1		ug/L	10.00		101	70-130	2	20	
Methyl tert-Butyl Ether	8.9		ug/L	10.00		89	70-130	3	20	
Methylene Chloride	10.0		ug/L	10.00		100	70-130	4	20	
Naphthalene	10.1		ug/L	10.00		101	70-130	1	20	
n-Butylbenzene	10.3		ug/L	10.00		103	70-130	0.9	20	
n-Propylbenzene	10.6		ug/L	10.00		106	70-130	0.9	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CH72534 - 5030B

sec-Butylbenzene	10.6		ug/L	10.00		106	70-130	1	20	
Styrene	9.8		ug/L	10.00		98	70-130	0	20	
tert-Butylbenzene	10.6		ug/L	10.00		106	70-130	0.9	20	
Tertiary-amyl methyl ether	9.6		ug/L	10.00		96	70-130	1	20	
Tetrachloroethene	9.8		ug/L	10.00		98	70-130	2	20	
Tetrahydrofuran	7.9		ug/L	10.00		79	70-130	9	20	
Toluene	9.8		ug/L	10.00		98	70-130	0.5	20	
trans-1,2-Dichloroethene	10.1		ug/L	10.00		101	70-130	2	20	
trans-1,3-Dichloropropene	7.8		ug/L	10.00		78	70-130	0.3	20	
Trichloroethene	9.5		ug/L	10.00		95	70-130	0.1	20	
Trichlorofluoromethane	10.4		ug/L	10.00		104	70-130	0.9	20	
Vinyl Chloride	10.9		ug/L	10.00		109	70-130	1	20	
Xylene O	10.4		ug/L	10.00		104	70-130	2	20	
Xylene P,M	21.4		ug/L	20.00		107	70-130	0.4	20	
Xylenes (Total)	31.8		ug/L							
Surrogate: 1,2-Dichloroethane-d4	24.1		ug/L	25.00		96	70-130			
Surrogate: 4-Bromofluorobenzene	24.9		ug/L	25.00		100	70-130			
Surrogate: Dibromofluoromethane	27.2		ug/L	25.00		109	70-130			
Surrogate: Toluene-d8	27.1		ug/L	25.00		108	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

Notes and Definitions

U	Analyte included in the analysis, but not detected
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1708457

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM

ESS Project ID: 1708457
 Date Received: 8/18/2017
 Project Due Date: 8/25/2017
 Days for Project: 5 Day

Shipped/Delivered Via: ESS Courier

1. Air bill manifest present? ☐ No
 Air No.: NA
2. Were custody seals present? ☐ No
3. Is radiation count <100 CPM? ☐ Yes
4. Is a Cooler Present? ☐ Yes
 Temp: 5.1 Iced with: Ice
5. Was COC signed and dated by client? ☐ Yes

6. Does COC match bottles? ☐ Yes
7. Is COC complete and correct? ☐ Yes
8. Were samples received intact? ☐ Yes
9. Were labs informed about short holds & rushes? Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes ☒ No
 ESS Sample IDs: _____
 Analysis: _____
 TAT: _____

12. Were VOAs received? ☒ Yes / ☒ No
 a. Air bubbles in aqueous VOAs? Yes / ☒ No
 b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? ☒ Yes / ☐ No
 a. If metals preserved upon receipt: _____
 b. Low Level VOA vials frozen: _____

Date: _____ Time: _____ By: _____
 Date: _____ Time: _____ By: _____

Sample Receiving Notes:

NOT ESS BOTTLES - Clear vials W 8/18/17

14. Was there a need to contact Project Manager? ☒ Yes / ☐ No
 a. Was there a need to contact the client? ☒ Yes / ☐ No
 Who was contacted? _____

Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	155673	Yes	No	Yes	VOA Vial - HCl	HCl	
01	155674	Yes	No	Yes	VOA Vial - HCl	HCl	
01	155675	Yes	No	Yes	VOA Vial - HCl	HCl	
02	155676	Yes	No	Yes	VOA Vial - HCl	HCl	
02	155677	Yes	No	Yes	VOA Vial - HCl	HCl	
02	155678	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review
 Are barcode labels on correct containers?

Yes / No

Completed
 By: _____
 Reviewed
 By: _____
 Delivered
 By: _____

Date & Time: 8/18/17 1157
 Date & Time: 8/18/17 1319
 Date & Time: 8/18/17 1354

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

Turn Time	Standard		Rush
Regulatory State			
Is this project for any of the following?:			
☐ OCT RCP		☐ OMA MCP	☐ ORGP
Project #	Project Name		
223812	Schneider Electric		
	Address		
	980 Washington St #325		
State	Zip Code	PO #	
IA	02026		
Number	Email Address		
	rmcgrath@woodardcurran.com		

17 08 457

Electronic ☐ Limit Checker ☒ Standard Excel
Deliverables ☐ Other (Please Specify →)

Analysis

VOC 826a

[illegible]

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer G - Glass O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*

Preservation Code: 1-Non Preserved 2-HCl 3-H₂SO₄ 4-HNO₃ 5-NaOH 6-Methanol 7-Na₂S₂O₃ 8-ZnAc₂, NaOH 9-NH₄Cl 10-DI H₂O 11-Ascorbic Acid 12-Other

Number of Containers per Sample:

Laboratory Use Only

Cooler Present:

Seals Intact:

Cooler Temperature:

Sampled by: Zac Borrelli 978-697-61164

Comments:

Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-127079-1

Client Project/Site: Schneider Electric

For:

Woodard & Curran, Inc.

980 Washington Street

Suite 325

Dedham, Massachusetts 02026

Attn: Mr. Rob McGrath



Authorized for release by:

11/14/2017 2:38:10 PM

Denise Giglia, Project Management Assistant II

denise.giglia@testamericainc.com

Designee for

Becky Mason, Project Manager II

(413)572-4000

becky.mason@testamericainc.com

LINKS

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www.testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Job ID: 480-127079-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-127079-1

Receipt

The samples were received on 11/4/2017 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

GC/MS VOA

Method 8260C: With the exception of diluted samples, per question G on the MassDEP Analytical Protocol Certification Form, TestAmerica's routine reporting limits do not achieve the CAM reporting limits specified in this CAM protocol for 1,2-dibromo-3-chloropropane, Carbon Disulfide, Isopropyl Ether, Naphthalene, tert-Amyl Methyl Ether and Tetrahydrofuran.

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-386964 exceeded control limits for the following analyte: 2-Butanone and Tetrahydrofuran. Unlike the calibration standards, this is due to the coelution with Ethyl Acetate and Methacrylonitrile in the spiking solution. This does not indicate a performance issue with the spike recovery, but rather the laboratory's ability to measure the two analytes together in a combined spiking solution. Through the use of spectral analysis, the two compounds can be distinguished from one another if present in a client sample. The following samples were affected: INFLUENT (480-127079-1) and EFFLUENT (480-127079-2).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-386964 recovered above the upper MCP control limit but less than 40% for 1,1-Dichloropropene, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene, Dichlorodifluoromethane, Hexachlorobutadiene, Naphthalene and n-Butylbenzene. MCP protocol allows for 20% of the target compounds to be outside the 20% difference but not over 40% difference. The following samples are impacted: INFLUENT (480-127079-1) and EFFLUENT (480-127079-2).

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-386964 exceeded control limits for the following analytes: 1,1-Dichloroethene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-Chloropropane, Chloroethane, Chloromethane, Dichlorodifluoromethane, Ethyl ether, Hexachlorobutadiene, n-Butylbenzene, Trichlorofluoromethane and Vinyl chloride MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are 40-160%. The following samples were affected : INFLUENT (480-127079-1) and EFFLUENT (480-127079-2).

Method 8260C: The initial calibration curve RSD was greater than the 15% acceptance criteria for Dichlorodifluoromethane, 1,1-Dichloroethene and Hexachlorobutadiene however the RSD was less than 30%. MCP protocol allows for 10% of the target compounds to be outside of the 15% RSD limit for the calibration provided the RSDs do not exceed 30%. The following samples are impacted: INFLUENT (480-127079-1) and EFFLUENT (480-127079-2).

Method 8260C: The Initial calibration verification (ICV) for batch 480-386964 recovered outside control limits for the following analytes: Acetone. MCP protocol allows for 10% of the target compounds to be outside of the limits provided. The following samples are impacted: INFLUENT (480-127079-1) and EFFLUENT (480-127079-2).

Method 8260, 8260C: The surrogate 4-Bromofluorobenzene(Surr) was outside the 20%D limits on the continuing calibration verification (CCV 480-386964/4) but was within laboratory limits. The following samples are impacted: INFLUENT (480-127079-1) and EFFLUENT (480-127079-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

MassDEP Analytical Protocol Certification Form					
Laboratory Name: TestAmerica Buffalo		Project #: 480-127079			
Project Location: Schneider Electric		RTN:			
This form provides certifications for the following data set: list Laboratory Sample ID Number(s): 480-127079[1-2]					
Matrices: ☒ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:					
CAM Protocols (check all that apply below):					
8260 VOC CAM II A ☒	7470/7471 Hg CAM III B ☐	Mass DEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	Mass DEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	Mass DEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐	
Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status					
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time.				☒ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				☒ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				☒ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				☒ Yes ☐ No
E	a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?				☒ Yes ☐ No
Responses to Questions G, H and I below are required for "Presumptive Certainty" status					
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				☐ Yes ☒ No ¹
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350					
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?				☒ Yes ☐ No ¹
¹ All negative responses must be addressed in an attached laboratory narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.					
Signature: <u>Denise L Giglia</u>		Position: <u>Project Manager Assistant II</u>			
Printed Name: <u>Denise L. Giglia</u>		Date: <u>11/14/17 14:32</u>			

Detection Summary

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Client Sample ID: INFLUENT

Lab Sample ID: 480-127079-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	5.71		1.00		ug/L	1		8260C	Total/NA
Trichloroethene	25.0		1.00		ug/L	1		8260C	Total/NA

Client Sample ID: EFFLUENT

Lab Sample ID: 480-127079-2

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Client Sample ID: INFLUENT

Lab Sample ID: 480-127079-1

Date Collected: 11/01/17 13:05

Matrix: Water

Date Received: 11/04/17 09:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			11/13/17 17:30	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			11/13/17 17:30	1
1,1,2,2-Tetrachloroethane	<0.500		0.500		ug/L			11/13/17 17:30	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			11/13/17 17:30	1
1,1-Dichloroethane	<1.00		1.00		ug/L			11/13/17 17:30	1
1,1-Dichloroethene	<1.00	*	1.00		ug/L			11/13/17 17:30	1
1,1-Dichloropropene	<1.00		1.00		ug/L			11/13/17 17:30	1
1,2,3-Trichlorobenzene	<1.00	*	1.00		ug/L			11/13/17 17:30	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			11/13/17 17:30	1
1,2,4-Trichlorobenzene	<1.00	*	1.00		ug/L			11/13/17 17:30	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
1,2-Dibromo-3-Chloropropane	<5.00	*	5.00		ug/L			11/13/17 17:30	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
1,2-Dichloroethane	<1.00		1.00		ug/L			11/13/17 17:30	1
1,2-Dichloropropane	<1.00		1.00		ug/L			11/13/17 17:30	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
1,3-Dichloropropane	<1.00		1.00		ug/L			11/13/17 17:30	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
1,4-Dioxane	<50.0		50.0		ug/L			11/13/17 17:30	1
2,2-Dichloropropane	<1.00		1.00		ug/L			11/13/17 17:30	1
2-Butanone (MEK)	<10.0	*	10.0		ug/L			11/13/17 17:30	1
2-Chlorotoluene	<1.00		1.00		ug/L			11/13/17 17:30	1
2-Hexanone	<10.0		10.0		ug/L			11/13/17 17:30	1
4-Chlorotoluene	<1.00		1.00		ug/L			11/13/17 17:30	1
4-Isopropyltoluene	<1.00		1.00		ug/L			11/13/17 17:30	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			11/13/17 17:30	1
Acetone	<50.0		50.0		ug/L			11/13/17 17:30	1
Benzene	<1.00		1.00		ug/L			11/13/17 17:30	1
Bromobenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
Bromoform	<1.00		1.00		ug/L			11/13/17 17:30	1
Bromomethane	<2.00		2.00		ug/L			11/13/17 17:30	1
Carbon disulfide	<10.0		10.0		ug/L			11/13/17 17:30	1
Carbon tetrachloride	<1.00		1.00		ug/L			11/13/17 17:30	1
Chlorobenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
Chlorobromomethane	<1.00		1.00		ug/L			11/13/17 17:30	1
Chlorodibromomethane	<0.500		0.500		ug/L			11/13/17 17:30	1
Chloroethane	<2.00	*	2.00		ug/L			11/13/17 17:30	1
Chloroform	<1.00		1.00		ug/L			11/13/17 17:30	1
Chloromethane	<2.00	*	2.00		ug/L			11/13/17 17:30	1
cis-1,2-Dichloroethene	5.71		1.00		ug/L			11/13/17 17:30	1
cis-1,3-Dichloropropene	<0.400		0.400		ug/L			11/13/17 17:30	1
Dichlorobromomethane	<0.500		0.500		ug/L			11/13/17 17:30	1
Dichlorodifluoromethane	<1.00	*	1.00		ug/L			11/13/17 17:30	1
Ethyl ether	<1.00	*	1.00		ug/L			11/13/17 17:30	1
Ethylbenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
Ethylene Dibromide	<1.00		1.00		ug/L			11/13/17 17:30	1
Hexachlorobutadiene	<0.400	*	0.400		ug/L			11/13/17 17:30	1
Isopropyl ether	<10.0		10.0		ug/L			11/13/17 17:30	1

TestAmerica Buffalo

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Client Sample ID: INFLUENT

Lab Sample ID: 480-127079-1

Date Collected: 11/01/17 13:05

Matrix: Water

Date Received: 11/04/17 09:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			11/13/17 17:30	1
Methylene Chloride	<1.00		1.00		ug/L			11/13/17 17:30	1
m-Xylene & p-Xylene	<2.00		2.00		ug/L			11/13/17 17:30	1
Naphthalene	<5.00		5.00		ug/L			11/13/17 17:30	1
n-Butylbenzene	<1.00	*	1.00		ug/L			11/13/17 17:30	1
N-Propylbenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
o-Xylene	<1.00		1.00		ug/L			11/13/17 17:30	1
sec-Butylbenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
Styrene	<1.00		1.00		ug/L			11/13/17 17:30	1
Tert-amyl methyl ether	<5.00		5.00		ug/L			11/13/17 17:30	1
Tert-butyl ethyl ether	<5.00		5.00		ug/L			11/13/17 17:30	1
tert-Butylbenzene	<1.00		1.00		ug/L			11/13/17 17:30	1
Tetrachloroethene	<1.00		1.00		ug/L			11/13/17 17:30	1
Tetrahydrofuran	<10.0	*	10.0		ug/L			11/13/17 17:30	1
Toluene	<1.00		1.00		ug/L			11/13/17 17:30	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			11/13/17 17:30	1
trans-1,3-Dichloropropene	<0.400		0.400		ug/L			11/13/17 17:30	1
Trichloroethene	25.0		1.00		ug/L			11/13/17 17:30	1
Trichlorofluoromethane	<1.00	*	1.00		ug/L			11/13/17 17:30	1
Vinyl chloride	<1.00	*	1.00		ug/L			11/13/17 17:30	1
Dibromomethane	<1.00		1.00		ug/L			11/13/17 17:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		70 - 130		11/13/17 17:30	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		11/13/17 17:30	1
4-Bromofluorobenzene (Surr)	92		70 - 130		11/13/17 17:30	1

TestAmerica Buffalo

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Client Sample ID: EFFLUENT

Lab Sample ID: 480-127079-2

Date Collected: 11/01/17 13:10

Matrix: Water

Date Received: 11/04/17 09:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			11/13/17 17:54	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			11/13/17 17:54	1
1,1,2,2-Tetrachloroethane	<0.500		0.500		ug/L			11/13/17 17:54	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			11/13/17 17:54	1
1,1-Dichloroethane	<1.00		1.00		ug/L			11/13/17 17:54	1
1,1-Dichloroethene	<1.00	*	1.00		ug/L			11/13/17 17:54	1
1,1-Dichloropropene	<1.00		1.00		ug/L			11/13/17 17:54	1
1,2,3-Trichlorobenzene	<1.00	*	1.00		ug/L			11/13/17 17:54	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			11/13/17 17:54	1
1,2,4-Trichlorobenzene	<1.00	*	1.00		ug/L			11/13/17 17:54	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
1,2-Dibromo-3-Chloropropane	<5.00	*	5.00		ug/L			11/13/17 17:54	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
1,2-Dichloroethane	<1.00		1.00		ug/L			11/13/17 17:54	1
1,2-Dichloropropane	<1.00		1.00		ug/L			11/13/17 17:54	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
1,3-Dichloropropane	<1.00		1.00		ug/L			11/13/17 17:54	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
1,4-Dioxane	<50.0		50.0		ug/L			11/13/17 17:54	1
2,2-Dichloropropane	<1.00		1.00		ug/L			11/13/17 17:54	1
2-Butanone (MEK)	<10.0	*	10.0		ug/L			11/13/17 17:54	1
2-Chlorotoluene	<1.00		1.00		ug/L			11/13/17 17:54	1
2-Hexanone	<10.0		10.0		ug/L			11/13/17 17:54	1
4-Chlorotoluene	<1.00		1.00		ug/L			11/13/17 17:54	1
4-Isopropyltoluene	<1.00		1.00		ug/L			11/13/17 17:54	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			11/13/17 17:54	1
Acetone	<50.0		50.0		ug/L			11/13/17 17:54	1
Benzene	<1.00		1.00		ug/L			11/13/17 17:54	1
Bromobenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
Bromoform	<1.00		1.00		ug/L			11/13/17 17:54	1
Bromomethane	<2.00		2.00		ug/L			11/13/17 17:54	1
Carbon disulfide	<10.0		10.0		ug/L			11/13/17 17:54	1
Carbon tetrachloride	<1.00		1.00		ug/L			11/13/17 17:54	1
Chlorobenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
Chlorobromomethane	<1.00		1.00		ug/L			11/13/17 17:54	1
Chlorodibromomethane	<0.500		0.500		ug/L			11/13/17 17:54	1
Chloroethane	<2.00	*	2.00		ug/L			11/13/17 17:54	1
Chloroform	<1.00		1.00		ug/L			11/13/17 17:54	1
Chloromethane	<2.00	*	2.00		ug/L			11/13/17 17:54	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			11/13/17 17:54	1
cis-1,3-Dichloropropene	<0.400		0.400		ug/L			11/13/17 17:54	1
Dichlorobromomethane	<0.500		0.500		ug/L			11/13/17 17:54	1
Dichlorodifluoromethane	<1.00	*	1.00		ug/L			11/13/17 17:54	1
Ethyl ether	<1.00	*	1.00		ug/L			11/13/17 17:54	1
Ethylbenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
Ethylene Dibromide	<1.00		1.00		ug/L			11/13/17 17:54	1
Hexachlorobutadiene	<0.400	*	0.400		ug/L			11/13/17 17:54	1
Isopropyl ether	<10.0		10.0		ug/L			11/13/17 17:54	1

TestAmerica Buffalo

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Client Sample ID: EFFLUENT

Lab Sample ID: 480-127079-2

Date Collected: 11/01/17 13:10

Matrix: Water

Date Received: 11/04/17 09:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			11/13/17 17:54	1
Methylene Chloride	<1.00		1.00		ug/L			11/13/17 17:54	1
m-Xylene & p-Xylene	<2.00		2.00		ug/L			11/13/17 17:54	1
Naphthalene	<5.00		5.00		ug/L			11/13/17 17:54	1
n-Butylbenzene	<1.00	*	1.00		ug/L			11/13/17 17:54	1
N-Propylbenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
o-Xylene	<1.00		1.00		ug/L			11/13/17 17:54	1
sec-Butylbenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
Styrene	<1.00		1.00		ug/L			11/13/17 17:54	1
Tert-amyl methyl ether	<5.00		5.00		ug/L			11/13/17 17:54	1
Tert-butyl ethyl ether	<5.00		5.00		ug/L			11/13/17 17:54	1
tert-Butylbenzene	<1.00		1.00		ug/L			11/13/17 17:54	1
Tetrachloroethene	<1.00		1.00		ug/L			11/13/17 17:54	1
Tetrahydrofuran	<10.0	*	10.0		ug/L			11/13/17 17:54	1
Toluene	<1.00		1.00		ug/L			11/13/17 17:54	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			11/13/17 17:54	1
trans-1,3-Dichloropropene	<0.400		0.400		ug/L			11/13/17 17:54	1
Trichloroethene	<1.00		1.00		ug/L			11/13/17 17:54	1
Trichlorofluoromethane	<1.00	*	1.00		ug/L			11/13/17 17:54	1
Vinyl chloride	<1.00	*	1.00		ug/L			11/13/17 17:54	1
Dibromomethane	<1.00		1.00		ug/L			11/13/17 17:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130					11/13/17 17:54	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 130					11/13/17 17:54	1
4-Bromofluorobenzene (Surr)	88		70 - 130					11/13/17 17:54	1

TestAmerica Buffalo

Surrogate Summary

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	TOL (70-130)	12DCE (70-130)	BFB (70-130)
480-127079-1	INFLUENT	92	95	92
480-127079-2	EFFLUENT	95	93	88
LCS 480-386964/5	Lab Control Sample	103	96	98
LCSD 480-386964/6	Lab Control Sample Dup	85	100	90
MB 480-386964/8	Method Blank	97	93	93

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-386964/8

Matrix: Water

Analysis Batch: 386964

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L			11/13/17 11:04	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			11/13/17 11:04	1
1,1,2,2-Tetrachloroethane	<0.500		0.500		ug/L			11/13/17 11:04	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			11/13/17 11:04	1
1,1-Dichloroethane	<1.00		1.00		ug/L			11/13/17 11:04	1
1,1-Dichloroethene	<1.00		1.00		ug/L			11/13/17 11:04	1
1,1-Dichloropropene	<1.00		1.00		ug/L			11/13/17 11:04	1
1,2,3-Trichlorobenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			11/13/17 11:04	1
1,2,4-Trichlorobenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
1,2-Dibromo-3-Chloropropane	<5.00		5.00		ug/L			11/13/17 11:04	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
1,2-Dichloroethane	<1.00		1.00		ug/L			11/13/17 11:04	1
1,2-Dichloropropane	<1.00		1.00		ug/L			11/13/17 11:04	1
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
1,3-Dichlorobenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
1,3-Dichloropropane	<1.00		1.00		ug/L			11/13/17 11:04	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
1,4-Dioxane	<50.0		50.0		ug/L			11/13/17 11:04	1
2,2-Dichloropropane	<1.00		1.00		ug/L			11/13/17 11:04	1
2-Butanone (MEK)	<10.0		10.0		ug/L			11/13/17 11:04	1
2-Chlorotoluene	<1.00		1.00		ug/L			11/13/17 11:04	1
2-Hexanone	<10.0		10.0		ug/L			11/13/17 11:04	1
4-Chlorotoluene	<1.00		1.00		ug/L			11/13/17 11:04	1
4-Isopropyltoluene	<1.00		1.00		ug/L			11/13/17 11:04	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			11/13/17 11:04	1
Acetone	<50.0		50.0		ug/L			11/13/17 11:04	1
Benzene	<1.00		1.00		ug/L			11/13/17 11:04	1
Bromobenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
Bromoform	<1.00		1.00		ug/L			11/13/17 11:04	1
Bromomethane	<2.00		2.00		ug/L			11/13/17 11:04	1
Carbon disulfide	<10.0		10.0		ug/L			11/13/17 11:04	1
Carbon tetrachloride	<1.00		1.00		ug/L			11/13/17 11:04	1
Chlorobenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
Chlorobromomethane	<1.00		1.00		ug/L			11/13/17 11:04	1
Chlorodibromomethane	<0.500		0.500		ug/L			11/13/17 11:04	1
Chloroethane	<2.00		2.00		ug/L			11/13/17 11:04	1
Chloroform	<1.00		1.00		ug/L			11/13/17 11:04	1
Chloromethane	<2.00		2.00		ug/L			11/13/17 11:04	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			11/13/17 11:04	1
cis-1,3-Dichloropropene	<0.400		0.400		ug/L			11/13/17 11:04	1
Dichlorobromomethane	<0.500		0.500		ug/L			11/13/17 11:04	1
Dichlorodifluoromethane	<1.00		1.00		ug/L			11/13/17 11:04	1
Ethyl ether	<1.00		1.00		ug/L			11/13/17 11:04	1
Ethylbenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
Ethylene Dibromide	<1.00		1.00		ug/L			11/13/17 11:04	1
Hexachlorobutadiene	<0.400		0.400		ug/L			11/13/17 11:04	1

TestAmerica Buffalo

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-386964/8

Matrix: Water

Analysis Batch: 386964

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl ether	<10.0		10.0		ug/L			11/13/17 11:04	1
Isopropylbenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			11/13/17 11:04	1
Methylene Chloride	<1.00		1.00		ug/L			11/13/17 11:04	1
m-Xylene & p-Xylene	<2.00		2.00		ug/L			11/13/17 11:04	1
Naphthalene	<5.00		5.00		ug/L			11/13/17 11:04	1
n-Butylbenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
N-Propylbenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
o-Xylene	<1.00		1.00		ug/L			11/13/17 11:04	1
sec-Butylbenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
Styrene	<1.00		1.00		ug/L			11/13/17 11:04	1
Tert-amyl methyl ether	<5.00		5.00		ug/L			11/13/17 11:04	1
Tert-butyl ethyl ether	<5.00		5.00		ug/L			11/13/17 11:04	1
tert-Butylbenzene	<1.00		1.00		ug/L			11/13/17 11:04	1
Tetrachloroethene	<1.00		1.00		ug/L			11/13/17 11:04	1
Tetrahydrofuran	<10.0		10.0		ug/L			11/13/17 11:04	1
Toluene	<1.00		1.00		ug/L			11/13/17 11:04	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			11/13/17 11:04	1
trans-1,3-Dichloropropene	<0.400		0.400		ug/L			11/13/17 11:04	1
Trichloroethene	<1.00		1.00		ug/L			11/13/17 11:04	1
Trichlorofluoromethane	<1.00		1.00		ug/L			11/13/17 11:04	1
Vinyl chloride	<1.00		1.00		ug/L			11/13/17 11:04	1
Dibromomethane	<1.00		1.00		ug/L			11/13/17 11:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		11/13/17 11:04	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 130		11/13/17 11:04	1
4-Bromofluorobenzene (Surr)	93		70 - 130		11/13/17 11:04	1

Lab Sample ID: LCS 480-386964/5

Matrix: Water

Analysis Batch: 386964

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	26.30		ug/L		105	70 - 130
1,1,1-Trichloroethane	25.0	25.31		ug/L		101	70 - 130
1,1,2,2-Tetrachloroethane	25.0	26.55		ug/L		106	70 - 130
1,1,2-Trichloroethane	25.0	29.97		ug/L		120	70 - 130
1,1-Dichloroethane	25.0	26.62		ug/L		106	70 - 130
1,1-Dichloroethene	25.0	24.67		ug/L		99	70 - 130
1,1-Dichloropropene	25.0	26.84		ug/L		107	70 - 130
1,2,3-Trichlorobenzene	25.0	34.28	*	ug/L		137	70 - 130
1,2,3-Trichloropropane	25.0	25.69		ug/L		103	70 - 130
1,2,4-Trichlorobenzene	25.0	32.76	*	ug/L		131	70 - 130
1,2,4-Trimethylbenzene	25.0	26.52		ug/L		106	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	29.07		ug/L		116	70 - 130
1,2-Dichlorobenzene	25.0	30.78		ug/L		123	70 - 130
1,2-Dichloroethane	25.0	25.55		ug/L		102	70 - 130

TestAmerica Buffalo

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-386964/5

Matrix: Water

Analysis Batch: 386964

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	25.0	27.17		ug/L		109	70 - 130
1,3,5-Trimethylbenzene	25.0	24.81		ug/L		99	70 - 130
1,3-Dichlorobenzene	25.0	27.14		ug/L		109	70 - 130
1,3-Dichloropropane	25.0	28.70		ug/L		115	70 - 130
1,4-Dichlorobenzene	25.0	26.23		ug/L		105	70 - 130
1,4-Dioxane	500	543.0		ug/L		109	70 - 130
2,2-Dichloropropane	25.0	23.73		ug/L		95	70 - 130
2-Butanone (MEK)	125	220.1	*	ug/L		176	70 - 130
2-Chlorotoluene	25.0	26.08		ug/L		104	70 - 130
2-Hexanone	125	143.3		ug/L		115	70 - 130
4-Chlorotoluene	25.0	28.22		ug/L		113	70 - 130
4-Isopropyltoluene	25.0	28.54		ug/L		114	70 - 130
4-Methyl-2-pentanone (MIBK)	125	148.7		ug/L		119	70 - 130
Acetone	125	132.4		ug/L		106	70 - 130
Benzene	25.0	26.58		ug/L		106	70 - 130
Bromobenzene	25.0	26.77		ug/L		107	70 - 130
Bromoform	25.0	28.34		ug/L		113	70 - 130
Bromomethane	25.0	27.14		ug/L		109	70 - 130
Carbon disulfide	25.0	24.70		ug/L		99	70 - 130
Carbon tetrachloride	25.0	22.25		ug/L		89	70 - 130
Chlorobenzene	25.0	24.88		ug/L		100	70 - 130
Chlorobromomethane	25.0	23.98		ug/L		96	70 - 130
Chlorodibromomethane	25.0	22.67		ug/L		91	70 - 130
Chloroethane	25.0	28.65		ug/L		115	70 - 130
Chloroform	25.0	24.33		ug/L		97	70 - 130
Chloromethane	25.0	29.71		ug/L		119	70 - 130
cis-1,2-Dichloroethene	25.0	23.22		ug/L		93	70 - 130
cis-1,3-Dichloropropene	25.0	25.08		ug/L		100	70 - 130
Dichlorobromomethane	25.0	26.77		ug/L		107	70 - 130
Dichlorodifluoromethane	25.0	33.76	*	ug/L		135	70 - 130
Ethyl ether	25.0	23.15		ug/L		93	70 - 130
Ethylbenzene	25.0	25.89		ug/L		104	70 - 130
Ethylene Dibromide	25.0	26.08		ug/L		104	70 - 130
Hexachlorobutadiene	25.0	33.42	*	ug/L		134	70 - 130
Isopropyl ether	25.0	23.89		ug/L		96	70 - 130
Isopropylbenzene	25.0	30.98		ug/L		124	70 - 130
Methyl tert-butyl ether	25.0	24.24		ug/L		97	70 - 130
Methylene Chloride	25.0	20.82		ug/L		83	70 - 130
m-Xylene & p-Xylene	25.0	26.66		ug/L		107	70 - 130
Naphthalene	25.0	32.46		ug/L		130	70 - 130
n-Butylbenzene	25.0	33.66	*	ug/L		135	70 - 130
N-Propylbenzene	25.0	26.75		ug/L		107	70 - 130
o-Xylene	25.0	29.02		ug/L		116	70 - 130
sec-Butylbenzene	25.0	28.52		ug/L		114	70 - 130
Styrene	25.0	30.93		ug/L		124	70 - 130
Tert-amyl methyl ether	25.0	25.34		ug/L		101	70 - 130
Tert-butyl ethyl ether	25.0	23.78		ug/L		95	70 - 130
tert-Butylbenzene	25.0	28.45		ug/L		114	70 - 130

TestAmerica Buffalo

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-386964/5

Matrix: Water

Analysis Batch: 386964

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	25.0	32.09		ug/L		128	70 - 130
Tetrahydrofuran	50.0	60.13		ug/L		120	70 - 130
Toluene	25.0	26.40		ug/L		106	70 - 130
trans-1,2-Dichloroethene	25.0	23.16		ug/L		93	70 - 130
trans-1,3-Dichloropropene	25.0	28.61		ug/L		114	70 - 130
Trichloroethene	25.0	26.95		ug/L		108	70 - 130
Trichlorofluoromethane	25.0	19.76		ug/L		79	70 - 130
Vinyl chloride	25.0	26.26		ug/L		105	70 - 130
Dibromomethane	25.0	27.64		ug/L		111	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	103		70 - 130
1,2-Dichloroethane-d4 (Surr)	96		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130

Lab Sample ID: LCSD 480-386964/6

Matrix: Water

Analysis Batch: 386964

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	25.63		ug/L		103	70 - 130	3	20
1,1,1-Trichloroethane	25.0	28.13		ug/L		113	70 - 130	11	20
1,1,2,2-Tetrachloroethane	25.0	26.85		ug/L		107	70 - 130	1	20
1,1,2-Trichloroethane	25.0	25.53		ug/L		102	70 - 130	16	20
1,1-Dichloroethane	25.0	30.82		ug/L		123	70 - 130	15	20
1,1-Dichloroethene	25.0	30.36	*	ug/L		121	70 - 130	21	20
1,1-Dichloropropene	25.0	31.09		ug/L		124	70 - 130	15	20
1,2,3-Trichlorobenzene	25.0	32.37		ug/L		129	70 - 130	6	20
1,2,3-Trichloropropane	25.0	23.69		ug/L		95	70 - 130	8	20
1,2,4-Trichlorobenzene	25.0	27.95		ug/L		112	70 - 130	16	20
1,2,4-Trimethylbenzene	25.0	27.23		ug/L		109	70 - 130	3	20
1,2-Dibromo-3-Chloropropane	25.0	23.39	*	ug/L		94	70 - 130	22	20
1,2-Dichlorobenzene	25.0	29.02		ug/L		116	70 - 130	6	20
1,2-Dichloroethane	25.0	28.20		ug/L		113	70 - 130	10	20
1,2-Dichloropropane	25.0	28.44		ug/L		114	70 - 130	5	20
1,3,5-Trimethylbenzene	25.0	28.52		ug/L		114	70 - 130	14	20
1,3-Dichlorobenzene	25.0	26.46		ug/L		106	70 - 130	3	20
1,3-Dichloropropane	25.0	24.02		ug/L		96	70 - 130	18	20
1,4-Dichlorobenzene	25.0	28.63		ug/L		115	70 - 130	9	20
1,4-Dioxane	500	471.9		ug/L		94	70 - 130	14	20
2,2-Dichloropropane	25.0	27.61		ug/L		110	70 - 130	15	20
2-Butanone (MEK)	125	244.9	*	ug/L		196	70 - 130	11	20
2-Chlorotoluene	25.0	27.20		ug/L		109	70 - 130	4	20
2-Hexanone	125	129.5		ug/L		104	70 - 130	10	20
4-Chlorotoluene	25.0	30.23		ug/L		121	70 - 130	7	20
4-Isopropyltoluene	25.0	28.09		ug/L		112	70 - 130	2	20
4-Methyl-2-pentanone (MIBK)	125	124.8		ug/L		100	70 - 130	17	20
Acetone	125	145.3		ug/L		116	70 - 130	9	20

TestAmerica Buffalo

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 480-386964/6

Matrix: Water

Analysis Batch: 386964

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	25.0	28.12		ug/L		112	70 - 130	6	20
Bromobenzene	25.0	26.80		ug/L		107	70 - 130	0	20
Bromoform	25.0	23.50		ug/L		94	70 - 130	19	20
Bromomethane	25.0	31.52		ug/L		126	70 - 130	15	20
Carbon disulfide	25.0	26.99		ug/L		108	70 - 130	9	20
Carbon tetrachloride	25.0	26.39		ug/L		106	70 - 130	17	20
Chlorobenzene	25.0	24.94		ug/L		100	70 - 130	0	20
Chlorobromomethane	25.0	24.68		ug/L		99	70 - 130	3	20
Chlorodibromomethane	25.0	23.08		ug/L		92	70 - 130	2	20
Chloroethane	25.0	33.11	*	ug/L		132	70 - 130	14	20
Chloroform	25.0	26.23		ug/L		105	70 - 130	7	20
Chloromethane	25.0	35.62	*	ug/L		142	70 - 130	18	20
cis-1,2-Dichloroethene	25.0	25.90		ug/L		104	70 - 130	11	20
cis-1,3-Dichloropropene	25.0	28.28		ug/L		113	70 - 130	12	20
Dichlorobromomethane	25.0	28.51		ug/L		114	70 - 130	6	20
Dichlorodifluoromethane	25.0	44.72	*	ug/L		179	70 - 130	28	20
Ethyl ether	25.0	28.60	*	ug/L		114	70 - 130	21	20
Ethylbenzene	25.0	26.53		ug/L		106	70 - 130	2	20
Ethylene Dibromide	25.0	25.72		ug/L		103	70 - 130	1	20
Hexachlorobutadiene	25.0	29.01		ug/L		116	70 - 130	14	20
Isopropyl ether	25.0	28.47		ug/L		114	70 - 130	17	20
Isopropylbenzene	25.0	27.90		ug/L		112	70 - 130	10	20
Methyl tert-butyl ether	25.0	28.00		ug/L		112	70 - 130	14	20
Methylene Chloride	25.0	23.38		ug/L		94	70 - 130	12	20
m-Xylene & p-Xylene	25.0	24.93		ug/L		100	70 - 130	7	20
Naphthalene	25.0	27.98		ug/L		112	70 - 130	15	20
n-Butylbenzene	25.0	31.86		ug/L		127	70 - 130	5	20
N-Propylbenzene	25.0	27.87		ug/L		111	70 - 130	4	20
o-Xylene	25.0	24.38		ug/L		98	70 - 130	17	20
sec-Butylbenzene	25.0	29.49		ug/L		118	70 - 130	3	20
Styrene	25.0	25.76		ug/L		103	70 - 130	18	20
Tert-amyl methyl ether	25.0	25.99		ug/L		104	70 - 130	3	20
Tert-butyl ethyl ether	25.0	27.12		ug/L		108	70 - 130	13	20
tert-Butylbenzene	25.0	28.73		ug/L		115	70 - 130	1	20
Tetrachloroethene	25.0	28.98		ug/L		116	70 - 130	10	20
Tetrahydrofuran	50.0	68.87	*	ug/L		138	70 - 130	14	20
Toluene	25.0	22.75		ug/L		91	70 - 130	15	20
trans-1,2-Dichloroethene	25.0	26.91		ug/L		108	70 - 130	15	20
trans-1,3-Dichloropropene	25.0	23.89		ug/L		96	70 - 130	18	20
Trichloroethene	25.0	27.98		ug/L		112	70 - 130	4	20
Trichlorofluoromethane	25.0	33.49	*	ug/L		134	70 - 130	52	20
Vinyl chloride	25.0	37.75	*	ug/L		151	70 - 130	36	20
Dibromomethane	25.0	27.68		ug/L		111	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	85		70 - 130
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	90		70 - 130

TestAmerica Buffalo

QC Association Summary

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

GC/MS VOA

Analysis Batch: 386964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-127079-1	INFLUENT	Total/NA	Water	8260C	
480-127079-2	EFFLUENT	Total/NA	Water	8260C	
MB 480-386964/8	Method Blank	Total/NA	Water	8260C	
LCS 480-386964/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-386964/6	Lab Control Sample Dup	Total/NA	Water	8260C	

Lab Chronicle

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Client Sample ID: INFLUENT

Date Collected: 11/01/17 13:05

Date Received: 11/04/17 09:00

Lab Sample ID: 480-127079-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	386964	11/13/17 17:30	KMN	TAL BUF

Client Sample ID: EFFLUENT

Date Collected: 11/01/17 13:10

Date Received: 11/04/17 09:00

Lab Sample ID: 480-127079-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	386964	11/13/17 17:54	KMN	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Laboratory: TestAmerica Buffalo

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-18
California	State Program	9	2931	04-01-18
Connecticut	State Program	1	PH-0568	09-30-18
Florida	NELAP	4	E87672	06-30-18
Georgia	State Program	4	10026 (NY)	03-31-18
Georgia	State Program	4	956	03-31-18
Illinois	NELAP	5	200003	09-30-18
Iowa	State Program	7	374	03-01-19
Kansas	NELAP	7	E-10187	01-31-18
Kentucky (DW)	State Program	4	90029	12-31-17
Kentucky (UST)	State Program	4	30	03-31-18
Kentucky (WW)	State Program	4	90029	12-31-17
Louisiana	NELAP	6	02031	06-30-18
Maryland	State Program	3	294	03-31-18
Massachusetts	State Program	1	M-NY044	06-30-18
Michigan	State Program	5	9937	04-01-09 *
Minnesota	NELAP	5	036-999-337	12-31-17
New Hampshire	NELAP	1	2973	09-11-18
New Jersey	NELAP	2	NY455	06-30-18
New York	NELAP	2	10026	03-31-18
North Dakota	State Program	8	R-176	03-31-18
Oklahoma	State Program	6	9421	08-31-18
Oregon	NELAP	10	NY200003	06-09-18
Pennsylvania	NELAP	3	68-00281	07-31-18
Rhode Island	State Program	1	LAO00328	12-30-17
Tennessee	State Program	4	TN02970	03-31-18
Texas	NELAP	6	T104704412-15-6	07-31-18
USDA	Federal		P330-11-00386	11-26-17 *
Virginia	NELAP	3	460185	09-14-18
Washington	State Program	10	C784	02-10-18
Wisconsin	State Program	5	998310390	08-31-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Buffalo

Method Summary

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL BUF

Protocol References:

MA DEP = Massachusetts Department Of Environmental Protection

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Woodard & Curran, Inc.
Project/Site: Schneider Electric

TestAmerica Job ID: 480-127079-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-127079-1	INFLUENT	Water	11/01/17 13:05	11/04/17 09:00
480-127079-2	EFFLUENT	Water	11/01/17 13:10	11/04/17 09:00

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:[illegible]

Login Sample Receipt Checklist

Client: Woodard & Curran, Inc.

Job Number: 480-127079-1

Login Number: 127079

List Source: TestAmerica Buffalo

List Number: 1

Creator: Janish, Carl M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	WC
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	



CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric (223812)
ESS Laboratory Work Order Number: 1803502

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 10:23 am, Mar 30, 2018

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1803502

SAMPLE RECEIPT

The following samples were received on March 23, 2018 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1803502-01	Influent	Waste Water	8260B
1803502-02	Effluent	Waste Water	8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1803502

PROJECT NARRATIVE

8260B Volatile Organic Compounds

C8C0361-CCV1 Continuing Calibration %Diff/Drift is above control limit (CD+).
Chloromethane (35% @ 20%)
C8C0361-CCV1 Continuing Calibration %Diff/Drift is below control limit (CD-).
Hexachloroethane (23% @ 20%)
CC82625-BS1 Blank Spike recovery is above upper control limit (B+).
Chloromethane (147% @ 70-130%)
CC82625-BSD1 Blank Spike recovery is above upper control limit (B+).
Chloromethane (141% @ 70-130%)
CC82625-BSD1 Blank Spike recovery is below lower control limit (B-).
trans-1,3-Dichloropropene (69% @ 70-130%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1803502

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH / VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Influent
Date Sampled: 03/22/18 12:50
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1803502
ESS Laboratory Sample ID: 1803502-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,1,1-Trichloroethane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,1,2-Trichloroethane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,1-Dichloroethane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,1-Dichloroethene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,1-Dichloropropene	ND (2.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,2,3-Trichloropropane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,2-Dibromoethane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,2-Dichlorobenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,2-Dichloroethane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,2-Dichloropropane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,3-Dichlorobenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,3-Dichloropropane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,4-Dichlorobenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
1,4-Dioxane - Screen	ND (500)		8260B		1	03/26/18 21:13	C8C0361	CC82625
2,2-Dichloropropane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
2-Butanone	ND (10.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
2-Chlorotoluene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
2-Hexanone	ND (10.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
4-Chlorotoluene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
4-Isopropyltoluene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Acetone	ND (10.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Benzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Bromobenzene	ND (2.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Bromochloromethane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Influent
Date Sampled: 03/22/18 12:50
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1803502
ESS Laboratory Sample ID: 1803502-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromodichloromethane	ND (0.6)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Bromoform	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Bromomethane	ND (2.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Carbon Disulfide	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Carbon Tetrachloride	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Chlorobenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Chloroethane	ND (2.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Chloroform	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Chloromethane	ND (2.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
cis-1,2-Dichloroethene	2.2 (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Dibromochloromethane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Dibromomethane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Dichlorodifluoromethane	ND (2.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Diethyl Ether	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Di-isopropyl ether	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Ethylbenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Hexachlorobutadiene	ND (0.6)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Hexachloroethane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Isopropylbenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Methylene Chloride	ND (2.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Naphthalene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
n-Butylbenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
n-Propylbenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
sec-Butylbenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Styrene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
tert-Butylbenzene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Tetrachloroethene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Tetrahydrofuran	ND (5.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Influent
Date Sampled: 03/22/18 12:50
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1803502
ESS Laboratory Sample ID: 1803502-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Toluene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Trichloroethene	12.0 (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Trichlorofluoromethane	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Vinyl Chloride	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Xylene O	ND (1.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Xylene P,M	ND (2.0)		8260B		1	03/26/18 21:13	C8C0361	CC82625
Xylenes (Total)	ND (2.0)		8260B		1	03/26/18 21:13		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	102 %		70-130
Surrogate: 4-Bromofluorobenzene	83 %		70-130
Surrogate: Dibromofluoromethane	93 %		70-130
Surrogate: Toluene-d8	99 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 03/22/18 13:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1803502
ESS Laboratory Sample ID: 1803502-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,1,1-Trichloroethane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,1,2-Trichloroethane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,1-Dichloroethane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,1-Dichloroethene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,1-Dichloropropene	ND (2.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,2,3-Trichloropropane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,2-Dibromoethane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,2-Dichlorobenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,2-Dichloroethane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,2-Dichloropropane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,3-Dichlorobenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,3-Dichloropropane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,4-Dichlorobenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
1,4-Dioxane - Screen	ND (500)		8260B		1	03/26/18 20:48	C8C0361	CC82625
2,2-Dichloropropane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
2-Butanone	ND (10.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
2-Chlorotoluene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
2-Hexanone	ND (10.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
4-Chlorotoluene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
4-Isopropyltoluene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Acetone	ND (10.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Benzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Bromobenzene	ND (2.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Bromochloromethane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 03/22/18 13:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1803502
ESS Laboratory Sample ID: 1803502-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromodichloromethane	ND (0.6)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Bromoform	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Bromomethane	ND (2.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Carbon Disulfide	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Carbon Tetrachloride	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Chlorobenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Chloroethane	ND (2.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Chloroform	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Chloromethane	ND (2.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Dibromochloromethane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Dibromomethane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Dichlorodifluoromethane	ND (2.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Diethyl Ether	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Di-isopropyl ether	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Ethylbenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Hexachlorobutadiene	ND (0.6)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Hexachloroethane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Isopropylbenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Methylene Chloride	ND (2.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Naphthalene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
n-Butylbenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
n-Propylbenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
sec-Butylbenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Styrene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
tert-Butylbenzene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Tetrachloroethene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Tetrahydrofuran	ND (5.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 03/22/18 13:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1803502
ESS Laboratory Sample ID: 1803502-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Toluene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Trichloroethene	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Trichlorofluoromethane	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Vinyl Chloride	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Xylene O	ND (1.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Xylene P,M	ND (2.0)		8260B		1	03/26/18 20:48	C8C0361	CC82625
Xylenes (Total)	ND (2.0)		8260B		1	03/26/18 20:48		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	101 %		70-130
Surrogate: 4-Bromofluorobenzene	83 %		70-130
Surrogate: Dibromofluoromethane	92 %		70-130
Surrogate: Toluene-d8	99 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1803502

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC82625 - 5030B

Blank

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloropropene	ND	2.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,4-Dioxane - Screen	ND	500	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
2-Butanone	ND	10.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
2-Hexanone	ND	10.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
4-Isopropyltoluene	ND	1.0	ug/L
4-Methyl-2-Pentanone	ND	10.0	ug/L
Acetone	ND	10.0	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	2.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	0.6	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon Disulfide	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	0.4	ug/L
Dibromochloromethane	ND	1.0	ug/L



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1803502

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC82625 - 5030B

Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Hexachloroethane	ND	1.0	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Xylenes (Total)	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	24.0		ug/L	25.00		96	70-130			
Surrogate: 4-Bromofluorobenzene	21.1		ug/L	25.00		84	70-130			
Surrogate: Dibromofluoromethane	22.6		ug/L	25.00		91	70-130			
Surrogate: Toluene-d8	24.7		ug/L	25.00		99	70-130			

LCS

1,1,1,2-Tetrachloroethane	8.2		ug/L	10.00		82	70-130			
1,1,1-Trichloroethane	10.3		ug/L	10.00		103	70-130			
1,1,2,2-Tetrachloroethane	10.5		ug/L	10.00		105	70-130			
1,1,2-Trichloroethane	10.7		ug/L	10.00		107	70-130			
1,1-Dichloroethane	10.4		ug/L	10.00		104	70-130			
1,1-Dichloroethene	10.3		ug/L	10.00		103	70-130			
1,1-Dichloropropene	11.1		ug/L	10.00		111	70-130			
1,2,3-Trichlorobenzene	10.8		ug/L	10.00		108	70-130			
1,2,3-Trichloropropane	9.8		ug/L	10.00		98	70-130			
1,2,4-Trichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,2,4-Trimethylbenzene	10.4		ug/L	10.00		104	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1803502

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC82625 - 5030B

1,2-Dibromo-3-Chloropropane	8.8		ug/L	10.00		88	70-130			
1,2-Dibromoethane	10.2		ug/L	10.00		102	70-130			
1,2-Dichlorobenzene	10.7		ug/L	10.00		107	70-130			
1,2-Dichloroethane	11.3		ug/L	10.00		113	70-130			
1,2-Dichloropropane	10.8		ug/L	10.00		108	70-130			
1,3,5-Trimethylbenzene	10.5		ug/L	10.00		105	70-130			
1,3-Dichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,3-Dichloropropane	11.1		ug/L	10.00		111	70-130			
1,4-Dichlorobenzene	10.6		ug/L	10.00		106	70-130			
1,4-Dioxane - Screen	214		ug/L	200.0		107	0-332			
2,2-Dichloropropane	9.0		ug/L	10.00		90	70-130			
2-Butanone	57.8		ug/L	50.00		116	70-130			
2-Chlorotoluene	10.6		ug/L	10.00		106	70-130			
2-Hexanone	54.8		ug/L	50.00		110	70-130			
4-Chlorotoluene	10.5		ug/L	10.00		105	70-130			
4-Isopropyltoluene	9.9		ug/L	10.00		99	70-130			
4-Methyl-2-Pentanone	54.0		ug/L	50.00		108	70-130			
Acetone	49.1		ug/L	50.00		98	70-130			
Benzene	10.7		ug/L	10.00		107	70-130			
Bromobenzene	10.4		ug/L	10.00		104	70-130			
Bromochloromethane	10.4		ug/L	10.00		104	70-130			
Bromodichloromethane	9.8		ug/L	10.00		98	70-130			
Bromoform	8.2		ug/L	10.00		82	70-130			
Bromomethane	10.2		ug/L	10.00		102	70-130			
Carbon Disulfide	10.3		ug/L	10.00		103	70-130			
Carbon Tetrachloride	9.1		ug/L	10.00		91	70-130			
Chlorobenzene	10.4		ug/L	10.00		104	70-130			
Chloroethane	12.0		ug/L	10.00		120	70-130			
Chloroform	10.8		ug/L	10.00		108	70-130			
Chloromethane	14.7		ug/L	10.00		147	70-130			B+
cis-1,2-Dichloroethene	10.6		ug/L	10.00		106	70-130			
cis-1,3-Dichloropropene	10.2		ug/L	10.00		102	70-130			
Dibromochloromethane	8.4		ug/L	10.00		84	70-130			
Dibromomethane	10.5		ug/L	10.00		105	70-130			
Dichlorodifluoromethane	11.4		ug/L	10.00		114	70-130			
Diethyl Ether	10.5		ug/L	10.00		105	70-130			
Di-isopropyl ether	11.2		ug/L	10.00		112	70-130			
Ethyl tertiary-butyl ether	10.1		ug/L	10.00		101	70-130			
Ethylbenzene	10.2		ug/L	10.00		102	70-130			
Hexachlorobutadiene	10.2		ug/L	10.00		102	70-130			
Hexachloroethane	7.9		ug/L	10.00		79	70-130			
Isopropylbenzene	10.2		ug/L	10.00		102	70-130			
Methyl tert-Butyl Ether	10.0		ug/L	10.00		100	70-130			
Methylene Chloride	10.6		ug/L	10.00		106	70-130			
Naphthalene	11.0		ug/L	10.00		110	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1803502

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC82625 - 5030B

n-Butylbenzene	10.0		ug/L	10.00		100	70-130			
n-Propylbenzene	10.5		ug/L	10.00		105	70-130			
sec-Butylbenzene	10.3		ug/L	10.00		103	70-130			
Styrene	9.6		ug/L	10.00		96	70-130			
tert-Butylbenzene	10.4		ug/L	10.00		104	70-130			
Tertiary-amyl methyl ether	9.3		ug/L	10.00		93	70-130			
Tetrachloroethene	9.1		ug/L	10.00		91	70-130			
Tetrahydrofuran	10.5		ug/L	10.00		105	70-130			
Toluene	10.7		ug/L	10.00		107	70-130			
trans-1,2-Dichloroethene	10.6		ug/L	10.00		106	70-130			
trans-1,3-Dichloropropene	7.8		ug/L	10.00		78	70-130			
Trichloroethene	10.7		ug/L	10.00		107	70-130			
Trichlorofluoromethane	10.7		ug/L	10.00		107	70-130			
Vinyl Chloride	11.7		ug/L	10.00		117	70-130			
Xylene O	10.4		ug/L	10.00		104	70-130			
Xylene P,M	20.4		ug/L	20.00		102	70-130			
Xylenes (Total)	30.8		ug/L							
Surrogate: 1,2-Dichloroethane-d4	27.1		ug/L	25.00		109	70-130			
Surrogate: 4-Bromofluorobenzene	23.4		ug/L	25.00		94	70-130			
Surrogate: Dibromofluoromethane	26.9		ug/L	25.00		108	70-130			
Surrogate: Toluene-d8	25.4		ug/L	25.00		102	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	7.6		ug/L	10.00		76	70-130	8	20	
1,1,1-Trichloroethane	9.4		ug/L	10.00		94	70-130	10	20	
1,1,2,2-Tetrachloroethane	9.6		ug/L	10.00		96	70-130	10	20	
1,1,2-Trichloroethane	9.7		ug/L	10.00		97	70-130	10	20	
1,1-Dichloroethane	9.5		ug/L	10.00		95	70-130	9	20	
1,1-Dichloroethene	9.8		ug/L	10.00		98	70-130	5	20	
1,1-Dichloropropene	10.2		ug/L	10.00		102	70-130	9	20	
1,2,3-Trichlorobenzene	9.6		ug/L	10.00		96	70-130	12	20	
1,2,3-Trichloropropane	8.7		ug/L	10.00		87	70-130	12	20	
1,2,4-Trichlorobenzene	9.5		ug/L	10.00		95	70-130	10	20	
1,2,4-Trimethylbenzene	9.6		ug/L	10.00		96	70-130	8	20	
1,2-Dibromo-3-Chloropropane	7.3		ug/L	10.00		73	70-130	18	20	
1,2-Dibromoethane	9.2		ug/L	10.00		92	70-130	10	20	
1,2-Dichlorobenzene	9.6		ug/L	10.00		96	70-130	10	20	
1,2-Dichloroethane	10.2		ug/L	10.00		102	70-130	10	20	
1,2-Dichloropropane	9.9		ug/L	10.00		99	70-130	9	20	
1,3,5-Trimethylbenzene	9.6		ug/L	10.00		96	70-130	9	20	
1,3-Dichlorobenzene	9.6		ug/L	10.00		96	70-130	7	20	
1,3-Dichloropropane	9.9		ug/L	10.00		99	70-130	11	20	
1,4-Dichlorobenzene	9.6		ug/L	10.00		96	70-130	10	20	
1,4-Dioxane - Screen	183		ug/L	200.0		91	0-332	16	200	
2,2-Dichloropropane	8.0		ug/L	10.00		80	70-130	11	20	
2-Butanone	50.5		ug/L	50.00		101	70-130	13	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1803502

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC82625 - 5030B

2-Chlorotoluene	9.9		ug/L	10.00		99	70-130	7	20	
2-Hexanone	47.4		ug/L	50.00		95	70-130	14	20	
4-Chlorotoluene	9.8		ug/L	10.00		98	70-130	7	20	
4-Isopropyltoluene	9.2		ug/L	10.00		92	70-130	7	20	
4-Methyl-2-Pentanone	47.7		ug/L	50.00		95	70-130	12	20	
Acetone	43.3		ug/L	50.00		87	70-130	13	20	
Benzene	9.9		ug/L	10.00		99	70-130	8	20	
Bromobenzene	9.6		ug/L	10.00		96	70-130	8	20	
Bromochloromethane	9.4		ug/L	10.00		94	70-130	10	20	
Bromodichloromethane	9.0		ug/L	10.00		90	70-130	9	20	
Bromoform	7.2		ug/L	10.00		72	70-130	13	20	
Bromomethane	9.3		ug/L	10.00		93	70-130	10	20	
Carbon Disulfide	9.4		ug/L	10.00		94	70-130	9	20	
Carbon Tetrachloride	8.4		ug/L	10.00		84	70-130	8	20	
Chlorobenzene	9.5		ug/L	10.00		95	70-130	9	20	
Chloroethane	11.1		ug/L	10.00		111	70-130	8	20	
Chloroform	10.0		ug/L	10.00		100	70-130	8	20	
Chloromethane	14.1		ug/L	10.00		141	70-130	5	20	B+
cis-1,2-Dichloroethene	9.5		ug/L	10.00		95	70-130	11	20	
cis-1,3-Dichloropropene	9.1		ug/L	10.00		91	70-130	11	20	
Dibromochloromethane	7.5		ug/L	10.00		75	70-130	11	20	
Dibromomethane	9.6		ug/L	10.00		96	70-130	10	20	
Dichlorodifluoromethane	10.6		ug/L	10.00		106	70-130	7	20	
Diethyl Ether	9.6		ug/L	10.00		96	70-130	9	20	
Di-isopropyl ether	10.2		ug/L	10.00		102	70-130	10	20	
Ethyl tertiary-butyl ether	9.1		ug/L	10.00		91	70-130	10	20	
Ethylbenzene	9.3		ug/L	10.00		93	70-130	9	20	
Hexachlorobutadiene	9.2		ug/L	10.00		92	70-130	10	20	
Hexachloroethane	7.4		ug/L	10.00		74	70-130	7	20	
Isopropylbenzene	9.4		ug/L	10.00		94	70-130	8	20	
Methyl tert-Butyl Ether	9.0		ug/L	10.00		90	70-130	10	20	
Methylene Chloride	9.7		ug/L	10.00		97	70-130	10	20	
Naphthalene	9.4		ug/L	10.00		94	70-130	16	20	
n-Butylbenzene	9.1		ug/L	10.00		91	70-130	10	20	
n-Propylbenzene	9.8		ug/L	10.00		98	70-130	7	20	
sec-Butylbenzene	9.5		ug/L	10.00		95	70-130	8	20	
Styrene	8.7		ug/L	10.00		87	70-130	10	20	
tert-Butylbenzene	9.6		ug/L	10.00		96	70-130	8	20	
Tertiary-amyl methyl ether	8.3		ug/L	10.00		83	70-130	11	20	
Tetrachloroethene	8.2		ug/L	10.00		82	70-130	11	20	
Tetrahydrofuran	9.3		ug/L	10.00		93	70-130	12	20	
Toluene	9.8		ug/L	10.00		98	70-130	9	20	
trans-1,2-Dichloroethene	9.8		ug/L	10.00		98	70-130	8	20	
trans-1,3-Dichloropropene	6.9		ug/L	10.00		69	70-130	11	20	B-
Trichloroethene	10.2		ug/L	10.00		102	70-130	5	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1803502

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC82625 - 5030B

Trichlorofluoromethane	9.8		ug/L	10.00		98	70-130	8	20	
Vinyl Chloride	11.0		ug/L	10.00		110	70-130	7	20	
Xylene O	9.5		ug/L	10.00		95	70-130	9	20	
Xylene P,M	18.6		ug/L	20.00		93	70-130	9	20	
Xylenes (Total)	28.1		ug/L							
Surrogate: 1,2-Dichloroethane-d4	26.7		ug/L	25.00		107	70-130			
Surrogate: 4-Bromofluorobenzene	23.0		ug/L	25.00		92	70-130			
Surrogate: Dibromofluoromethane	26.7		ug/L	25.00		107	70-130			
Surrogate: Toluene-d8	25.3		ug/L	25.00		101	70-130			



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1803502

Notes and Definitions

U	Analyte included in the analysis, but not detected
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
B+	Blank Spike recovery is above upper control limit (B+).
B-	Blank Spike recovery is below lower control limit (B-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1803502

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM

ESS Project ID: 1803502

Shipped/Delivered Via: ESS Courier

Date Received: 3/23/2018

Project Due Date: 3/30/2018

Days for Project: 5 Day

1. Air bill manifest present? ☐ No

Air No.: NA

2. Were custody seals present? ☐ No

3. Is radiation count <100 CPM? ☐ Yes

4. Is a Cooler Present? ☐ Yes

Temp: 2.8 Iced with: Ice

5. Was COC signed and dated by client? ☐ Yes

6. Does COC match bottles? ☐ Yes

7. Is COC complete and correct? ☐ Yes

8. Were samples received intact? ☐ Yes

9. Were labs informed about short holds & rushes? Yes / No / NA

10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No

ESS Sample IDs: _____

Analysis: _____

TAT: _____

12. Were VOAs received? Yes / No

a. Air bubbles in aqueous VOAs? Yes / No

b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No

a. If metals preserved upon receipt: Date: _____

b. Low Level VOA vials frozen: Date: _____

Time: _____ By: _____

Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No

a. Was there a need to contact the client? Yes / No

Who was contacted? _____ Date: _____

Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	210644	Yes	No	Yes	VOA Vial - HCl	HCl	
01	210645	Yes	No	Yes	VOA Vial - HCl	HCl	
01	210646	Yes	No	Yes	VOA Vial - HCl	HCl	
02	210641	Yes	No	Yes	VOA Vial - HCl	HCl	
02	210642	Yes	No	Yes	VOA Vial - HCl	HCl	
02	210643	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review

Are barcode labels on correct containers? Yes / No

Completed By: [Signature]

Date & Time: 3/23/18 1815

Reviewed By: [Signature]

Date & Time: 3/23/18 1826

Delivered By: [Signature]

Date & Time: 3/23/18 1831

1803502

Electronic ☐ Limit Checker ☒ Standard Excel
Deliverables ☐ Other (Please Specify →)

Analysis

PO #

FAX Number

Email Address
rmcgrath@woodardcurran.com

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer G - Glass O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other

Preservation Code: 1-Non Preserved 2-HCl 3-H₂SO₄ 4-HNO₃ 5-NaOH 6-Methanol 7-Na₂S₂O₃ 8-ZnAc₂·NaCl 9-NH₄Cl 10-DI H₂O 11-Other*

Number of Containers per Sample:

Laboratory Use Only

Cooler Present:

Seals Intact:

Cooler Temperature:

$^{\circ}\text{C}$ ice temp: 2.8

Sampled by: Fae Borrelli

Comments:

Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)



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CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric (223812.03)
ESS Laboratory Work Order Number: 1806489

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 2:51 pm, Jun 27, 2018

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1806489

SAMPLE RECEIPT

The following samples were received on June 20, 2018 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1806489-01	INFLUENT	Waste Water	8260B
1806489-02	EFFLUENT	Waste Water	8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1806489

PROJECT NARRATIVE

8260B Volatile Organic Compounds

C8F0357-CCV1 Continuing Calibration %Diff/Drift is below control limit (CD-).
1,4-Dioxane - Screen (56% @ 20%), 2-Hexanone (23% @ 20%), 4-Methyl-2-Pentanone (21% @ 20%),
Acetone (28% @ 20%), Tetrahydrofuran (23% @ 20%)
CF82127-BSD1 Blank Spike recovery is below lower control limit (B-).
Acetone (68% @ 70-130%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1806489

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 04-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: INFLUENT
Date Sampled: 06/19/18 14:35
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1806489
ESS Laboratory Sample ID: 1806489-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,1,1-Trichloroethane	1.3 (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,1,2-Trichloroethane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,1-Dichloroethane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,1-Dichloroethene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,1-Dichloropropene	ND (2.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,2,3-Trichloropropane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,2-Dibromoethane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,2-Dichlorobenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,2-Dichloroethane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,2-Dichloropropane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,3-Dichlorobenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,3-Dichloropropane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,4-Dichlorobenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
1,4-Dioxane - Screen	ND (500)		8260B		1	06/21/18 19:44	C8F0357	CF82127
2,2-Dichloropropane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
2-Butanone	ND (10.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
2-Chlorotoluene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
2-Hexanone	ND (10.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
4-Chlorotoluene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
4-Isopropyltoluene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Acetone	ND (10.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Benzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Bromobenzene	ND (2.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Bromochloromethane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: INFLUENT
Date Sampled: 06/19/18 14:35
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1806489
ESS Laboratory Sample ID: 1806489-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromodichloromethane	ND (0.6)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Bromoform	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Bromomethane	ND (2.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Carbon Disulfide	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Carbon Tetrachloride	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Chlorobenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Chloroethane	ND (2.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Chloroform	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Chloromethane	ND (2.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
cis-1,2-Dichloroethene	7.6 (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Dibromochloromethane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Dibromomethane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Dichlorodifluoromethane	ND (2.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Diethyl Ether	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Di-isopropyl ether	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Ethylbenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Hexachlorobutadiene	ND (0.6)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Hexachloroethane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Isopropylbenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Methylene Chloride	ND (2.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Naphthalene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
n-Butylbenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
n-Propylbenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
sec-Butylbenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Styrene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
tert-Butylbenzene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Tetrachloroethene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Tetrahydrofuran	ND (5.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: INFLUENT
Date Sampled: 06/19/18 14:35
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1806489
ESS Laboratory Sample ID: 1806489-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Toluene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Trichloroethene	27.3 (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Trichlorofluoromethane	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Vinyl Chloride	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Xylene O	ND (1.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Xylene P,M	ND (2.0)		8260B		1	06/21/18 19:44	C8F0357	CF82127
Xylenes (Total)	ND (2.0)		8260B		1	06/21/18 19:44		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	97 %		70-130
Surrogate: 4-Bromofluorobenzene	98 %		70-130
Surrogate: Dibromofluoromethane	104 %		70-130
Surrogate: Toluene-d8	101 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: EFFLUENT
Date Sampled: 06/19/18 14:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1806489
ESS Laboratory Sample ID: 1806489-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,1,1-Trichloroethane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,1,2-Trichloroethane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,1-Dichloroethane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,1-Dichloroethene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,1-Dichloropropene	ND (2.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,2,3-Trichloropropane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,2-Dibromoethane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,2-Dichlorobenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,2-Dichloroethane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,2-Dichloropropane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,3-Dichlorobenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,3-Dichloropropane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,4-Dichlorobenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
1,4-Dioxane - Screen	ND (500)		8260B		1	06/21/18 19:17	C8F0357	CF82127
2,2-Dichloropropane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
2-Butanone	ND (10.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
2-Chlorotoluene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
2-Hexanone	ND (10.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
4-Chlorotoluene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
4-Isopropyltoluene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Acetone	ND (10.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Benzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Bromobenzene	ND (2.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Bromochloromethane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

The Microbiology Division
of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: EFFLUENT
Date Sampled: 06/19/18 14:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1806489
ESS Laboratory Sample ID: 1806489-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.6)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Bromoform	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Bromomethane	ND (2.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Carbon Disulfide	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Carbon Tetrachloride	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Chlorobenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Chloroethane	ND (2.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Chloroform	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Chloromethane	ND (2.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Dibromochloromethane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Dibromomethane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Dichlorodifluoromethane	ND (2.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Diethyl Ether	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Di-isopropyl ether	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Ethylbenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Hexachlorobutadiene	ND (0.6)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Hexachloroethane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Isopropylbenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Methylene Chloride	ND (2.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Naphthalene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
n-Butylbenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
n-Propylbenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
sec-Butylbenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Styrene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
tert-Butylbenzene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Tetrachloroethene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Tetrahydrofuran	ND (5.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: EFFLUENT
Date Sampled: 06/19/18 14:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1806489
ESS Laboratory Sample ID: 1806489-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Toluene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Trichloroethene	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Trichlorofluoromethane	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Vinyl Chloride	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Xylene O	ND (1.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Xylene P,M	ND (2.0)		8260B		1	06/21/18 19:17	C8F0357	CF82127
Xylenes (Total)	ND (2.0)		8260B		1	06/21/18 19:17		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	95 %		70-130
Surrogate: 4-Bromofluorobenzene	102 %		70-130
Surrogate: Dibromofluoromethane	103 %		70-130
Surrogate: Toluene-d8	104 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1806489

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF82127 - 5030B

Blank

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloropropene	ND	2.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,4-Dioxane - Screen	ND	500	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
2-Butanone	ND	10.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
2-Hexanone	ND	10.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
4-Isopropyltoluene	ND	1.0	ug/L
4-Methyl-2-Pentanone	ND	10.0	ug/L
Acetone	ND	10.0	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	2.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	0.6	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon Disulfide	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	0.4	ug/L
Dibromochloromethane	ND	1.0	ug/L



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1806489

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF82127 - 5030B

Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Hexachloroethane	ND	1.0	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Xylenes (Total)	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	23.6		ug/L	25.00		94	70-130			
Surrogate: 4-Bromofluorobenzene	25.5		ug/L	25.00		102	70-130			
Surrogate: Dibromofluoromethane	24.8		ug/L	25.00		99	70-130			
Surrogate: Toluene-d8	26.4		ug/L	25.00		105	70-130			

LCS

1,1,1,2-Tetrachloroethane	9.0		ug/L	10.00		90	70-130			
1,1,1-Trichloroethane	11.8		ug/L	10.00		118	70-130			
1,1,2,2-Tetrachloroethane	11.3		ug/L	10.00		113	70-130			
1,1,2-Trichloroethane	10.9		ug/L	10.00		109	70-130			
1,1-Dichloroethane	10.6		ug/L	10.00		106	70-130			
1,1-Dichloroethene	12.0		ug/L	10.00		120	70-130			
1,1-Dichloropropene	11.6		ug/L	10.00		116	70-130			
1,2,3-Trichlorobenzene	10.9		ug/L	10.00		109	70-130			
1,2,3-Trichloropropane	8.9		ug/L	10.00		89	70-130			
1,2,4-Trichlorobenzene	10.8		ug/L	10.00		108	70-130			
1,2,4-Trimethylbenzene	11.0		ug/L	10.00		110	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1806489

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF82127 - 5030B

1,2-Dibromo-3-Chloropropane	8.3		ug/L	10.00		83	70-130			
1,2-Dibromoethane	11.1		ug/L	10.00		111	70-130			
1,2-Dichlorobenzene	11.5		ug/L	10.00		115	70-130			
1,2-Dichloroethane	11.9		ug/L	10.00		119	70-130			
1,2-Dichloropropane	9.8		ug/L	10.00		98	70-130			
1,3,5-Trimethylbenzene	11.0		ug/L	10.00		110	70-130			
1,3-Dichlorobenzene	10.9		ug/L	10.00		109	70-130			
1,3-Dichloropropane	10.8		ug/L	10.00		108	70-130			
1,4-Dichlorobenzene	12.0		ug/L	10.00		120	70-130			
1,4-Dioxane - Screen	402		ug/L	200.0		201	0-332			
2,2-Dichloropropane	10.9		ug/L	10.00		109	70-130			
2-Butanone	43.5		ug/L	50.00		87	70-130			
2-Chlorotoluene	10.9		ug/L	10.00		109	70-130			
2-Hexanone	40.2		ug/L	50.00		80	70-130			
4-Chlorotoluene	11.4		ug/L	10.00		114	70-130			
4-Isopropyltoluene	11.3		ug/L	10.00		113	70-130			
4-Methyl-2-Pentanone	41.2		ug/L	50.00		82	70-130			
Acetone	36.3		ug/L	50.00		73	70-130			
Benzene	10.5		ug/L	10.00		105	70-130			
Bromobenzene	11.5		ug/L	10.00		115	70-130			
Bromochloromethane	11.7		ug/L	10.00		117	70-130			
Bromodichloromethane	9.4		ug/L	10.00		94	70-130			
Bromoform	9.2		ug/L	10.00		92	70-130			
Bromomethane	12.9		ug/L	10.00		129	70-130			
Carbon Disulfide	10.5		ug/L	10.00		105	70-130			
Carbon Tetrachloride	10.0		ug/L	10.00		100	70-130			
Chlorobenzene	11.7		ug/L	10.00		117	70-130			
Chloroethane	10.3		ug/L	10.00		103	70-130			
Chloroform	11.8		ug/L	10.00		118	70-130			
Chloromethane	9.3		ug/L	10.00		93	70-130			
cis-1,2-Dichloroethene	11.3		ug/L	10.00		113	70-130			
cis-1,3-Dichloropropene	9.0		ug/L	10.00		90	70-130			
Dibromochloromethane	7.5		ug/L	10.00		75	70-130			
Dibromomethane	11.0		ug/L	10.00		110	70-130			
Dichlorodifluoromethane	10.1		ug/L	10.00		101	70-130			
Diethyl Ether	10.0		ug/L	10.00		100	70-130			
Di-isopropyl ether	9.3		ug/L	10.00		93	70-130			
Ethyl tertiary-butyl ether	10.4		ug/L	10.00		104	70-130			
Ethylbenzene	10.5		ug/L	10.00		105	70-130			
Hexachlorobutadiene	11.2		ug/L	10.00		112	70-130			
Hexachloroethane	10.0		ug/L	10.00		100	70-130			
Isopropylbenzene	10.9		ug/L	10.00		109	70-130			
Methyl tert-Butyl Ether	10.5		ug/L	10.00		105	70-130			
Methylene Chloride	11.7		ug/L	10.00		117	70-130			
Naphthalene	10.4		ug/L	10.00		104	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1806489

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF82127 - 5030B

n-Butylbenzene	11.2		ug/L	10.00		112	70-130			
n-Propylbenzene	11.6		ug/L	10.00		116	70-130			
sec-Butylbenzene	11.0		ug/L	10.00		110	70-130			
Styrene	10.4		ug/L	10.00		104	70-130			
tert-Butylbenzene	10.9		ug/L	10.00		109	70-130			
Tertiary-amyl methyl ether	9.3		ug/L	10.00		93	70-130			
Tetrachloroethene	8.7		ug/L	10.00		87	70-130			
Tetrahydrofuran	7.3		ug/L	10.00		73	70-130			
Toluene	11.1		ug/L	10.00		111	70-130			
trans-1,2-Dichloroethene	12.0		ug/L	10.00		120	70-130			
trans-1,3-Dichloropropene	8.1		ug/L	10.00		81	70-130			
Trichloroethene	11.0		ug/L	10.00		110	70-130			
Trichlorofluoromethane	12.1		ug/L	10.00		121	70-130			
Vinyl Chloride	10.8		ug/L	10.00		108	70-130			
Xylene O	11.2		ug/L	10.00		112	70-130			
Xylene P,M	22.8		ug/L	20.00		114	70-130			
Xylenes (Total)	34.1		ug/L							
Surrogate: 1,2-Dichloroethane-d4	28.3		ug/L	25.00		113	70-130			
Surrogate: 4-Bromofluorobenzene	28.0		ug/L	25.00		112	70-130			
Surrogate: Dibromofluoromethane	30.2		ug/L	25.00		121	70-130			
Surrogate: Toluene-d8	27.6		ug/L	25.00		111	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	9.1		ug/L	10.00		91	70-130	0.9	20	
1,1,1-Trichloroethane	10.9		ug/L	10.00		109	70-130	8	20	
1,1,2,2-Tetrachloroethane	11.1		ug/L	10.00		111	70-130	2	20	
1,1,2-Trichloroethane	10.0		ug/L	10.00		100	70-130	9	20	
1,1-Dichloroethane	9.9		ug/L	10.00		99	70-130	6	20	
1,1-Dichloroethene	11.2		ug/L	10.00		112	70-130	7	20	
1,1-Dichloropropene	10.8		ug/L	10.00		108	70-130	7	20	
1,2,3-Trichlorobenzene	10.9		ug/L	10.00		109	70-130	0.09	20	
1,2,3-Trichloropropane	8.2		ug/L	10.00		82	70-130	8	20	
1,2,4-Trichlorobenzene	10.4		ug/L	10.00		104	70-130	3	20	
1,2,4-Trimethylbenzene	10.9		ug/L	10.00		109	70-130	0.09	20	
1,2-Dibromo-3-Chloropropane	9.0		ug/L	10.00		90	70-130	8	20	
1,2-Dibromoethane	10.6		ug/L	10.00		106	70-130	5	20	
1,2-Dichlorobenzene	11.3		ug/L	10.00		113	70-130	1	20	
1,2-Dichloroethane	10.8		ug/L	10.00		108	70-130	10	20	
1,2-Dichloropropane	9.4		ug/L	10.00		94	70-130	4	20	
1,3,5-Trimethylbenzene	10.8		ug/L	10.00		108	70-130	2	20	
1,3-Dichlorobenzene	10.9		ug/L	10.00		109	70-130	0.3	20	
1,3-Dichloropropane	10.4		ug/L	10.00		104	70-130	4	20	
1,4-Dichlorobenzene	11.4		ug/L	10.00		114	70-130	5	20	
1,4-Dioxane - Screen	229		ug/L	200.0		114	0-332	55	200	
2,2-Dichloropropane	10.7		ug/L	10.00		107	70-130	2	20	
2-Butanone	41.7		ug/L	50.00		83	70-130	4	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1806489

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF82127 - 5030B

2-Chlorotoluene	10.6		ug/L	10.00		106	70-130	2	20	
2-Hexanone	37.8		ug/L	50.00		76	70-130	6	20	
4-Chlorotoluene	11.2		ug/L	10.00		112	70-130	2	20	
4-Isopropyltoluene	10.9		ug/L	10.00		109	70-130	4	20	
4-Methyl-2-Pentanone	38.9		ug/L	50.00		78	70-130	6	20	
Acetone	33.9		ug/L	50.00		68	70-130	7	20	B-
Benzene	10.2		ug/L	10.00		102	70-130	3	20	
Bromobenzene	11.3		ug/L	10.00		113	70-130	2	20	
Bromochloromethane	11.1		ug/L	10.00		111	70-130	5	20	
Bromodichloromethane	8.8		ug/L	10.00		88	70-130	6	20	
Bromoform	8.8		ug/L	10.00		88	70-130	5	20	
Bromomethane	12.0		ug/L	10.00		120	70-130	7	20	
Carbon Disulfide	10.0		ug/L	10.00		100	70-130	5	20	
Carbon Tetrachloride	9.3		ug/L	10.00		93	70-130	7	20	
Chlorobenzene	11.5		ug/L	10.00		115	70-130	2	20	
Chloroethane	9.1		ug/L	10.00		91	70-130	13	20	
Chloroform	11.4		ug/L	10.00		114	70-130	4	20	
Chloromethane	9.2		ug/L	10.00		92	70-130	0.6	20	
cis-1,2-Dichloroethene	10.9		ug/L	10.00		109	70-130	4	20	
cis-1,3-Dichloropropene	8.6		ug/L	10.00		86	70-130	5	20	
Dibromochloromethane	7.4		ug/L	10.00		74	70-130	1	20	
Dibromomethane	10.3		ug/L	10.00		103	70-130	6	20	
Dichlorodifluoromethane	9.6		ug/L	10.00		96	70-130	5	20	
Diethyl Ether	8.8		ug/L	10.00		88	70-130	12	20	
Di-isopropyl ether	9.2		ug/L	10.00		92	70-130	1	20	
Ethyl tertiary-butyl ether	9.4		ug/L	10.00		94	70-130	10	20	
Ethylbenzene	10.2		ug/L	10.00		102	70-130	3	20	
Hexachlorobutadiene	10.4		ug/L	10.00		104	70-130	7	20	
Hexachloroethane	9.7		ug/L	10.00		97	70-130	3	20	
Isopropylbenzene	10.9		ug/L	10.00		109	70-130	0.3	20	
Methyl tert-Butyl Ether	9.4		ug/L	10.00		94	70-130	10	20	
Methylene Chloride	10.8		ug/L	10.00		108	70-130	9	20	
Naphthalene	9.8		ug/L	10.00		98	70-130	7	20	
n-Butylbenzene	10.7		ug/L	10.00		107	70-130	4	20	
n-Propylbenzene	11.2		ug/L	10.00		112	70-130	3	20	
sec-Butylbenzene	11.1		ug/L	10.00		111	70-130	0.3	20	
Styrene	10.0		ug/L	10.00		100	70-130	4	20	
tert-Butylbenzene	11.1		ug/L	10.00		111	70-130	2	20	
Tertiary-amyl methyl ether	8.9		ug/L	10.00		89	70-130	5	20	
Tetrachloroethene	8.2		ug/L	10.00		82	70-130	7	20	
Tetrahydrofuran	7.6		ug/L	10.00		76	70-130	4	20	
Toluene	10.4		ug/L	10.00		104	70-130	6	20	
trans-1,2-Dichloroethene	11.7		ug/L	10.00		117	70-130	2	20	
trans-1,3-Dichloropropene	7.7		ug/L	10.00		77	70-130	6	20	
Trichloroethene	10.7		ug/L	10.00		107	70-130	2	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1806489

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF82127 - 5030B

Trichlorofluoromethane	11.8		ug/L	10.00		118	70-130	2	20	
Vinyl Chloride	10.6		ug/L	10.00		106	70-130	2	20	
Xylene O	11.0		ug/L	10.00		110	70-130	2	20	
Xylene P,M	21.6		ug/L	20.00		108	70-130	5	20	
Xylenes (Total)	32.7		ug/L							
Surrogate: 1,2-Dichloroethane-d4	27.9		ug/L	25.00		112	70-130			
Surrogate: 4-Bromofluorobenzene	27.5		ug/L	25.00		110	70-130			
Surrogate: Dibromofluoromethane	29.8		ug/L	25.00		119	70-130			
Surrogate: Toluene-d8	27.8		ug/L	25.00		111	70-130			



CERTIFICATE OF ANALYSIS

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Notes and Definitions

U	Analyte included in the analysis, but not detected
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
B-	Blank Spike recovery is below lower control limit (B-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 1806489

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002
<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM

ESS Project ID: 1806489

Shipped/Delivered Via: ESS Courier

Date Received: 6/20/2018

Project Due Date: 6/27/2018

Days for Project: 5 Day

1. Air bill manifest present? ☐ No
Air No.: NA

6. Does COC match bottles? ☐ Yes

2. Were custody seals present? ☐ No

7. Is COC complete and correct? ☐ Yes

3. Is radiation count <100 CPM? ☐ Yes

8. Were samples received intact? ☐ Yes

4. Is a Cooler Present? ☐ Yes
Temp: 2.1 Iced with: Ice

9. Were labs informed about short holds & rushes? Yes / No / ☒ NA

5. Was COC signed and dated by client? ☐ Yes

10. Were any analyses received outside of hold time? Yes ☒ No

11. Any Subcontracting needed? Yes / ☒ No
ESS Sample IDs: _____
Analysis: _____
TAT: _____

12. Were VOAs received? ☒ Yes / No
a. Air bubbles in aqueous VOAs? Yes / ☒ No
b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? ☒ Yes / No
a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / ☒ No
a. Was there a need to contact the client? Yes / ☒ No
Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	238756	Yes	No	Yes	VOA Vial - HCl	HCl	
01	238757	Yes	No	Yes	VOA Vial - HCl	HCl	
01	238758	Yes	No	Yes	VOA Vial - HCl	HCl	
02	238753	Yes	No	Yes	VOA Vial - HCl	HCl	
02	238754	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review
Are barcode labels on correct containers? ☒ Yes / No

Completed By: [Signature] Date & Time: 6/20/18 1908
Reviewed By: [Signature] Date & Time: 06/20/18 1959
Delivered By: [Signature] Date & Time: 6/20/18 2021

CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (221813)
ESS Laboratory Work Order Number: 1809774

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.



Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 4:18 pm, Oct 05, 2018

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1809774

SAMPLE RECEIPT

The following samples were received on September 28, 2018 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1809774-01	Influent	Aqueous	8260B
1809774-02	Effluent	Aqueous	8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1809774

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1809774

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 04-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 09/26/18 17:45
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1809774
ESS Laboratory Sample ID: 1809774-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B	5	1	10/02/18 19:42	C8J0049	CJ80245
1,1,1-Trichloroethane	ND (1.0)		8260B	200	1	10/02/18 19:42	C8J0049	CJ80245
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B	2	1	10/02/18 19:42	C8J0049	CJ80245
1,1,2-Trichloroethane	ND (1.0)		8260B	5	1	10/02/18 19:42	C8J0049	CJ80245
1,1-Dichloroethane	ND (1.0)		8260B	70	1	10/02/18 19:42	C8J0049	CJ80245
1,1-Dichloroethene	ND (1.0)		8260B	7	1	10/02/18 19:42	C8J0049	CJ80245
1,1-Dichloropropene	ND (2.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
1,2,3-Trichloropropane	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
1,2,4-Trichlorobenzene	ND (1.0)		8260B	70	1	10/02/18 19:42	C8J0049	CJ80245
1,2,4-Trimethylbenzene	ND (1.0)		8260B	200	1	10/02/18 19:42	C8J0049	CJ80245
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
1,2-Dibromoethane	ND (1.0)		8260B	0.02	1	10/02/18 19:42	C8J0049	CJ80245
1,2-Dichlorobenzene	ND (1.0)		8260B	600	1	10/02/18 19:42	C8J0049	CJ80245
1,2-Dichloroethane	ND (1.0)		8260B	5	1	10/02/18 19:42	C8J0049	CJ80245
1,2-Dichloropropane	ND (1.0)		8260B	5	1	10/02/18 19:42	C8J0049	CJ80245
1,3,5-Trimethylbenzene	ND (1.0)		8260B	200	1	10/02/18 19:42	C8J0049	CJ80245
1,3-Dichlorobenzene	ND (1.0)		8260B	40	1	10/02/18 19:42	C8J0049	CJ80245
1,3-Dichloropropane	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
1,4-Dichlorobenzene	ND (1.0)		8260B	5	1	10/02/18 19:42	C8J0049	CJ80245
1,4-Dioxane - Screen	ND (500)		8260B	3	1	10/02/18 19:42	C8J0049	CJ80245
2,2-Dichloropropane	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
2-Butanone	ND (10.0)		8260B	4000	1	10/02/18 19:42	C8J0049	CJ80245
2-Chlorotoluene	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
2-Hexanone	ND (10.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
4-Chlorotoluene	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
4-Isopropyltoluene	ND (1.0)		8260B	200	1	10/02/18 19:42	C8J0049	CJ80245
4-Methyl-2-Pentanone	ND (10.0)		8260B	350	1	10/02/18 19:42	C8J0049	CJ80245
Acetone	ND (10.0)		8260B	6300	1	10/02/18 19:42	C8J0049	CJ80245
Benzene	ND (1.0)		8260B	5	1	10/02/18 19:42	C8J0049	CJ80245
Bromobenzene	ND (2.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
Bromochloromethane	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 09/26/18 17:45
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1809774
ESS Laboratory Sample ID: 1809774-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B	3	1	10/02/18 19:42	C8J0049	CJ80245
Bromoform	ND (1.0)		8260B	4	1	10/02/18 19:42	C8J0049	CJ80245
Bromomethane	ND (2.0)		8260B	10	1	10/02/18 19:42	C8J0049	CJ80245
Carbon Disulfide	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
Carbon Tetrachloride	ND (1.0)		8260B	5	1	10/02/18 19:42	C8J0049	CJ80245
Chlorobenzene	ND (1.0)		8260B	100	1	10/02/18 19:42	C8J0049	CJ80245
Chloroethane	ND (2.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
Chloroform	ND (1.0)		8260B	70	1	10/02/18 19:42	C8J0049	CJ80245
Chloromethane	ND (2.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
cis-1,2-Dichloroethene	4.2 (1.0)		8260B	70	1	10/02/18 19:42	C8J0049	CJ80245
cis-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	10/02/18 19:42	C8J0049	CJ80245
Dibromochloromethane	ND (1.0)		8260B	2	1	10/02/18 19:42	C8J0049	CJ80245
Dibromomethane	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
Dichlorodifluoromethane	ND (2.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
Diethyl Ether	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
Di-isopropyl ether	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
Ethylbenzene	ND (1.0)		8260B	700	1	10/02/18 19:42	C8J0049	CJ80245
Hexachlorobutadiene	ND (0.6)		8260B	0.6	1	10/02/18 19:42	C8J0049	CJ80245
Hexachloroethane	ND (1.0)		8260B	8	1	10/02/18 19:42	C8J0049	CJ80245
Isopropylbenzene	ND (1.0)		8260B	200	1	10/02/18 19:42	C8J0049	CJ80245
Methyl tert-Butyl Ether	ND (1.0)		8260B	70	1	10/02/18 19:42	C8J0049	CJ80245
Methylene Chloride	ND (2.0)		8260B	5	1	10/02/18 19:42	C8J0049	CJ80245
Naphthalene	ND (1.0)		8260B	140	1	10/02/18 19:42	C8J0049	CJ80245
n-Butylbenzene	ND (1.0)		8260B	200	1	10/02/18 19:42	C8J0049	CJ80245
n-Propylbenzene	ND (1.0)		8260B	200	1	10/02/18 19:42	C8J0049	CJ80245
sec-Butylbenzene	ND (1.0)		8260B	200	1	10/02/18 19:42	C8J0049	CJ80245
Styrene	ND (1.0)		8260B	100	1	10/02/18 19:42	C8J0049	CJ80245
tert-Butylbenzene	ND (1.0)		8260B	200	1	10/02/18 19:42	C8J0049	CJ80245
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
Tetrachloroethene	ND (1.0)		8260B	5	1	10/02/18 19:42	C8J0049	CJ80245
Tetrahydrofuran	ND (5.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 09/26/18 17:45
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1809774
ESS Laboratory Sample ID: 1809774-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B	1000	1	10/02/18 19:42	C8J0049	CJ80245
trans-1,2-Dichloroethene	ND (1.0)		8260B	100	1	10/02/18 19:42	C8J0049	CJ80245
trans-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	10/02/18 19:42	C8J0049	CJ80245
Trichloroethene	12.5 (1.0)		8260B	5	1	10/02/18 19:42	C8J0049	CJ80245
Trichlorofluoromethane	ND (1.0)		8260B		1	10/02/18 19:42	C8J0049	CJ80245
Vinyl Chloride	ND (1.0)		8260B	2	1	10/02/18 19:42	C8J0049	CJ80245
Xylene O	ND (1.0)		8260B	10000	1	10/02/18 19:42	C8J0049	CJ80245
Xylene P,M	ND (2.0)		8260B	10000	1	10/02/18 19:42	C8J0049	CJ80245
Xylenes (Total)	ND (2.0)		8260B		1	10/02/18 19:42		[CALC]

	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
Surrogate: 1,2-Dichloroethane-d4	105 %		70-130
Surrogate: 4-Bromofluorobenzene	95 %		70-130
Surrogate: Dibromofluoromethane	104 %		70-130
Surrogate: Toluene-d8	103 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 09/26/18 17:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1809774
ESS Laboratory Sample ID: 1809774-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B	5	1	10/02/18 17:31	C8J0049	CJ80245
1,1,1-Trichloroethane	ND (1.0)		8260B	200	1	10/02/18 17:31	C8J0049	CJ80245
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B	2	1	10/02/18 17:31	C8J0049	CJ80245
1,1,2-Trichloroethane	ND (1.0)		8260B	5	1	10/02/18 17:31	C8J0049	CJ80245
1,1-Dichloroethane	ND (1.0)		8260B	70	1	10/02/18 17:31	C8J0049	CJ80245
1,1-Dichloroethene	ND (1.0)		8260B	7	1	10/02/18 17:31	C8J0049	CJ80245
1,1-Dichloropropene	ND (2.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
1,2,3-Trichloropropane	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
1,2,4-Trichlorobenzene	ND (1.0)		8260B	70	1	10/02/18 17:31	C8J0049	CJ80245
1,2,4-Trimethylbenzene	ND (1.0)		8260B	200	1	10/02/18 17:31	C8J0049	CJ80245
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
1,2-Dibromoethane	ND (1.0)		8260B	0.02	1	10/02/18 17:31	C8J0049	CJ80245
1,2-Dichlorobenzene	ND (1.0)		8260B	600	1	10/02/18 17:31	C8J0049	CJ80245
1,2-Dichloroethane	ND (1.0)		8260B	5	1	10/02/18 17:31	C8J0049	CJ80245
1,2-Dichloropropane	ND (1.0)		8260B	5	1	10/02/18 17:31	C8J0049	CJ80245
1,3,5-Trimethylbenzene	ND (1.0)		8260B	200	1	10/02/18 17:31	C8J0049	CJ80245
1,3-Dichlorobenzene	ND (1.0)		8260B	40	1	10/02/18 17:31	C8J0049	CJ80245
1,3-Dichloropropane	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
1,4-Dichlorobenzene	ND (1.0)		8260B	5	1	10/02/18 17:31	C8J0049	CJ80245
1,4-Dioxane - Screen	ND (500)		8260B	3	1	10/02/18 17:31	C8J0049	CJ80245
2,2-Dichloropropane	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
2-Butanone	ND (10.0)		8260B	4000	1	10/02/18 17:31	C8J0049	CJ80245
2-Chlorotoluene	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
2-Hexanone	ND (10.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
4-Chlorotoluene	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
4-Isopropyltoluene	ND (1.0)		8260B	200	1	10/02/18 17:31	C8J0049	CJ80245
4-Methyl-2-Pentanone	ND (10.0)		8260B	350	1	10/02/18 17:31	C8J0049	CJ80245
Acetone	ND (10.0)		8260B	6300	1	10/02/18 17:31	C8J0049	CJ80245
Benzene	ND (1.0)		8260B	5	1	10/02/18 17:31	C8J0049	CJ80245
Bromobenzene	ND (2.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
Bromochloromethane	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 09/26/18 17:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1809774
ESS Laboratory Sample ID: 1809774-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B	3	1	10/02/18 17:31	C8J0049	CJ80245
Bromoform	ND (1.0)		8260B	4	1	10/02/18 17:31	C8J0049	CJ80245
Bromomethane	ND (2.0)		8260B	10	1	10/02/18 17:31	C8J0049	CJ80245
Carbon Disulfide	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
Carbon Tetrachloride	ND (1.0)		8260B	5	1	10/02/18 17:31	C8J0049	CJ80245
Chlorobenzene	ND (1.0)		8260B	100	1	10/02/18 17:31	C8J0049	CJ80245
Chloroethane	ND (2.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
Chloroform	ND (1.0)		8260B	70	1	10/02/18 17:31	C8J0049	CJ80245
Chloromethane	ND (2.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
cis-1,2-Dichloroethene	ND (1.0)		8260B	70	1	10/02/18 17:31	C8J0049	CJ80245
cis-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	10/02/18 17:31	C8J0049	CJ80245
Dibromochloromethane	ND (1.0)		8260B	2	1	10/02/18 17:31	C8J0049	CJ80245
Dibromomethane	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
Dichlorodifluoromethane	ND (2.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
Diethyl Ether	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
Di-isopropyl ether	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
Ethylbenzene	ND (1.0)		8260B	700	1	10/02/18 17:31	C8J0049	CJ80245
Hexachlorobutadiene	ND (0.6)		8260B	0.6	1	10/02/18 17:31	C8J0049	CJ80245
Hexachloroethane	ND (1.0)		8260B	8	1	10/02/18 17:31	C8J0049	CJ80245
Isopropylbenzene	ND (1.0)		8260B	200	1	10/02/18 17:31	C8J0049	CJ80245
Methyl tert-Butyl Ether	ND (1.0)		8260B	70	1	10/02/18 17:31	C8J0049	CJ80245
Methylene Chloride	ND (2.0)		8260B	5	1	10/02/18 17:31	C8J0049	CJ80245
Naphthalene	ND (1.0)		8260B	140	1	10/02/18 17:31	C8J0049	CJ80245
n-Butylbenzene	ND (1.0)		8260B	200	1	10/02/18 17:31	C8J0049	CJ80245
n-Propylbenzene	ND (1.0)		8260B	200	1	10/02/18 17:31	C8J0049	CJ80245
sec-Butylbenzene	ND (1.0)		8260B	200	1	10/02/18 17:31	C8J0049	CJ80245
Styrene	ND (1.0)		8260B	100	1	10/02/18 17:31	C8J0049	CJ80245
tert-Butylbenzene	ND (1.0)		8260B	200	1	10/02/18 17:31	C8J0049	CJ80245
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
Tetrachloroethene	ND (1.0)		8260B	5	1	10/02/18 17:31	C8J0049	CJ80245
Tetrahydrofuran	ND (5.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 09/26/18 17:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1809774
ESS Laboratory Sample ID: 1809774-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B	1000	1	10/02/18 17:31	C8J0049	CJ80245
trans-1,2-Dichloroethene	ND (1.0)		8260B	100	1	10/02/18 17:31	C8J0049	CJ80245
trans-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	10/02/18 17:31	C8J0049	CJ80245
Trichloroethene	ND (1.0)		8260B	5	1	10/02/18 17:31	C8J0049	CJ80245
Trichlorofluoromethane	ND (1.0)		8260B		1	10/02/18 17:31	C8J0049	CJ80245
Vinyl Chloride	ND (1.0)		8260B	2	1	10/02/18 17:31	C8J0049	CJ80245
Xylene O	ND (1.0)		8260B	10000	1	10/02/18 17:31	C8J0049	CJ80245
Xylene P,M	ND (2.0)		8260B	10000	1	10/02/18 17:31	C8J0049	CJ80245
Xylenes (Total)	ND (2.0)		8260B		1	10/02/18 17:31		[CALC]

	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
Surrogate: 1,2-Dichloroethane-d4	107 %		70-130
Surrogate: 4-Bromofluorobenzene	91 %		70-130
Surrogate: Dibromofluoromethane	106 %		70-130
Surrogate: Toluene-d8	102 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1809774

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CJ80245 - 5030B

Blank

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloropropene	ND	2.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,4-Dioxane - Screen	ND	500	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
2-Butanone	ND	10.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
2-Hexanone	ND	10.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
4-Isopropyltoluene	ND	1.0	ug/L
4-Methyl-2-Pentanone	ND	10.0	ug/L
Acetone	ND	10.0	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	2.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	0.6	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon Disulfide	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	0.4	ug/L
Dibromochloromethane	ND	1.0	ug/L



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1809774

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CJ80245 - 50308

Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Hexachloroethane	ND	1.0	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Xylenes (Total)	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	25.1		ug/L	25.00		100	70-130			
Surrogate: 4-Bromofluorobenzene	22.8		ug/L	25.00		91	70-130			
Surrogate: Dibromofluoromethane	25.2		ug/L	25.00		101	70-130			
Surrogate: Toluene-d8	25.3		ug/L	25.00		101	70-130			

LCS

1,1,1,2-Tetrachloroethane	9.3		ug/L	10.00		93	70-130			
1,1,1-Trichloroethane	9.7		ug/L	10.00		97	70-130			
1,1,2,2-Tetrachloroethane	11.0		ug/L	10.00		110	70-130			
1,1,2-Trichloroethane	9.3		ug/L	10.00		93	70-130			
1,1-Dichloroethane	9.6		ug/L	10.00		96	70-130			
1,1-Dichloroethene	10.0		ug/L	10.00		100	70-130			
1,1-Dichloropropene	9.9		ug/L	10.00		99	70-130			
1,2,3-Trichlorobenzene	10.5		ug/L	10.00		105	70-130			
1,2,3-Trichloropropane	8.8		ug/L	10.00		88	70-130			
1,2,4-Trichlorobenzene	10.1		ug/L	10.00		101	70-130			
1,2,4-Trimethylbenzene	9.2		ug/L	10.00		92	70-130			



CERTIFICATE OF ANALYSIS

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ESS Laboratory Work Order: 1809774

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CJ80245 - 50308

1,2-Dibromo-3-Chloropropane	9.2		ug/L	10.00		92	70-130			
1,2-Dibromoethane	9.8		ug/L	10.00		98	70-130			
1,2-Dichlorobenzene	9.9		ug/L	10.00		99	70-130			
1,2-Dichloroethane	9.7		ug/L	10.00		97	70-130			
1,2-Dichloropropane	9.3		ug/L	10.00		93	70-130			
1,3,5-Trimethylbenzene	10.0		ug/L	10.00		100	70-130			
1,3-Dichlorobenzene	10.0		ug/L	10.00		100	70-130			
1,3-Dichloropropane	9.9		ug/L	10.00		99	70-130			
1,4-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,4-Dioxane - Screen	203		ug/L	200.0		102	0-332			
2,2-Dichloropropane	9.9		ug/L	10.00		99	70-130			
2-Butanone	45.4		ug/L	50.00		91	70-130			
2-Chlorotoluene	9.9		ug/L	10.00		99	70-130			
2-Hexanone	50.6		ug/L	50.00		101	70-130			
4-Chlorotoluene	10.2		ug/L	10.00		102	70-130			
4-Isopropyltoluene	10.2		ug/L	10.00		102	70-130			
4-Methyl-2-Pentanone	51.0		ug/L	50.00		102	70-130			
Acetone	45.6		ug/L	50.00		91	70-130			
Benzene	9.7		ug/L	10.00		97	70-130			
Bromobenzene	9.6		ug/L	10.00		96	70-130			
Bromochloromethane	9.8		ug/L	10.00		98	70-130			
Bromodichloromethane	9.0		ug/L	10.00		90	70-130			
Bromoform	9.8		ug/L	10.00		98	70-130			
Bromomethane	11.0		ug/L	10.00		110	70-130			
Carbon Disulfide	10.0		ug/L	10.00		100	70-130			
Carbon Tetrachloride	9.5		ug/L	10.00		95	70-130			
Chlorobenzene	9.9		ug/L	10.00		99	70-130			
Chloroethane	9.2		ug/L	10.00		92	70-130			
Chloroform	9.8		ug/L	10.00		98	70-130			
Chloromethane	10.5		ug/L	10.00		105	70-130			
cis-1,2-Dichloroethene	10.0		ug/L	10.00		100	70-130			
cis-1,3-Dichloropropene	9.3		ug/L	10.00		93	70-130			
Dibromochloromethane	9.2		ug/L	10.00		92	70-130			
Dibromomethane	9.6		ug/L	10.00		96	70-130			
Dichlorodifluoromethane	9.3		ug/L	10.00		93	70-130			
Diethyl Ether	10.3		ug/L	10.00		103	70-130			
Di-isopropyl ether	9.6		ug/L	10.00		96	70-130			
Ethyl tertiary-butyl ether	9.6		ug/L	10.00		96	70-130			
Ethylbenzene	9.8		ug/L	10.00		98	70-130			
Hexachlorobutadiene	11.5		ug/L	10.00		115	70-130			
Hexachloroethane	9.6		ug/L	10.00		96	70-130			
Isopropylbenzene	10.0		ug/L	10.00		100	70-130			
Methyl tert-Butyl Ether	10.0		ug/L	10.00		100	70-130			
Methylene Chloride	8.8		ug/L	10.00		88	70-130			
Naphthalene	9.4		ug/L	10.00		94	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1809774

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CJ80245 - 50308

n-Butylbenzene	10.3		ug/L	10.00		103	70-130			
n-Propylbenzene	10.4		ug/L	10.00		104	70-130			
sec-Butylbenzene	9.4		ug/L	10.00		94	70-130			
Styrene	8.6		ug/L	10.00		86	70-130			
tert-Butylbenzene	10.0		ug/L	10.00		100	70-130			
Tertiary-amyl methyl ether	9.7		ug/L	10.00		97	70-130			
Tetrachloroethene	8.2		ug/L	10.00		82	70-130			
Tetrahydrofuran	11.6		ug/L	10.00		116	70-130			
Toluene	9.7		ug/L	10.00		97	70-130			
trans-1,2-Dichloroethene	9.8		ug/L	10.00		98	70-130			
trans-1,3-Dichloropropene	8.4		ug/L	10.00		84	70-130			
Trichloroethene	10.1		ug/L	10.00		101	70-130			
Trichlorofluoromethane	9.9		ug/L	10.00		99	70-130			
Vinyl Chloride	9.8		ug/L	10.00		98	70-130			
Xylene O	10.5		ug/L	10.00		105	70-130			
Xylene P,M	20.8		ug/L	20.00		104	70-130			
Xylenes (Total)	31.3		ug/L							
Surrogate: 1,2-Dichloroethane-d4	23.3		ug/L	25.00		93	70-130			
Surrogate: 4-Bromofluorobenzene	25.0		ug/L	25.00		100	70-130			
Surrogate: Dibromofluoromethane	23.5		ug/L	25.00		94	70-130			
Surrogate: Toluene-d8	24.5		ug/L	25.00		98	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	9.9		ug/L	10.00		99	70-130	6	20	
1,1,1-Trichloroethane	10.6		ug/L	10.00		106	70-130	9	20	
1,1,2,2-Tetrachloroethane	11.6		ug/L	10.00		116	70-130	6	20	
1,1,2-Trichloroethane	10.1		ug/L	10.00		101	70-130	8	20	
1,1-Dichloroethane	10.2		ug/L	10.00		102	70-130	6	20	
1,1-Dichloroethene	10.4		ug/L	10.00		104	70-130	4	20	
1,1-Dichloropropene	10.9		ug/L	10.00		109	70-130	9	20	
1,2,3-Trichlorobenzene	11.4		ug/L	10.00		114	70-130	9	20	
1,2,3-Trichloropropane	9.5		ug/L	10.00		95	70-130	8	20	
1,2,4-Trichlorobenzene	10.6		ug/L	10.00		106	70-130	5	20	
1,2,4-Trimethylbenzene	9.8		ug/L	10.00		98	70-130	6	20	
1,2-Dibromo-3-Chloropropane	9.5		ug/L	10.00		95	70-130	4	20	
1,2-Dibromoethane	10.2		ug/L	10.00		102	70-130	4	20	
1,2-Dichlorobenzene	11.0		ug/L	10.00		110	70-130	10	20	
1,2-Dichloroethane	9.9		ug/L	10.00		99	70-130	1	20	
1,2-Dichloropropane	10.2		ug/L	10.00		102	70-130	9	20	
1,3,5-Trimethylbenzene	11.0		ug/L	10.00		110	70-130	10	20	
1,3-Dichlorobenzene	11.3		ug/L	10.00		113	70-130	13	20	
1,3-Dichloropropane	10.6		ug/L	10.00		106	70-130	7	20	
1,4-Dichlorobenzene	11.1		ug/L	10.00		111	70-130	6	20	
1,4-Dioxane - Screen	225		ug/L	200.0		112	0-332	10	200	
2,2-Dichloropropane	10.7		ug/L	10.00		107	70-130	8	20	
2-Butanone	49.6		ug/L	50.00		99	70-130	9	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1809774

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CJ80245 - 5030B

2-Chlorotoluene	11.1		ug/L	10.00		111	70-130	12	20	
2-Hexanone	53.5		ug/L	50.00		107	70-130	6	20	
4-Chlorotoluene	10.8		ug/L	10.00		108	70-130	5	20	
4-Isopropyltoluene	11.4		ug/L	10.00		114	70-130	11	20	
4-Methyl-2-Pentanone	52.4		ug/L	50.00		105	70-130	3	20	
Acetone	48.5		ug/L	50.00		97	70-130	6	20	
Benzene	10.4		ug/L	10.00		104	70-130	7	20	
Bromobenzene	10.9		ug/L	10.00		109	70-130	12	20	
Bromochloromethane	10.1		ug/L	10.00		101	70-130	2	20	
Bromodichloromethane	9.4		ug/L	10.00		94	70-130	3	20	
Bromoform	10.2		ug/L	10.00		102	70-130	5	20	
Bromomethane	12.1		ug/L	10.00		121	70-130	10	20	
Carbon Disulfide	11.1		ug/L	10.00		111	70-130	10	20	
Carbon Tetrachloride	10.4		ug/L	10.00		104	70-130	9	20	
Chlorobenzene	10.7		ug/L	10.00		107	70-130	8	20	
Chloroethane	10.2		ug/L	10.00		102	70-130	10	20	
Chloroform	10.5		ug/L	10.00		105	70-130	7	20	
Chloromethane	11.0		ug/L	10.00		110	70-130	5	20	
cis-1,2-Dichloroethene	10.9		ug/L	10.00		109	70-130	9	20	
cis-1,3-Dichloropropene	10.6		ug/L	10.00		106	70-130	13	20	
Dibromochloromethane	9.7		ug/L	10.00		97	70-130	5	20	
Dibromomethane	10.4		ug/L	10.00		104	70-130	8	20	
Dichlorodifluoromethane	10.1		ug/L	10.00		101	70-130	9	20	
Diethyl Ether	10.8		ug/L	10.00		108	70-130	5	20	
Di-isopropyl ether	10.5		ug/L	10.00		105	70-130	10	20	
Ethyl tertiary-butyl ether	10.1		ug/L	10.00		101	70-130	6	20	
Ethylbenzene	10.7		ug/L	10.00		107	70-130	8	20	
Hexachlorobutadiene	12.6		ug/L	10.00		126	70-130	9	20	
Hexachloroethane	10.8		ug/L	10.00		108	70-130	11	20	
Isopropylbenzene	11.2		ug/L	10.00		112	70-130	10	20	
Methyl tert-Butyl Ether	10.7		ug/L	10.00		107	70-130	7	20	
Methylene Chloride	9.7		ug/L	10.00		97	70-130	9	20	
Naphthalene	10.0		ug/L	10.00		100	70-130	6	20	
n-Butylbenzene	11.1		ug/L	10.00		111	70-130	7	20	
n-Propylbenzene	11.0		ug/L	10.00		110	70-130	6	20	
sec-Butylbenzene	10.2		ug/L	10.00		102	70-130	8	20	
Styrene	9.2		ug/L	10.00		92	70-130	7	20	
tert-Butylbenzene	11.3		ug/L	10.00		113	70-130	12	20	
Tertiary-amyl methyl ether	10.2		ug/L	10.00		102	70-130	6	20	
Tetrachloroethene	8.8		ug/L	10.00		88	70-130	8	20	
Tetrahydrofuran	11.2		ug/L	10.00		112	70-130	3	20	
Toluene	10.4		ug/L	10.00		104	70-130	7	20	
trans-1,2-Dichloroethene	10.6		ug/L	10.00		106	70-130	8	20	
trans-1,3-Dichloropropene	9.1		ug/L	10.00		91	70-130	8	20	
Trichloroethene	10.8		ug/L	10.00		108	70-130	7	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1809774

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CJ80245 - 50308

Trichlorofluoromethane	10.6		ug/L	10.00		106	70-130	7	20	
Vinyl Chloride	10.4		ug/L	10.00		104	70-130	6	20	
Xylene O	11.2		ug/L	10.00		112	70-130	7	20	
Xylene P,M	23.1		ug/L	20.00		116	70-130	10	20	
Xylenes (Total)	34.3		ug/L							
Surrogate: 1,2-Dichloroethane-d4	23.5		ug/L	25.00		94	70-130			
Surrogate: 4-Bromofluorobenzene	25.8		ug/L	25.00		103	70-130			
Surrogate: Dibromofluoromethane	24.1		ug/L	25.00		96	70-130			
Surrogate: Toluene-d8	24.8		ug/L	25.00		99	70-130			



CERTIFICATE OF ANALYSIS

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Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1809774

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002
<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 1809774
 Date Received: 9/28/2018
 Project Due Date: 10/5/2018
 Days for Project: 5 Day

1. Air bill manifest present? ☒ No
 Air No.: NA
2. Were custody seals present? ☒ No
3. Is radiation count <100 CPM? ☒ Yes
4. Is a Cooler Present? ☒ Yes
 Temp: 2.9 Iced with: Ice
5. Was COC signed and dated by client? ☒ Yes

6. Does COC match bottles? ☒ Yes
7. Is COC complete and correct? ☒ Yes
8. Were samples received intact? ☒ Yes
9. Were labs informed about short holds & rushes? Yes / No / NA
10. Were any analyses received outside of hold time? Yes ☒ No

11. Any Subcontracting needed? Yes ☒ No
 ESS Sample IDs: _____
 Analysis: _____
 TAT: _____

12. Were VOAs received? Yes / No ☒ No
 a. Air bubbles in aqueous VOAs? Yes / No / NA
 b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? ☒ Yes ☐ No
 a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
 b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes ☒ No
 a. Was there a need to contact the client? Yes / No
 Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	272143	Yes	No	Yes	VOA Vial - HCl	HCl	
01	272144	Yes	No	Yes	VOA Vial - HCl	HCl	
01	272145	Yes	No	Yes	VOA Vial - HCl	HCl	
02	272140	Yes	No	Yes	VOA Vial - HCl	HCl	
02	272141	Yes	No	Yes	VOA Vial - HCl	HCl	
02	272142	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review

Are barcode labels on correct containers?
 Are all necessary stickers attached?

Yes / No
 Yes / No

Completed By: [Signature] Date & Time: 9/28/18 1806
 Reviewed By: [Signature] Date & Time: 9/28/18 1808
 Delivered By: [Signature] Date & Time: 9/28/18 1808

CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (221813)
ESS Laboratory Work Order Number: 1812077

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.



Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 2:48 pm, Dec 11, 2018

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812077

SAMPLE RECEIPT

The following samples were received on December 04, 2018 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1812077-01	Influent	Aqueous	8260B
1812077-02	Effluent	Aqueous	8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812077

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812077

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 04-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 12/04/18 07:45
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812077
ESS Laboratory Sample ID: 1812077-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B	5	1	12/05/18 16:29	C8L0088	CL80529
1,1,1-Trichloroethane	ND (1.0)		8260B	200	1	12/05/18 16:29	C8L0088	CL80529
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B	2	1	12/05/18 16:29	C8L0088	CL80529
1,1,2-Trichloroethane	ND (1.0)		8260B	5	1	12/05/18 16:29	C8L0088	CL80529
1,1-Dichloroethane	ND (1.0)		8260B	70	1	12/05/18 16:29	C8L0088	CL80529
1,1-Dichloroethene	ND (1.0)		8260B	7	1	12/05/18 16:29	C8L0088	CL80529
1,1-Dichloropropene	ND (2.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
1,2,3-Trichloropropane	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
1,2,4-Trichlorobenzene	ND (1.0)		8260B	70	1	12/05/18 16:29	C8L0088	CL80529
1,2,4-Trimethylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:29	C8L0088	CL80529
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
1,2-Dibromoethane	ND (1.0)		8260B	0.02	1	12/05/18 16:29	C8L0088	CL80529
1,2-Dichlorobenzene	ND (1.0)		8260B	600	1	12/05/18 16:29	C8L0088	CL80529
1,2-Dichloroethane	ND (1.0)		8260B	5	1	12/05/18 16:29	C8L0088	CL80529
1,2-Dichloropropane	ND (1.0)		8260B	5	1	12/05/18 16:29	C8L0088	CL80529
1,3,5-Trimethylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:29	C8L0088	CL80529
1,3-Dichlorobenzene	ND (1.0)		8260B	40	1	12/05/18 16:29	C8L0088	CL80529
1,3-Dichloropropane	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
1,4-Dichlorobenzene	ND (1.0)		8260B	5	1	12/05/18 16:29	C8L0088	CL80529
1,4-Dioxane - Screen	ND (500)		8260B	3	1	12/05/18 16:29	C8L0088	CL80529
2,2-Dichloropropane	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
2-Butanone	ND (10.0)		8260B	4000	1	12/05/18 16:29	C8L0088	CL80529
2-Chlorotoluene	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
2-Hexanone	ND (10.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
4-Chlorotoluene	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
4-Isopropyltoluene	ND (1.0)		8260B	200	1	12/05/18 16:29	C8L0088	CL80529
4-Methyl-2-Pentanone	ND (10.0)		8260B	350	1	12/05/18 16:29	C8L0088	CL80529
Acetone	ND (10.0)		8260B	6300	1	12/05/18 16:29	C8L0088	CL80529
Benzene	ND (1.0)		8260B	5	1	12/05/18 16:29	C8L0088	CL80529
Bromobenzene	ND (2.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
Bromochloromethane	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 12/04/18 07:45
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812077
ESS Laboratory Sample ID: 1812077-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B	3	1	12/05/18 16:29	C8L0088	CL80529
Bromoform	ND (1.0)		8260B	4	1	12/05/18 16:29	C8L0088	CL80529
Bromomethane	ND (2.0)		8260B	10	1	12/05/18 16:29	C8L0088	CL80529
Carbon Disulfide	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
Carbon Tetrachloride	ND (1.0)		8260B	5	1	12/05/18 16:29	C8L0088	CL80529
Chlorobenzene	ND (1.0)		8260B	100	1	12/05/18 16:29	C8L0088	CL80529
Chloroethane	ND (2.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
Chloroform	ND (1.0)		8260B	70	1	12/05/18 16:29	C8L0088	CL80529
Chloromethane	ND (2.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
cis-1,2-Dichloroethene	2.2 (1.0)		8260B	70	1	12/05/18 16:29	C8L0088	CL80529
cis-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	12/05/18 16:29	C8L0088	CL80529
Dibromochloromethane	ND (1.0)		8260B	2	1	12/05/18 16:29	C8L0088	CL80529
Dibromomethane	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
Dichlorodifluoromethane	ND (2.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
Diethyl Ether	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
Di-isopropyl ether	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
Ethylbenzene	ND (1.0)		8260B	700	1	12/05/18 16:29	C8L0088	CL80529
Hexachlorobutadiene	ND (0.6)		8260B	0.6	1	12/05/18 16:29	C8L0088	CL80529
Hexachloroethane	ND (1.0)		8260B	8	1	12/05/18 16:29	C8L0088	CL80529
Isopropylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:29	C8L0088	CL80529
Methyl tert-Butyl Ether	ND (1.0)		8260B	70	1	12/05/18 16:29	C8L0088	CL80529
Methylene Chloride	ND (2.0)		8260B	5	1	12/05/18 16:29	C8L0088	CL80529
Naphthalene	ND (1.0)		8260B	140	1	12/05/18 16:29	C8L0088	CL80529
n-Butylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:29	C8L0088	CL80529
n-Propylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:29	C8L0088	CL80529
sec-Butylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:29	C8L0088	CL80529
Styrene	ND (1.0)		8260B	100	1	12/05/18 16:29	C8L0088	CL80529
tert-Butylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:29	C8L0088	CL80529
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
Tetrachloroethene	ND (1.0)		8260B	5	1	12/05/18 16:29	C8L0088	CL80529
Tetrahydrofuran	ND (5.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 12/04/18 07:45
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812077
ESS Laboratory Sample ID: 1812077-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B	1000	1	12/05/18 16:29	C8L0088	CL80529
trans-1,2-Dichloroethene	ND (1.0)		8260B	100	1	12/05/18 16:29	C8L0088	CL80529
trans-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	12/05/18 16:29	C8L0088	CL80529
Trichloroethene	11.2 (1.0)		8260B	5	1	12/05/18 16:29	C8L0088	CL80529
Trichlorofluoromethane	ND (1.0)		8260B		1	12/05/18 16:29	C8L0088	CL80529
Vinyl Chloride	ND (1.0)		8260B	2	1	12/05/18 16:29	C8L0088	CL80529
Xylene O	ND (1.0)		8260B	10000	1	12/05/18 16:29	C8L0088	CL80529
Xylene P,M	ND (2.0)		8260B	10000	1	12/05/18 16:29	C8L0088	CL80529
Xylenes (Total)	ND (2.0)		8260B		1	12/05/18 16:29		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	103 %		70-130
Surrogate: 4-Bromofluorobenzene	89 %		70-130
Surrogate: Dibromofluoromethane	97 %		70-130
Surrogate: Toluene-d8	98 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 12/04/18 07:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812077
ESS Laboratory Sample ID: 1812077-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B	5	1	12/05/18 16:03	C8L0088	CL80529
1,1,1-Trichloroethane	ND (1.0)		8260B	200	1	12/05/18 16:03	C8L0088	CL80529
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B	2	1	12/05/18 16:03	C8L0088	CL80529
1,1,2-Trichloroethane	ND (1.0)		8260B	5	1	12/05/18 16:03	C8L0088	CL80529
1,1-Dichloroethane	ND (1.0)		8260B	70	1	12/05/18 16:03	C8L0088	CL80529
1,1-Dichloroethene	ND (1.0)		8260B	7	1	12/05/18 16:03	C8L0088	CL80529
1,1-Dichloropropene	ND (2.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
1,2,3-Trichloropropane	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
1,2,4-Trichlorobenzene	ND (1.0)		8260B	70	1	12/05/18 16:03	C8L0088	CL80529
1,2,4-Trimethylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:03	C8L0088	CL80529
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
1,2-Dibromoethane	ND (1.0)		8260B	0.02	1	12/05/18 16:03	C8L0088	CL80529
1,2-Dichlorobenzene	ND (1.0)		8260B	600	1	12/05/18 16:03	C8L0088	CL80529
1,2-Dichloroethane	ND (1.0)		8260B	5	1	12/05/18 16:03	C8L0088	CL80529
1,2-Dichloropropane	ND (1.0)		8260B	5	1	12/05/18 16:03	C8L0088	CL80529
1,3,5-Trimethylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:03	C8L0088	CL80529
1,3-Dichlorobenzene	ND (1.0)		8260B	40	1	12/05/18 16:03	C8L0088	CL80529
1,3-Dichloropropane	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
1,4-Dichlorobenzene	ND (1.0)		8260B	5	1	12/05/18 16:03	C8L0088	CL80529
1,4-Dioxane - Screen	ND (500)		8260B	3	1	12/05/18 16:03	C8L0088	CL80529
2,2-Dichloropropane	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
2-Butanone	ND (10.0)		8260B	4000	1	12/05/18 16:03	C8L0088	CL80529
2-Chlorotoluene	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
2-Hexanone	ND (10.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
4-Chlorotoluene	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
4-Isopropyltoluene	ND (1.0)		8260B	200	1	12/05/18 16:03	C8L0088	CL80529
4-Methyl-2-Pentanone	ND (10.0)		8260B	350	1	12/05/18 16:03	C8L0088	CL80529
Acetone	ND (10.0)		8260B	6300	1	12/05/18 16:03	C8L0088	CL80529
Benzene	ND (1.0)		8260B	5	1	12/05/18 16:03	C8L0088	CL80529
Bromobenzene	ND (2.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
Bromochloromethane	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 12/04/18 07:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812077
ESS Laboratory Sample ID: 1812077-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B	3	1	12/05/18 16:03	C8L0088	CL80529
Bromoform	ND (1.0)		8260B	4	1	12/05/18 16:03	C8L0088	CL80529
Bromomethane	ND (2.0)		8260B	10	1	12/05/18 16:03	C8L0088	CL80529
Carbon Disulfide	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
Carbon Tetrachloride	ND (1.0)		8260B	5	1	12/05/18 16:03	C8L0088	CL80529
Chlorobenzene	ND (1.0)		8260B	100	1	12/05/18 16:03	C8L0088	CL80529
Chloroethane	ND (2.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
Chloroform	ND (1.0)		8260B	70	1	12/05/18 16:03	C8L0088	CL80529
Chloromethane	ND (2.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
cis-1,2-Dichloroethene	ND (1.0)		8260B	70	1	12/05/18 16:03	C8L0088	CL80529
cis-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	12/05/18 16:03	C8L0088	CL80529
Dibromochloromethane	ND (1.0)		8260B	2	1	12/05/18 16:03	C8L0088	CL80529
Dibromomethane	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
Dichlorodifluoromethane	ND (2.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
Diethyl Ether	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
Di-isopropyl ether	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
Ethylbenzene	ND (1.0)		8260B	700	1	12/05/18 16:03	C8L0088	CL80529
Hexachlorobutadiene	ND (0.6)		8260B	0.6	1	12/05/18 16:03	C8L0088	CL80529
Hexachloroethane	ND (1.0)		8260B	8	1	12/05/18 16:03	C8L0088	CL80529
Isopropylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:03	C8L0088	CL80529
Methyl tert-Butyl Ether	ND (1.0)		8260B	70	1	12/05/18 16:03	C8L0088	CL80529
Methylene Chloride	ND (2.0)		8260B	5	1	12/05/18 16:03	C8L0088	CL80529
Naphthalene	ND (1.0)		8260B	140	1	12/05/18 16:03	C8L0088	CL80529
n-Butylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:03	C8L0088	CL80529
n-Propylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:03	C8L0088	CL80529
sec-Butylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:03	C8L0088	CL80529
Styrene	ND (1.0)		8260B	100	1	12/05/18 16:03	C8L0088	CL80529
tert-Butylbenzene	ND (1.0)		8260B	200	1	12/05/18 16:03	C8L0088	CL80529
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
Tetrachloroethene	ND (1.0)		8260B	5	1	12/05/18 16:03	C8L0088	CL80529
Tetrahydrofuran	ND (5.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 12/04/18 07:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812077
ESS Laboratory Sample ID: 1812077-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B	1000	1	12/05/18 16:03	C8L0088	CL80529
trans-1,2-Dichloroethene	ND (1.0)		8260B	100	1	12/05/18 16:03	C8L0088	CL80529
trans-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	12/05/18 16:03	C8L0088	CL80529
Trichloroethene	ND (1.0)		8260B	5	1	12/05/18 16:03	C8L0088	CL80529
Trichlorofluoromethane	ND (1.0)		8260B		1	12/05/18 16:03	C8L0088	CL80529
Vinyl Chloride	ND (1.0)		8260B	2	1	12/05/18 16:03	C8L0088	CL80529
Xylene O	ND (1.0)		8260B	10000	1	12/05/18 16:03	C8L0088	CL80529
Xylene P,M	ND (2.0)		8260B	10000	1	12/05/18 16:03	C8L0088	CL80529
Xylenes (Total)	ND (2.0)		8260B		1	12/05/18 16:03		[CALC]

	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
Surrogate: 1,2-Dichloroethane-d4	104 %		70-130
Surrogate: 4-Bromofluorobenzene	94 %		70-130
Surrogate: Dibromofluoromethane	101 %		70-130
Surrogate: Toluene-d8	104 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812077

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CL80529 - 5030B

Blank

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloropropene	ND	2.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,4-Dioxane - Screen	ND	500	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
2-Butanone	ND	10.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
2-Hexanone	ND	10.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
4-Isopropyltoluene	ND	1.0	ug/L
4-Methyl-2-Pentanone	ND	10.0	ug/L
Acetone	ND	10.0	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	2.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	0.6	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon Disulfide	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	0.4	ug/L
Dibromochloromethane	ND	1.0	ug/L



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812077

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CL80529 - 5030B

Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Hexachloroethane	ND	1.0	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	25.2		ug/L	25.00		101	70-130			
Surrogate: 4-Bromofluorobenzene	22.8		ug/L	25.00		91	70-130			
Surrogate: Dibromofluoromethane	25.1		ug/L	25.00		101	70-130			
Surrogate: Toluene-d8	24.9		ug/L	25.00		100	70-130			

LCS

1,1,1,2-Tetrachloroethane	9.4		ug/L	10.00		94	70-130			
1,1,1-Trichloroethane	10.2		ug/L	10.00		102	70-130			
1,1,2,2-Tetrachloroethane	10.6		ug/L	10.00		106	70-130			
1,1,2-Trichloroethane	9.0		ug/L	10.00		90	70-130			
1,1-Dichloroethane	9.0		ug/L	10.00		90	70-130			
1,1-Dichloroethene	10.0		ug/L	10.00		100	70-130			
1,1-Dichloropropene	9.1		ug/L	10.00		91	70-130			
1,2,3-Trichlorobenzene	10.1		ug/L	10.00		101	70-130			
1,2,3-Trichloropropane	9.1		ug/L	10.00		91	70-130			
1,2,4-Trichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2,4-Trimethylbenzene	9.6		ug/L	10.00		96	70-130			
1,2-Dibromo-3-Chloropropane	9.5		ug/L	10.00		95	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812077

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CL80529 - 5030B

1,2-Dibromoethane	9.6		ug/L	10.00		96	70-130			
1,2-Dichlorobenzene	9.9		ug/L	10.00		99	70-130			
1,2-Dichloroethane	9.9		ug/L	10.00		99	70-130			
1,2-Dichloropropane	8.4		ug/L	10.00		84	70-130			
1,3,5-Trimethylbenzene	10.0		ug/L	10.00		100	70-130			
1,3-Dichlorobenzene	10.0		ug/L	10.00		100	70-130			
1,3-Dichloropropane	9.4		ug/L	10.00		94	70-130			
1,4-Dichlorobenzene	9.8		ug/L	10.00		98	70-130			
1,4-Dioxane - Screen	172		ug/L	200.0		86	0-332			
2,2-Dichloropropane	10.5		ug/L	10.00		105	70-130			
2-Butanone	43.3		ug/L	50.00		87	70-130			
2-Chlorotoluene	9.7		ug/L	10.00		97	70-130			
2-Hexanone	42.1		ug/L	50.00		84	70-130			
4-Chlorotoluene	9.8		ug/L	10.00		98	70-130			
4-Isopropyltoluene	10.4		ug/L	10.00		104	70-130			
4-Methyl-2-Pentanone	43.0		ug/L	50.00		86	70-130			
Acetone	43.3		ug/L	50.00		87	70-130			
Benzene	9.0		ug/L	10.00		90	70-130			
Bromobenzene	9.6		ug/L	10.00		96	70-130			
Bromochloromethane	9.6		ug/L	10.00		96	70-130			
Bromodichloromethane	8.5		ug/L	10.00		85	70-130			
Bromoform	9.8		ug/L	10.00		98	70-130			
Bromomethane	11.8		ug/L	10.00		118	70-130			
Carbon Disulfide	9.9		ug/L	10.00		99	70-130			
Carbon Tetrachloride	10.4		ug/L	10.00		104	70-130			
Chlorobenzene	9.3		ug/L	10.00		93	70-130			
Chloroethane	10.9		ug/L	10.00		109	70-130			
Chloroform	9.5		ug/L	10.00		95	70-130			
Chloromethane	9.3		ug/L	10.00		93	70-130			
cis-1,2-Dichloroethene	9.4		ug/L	10.00		94	70-130			
cis-1,3-Dichloropropene	8.4		ug/L	10.00		84	70-130			
Dibromochloromethane	9.2		ug/L	10.00		92	70-130			
Dibromomethane	9.5		ug/L	10.00		95	70-130			
Dichlorodifluoromethane	10.4		ug/L	10.00		104	70-130			
Diethyl Ether	8.4		ug/L	10.00		84	70-130			
Di-isopropyl ether	8.7		ug/L	10.00		87	70-130			
Ethyl tertiary-butyl ether	8.9		ug/L	10.00		89	70-130			
Ethylbenzene	9.4		ug/L	10.00		94	70-130			
Hexachlorobutadiene	11.5		ug/L	10.00		115	70-130			
Hexachloroethane	9.4		ug/L	10.00		94	70-130			
Isopropylbenzene	9.8		ug/L	10.00		98	70-130			
Methyl tert-Butyl Ether	8.9		ug/L	10.00		89	70-130			
Methylene Chloride	8.9		ug/L	10.00		89	70-130			
Naphthalene	8.4		ug/L	10.00		84	70-130			
n-Butylbenzene	10.3		ug/L	10.00		103	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812077

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CL80529 - 5030B

n-Propylbenzene	9.3		ug/L	10.00		93	70-130			
sec-Butylbenzene	10.3		ug/L	10.00		103	70-130			
Styrene	8.8		ug/L	10.00		88	70-130			
tert-Butylbenzene	10.3		ug/L	10.00		103	70-130			
Tertiary-amyl methyl ether	8.9		ug/L	10.00		89	70-130			
Tetrachloroethene	8.4		ug/L	10.00		84	70-130			
Tetrahydrofuran	8.6		ug/L	10.00		86	70-130			
Toluene	9.4		ug/L	10.00		94	70-130			
trans-1,2-Dichloroethene	9.2		ug/L	10.00		92	70-130			
trans-1,3-Dichloropropene	8.4		ug/L	10.00		84	70-130			
Trichloroethene	9.2		ug/L	10.00		92	70-130			
Trichlorofluoromethane	10.7		ug/L	10.00		107	70-130			
Vinyl Chloride	10.7		ug/L	10.00		107	70-130			
Xylene O	10.1		ug/L	10.00		101	70-130			
Xylene P,M	20.0		ug/L	20.00		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.4		ug/L	25.00		98	70-130			
Surrogate: 4-Bromofluorobenzene	25.4		ug/L	25.00		102	70-130			
Surrogate: Dibromofluoromethane	24.4		ug/L	25.00		97	70-130			
Surrogate: Toluene-d8	23.8		ug/L	25.00		95	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	9.4		ug/L	10.00		94	70-130	0.7	20	
1,1,1-Trichloroethane	10.4		ug/L	10.00		104	70-130	2	20	
1,1,2,2-Tetrachloroethane	10.5		ug/L	10.00		105	70-130	0.9	20	
1,1,2-Trichloroethane	9.5		ug/L	10.00		95	70-130	6	20	
1,1-Dichloroethane	9.1		ug/L	10.00		91	70-130	0.8	20	
1,1-Dichloroethene	10.2		ug/L	10.00		102	70-130	3	20	
1,1-Dichloropropene	9.5		ug/L	10.00		95	70-130	4	20	
1,2,3-Trichlorobenzene	10.3		ug/L	10.00		103	70-130	2	20	
1,2,3-Trichloropropane	8.9		ug/L	10.00		89	70-130	3	20	
1,2,4-Trichlorobenzene	10.2		ug/L	10.00		102	70-130	1	20	
1,2,4-Trimethylbenzene	9.9		ug/L	10.00		99	70-130	3	20	
1,2-Dibromo-3-Chloropropane	9.8		ug/L	10.00		98	70-130	4	20	
1,2-Dibromoethane	10.3		ug/L	10.00		103	70-130	7	20	
1,2-Dichlorobenzene	9.8		ug/L	10.00		98	70-130	1	20	
1,2-Dichloroethane	9.8		ug/L	10.00		98	70-130	0.8	20	
1,2-Dichloropropane	8.4		ug/L	10.00		84	70-130	0.5	20	
1,3,5-Trimethylbenzene	10.4		ug/L	10.00		104	70-130	4	20	
1,3-Dichlorobenzene	10.0		ug/L	10.00		100	70-130	0.1	20	
1,3-Dichloropropane	9.7		ug/L	10.00		97	70-130	3	20	
1,4-Dichlorobenzene	10.1		ug/L	10.00		101	70-130	3	20	
1,4-Dioxane - Screen	177		ug/L	200.0		88	0-332	3	200	
2,2-Dichloropropane	10.7		ug/L	10.00		107	70-130	2	20	
2-Butanone	43.3		ug/L	50.00		87	70-130	0.09	20	
2-Chlorotoluene	10.2		ug/L	10.00		102	70-130	5	20	
2-Hexanone	43.4		ug/L	50.00		87	70-130	3	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812077

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CL80529 - 5030B

4-Chlorotoluene	9.9		ug/L	10.00		99	70-130	0.6	20	
4-Isopropyltoluene	10.4		ug/L	10.00		104	70-130	0.3	20	
4-Methyl-2-Pentanone	42.3		ug/L	50.00		85	70-130	2	20	
Acetone	42.6		ug/L	50.00		85	70-130	1	20	
Benzene	9.2		ug/L	10.00		92	70-130	2	20	
Bromobenzene	9.7		ug/L	10.00		97	70-130	0.7	20	
Bromochloromethane	9.6		ug/L	10.00		96	70-130	0.1	20	
Bromodichloromethane	9.0		ug/L	10.00		90	70-130	6	20	
Bromoform	9.9		ug/L	10.00		99	70-130	0.4	20	
Bromomethane	11.2		ug/L	10.00		112	70-130	5	20	
Carbon Disulfide	10.1		ug/L	10.00		101	70-130	2	20	
Carbon Tetrachloride	10.7		ug/L	10.00		107	70-130	3	20	
Chlorobenzene	10.2		ug/L	10.00		102	70-130	8	20	
Chloroethane	11.6		ug/L	10.00		116	70-130	6	20	
Chloroform	9.8		ug/L	10.00		98	70-130	3	20	
Chloromethane	9.6		ug/L	10.00		96	70-130	3	20	
cis-1,2-Dichloroethene	9.4		ug/L	10.00		94	70-130	0.6	20	
cis-1,3-Dichloropropene	8.8		ug/L	10.00		88	70-130	4	20	
Dibromochloromethane	9.4		ug/L	10.00		94	70-130	2	20	
Dibromomethane	9.2		ug/L	10.00		92	70-130	3	20	
Dichlorodifluoromethane	10.7		ug/L	10.00		107	70-130	3	20	
Diethyl Ether	8.3		ug/L	10.00		83	70-130	1	20	
Di-isopropyl ether	9.0		ug/L	10.00		90	70-130	3	20	
Ethyl tertiary-butyl ether	9.4		ug/L	10.00		94	70-130	5	20	
Ethylbenzene	9.8		ug/L	10.00		98	70-130	4	20	
Hexachlorobutadiene	11.5		ug/L	10.00		115	70-130	0.3	20	
Hexachloroethane	9.0		ug/L	10.00		90	70-130	4	20	
Isopropylbenzene	10.1		ug/L	10.00		101	70-130	3	20	
Methyl tert-Butyl Ether	9.6		ug/L	10.00		96	70-130	7	20	
Methylene Chloride	8.8		ug/L	10.00		88	70-130	1	20	
Naphthalene	8.0		ug/L	10.00		80	70-130	5	20	
n-Butylbenzene	10.0		ug/L	10.00		100	70-130	3	20	
n-Propylbenzene	9.8		ug/L	10.00		98	70-130	5	20	
sec-Butylbenzene	10.4		ug/L	10.00		104	70-130	1	20	
Styrene	9.2		ug/L	10.00		92	70-130	4	20	
tert-Butylbenzene	10.4		ug/L	10.00		104	70-130	0.5	20	
Tertiary-amyl methyl ether	9.2		ug/L	10.00		92	70-130	3	20	
Tetrachloroethene	8.6		ug/L	10.00		86	70-130	2	20	
Tetrahydrofuran	10.5		ug/L	10.00		105	70-130	20	20	
Toluene	10.0		ug/L	10.00		100	70-130	6	20	
trans-1,2-Dichloroethene	9.5		ug/L	10.00		95	70-130	4	20	
trans-1,3-Dichloropropene	8.5		ug/L	10.00		85	70-130	0.6	20	
Trichloroethene	9.5		ug/L	10.00		95	70-130	3	20	
Trichlorofluoromethane	11.2		ug/L	10.00		112	70-130	4	20	
Vinyl Chloride	12.4		ug/L	10.00		124	70-130	14	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812077

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CL80529 - 50308

Xylene O	10.6		ug/L	10.00		106	70-130	4	20	
Xylene P,M	20.7		ug/L	20.00		103	70-130	3	20	
Surrogate: 1,2-Dichloroethane-d4	24.8		ug/L	25.00		99	70-130			
Surrogate: 4-Bromofluorobenzene	25.5		ug/L	25.00		102	70-130			
Surrogate: Dibromofluoromethane	24.6		ug/L	25.00		99	70-130			
Surrogate: Toluene-d8	24.3		ug/L	25.00		97	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812077

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812077

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

Division of Thielsch Engineering, Inc.
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www.esslaboratory.com

Turn Time	5-Day	Rush
Regulatory State	Massachusetts	
Is this project for any of the following?:		
☐ OCT RCP	☐ OMA MCP	☐ ORGP

18/2077

see attached

☒ Standard Excel☐ Other (Please Specify →)

Schneider Electric Foxboro

980 Washington St, Suite 325

PO #

rmcgrath@woodardcurran.com

Sample ID

Influent

Effluent

1

1

2

2

Sampled by : RWM

Seals Intact:

Cooler Temperature: 2.9 °C ICE DSC

Comments:

Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)



CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (223813)
ESS Laboratory Work Order Number: 1812678

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 1:32 pm, Jan 08, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812678

SAMPLE RECEIPT

The following samples were received on December 31, 2018 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1812678-01	Influent	Aqueous	8260B
1812678-02	Effluent	Aqueous	8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812678

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812678

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 04-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 12/28/18 09:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812678
ESS Laboratory Sample ID: 1812678-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,1,1-Trichloroethane	1.2 (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,1,2-Trichloroethane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,1-Dichloroethane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,1-Dichloroethene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,1-Dichloropropene	ND (2.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,2,3-Trichloropropane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,2-Dibromoethane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,2-Dichlorobenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,2-Dichloroethane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,2-Dichloropropane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,3-Dichlorobenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,3-Dichloropropane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,4-Dichlorobenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
1,4-Dioxane - Screen	ND (500)		8260B		1	01/02/19 21:47	C9A0025	CA90237
2,2-Dichloropropane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
2-Butanone	ND (10.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
2-Chlorotoluene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
2-Hexanone	ND (10.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
4-Chlorotoluene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
4-Isopropyltoluene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Acetone	ND (10.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Benzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Bromobenzene	ND (2.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Bromochloromethane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 12/28/18 09:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812678
ESS Laboratory Sample ID: 1812678-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromodichloromethane	ND (0.6)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Bromoform	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Bromomethane	ND (2.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Carbon Disulfide	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Carbon Tetrachloride	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Chlorobenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Chloroethane	ND (2.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Chloroform	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Chloromethane	ND (2.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
cis-1,2-Dichloroethene	3.6 (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Dibromochloromethane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Dibromomethane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Dichlorodifluoromethane	ND (2.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Diethyl Ether	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Di-isopropyl ether	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Ethylbenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Hexachlorobutadiene	ND (0.6)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Hexachloroethane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Isopropylbenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Methylene Chloride	ND (2.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Naphthalene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
n-Butylbenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
n-Propylbenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
sec-Butylbenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Styrene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
tert-Butylbenzene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Tetrachloroethene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Tetrahydrofuran	ND (5.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 12/28/18 09:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812678
ESS Laboratory Sample ID: 1812678-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Toluene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Trichloroethene	13.3 (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Trichlorofluoromethane	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Vinyl Chloride	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Xylene O	ND (1.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Xylene P,M	ND (2.0)		8260B		1	01/02/19 21:47	C9A0025	CA90237
Xylenes (Total)	ND (2.0)		8260B		1	01/02/19 21:47		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	99 %		70-130
Surrogate: 4-Bromofluorobenzene	100 %		70-130
Surrogate: Dibromofluoromethane	100 %		70-130
Surrogate: Toluene-d8	103 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 12/28/18 09:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812678
ESS Laboratory Sample ID: 1812678-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,1,1-Trichloroethane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,1,2-Trichloroethane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,1-Dichloroethane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,1-Dichloroethene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,1-Dichloropropene	ND (2.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,2,3-Trichloropropane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,2-Dibromoethane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,2-Dichlorobenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,2-Dichloroethane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,2-Dichloropropane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,3-Dichlorobenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,3-Dichloropropane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,4-Dichlorobenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
1,4-Dioxane - Screen	ND (500)		8260B		1	01/02/19 21:21	C9A0025	CA90237
2,2-Dichloropropane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
2-Butanone	ND (10.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
2-Chlorotoluene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
2-Hexanone	ND (10.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
4-Chlorotoluene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
4-Isopropyltoluene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Acetone	ND (10.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Benzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Bromobenzene	ND (2.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Bromochloromethane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 12/28/18 09:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812678
ESS Laboratory Sample ID: 1812678-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromodichloromethane	ND (0.6)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Bromoform	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Bromomethane	ND (2.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Carbon Disulfide	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Carbon Tetrachloride	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Chlorobenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Chloroethane	ND (2.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Chloroform	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Chloromethane	ND (2.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Dibromochloromethane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Dibromomethane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Dichlorodifluoromethane	ND (2.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Diethyl Ether	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Di-isopropyl ether	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Ethylbenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Hexachlorobutadiene	ND (0.6)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Hexachloroethane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Isopropylbenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Methylene Chloride	ND (2.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Naphthalene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
n-Butylbenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
n-Propylbenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
sec-Butylbenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Styrene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
tert-Butylbenzene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Tetrachloroethene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Tetrahydrofuran	ND (5.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 12/28/18 09:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1812678
ESS Laboratory Sample ID: 1812678-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Toluene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Trichloroethene	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Trichlorofluoromethane	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Vinyl Chloride	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Xylene O	ND (1.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Xylene P,M	ND (2.0)		8260B		1	01/02/19 21:21	C9A0025	CA90237
Xylenes (Total)	ND (2.0)		8260B		1	01/02/19 21:21		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>102 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>98 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>103 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812678

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CA90237 - 5030B

LCS

1,1,1,2-Tetrachloroethane	9.5		ug/L	10.00		95	70-130			
1,1,1-Trichloroethane	10.1		ug/L	10.00		101	70-130			
1,1,2,2-Tetrachloroethane	9.8		ug/L	10.00		98	70-130			
1,1,2-Trichloroethane	10.1		ug/L	10.00		101	70-130			
1,1-Dichloroethane	9.6		ug/L	10.00		96	70-130			
1,1-Dichloroethene	10.0		ug/L	10.00		100	70-130			
1,1-Dichloropropene	10.2		ug/L	10.00		102	70-130			
1,2,3-Trichlorobenzene	10.5		ug/L	10.00		105	70-130			
1,2,3-Trichloropropane	9.4		ug/L	10.00		94	70-130			
1,2,4-Trichlorobenzene	10.9		ug/L	10.00		109	70-130			
1,2,4-Trimethylbenzene	10.2		ug/L	10.00		102	70-130			
1,2-Dibromo-3-Chloropropane	9.7		ug/L	10.00		97	70-130			
1,2-Dibromoethane	10.3		ug/L	10.00		103	70-130			
1,2-Dichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2-Dichloroethane	10.0		ug/L	10.00		100	70-130			
1,2-Dichloropropane	10.0		ug/L	10.00		100	70-130			
1,3,5-Trimethylbenzene	10.0		ug/L	10.00		100	70-130			
1,3-Dichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,3-Dichloropropane	10.8		ug/L	10.00		108	70-130			
1,4-Dichlorobenzene	10.1		ug/L	10.00		101	70-130			
1,4-Dioxane - Screen	223		ug/L	200.0		111	0-332			
2,2-Dichloropropane	9.8		ug/L	10.00		98	70-130			
2-Butanone	54.7		ug/L	50.00		109	70-130			
2-Chlorotoluene	10.5		ug/L	10.00		105	70-130			
2-Hexanone	55.4		ug/L	50.00		111	70-130			
4-Chlorotoluene	10.8		ug/L	10.00		108	70-130			
4-Isopropyltoluene	10.4		ug/L	10.00		104	70-130			
4-Methyl-2-Pentanone	50.2		ug/L	50.00		100	70-130			
Acetone	50.0		ug/L	50.00		100	70-130			
Benzene	9.8		ug/L	10.00		98	70-130			
Bromobenzene	10.2		ug/L	10.00		102	70-130			
Bromochloromethane	10.1		ug/L	10.00		101	70-130			
Bromodichloromethane	9.2		ug/L	10.00		92	70-130			
Bromoform	9.4		ug/L	10.00		94	70-130			
Bromomethane	11.0		ug/L	10.00		110	70-130			
Carbon Disulfide	10.8		ug/L	10.00		108	70-130			
Carbon Tetrachloride	9.5		ug/L	10.00		95	70-130			
Chlorobenzene	10.4		ug/L	10.00		104	70-130			
Chloroethane	9.7		ug/L	10.00		97	70-130			
Chloroform	9.8		ug/L	10.00		98	70-130			
Chloromethane	9.4		ug/L	10.00		94	70-130			
cis-1,2-Dichloroethene	10.2		ug/L	10.00		102	70-130			
cis-1,3-Dichloropropene	9.4		ug/L	10.00		94	70-130			
Dibromochloromethane	8.9		ug/L	10.00		89	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812678

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CA90237 - 5030B

Dibromomethane	10.1		ug/L	10.00		101	70-130			
Dichlorodifluoromethane	9.0		ug/L	10.00		90	70-130			
Diethyl Ether	10.2		ug/L	10.00		102	70-130			
Di-isopropyl ether	10.9		ug/L	10.00		109	70-130			
Ethyl tertiary-butyl ether	9.5		ug/L	10.00		95	70-130			
Ethylbenzene	9.8		ug/L	10.00		98	70-130			
Hexachlorobutadiene	11.6		ug/L	10.00		116	70-130			
Hexachloroethane	10.1		ug/L	10.00		101	70-130			
Isopropylbenzene	10.0		ug/L	10.00		100	70-130			
Methyl tert-Butyl Ether	10.1		ug/L	10.00		101	70-130			
Methylene Chloride	9.9		ug/L	10.00		99	70-130			
Naphthalene	10.4		ug/L	10.00		104	70-130			
n-Butylbenzene	10.1		ug/L	10.00		101	70-130			
n-Propylbenzene	10.1		ug/L	10.00		101	70-130			
sec-Butylbenzene	9.9		ug/L	10.00		99	70-130			
Styrene	10.1		ug/L	10.00		101	70-130			
tert-Butylbenzene	10.2		ug/L	10.00		102	70-130			
Tertiary-amyl methyl ether	10.1		ug/L	10.00		101	70-130			
Tetrachloroethene	9.8		ug/L	10.00		98	70-130			
Tetrahydrofuran	10.5		ug/L	10.00		105	70-130			
Toluene	10.0		ug/L	10.00		100	70-130			
trans-1,2-Dichloroethene	10.3		ug/L	10.00		103	70-130			
trans-1,3-Dichloropropene	9.1		ug/L	10.00		91	70-130			
Trichloroethene	9.9		ug/L	10.00		99	70-130			
Trichlorofluoromethane	10.2		ug/L	10.00		102	70-130			
Vinyl Chloride	10.0		ug/L	10.00		100	70-130			
Xylene O	10.2		ug/L	10.00		102	70-130			
Xylene P,M	21.4		ug/L	20.00		107	70-130			
Xylenes (Total)	31.5		ug/L							
Surrogate: 1,2-Dichloroethane-d4	25.3		ug/L	25.00		101	70-130			
Surrogate: 4-Bromofluorobenzene	25.6		ug/L	25.00		102	70-130			
Surrogate: Dibromofluoromethane	24.6		ug/L	25.00		99	70-130			
Surrogate: Toluene-d8	25.6		ug/L	25.00		102	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	9.2		ug/L	10.00		92	70-130	3	20	
1,1,1-Trichloroethane	9.9		ug/L	10.00		99	70-130	2	20	
1,1,2,2-Tetrachloroethane	9.2		ug/L	10.00		92	70-130	7	20	
1,1,2-Trichloroethane	9.8		ug/L	10.00		98	70-130	3	20	
1,1-Dichloroethane	10.0		ug/L	10.00		100	70-130	4	20	
1,1-Dichloroethene	10.3		ug/L	10.00		103	70-130	3	20	
1,1-Dichloropropene	10.4		ug/L	10.00		104	70-130	2	20	
1,2,3-Trichlorobenzene	10.0		ug/L	10.00		100	70-130	5	20	
1,2,3-Trichloropropane	9.0		ug/L	10.00		90	70-130	4	20	
1,2,4-Trichlorobenzene	10.5		ug/L	10.00		105	70-130	4	20	
1,2,4-Trimethylbenzene	9.5		ug/L	10.00		95	70-130	7	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812678

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CA90237 - 5030B

1,2-Dibromo-3-Chloropropane	8.6		ug/L	10.00		86	70-130	13	20	
1,2-Dibromoethane	9.8		ug/L	10.00		98	70-130	4	20	
1,2-Dichlorobenzene	10.0		ug/L	10.00		100	70-130	3	20	
1,2-Dichloroethane	9.6		ug/L	10.00		96	70-130	4	20	
1,2-Dichloropropane	9.6		ug/L	10.00		96	70-130	4	20	
1,3,5-Trimethylbenzene	9.8		ug/L	10.00		98	70-130	2	20	
1,3-Dichlorobenzene	9.9		ug/L	10.00		99	70-130	4	20	
1,3-Dichloropropane	10.3		ug/L	10.00		103	70-130	4	20	
1,4-Dichlorobenzene	9.9		ug/L	10.00		99	70-130	2	20	
1,4-Dioxane - Screen	220		ug/L	200.0		110	0-332	1	200	
2,2-Dichloropropane	9.6		ug/L	10.00		96	70-130	2	20	
2-Butanone	51.3		ug/L	50.00		103	70-130	6	20	
2-Chlorotoluene	10.3		ug/L	10.00		103	70-130	2	20	
2-Hexanone	46.2		ug/L	50.00		92	70-130	18	20	
4-Chlorotoluene	10.4		ug/L	10.00		104	70-130	4	20	
4-Isopropyltoluene	10.1		ug/L	10.00		101	70-130	3	20	
4-Methyl-2-Pentanone	44.7		ug/L	50.00		89	70-130	12	20	
Acetone	42.8		ug/L	50.00		86	70-130	15	20	
Benzene	10.2		ug/L	10.00		102	70-130	4	20	
Bromobenzene	10.1		ug/L	10.00		101	70-130	0.8	20	
Bromochloromethane	9.8		ug/L	10.00		98	70-130	3	20	
Bromodichloromethane	9.2		ug/L	10.00		92	70-130	0.5	20	
Bromoform	8.5		ug/L	10.00		85	70-130	9	20	
Bromomethane	11.3		ug/L	10.00		113	70-130	3	20	
Carbon Disulfide	11.4		ug/L	10.00		114	70-130	6	20	
Carbon Tetrachloride	9.8		ug/L	10.00		98	70-130	3	20	
Chlorobenzene	10.0		ug/L	10.00		100	70-130	4	20	
Chloroethane	9.9		ug/L	10.00		99	70-130	2	20	
Chloroform	9.6		ug/L	10.00		96	70-130	1	20	
Chloromethane	10.0		ug/L	10.00		100	70-130	6	20	
cis-1,2-Dichloroethene	10.5		ug/L	10.00		105	70-130	2	20	
cis-1,3-Dichloropropene	9.3		ug/L	10.00		93	70-130	1	20	
Dibromochloromethane	8.4		ug/L	10.00		84	70-130	6	20	
Dibromomethane	10.0		ug/L	10.00		100	70-130	1	20	
Dichlorodifluoromethane	9.0		ug/L	10.00		90	70-130	0.3	20	
Diethyl Ether	9.5		ug/L	10.00		95	70-130	7	20	
Di-isopropyl ether	10.4		ug/L	10.00		104	70-130	4	20	
Ethyl tertiary-butyl ether	9.1		ug/L	10.00		91	70-130	4	20	
Ethylbenzene	9.4		ug/L	10.00		94	70-130	4	20	
Hexachlorobutadiene	10.3		ug/L	10.00		103	70-130	12	20	
Hexachloroethane	9.2		ug/L	10.00		92	70-130	9	20	
Isopropylbenzene	9.9		ug/L	10.00		99	70-130	0.8	20	
Methyl tert-Butyl Ether	9.4		ug/L	10.00		94	70-130	7	20	
Methylene Chloride	10.0		ug/L	10.00		100	70-130	1	20	
Naphthalene	9.5		ug/L	10.00		95	70-130	9	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812678

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CA90237 - 5030B

n-Butylbenzene	10.1		ug/L	10.00		101	70-130	0.6	20	
n-Propylbenzene	9.8		ug/L	10.00		98	70-130	3	20	
sec-Butylbenzene	9.7		ug/L	10.00		97	70-130	2	20	
Styrene	10.1		ug/L	10.00		101	70-130	0	20	
tert-Butylbenzene	9.9		ug/L	10.00		99	70-130	2	20	
Tertiary-amyl methyl ether	9.8		ug/L	10.00		98	70-130	2	20	
Tetrachloroethene	9.7		ug/L	10.00		97	70-130	2	20	
Tetrahydrofuran	9.8		ug/L	10.00		98	70-130	7	20	
Toluene	10.2		ug/L	10.00		102	70-130	2	20	
trans-1,2-Dichloroethene	10.4		ug/L	10.00		104	70-130	1	20	
trans-1,3-Dichloropropene	9.0		ug/L	10.00		90	70-130	0.7	20	
Trichloroethene	10.1		ug/L	10.00		101	70-130	2	20	
Trichlorofluoromethane	10.5		ug/L	10.00		105	70-130	3	20	
Vinyl Chloride	9.4		ug/L	10.00		94	70-130	5	20	
Xylene O	10.1		ug/L	10.00		101	70-130	0.5	20	
Xylene P,M	20.9		ug/L	20.00		105	70-130	2	20	
Xylenes (Total)	31.0		ug/L							
Surrogate: 1,2-Dichloroethane-d4	25.0		ug/L	25.00		100	70-130			
Surrogate: 4-Bromofluorobenzene	24.8		ug/L	25.00		99	70-130			
Surrogate: Dibromofluoromethane	25.2		ug/L	25.00		101	70-130			
Surrogate: Toluene-d8	24.9		ug/L	25.00		100	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812678

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812678

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - RI - KPB/TB/HDM
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 1812678
 Date Received: 12/31/2018
 Project Due Date: 1/8/2019
 Days for Project: 5 Day

- | | |
|---|---|
| 1. Air bill manifest present? ☐ No
Air No.: <u>NA</u>
2. Were custody seals present? ☐ No
3. Is radiation count <100 CPM? ☐ Yes
4. Is a Cooler Present? ☐ Yes
Temp: <u>0.4</u> Iced with: <u>Ice</u>
5. Was COC signed and dated by client? ☐ Yes | 6. Does COC match bottles? ☐ Yes
7. Is COC complete and correct? ☐ Yes
8. Were samples received intact? ☐ Yes
9. Were labs informed about <u>short holds & rushes</u> ? Yes / No ☒ NA
10. Were any analyses received outside of hold time? Yes / ☒ No |
|---|---|

- | | |
|--|---|
| 11. Any Subcontracting needed? Yes ☒ No
ESS Sample IDs: _____
Analysis: _____
TAT: _____ | 12. Were VOAs received? Yes / No ☒ NA
a. Air bubbles in aqueous VOAs? Yes / ☒ No
b. Does methanol cover soil completely? Yes / No / NA |
|--|---|

13. Are the samples properly preserved? Yes ☒ / No
- | | | | |
|--------------------------------------|-------------|-------------|-----------|
| a. If metals preserved upon receipt: | Date: _____ | Time: _____ | By: _____ |
| b. Low Level VOA vials frozen: | Date: _____ | Time: _____ | By: _____ |

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / ☒ No
- a. Was there a need to contact the client? Yes / No
- Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	306821	Yes	No	Yes	VOA Vial - HCl	HCl	
01	306822	Yes	No	Yes	VOA Vial - HCl	HCl	
01	306823	Yes	No	Yes	VOA Vial - HCl	HCl	
02	306818	Yes	No	Yes	VOA Vial - HCl	HCl	
02	306819	Yes	No	Yes	VOA Vial - HCl	HCl	
02	306820	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review

- Are barcode labels on correct containers? Yes / No ☒ No
- Are all necessary stickers attached? Yes / No ☒ No

Completed By: <u>[Signature]</u>	Date & Time: <u>12/31/18</u>	1406
Reviewed By: <u>[Signature]</u>	Date & Time: <u>12/31/18</u>	1541
Delivered By: <u>[Signature]</u>	Date & Time: <u>12/31/18</u>	1541



CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (221813)
ESS Laboratory Work Order Number: 1902047

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 11:13 am, Feb 12, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1902047

SAMPLE RECEIPT

The following samples were received on February 05, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1902047-01	Influent	Aqueous	8260B
1902047-02	Effluent	Aqueous	8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1902047

PROJECT NARRATIVE

8260B Volatile Organic Compounds

C9B0088-CCV1 [Continuing Calibration %Diff/Drift is above control limit \(CD+\).](#)
Chloromethane (24% @ 20%)
C9B0088-CCV1 [Continuing Calibration %Diff/Drift is below control limit \(CD-\).](#)
Bromomethane (27% @ 20%), Naphthalene (21% @ 20%)
CB90627-BS1 [Blank Spike recovery is above upper control limit \(B+\).](#)
Chloromethane (134% @ 70-130%)
CB90627-BSD1 [Blank Spike recovery is below lower control limit \(B-\).](#)
Naphthalene (68% @ 70-130%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1902047

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 04-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 01/31/19 13:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1902047
ESS Laboratory Sample ID: 1902047-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B	5	1	02/06/19 12:58	C9B0088	CB90627
1,1,1-Trichloroethane	ND (1.0)		8260B	200	1	02/06/19 12:58	C9B0088	CB90627
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B	2	1	02/06/19 12:58	C9B0088	CB90627
1,1,2-Trichloroethane	ND (1.0)		8260B	5	1	02/06/19 12:58	C9B0088	CB90627
1,1-Dichloroethane	ND (1.0)		8260B	70	1	02/06/19 12:58	C9B0088	CB90627
1,1-Dichloroethene	ND (1.0)		8260B	7	1	02/06/19 12:58	C9B0088	CB90627
1,1-Dichloropropene	ND (2.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
1,2,3-Trichloropropane	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
1,2,4-Trichlorobenzene	ND (1.0)		8260B	70	1	02/06/19 12:58	C9B0088	CB90627
1,2,4-Trimethylbenzene	ND (1.0)		8260B	200	1	02/06/19 12:58	C9B0088	CB90627
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
1,2-Dibromoethane	ND (1.0)		8260B	0.02	1	02/06/19 12:58	C9B0088	CB90627
1,2-Dichlorobenzene	ND (1.0)		8260B	600	1	02/06/19 12:58	C9B0088	CB90627
1,2-Dichloroethane	ND (1.0)		8260B	5	1	02/06/19 12:58	C9B0088	CB90627
1,2-Dichloropropane	ND (1.0)		8260B	5	1	02/06/19 12:58	C9B0088	CB90627
1,3,5-Trimethylbenzene	ND (1.0)		8260B	200	1	02/06/19 12:58	C9B0088	CB90627
1,3-Dichlorobenzene	ND (1.0)		8260B	40	1	02/06/19 12:58	C9B0088	CB90627
1,3-Dichloropropane	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
1,4-Dichlorobenzene	ND (1.0)		8260B	5	1	02/06/19 12:58	C9B0088	CB90627
1,4-Dioxane - Screen	ND (500)		8260B	3	1	02/06/19 12:58	C9B0088	CB90627
2,2-Dichloropropane	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
2-Butanone	ND (10.0)		8260B	4000	1	02/06/19 12:58	C9B0088	CB90627
2-Chlorotoluene	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
2-Hexanone	ND (10.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
4-Chlorotoluene	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
4-Isopropyltoluene	ND (1.0)		8260B	200	1	02/06/19 12:58	C9B0088	CB90627
4-Methyl-2-Pentanone	ND (10.0)		8260B	350	1	02/06/19 12:58	C9B0088	CB90627
Acetone	ND (10.0)		8260B	6300	1	02/06/19 12:58	C9B0088	CB90627
Benzene	ND (1.0)		8260B	5	1	02/06/19 12:58	C9B0088	CB90627
Bromobenzene	ND (2.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
Bromochloromethane	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 01/31/19 13:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1902047
ESS Laboratory Sample ID: 1902047-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B	3	1	02/06/19 12:58	C9B0088	CB90627
Bromoform	ND (1.0)		8260B	4	1	02/06/19 12:58	C9B0088	CB90627
Bromomethane	ND (2.0)		8260B	10	1	02/06/19 12:58	C9B0088	CB90627
Carbon Disulfide	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
Carbon Tetrachloride	ND (1.0)		8260B	5	1	02/06/19 12:58	C9B0088	CB90627
Chlorobenzene	ND (1.0)		8260B	100	1	02/06/19 12:58	C9B0088	CB90627
Chloroethane	ND (2.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
Chloroform	ND (1.0)		8260B	70	1	02/06/19 12:58	C9B0088	CB90627
Chloromethane	ND (2.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
cis-1,2-Dichloroethene	2.0 (1.0)		8260B	70	1	02/06/19 12:58	C9B0088	CB90627
cis-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	02/06/19 12:58	C9B0088	CB90627
Dibromochloromethane	ND (1.0)		8260B	2	1	02/06/19 12:58	C9B0088	CB90627
Dibromomethane	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
Dichlorodifluoromethane	ND (2.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
Diethyl Ether	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
Di-isopropyl ether	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
Ethylbenzene	ND (1.0)		8260B	700	1	02/06/19 12:58	C9B0088	CB90627
Hexachlorobutadiene	ND (0.6)		8260B	0.6	1	02/06/19 12:58	C9B0088	CB90627
Hexachloroethane	ND (1.0)		8260B	8	1	02/06/19 12:58	C9B0088	CB90627
Isopropylbenzene	ND (1.0)		8260B	200	1	02/06/19 12:58	C9B0088	CB90627
Methyl tert-Butyl Ether	ND (1.0)		8260B	70	1	02/06/19 12:58	C9B0088	CB90627
Methylene Chloride	ND (2.0)		8260B	5	1	02/06/19 12:58	C9B0088	CB90627
Naphthalene	ND (1.0)		8260B	140	1	02/06/19 12:58	C9B0088	CB90627
n-Butylbenzene	ND (1.0)		8260B	200	1	02/06/19 12:58	C9B0088	CB90627
n-Propylbenzene	ND (1.0)		8260B	200	1	02/06/19 12:58	C9B0088	CB90627
sec-Butylbenzene	ND (1.0)		8260B	200	1	02/06/19 12:58	C9B0088	CB90627
Styrene	ND (1.0)		8260B	100	1	02/06/19 12:58	C9B0088	CB90627
tert-Butylbenzene	ND (1.0)		8260B	200	1	02/06/19 12:58	C9B0088	CB90627
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
Tetrachloroethene	ND (1.0)		8260B	5	1	02/06/19 12:58	C9B0088	CB90627
Tetrahydrofuran	ND (5.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 01/31/19 13:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1902047
ESS Laboratory Sample ID: 1902047-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B	1000	1	02/06/19 12:58	C9B0088	CB90627
trans-1,2-Dichloroethene	ND (1.0)		8260B	100	1	02/06/19 12:58	C9B0088	CB90627
trans-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	02/06/19 12:58	C9B0088	CB90627
Trichloroethene	9.2 (1.0)		8260B	5	1	02/06/19 12:58	C9B0088	CB90627
Trichlorofluoromethane	ND (1.0)		8260B		1	02/06/19 12:58	C9B0088	CB90627
Vinyl Chloride	ND (1.0)		8260B	2	1	02/06/19 12:58	C9B0088	CB90627
Xylene O	ND (1.0)		8260B	10000	1	02/06/19 12:58	C9B0088	CB90627
Xylene P,M	ND (2.0)		8260B	10000	1	02/06/19 12:58	C9B0088	CB90627
Xylenes (Total)	ND (2.0)		8260B		1	02/06/19 12:58		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>120 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>99 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 01/31/19 13:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1902047
ESS Laboratory Sample ID: 1902047-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B	5	1	02/06/19 13:24	C9B0088	CB90627
1,1,1-Trichloroethane	ND (1.0)		8260B	200	1	02/06/19 13:24	C9B0088	CB90627
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B	2	1	02/06/19 13:24	C9B0088	CB90627
1,1,2-Trichloroethane	ND (1.0)		8260B	5	1	02/06/19 13:24	C9B0088	CB90627
1,1-Dichloroethane	ND (1.0)		8260B	70	1	02/06/19 13:24	C9B0088	CB90627
1,1-Dichloroethene	ND (1.0)		8260B	7	1	02/06/19 13:24	C9B0088	CB90627
1,1-Dichloropropene	ND (2.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
1,2,3-Trichloropropane	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
1,2,4-Trichlorobenzene	ND (1.0)		8260B	70	1	02/06/19 13:24	C9B0088	CB90627
1,2,4-Trimethylbenzene	ND (1.0)		8260B	200	1	02/06/19 13:24	C9B0088	CB90627
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
1,2-Dibromoethane	ND (1.0)		8260B	0.02	1	02/06/19 13:24	C9B0088	CB90627
1,2-Dichlorobenzene	ND (1.0)		8260B	600	1	02/06/19 13:24	C9B0088	CB90627
1,2-Dichloroethane	ND (1.0)		8260B	5	1	02/06/19 13:24	C9B0088	CB90627
1,2-Dichloropropane	ND (1.0)		8260B	5	1	02/06/19 13:24	C9B0088	CB90627
1,3,5-Trimethylbenzene	ND (1.0)		8260B	200	1	02/06/19 13:24	C9B0088	CB90627
1,3-Dichlorobenzene	ND (1.0)		8260B	40	1	02/06/19 13:24	C9B0088	CB90627
1,3-Dichloropropane	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
1,4-Dichlorobenzene	ND (1.0)		8260B	5	1	02/06/19 13:24	C9B0088	CB90627
1,4-Dioxane - Screen	ND (500)		8260B	3	1	02/06/19 13:24	C9B0088	CB90627
2,2-Dichloropropane	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
2-Butanone	ND (10.0)		8260B	4000	1	02/06/19 13:24	C9B0088	CB90627
2-Chlorotoluene	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
2-Hexanone	ND (10.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
4-Chlorotoluene	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
4-Isopropyltoluene	ND (1.0)		8260B	200	1	02/06/19 13:24	C9B0088	CB90627
4-Methyl-2-Pentanone	ND (10.0)		8260B	350	1	02/06/19 13:24	C9B0088	CB90627
Acetone	ND (10.0)		8260B	6300	1	02/06/19 13:24	C9B0088	CB90627
Benzene	ND (1.0)		8260B	5	1	02/06/19 13:24	C9B0088	CB90627
Bromobenzene	ND (2.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
Bromochloromethane	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 01/31/19 13:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1902047
ESS Laboratory Sample ID: 1902047-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B	3	1	02/06/19 13:24	C9B0088	CB90627
Bromoform	ND (1.0)		8260B	4	1	02/06/19 13:24	C9B0088	CB90627
Bromomethane	ND (2.0)		8260B	10	1	02/06/19 13:24	C9B0088	CB90627
Carbon Disulfide	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
Carbon Tetrachloride	ND (1.0)		8260B	5	1	02/06/19 13:24	C9B0088	CB90627
Chlorobenzene	ND (1.0)		8260B	100	1	02/06/19 13:24	C9B0088	CB90627
Chloroethane	ND (2.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
Chloroform	ND (1.0)		8260B	70	1	02/06/19 13:24	C9B0088	CB90627
Chloromethane	ND (2.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
cis-1,2-Dichloroethene	ND (1.0)		8260B	70	1	02/06/19 13:24	C9B0088	CB90627
cis-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	02/06/19 13:24	C9B0088	CB90627
Dibromochloromethane	ND (1.0)		8260B	2	1	02/06/19 13:24	C9B0088	CB90627
Dibromomethane	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
Dichlorodifluoromethane	ND (2.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
Diethyl Ether	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
Di-isopropyl ether	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
Ethylbenzene	ND (1.0)		8260B	700	1	02/06/19 13:24	C9B0088	CB90627
Hexachlorobutadiene	ND (0.6)		8260B	0.6	1	02/06/19 13:24	C9B0088	CB90627
Hexachloroethane	ND (1.0)		8260B	8	1	02/06/19 13:24	C9B0088	CB90627
Isopropylbenzene	ND (1.0)		8260B	200	1	02/06/19 13:24	C9B0088	CB90627
Methyl tert-Butyl Ether	ND (1.0)		8260B	70	1	02/06/19 13:24	C9B0088	CB90627
Methylene Chloride	ND (2.0)		8260B	5	1	02/06/19 13:24	C9B0088	CB90627
Naphthalene	ND (1.0)		8260B	140	1	02/06/19 13:24	C9B0088	CB90627
n-Butylbenzene	ND (1.0)		8260B	200	1	02/06/19 13:24	C9B0088	CB90627
n-Propylbenzene	ND (1.0)		8260B	200	1	02/06/19 13:24	C9B0088	CB90627
sec-Butylbenzene	ND (1.0)		8260B	200	1	02/06/19 13:24	C9B0088	CB90627
Styrene	ND (1.0)		8260B	100	1	02/06/19 13:24	C9B0088	CB90627
tert-Butylbenzene	ND (1.0)		8260B	200	1	02/06/19 13:24	C9B0088	CB90627
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
Tetrachloroethene	ND (1.0)		8260B	5	1	02/06/19 13:24	C9B0088	CB90627
Tetrahydrofuran	ND (5.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 01/31/19 13:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1902047
ESS Laboratory Sample ID: 1902047-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B	1000	1	02/06/19 13:24	C9B0088	CB90627
trans-1,2-Dichloroethene	ND (1.0)		8260B	100	1	02/06/19 13:24	C9B0088	CB90627
trans-1,3-Dichloropropene	ND (0.4)		8260B	0.4	1	02/06/19 13:24	C9B0088	CB90627
Trichloroethene	ND (1.0)		8260B	5	1	02/06/19 13:24	C9B0088	CB90627
Trichlorofluoromethane	ND (1.0)		8260B		1	02/06/19 13:24	C9B0088	CB90627
Vinyl Chloride	ND (1.0)		8260B	2	1	02/06/19 13:24	C9B0088	CB90627
Xylene O	ND (1.0)		8260B	10000	1	02/06/19 13:24	C9B0088	CB90627
Xylene P,M	ND (2.0)		8260B	10000	1	02/06/19 13:24	C9B0088	CB90627
Xylenes (Total)	ND (2.0)		8260B		1	02/06/19 13:24		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>123 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1902047

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB90627 - 5030B

Blank

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloropropene	ND	2.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,4-Dioxane - Screen	ND	500	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
2-Butanone	ND	10.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
2-Hexanone	ND	10.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
4-Isopropyltoluene	ND	1.0	ug/L
4-Methyl-2-Pentanone	ND	10.0	ug/L
Acetone	ND	10.0	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	2.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	0.6	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon Disulfide	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	0.4	ug/L
Dibromochloromethane	ND	1.0	ug/L



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1902047

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch C890627 - 5030B

Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Hexachloroethane	ND	1.0	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	30.5		ug/L	25.00		122	70-130			
Surrogate: 4-Bromofluorobenzene	23.4		ug/L	25.00		94	70-130			
Surrogate: Dibromofluoromethane	27.1		ug/L	25.00		108	70-130			
Surrogate: Toluene-d8	25.0		ug/L	25.00		100	70-130			

LCS

1,1,1,2-Tetrachloroethane	9.6		ug/L	10.00		96	70-130			
1,1,1-Trichloroethane	10.9		ug/L	10.00		109	70-130			
1,1,2,2-Tetrachloroethane	9.8		ug/L	10.00		98	70-130			
1,1,2-Trichloroethane	10.2		ug/L	10.00		102	70-130			
1,1-Dichloroethane	10.6		ug/L	10.00		106	70-130			
1,1-Dichloroethene	10.2		ug/L	10.00		102	70-130			
1,1-Dichloropropene	10.8		ug/L	10.00		108	70-130			
1,2,3-Trichlorobenzene	9.1		ug/L	10.00		91	70-130			
1,2,3-Trichloropropane	8.8		ug/L	10.00		88	70-130			
1,2,4-Trichlorobenzene	9.3		ug/L	10.00		93	70-130			
1,2,4-Trimethylbenzene	9.8		ug/L	10.00		98	70-130			
1,2-Dibromo-3-Chloropropane	8.6		ug/L	10.00		86	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1902047

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB90627 - 5030B

1,2-Dibromoethane	9.5		ug/L	10.00		95	70-130			
1,2-Dichlorobenzene	9.3		ug/L	10.00		93	70-130			
1,2-Dichloroethane	11.3		ug/L	10.00		113	70-130			
1,2-Dichloropropane	10.3		ug/L	10.00		103	70-130			
1,3,5-Trimethylbenzene	9.7		ug/L	10.00		97	70-130			
1,3-Dichlorobenzene	9.3		ug/L	10.00		93	70-130			
1,3-Dichloropropane	9.7		ug/L	10.00		97	70-130			
1,4-Dichlorobenzene	9.7		ug/L	10.00		97	70-130			
1,4-Dioxane - Screen	199		ug/L	200.0		99	0-332			
2,2-Dichloropropane	11.1		ug/L	10.00		111	70-130			
2-Butanone	51.0		ug/L	50.00		102	70-130			
2-Chlorotoluene	9.6		ug/L	10.00		96	70-130			
2-Hexanone	45.3		ug/L	50.00		91	70-130			
4-Chlorotoluene	9.6		ug/L	10.00		96	70-130			
4-Isopropyltoluene	9.8		ug/L	10.00		98	70-130			
4-Methyl-2-Pentanone	48.3		ug/L	50.00		97	70-130			
Acetone	50.3		ug/L	50.00		101	70-130			
Benzene	10.8		ug/L	10.00		108	70-130			
Bromobenzene	9.6		ug/L	10.00		96	70-130			
Bromochloromethane	10.7		ug/L	10.00		107	70-130			
Bromodichloromethane	10.3		ug/L	10.00		103	70-130			
Bromoform	9.8		ug/L	10.00		98	70-130			
Bromomethane	8.3		ug/L	10.00		83	70-130			
Carbon Disulfide	10.5		ug/L	10.00		105	70-130			
Carbon Tetrachloride	10.1		ug/L	10.00		101	70-130			
Chlorobenzene	9.5		ug/L	10.00		95	70-130			
Chloroethane	11.3		ug/L	10.00		113	70-130			
Chloroform	11.1		ug/L	10.00		111	70-130			
Chloromethane	13.4		ug/L	10.00		134	70-130			B+
cis-1,2-Dichloroethene	10.4		ug/L	10.00		104	70-130			
cis-1,3-Dichloropropene	7.9		ug/L	10.00		79	70-130			
Dibromochloromethane	8.6		ug/L	10.00		86	70-130			
Dibromomethane	10.7		ug/L	10.00		107	70-130			
Dichlorodifluoromethane	11.3		ug/L	10.00		113	70-130			
Diethyl Ether	10.4		ug/L	10.00		104	70-130			
Di-isopropyl ether	10.4		ug/L	10.00		104	70-130			
Ethyl tertiary-butyl ether	9.4		ug/L	10.00		94	70-130			
Ethylbenzene	9.5		ug/L	10.00		95	70-130			
Hexachlorobutadiene	9.6		ug/L	10.00		96	70-130			
Hexachloroethane	10.5		ug/L	10.00		105	70-130			
Isopropylbenzene	9.6		ug/L	10.00		96	70-130			
Methyl tert-Butyl Ether	10.0		ug/L	10.00		100	70-130			
Methylene Chloride	10.4		ug/L	10.00		104	70-130			
Naphthalene	7.1		ug/L	10.00		71	70-130			
n-Butylbenzene	10.0		ug/L	10.00		100	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1902047

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch C890627 - 5030B

n-Propylbenzene	9.7		ug/L	10.00		97	70-130			
sec-Butylbenzene	9.8		ug/L	10.00		98	70-130			
Styrene	9.2		ug/L	10.00		92	70-130			
tert-Butylbenzene	9.7		ug/L	10.00		97	70-130			
Tertiary-amyl methyl ether	9.3		ug/L	10.00		93	70-130			
Tetrachloroethene	8.8		ug/L	10.00		88	70-130			
Tetrahydrofuran	9.4		ug/L	10.00		94	70-130			
Toluene	10.3		ug/L	10.00		103	70-130			
trans-1,2-Dichloroethene	9.8		ug/L	10.00		98	70-130			
trans-1,3-Dichloropropene	7.9		ug/L	10.00		79	70-130			
Trichloroethene	10.6		ug/L	10.00		106	70-130			
Trichlorofluoromethane	11.7		ug/L	10.00		117	70-130			
Vinyl Chloride	11.7		ug/L	10.00		117	70-130			
Xylene O	10.0		ug/L	10.00		100	70-130			
Xylene P,M	19.6		ug/L	20.00		98	70-130			
Surrogate: 1,2-Dichloroethane-d4	28.9		ug/L	25.00		116	70-130			
Surrogate: 4-Bromofluorobenzene	25.1		ug/L	25.00		101	70-130			
Surrogate: Dibromofluoromethane	27.3		ug/L	25.00		109	70-130			
Surrogate: Toluene-d8	24.6		ug/L	25.00		98	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	9.7		ug/L	10.00		97	70-130	0.7	20	
1,1,1-Trichloroethane	11.0		ug/L	10.00		110	70-130	1	20	
1,1,2,2-Tetrachloroethane	9.5		ug/L	10.00		95	70-130	3	20	
1,1,2-Trichloroethane	9.9		ug/L	10.00		99	70-130	3	20	
1,1-Dichloroethane	10.6		ug/L	10.00		106	70-130	0	20	
1,1-Dichloroethene	10.0		ug/L	10.00		100	70-130	2	20	
1,1-Dichloropropene	10.6		ug/L	10.00		106	70-130	1	20	
1,2,3-Trichlorobenzene	8.8		ug/L	10.00		88	70-130	3	20	
1,2,3-Trichloropropane	8.6		ug/L	10.00		86	70-130	2	20	
1,2,4-Trichlorobenzene	9.1		ug/L	10.00		91	70-130	3	20	
1,2,4-Trimethylbenzene	9.9		ug/L	10.00		99	70-130	1	20	
1,2-Dibromo-3-Chloropropane	8.2		ug/L	10.00		82	70-130	4	20	
1,2-Dibromoethane	9.3		ug/L	10.00		93	70-130	2	20	
1,2-Dichlorobenzene	9.3		ug/L	10.00		93	70-130	0.8	20	
1,2-Dichloroethane	11.0		ug/L	10.00		110	70-130	3	20	
1,2-Dichloropropane	10.2		ug/L	10.00		102	70-130	0.5	20	
1,3,5-Trimethylbenzene	9.8		ug/L	10.00		98	70-130	1	20	
1,3-Dichlorobenzene	9.8		ug/L	10.00		98	70-130	5	20	
1,3-Dichloropropane	10.0		ug/L	10.00		100	70-130	3	20	
1,4-Dichlorobenzene	9.7		ug/L	10.00		97	70-130	0.5	20	
1,4-Dioxane - Screen	193		ug/L	200.0		96	0-332	3	200	
2,2-Dichloropropane	10.8		ug/L	10.00		108	70-130	2	20	
2-Butanone	50.7		ug/L	50.00		101	70-130	0.6	20	
2-Chlorotoluene	9.9		ug/L	10.00		99	70-130	3	20	
2-Hexanone	42.0		ug/L	50.00		84	70-130	8	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1902047

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch C890627 - 5030B

4-Chlorotoluene	9.9		ug/L	10.00		99	70-130	3	20	
4-Isopropyltoluene	10.0		ug/L	10.00		100	70-130	2	20	
4-Methyl-2-Pentanone	44.5		ug/L	50.00		89	70-130	8	20	
Acetone	44.1		ug/L	50.00		88	70-130	13	20	
Benzene	10.8		ug/L	10.00		108	70-130	0.5	20	
Bromobenzene	9.6		ug/L	10.00		96	70-130	0.2	20	
Bromochloromethane	10.5		ug/L	10.00		105	70-130	2	20	
Bromodichloromethane	10.0		ug/L	10.00		100	70-130	3	20	
Bromoform	9.6		ug/L	10.00		96	70-130	2	20	
Bromomethane	8.2		ug/L	10.00		82	70-130	1	20	
Carbon Disulfide	10.6		ug/L	10.00		106	70-130	0.09	20	
Carbon Tetrachloride	9.7		ug/L	10.00		97	70-130	4	20	
Chlorobenzene	9.8		ug/L	10.00		98	70-130	3	20	
Chloroethane	11.3		ug/L	10.00		113	70-130	0.09	20	
Chloroform	11.0		ug/L	10.00		110	70-130	0.7	20	
Chloromethane	12.8		ug/L	10.00		128	70-130	4	20	
cis-1,2-Dichloroethene	10.0		ug/L	10.00		100	70-130	3	20	
cis-1,3-Dichloropropene	7.8		ug/L	10.00		78	70-130	0.8	20	
Dibromochloromethane	8.3		ug/L	10.00		83	70-130	3	20	
Dibromomethane	10.4		ug/L	10.00		104	70-130	3	20	
Dichlorodifluoromethane	10.9		ug/L	10.00		109	70-130	4	20	
Diethyl Ether	10.0		ug/L	10.00		100	70-130	5	20	
Di-isopropyl ether	10.2		ug/L	10.00		102	70-130	1	20	
Ethyl tertiary-butyl ether	9.1		ug/L	10.00		91	70-130	3	20	
Ethylbenzene	9.8		ug/L	10.00		98	70-130	2	20	
Hexachlorobutadiene	9.6		ug/L	10.00		96	70-130	0.3	20	
Hexachloroethane	10.5		ug/L	10.00		105	70-130	0.4	20	
Isopropylbenzene	9.8		ug/L	10.00		98	70-130	3	20	
Methyl tert-Butyl Ether	9.6		ug/L	10.00		96	70-130	4	20	
Methylene Chloride	10.3		ug/L	10.00		103	70-130	1	20	
Naphthalene	6.8		ug/L	10.00		68	70-130	5	20	B-
n-Butylbenzene	10.0		ug/L	10.00		100	70-130	0	20	
n-Propylbenzene	9.9		ug/L	10.00		99	70-130	2	20	
sec-Butylbenzene	10.1		ug/L	10.00		101	70-130	3	20	
Styrene	9.4		ug/L	10.00		94	70-130	2	20	
tert-Butylbenzene	10.0		ug/L	10.00		100	70-130	3	20	
Tertiary-amyl methyl ether	9.2		ug/L	10.00		92	70-130	2	20	
Tetrachloroethene	9.2		ug/L	10.00		92	70-130	5	20	
Tetrahydrofuran	9.5		ug/L	10.00		95	70-130	2	20	
Toluene	10.3		ug/L	10.00		103	70-130	0.4	20	
trans-1,2-Dichloroethene	9.6		ug/L	10.00		96	70-130	2	20	
trans-1,3-Dichloropropene	7.8		ug/L	10.00		78	70-130	1	20	
Trichloroethene	10.8		ug/L	10.00		108	70-130	2	20	
Trichlorofluoromethane	11.4		ug/L	10.00		114	70-130	2	20	
Vinyl Chloride	11.3		ug/L	10.00		113	70-130	4	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1902047

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB90627 - 5030B

Xylene O	10.2		ug/L	10.00		102	70-130	2	20	
Xylene P,M	20.1		ug/L	20.00		100	70-130	3	20	
Surrogate: 1,2-Dichloroethane-d4	27.9		ug/L	25.00		112	70-130			
Surrogate: 4-Bromofluorobenzene	25.4		ug/L	25.00		102	70-130			
Surrogate: Dibromofluoromethane	26.8		ug/L	25.00		107	70-130			
Surrogate: Toluene-d8	24.6		ug/L	25.00		98	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1902047

Notes and Definitions

U	Analyte included in the analysis, but not detected
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
B+	Blank Spike recovery is above upper control limit (B+).
B-	Blank Spike recovery is below lower control limit (B-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1902047

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meedc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory

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www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 1902 047				
Reporting Limits see attached				
Electronic Deliverables ☐ Limit Checker ☒ Standard Excel ☐ Other (Please Specify ->)				
Turn Time 5-Day Rush		Regulatory State Massachusetts		
Is this project for any of the following?: ☐ CT RCP ☐ MA MCP ☐ RGP				
Company Name Woodard & Curran		Project # 221813 Project Name Schneider Electric Foxboro		
Contact Person Rob McGrath		Address 980 Washington St, Suite 325		
City Dedham		State MA		Zip Code 02026 PO # 223812.04
Telephone Number 781 613 0640		FAX Number		Email Address rmcgrath@woodardcurran.com
ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix
01	1/31/19	1300	Grab	Aqueous
02	1/31/19	1305	Grab	Aqueous
Sample ID				
Influent				
Effluent				
VOC (method 8260)				
Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer G - Glass O-Other P-Poly S-Sterile V-Vial				
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*				
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*				
Number of Containers per Sample: 3				
Laboratory Use Only			Sampled by: RWM	
Cooler Present: ☒			Comments: Please specify "Other" preservative and containers types in this space	
Seals Intact: ☒				
Cooler Temperature: °C ke temp: 1.8				
Relinquished by: (Signature, Date & Time)		Received By: (Signature, Date & Time)		Received By: (Signature, Date & Time)
Relinquished by: (Signature, Date & Time)		Received By: (Signature, Date & Time)		Received By: (Signature, Date & Time)



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (221813)
ESS Laboratory Work Order Number: 1903697

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 12:14 pm, Apr 02, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903697

SAMPLE RECEIPT

The following samples were received on March 26, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1903697-01	Influent	Aqueous	8260B
1903697-02	Effluent	Aqueous	8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903697

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903697

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 03/20/19 14:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903697
ESS Laboratory Sample ID: 1903697-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,1,1-Trichloroethane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,1,2-Trichloroethane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,1-Dichloroethane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,1-Dichloroethene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,1-Dichloropropene	ND (2.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,2,3-Trichloropropane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,2-Dibromoethane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,2-Dichlorobenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,2-Dichloroethane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,2-Dichloropropane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,3-Dichlorobenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,3-Dichloropropane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,4-Dichlorobenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
1,4-Dioxane - Screen	ND (500)		8260B		1	03/27/19 20:14	C9C0442	CC92759
2,2-Dichloropropane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
2-Butanone	ND (10.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
2-Chlorotoluene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
2-Hexanone	ND (10.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
4-Chlorotoluene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
4-Isopropyltoluene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Acetone	ND (10.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Benzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Bromobenzene	ND (2.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Bromochloromethane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 03/20/19 14:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903697
ESS Laboratory Sample ID: 1903697-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Bromoform	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Bromomethane	ND (2.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Carbon Disulfide	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Carbon Tetrachloride	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Chlorobenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Chloroethane	ND (2.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Chloroform	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Chloromethane	ND (2.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
cis-1,2-Dichloroethene	2.3 (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Dibromochloromethane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Dibromomethane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Dichlorodifluoromethane	ND (2.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Diethyl Ether	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Di-isopropyl ether	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Ethylbenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Hexachlorobutadiene	ND (0.6)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Hexachloroethane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Isopropylbenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Methylene Chloride	ND (2.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Naphthalene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
n-Butylbenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
n-Propylbenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
sec-Butylbenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Styrene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
tert-Butylbenzene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Tetrachloroethene	ND (1.0)		8260B	1	1	03/27/19 20:14	C9C0442	CC92759
Tetrahydrofuran	ND (5.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 03/20/19 14:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903697
ESS Laboratory Sample ID: 1903697-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Trichloroethene	9.8 (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Trichlorofluoromethane	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Vinyl Chloride	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Xylene O	ND (1.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Xylene P,M	ND (2.0)		8260B		1	03/27/19 20:14	C9C0442	CC92759
Xylenes (Total)	ND (2.0)		8260B		1	03/27/19 20:14		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	103 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	87 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	105 %		70-130
<i>Surrogate: Toluene-d8</i>	98 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 03/20/19 14:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903697
ESS Laboratory Sample ID: 1903697-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,1,1-Trichloroethane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,1,2-Trichloroethane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,1-Dichloroethane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,1-Dichloroethene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,1-Dichloropropene	ND (2.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,2,3-Trichloropropane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,2-Dibromoethane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,2-Dichlorobenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,2-Dichloroethane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,2-Dichloropropane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,3-Dichlorobenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,3-Dichloropropane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,4-Dichlorobenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
1,4-Dioxane - Screen	ND (500)		8260B		1	03/27/19 19:47	C9C0442	CC92759
2,2-Dichloropropane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
2-Butanone	ND (10.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
2-Chlorotoluene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
2-Hexanone	ND (10.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
4-Chlorotoluene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
4-Isopropyltoluene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Acetone	ND (10.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Benzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Bromobenzene	ND (2.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Bromochloromethane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 03/20/19 14:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903697
ESS Laboratory Sample ID: 1903697-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Bromoform	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Bromomethane	ND (2.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Carbon Disulfide	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Carbon Tetrachloride	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Chlorobenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Chloroethane	ND (2.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Chloroform	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Chloromethane	ND (2.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Dibromochloromethane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Dibromomethane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Dichlorodifluoromethane	ND (2.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Diethyl Ether	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Di-isopropyl ether	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Ethylbenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Hexachlorobutadiene	ND (0.6)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Hexachloroethane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Isopropylbenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Methylene Chloride	ND (2.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Naphthalene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
n-Butylbenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
n-Propylbenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
sec-Butylbenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Styrene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
tert-Butylbenzene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Tetrachloroethene	ND (1.0)		8260B	1	1	03/27/19 19:47	C9C0442	CC92759
Tetrahydrofuran	ND (5.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 03/20/19 14:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903697
ESS Laboratory Sample ID: 1903697-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Trichloroethene	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Trichlorofluoromethane	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Vinyl Chloride	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Xylene O	ND (1.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Xylene P,M	ND (2.0)		8260B		1	03/27/19 19:47	C9C0442	CC92759
Xylenes (Total)	ND (2.0)		8260B		1	03/27/19 19:47		[CALC]

	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
Surrogate: 1,2-Dichloroethane-d4	108 %		70-130
Surrogate: 4-Bromofluorobenzene	88 %		70-130
Surrogate: Dibromofluoromethane	107 %		70-130
Surrogate: Toluene-d8	97 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903697

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC92759 - 5030B

Blank

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloropropene	ND	2.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,4-Dioxane - Screen	ND	500	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
2-Butanone	ND	10.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
2-Hexanone	ND	10.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
4-Isopropyltoluene	ND	1.0	ug/L
4-Methyl-2-Pentanone	ND	10.0	ug/L
Acetone	ND	10.0	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	2.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	0.6	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon Disulfide	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	0.4	ug/L
Dibromochloromethane	ND	1.0	ug/L



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903697

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC92759 - 5030B

Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Hexachloroethane	ND	1.0	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	26.9		ug/L	25.00		108	70-130			
Surrogate: 4-Bromofluorobenzene	22.5		ug/L	25.00		90	70-130			
Surrogate: Dibromofluoromethane	25.4		ug/L	25.00		102	70-130			
Surrogate: Toluene-d8	24.9		ug/L	25.00		100	70-130			

LCS

1,1,1,2-Tetrachloroethane	10.4		ug/L	10.00		104	70-130			
1,1,1-Trichloroethane	11.1		ug/L	10.00		111	70-130			
1,1,2,2-Tetrachloroethane	9.8		ug/L	10.00		98	70-130			
1,1,2-Trichloroethane	10.1		ug/L	10.00		101	70-130			
1,1-Dichloroethane	10.0		ug/L	10.00		100	70-130			
1,1-Dichloroethene	10.6		ug/L	10.00		106	70-130			
1,1-Dichloropropene	10.6		ug/L	10.00		106	70-130			
1,2,3-Trichlorobenzene	10.6		ug/L	10.00		106	70-130			
1,2,3-Trichloropropane	9.8		ug/L	10.00		98	70-130			
1,2,4-Trichlorobenzene	10.1		ug/L	10.00		101	70-130			
1,2,4-Trimethylbenzene	10.4		ug/L	10.00		104	70-130			
1,2-Dibromo-3-Chloropropane	10.2		ug/L	10.00		102	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903697

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC92759 - 5030B

1,2-Dibromoethane	10.4		ug/L	10.00		104	70-130			
1,2-Dichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2-Dichloroethane	11.0		ug/L	10.00		110	70-130			
1,2-Dichloropropane	10.1		ug/L	10.00		101	70-130			
1,3,5-Trimethylbenzene	10.6		ug/L	10.00		106	70-130			
1,3-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,3-Dichloropropane	10.2		ug/L	10.00		102	70-130			
1,4-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,4-Dioxane - Screen	212		ug/L	200.0		106	0-332			
2,2-Dichloropropane	11.4		ug/L	10.00		114	70-130			
2-Butanone	47.7		ug/L	50.00		95	70-130			
2-Chlorotoluene	10.3		ug/L	10.00		103	70-130			
2-Hexanone	49.5		ug/L	50.00		99	70-130			
4-Chlorotoluene	10.2		ug/L	10.00		102	70-130			
4-Isopropyltoluene	10.8		ug/L	10.00		108	70-130			
4-Methyl-2-Pentanone	47.2		ug/L	50.00		94	70-130			
Acetone	47.3		ug/L	50.00		95	70-130			
Benzene	10.7		ug/L	10.00		107	70-130			
Bromobenzene	10.9		ug/L	10.00		109	70-130			
Bromochloromethane	10.7		ug/L	10.00		107	70-130			
Bromodichloromethane	10.5		ug/L	10.00		105	70-130			
Bromoform	11.2		ug/L	10.00		112	70-130			
Bromomethane	12.2		ug/L	10.00		122	70-130			
Carbon Disulfide	11.0		ug/L	10.00		110	70-130			
Carbon Tetrachloride	11.5		ug/L	10.00		115	70-130			
Chlorobenzene	9.9		ug/L	10.00		99	70-130			
Chloroethane	11.5		ug/L	10.00		115	70-130			
Chloroform	10.8		ug/L	10.00		108	70-130			
Chloromethane	11.9		ug/L	10.00		119	70-130			
cis-1,2-Dichloroethene	10.8		ug/L	10.00		108	70-130			
cis-1,3-Dichloropropene	10.2		ug/L	10.00		102	70-130			
Dibromochloromethane	8.9		ug/L	10.00		89	70-130			
Dibromomethane	10.6		ug/L	10.00		106	70-130			
Dichlorodifluoromethane	12.6		ug/L	10.00		126	70-130			
Diethyl Ether	9.4		ug/L	10.00		94	70-130			
Di-isopropyl ether	9.6		ug/L	10.00		96	70-130			
Ethyl tertiary-butyl ether	9.1		ug/L	10.00		91	70-130			
Ethylbenzene	10.1		ug/L	10.00		101	70-130			
Hexachlorobutadiene	12.2		ug/L	10.00		122	70-130			
Hexachloroethane	11.7		ug/L	10.00		117	70-130			
Isopropylbenzene	10.2		ug/L	10.00		102	70-130			
Methyl tert-Butyl Ether	9.9		ug/L	10.00		99	70-130			
Methylene Chloride	10.8		ug/L	10.00		108	70-130			
Naphthalene	9.5		ug/L	10.00		95	70-130			
n-Butylbenzene	10.7		ug/L	10.00		107	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903697

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC92759 - 5030B

n-Propylbenzene	10.1		ug/L	10.00		101	70-130			
sec-Butylbenzene	10.6		ug/L	10.00		106	70-130			
Styrene	10.3		ug/L	10.00		103	70-130			
tert-Butylbenzene	10.5		ug/L	10.00		105	70-130			
Tertiary-amyl methyl ether	9.2		ug/L	10.00		92	70-130			
Tetrachloroethene	9.6		ug/L	10.00		96	70-130			
Tetrahydrofuran	11.8		ug/L	10.00		118	70-130			
Toluene	10.1		ug/L	10.00		101	70-130			
trans-1,2-Dichloroethene	9.9		ug/L	10.00		99	70-130			
trans-1,3-Dichloropropene	10.6		ug/L	10.00		106	70-130			
Trichloroethene	11.0		ug/L	10.00		110	70-130			
Trichlorofluoromethane	11.8		ug/L	10.00		118	70-130			
Vinyl Chloride	12.4		ug/L	10.00		124	70-130			
Xylene O	10.4		ug/L	10.00		104	70-130			
Xylene P,M	20.4		ug/L	20.00		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	25.2		ug/L	25.00		101	70-130			
Surrogate: 4-Bromofluorobenzene	24.6		ug/L	25.00		99	70-130			
Surrogate: Dibromofluoromethane	26.0		ug/L	25.00		104	70-130			
Surrogate: Toluene-d8	24.1		ug/L	25.00		96	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	10.9		ug/L	10.00		109	70-130	5	20	
1,1,1-Trichloroethane	11.2		ug/L	10.00		112	70-130	1	20	
1,1,2,2-Tetrachloroethane	9.7		ug/L	10.00		97	70-130	0.6	20	
1,1,2-Trichloroethane	11.0		ug/L	10.00		110	70-130	8	20	
1,1-Dichloroethane	10.1		ug/L	10.00		101	70-130	0.3	20	
1,1-Dichloroethene	10.8		ug/L	10.00		108	70-130	3	20	
1,1-Dichloropropene	10.6		ug/L	10.00		106	70-130	0.7	20	
1,2,3-Trichlorobenzene	10.0		ug/L	10.00		100	70-130	6	20	
1,2,3-Trichloropropane	8.6		ug/L	10.00		86	70-130	13	20	
1,2,4-Trichlorobenzene	10.0		ug/L	10.00		100	70-130	1	20	
1,2,4-Trimethylbenzene	10.0		ug/L	10.00		100	70-130	4	20	
1,2-Dibromo-3-Chloropropane	11.2		ug/L	10.00		112	70-130	9	20	
1,2-Dibromoethane	10.4		ug/L	10.00		104	70-130	0.2	20	
1,2-Dichlorobenzene	10.1		ug/L	10.00		101	70-130	2	20	
1,2-Dichloroethane	11.0		ug/L	10.00		110	70-130	0.4	20	
1,2-Dichloropropane	10.3		ug/L	10.00		103	70-130	2	20	
1,3,5-Trimethylbenzene	10.0		ug/L	10.00		100	70-130	5	20	
1,3-Dichlorobenzene	9.9		ug/L	10.00		99	70-130	5	20	
1,3-Dichloropropane	10.2		ug/L	10.00		102	70-130	0.3	20	
1,4-Dichlorobenzene	10.3		ug/L	10.00		103	70-130	1	20	
1,4-Dioxane - Screen	225		ug/L	200.0		112	0-332	6	200	
2,2-Dichloropropane	11.0		ug/L	10.00		110	70-130	4	20	
2-Butanone	49.5		ug/L	50.00		99	70-130	4	20	
2-Chlorotoluene	9.6		ug/L	10.00		96	70-130	7	20	
2-Hexanone	49.7		ug/L	50.00		99	70-130	0.4	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903697

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC92759 - 5030B

4-Chlorotoluene	10.3		ug/L	10.00		103	70-130	0.2	20	
4-Isopropyltoluene	10.0		ug/L	10.00		100	70-130	8	20	
4-Methyl-2-Pentanone	51.4		ug/L	50.00		103	70-130	9	20	
Acetone	47.4		ug/L	50.00		95	70-130	0.04	20	
Benzene	10.3		ug/L	10.00		103	70-130	4	20	
Bromobenzene	10.6		ug/L	10.00		106	70-130	4	20	
Bromochloromethane	10.8		ug/L	10.00		108	70-130	1	20	
Bromodichloromethane	10.5		ug/L	10.00		105	70-130	0.09	20	
Bromoform	11.0		ug/L	10.00		110	70-130	2	20	
Bromomethane	12.5		ug/L	10.00		125	70-130	3	20	
Carbon Disulfide	11.0		ug/L	10.00		110	70-130	0.8	20	
Carbon Tetrachloride	11.6		ug/L	10.00		116	70-130	0.3	20	
Chlorobenzene	10.0		ug/L	10.00		100	70-130	1	20	
Chloroethane	10.8		ug/L	10.00		108	70-130	7	20	
Chloroform	10.8		ug/L	10.00		108	70-130	0.5	20	
Chloromethane	12.1		ug/L	10.00		121	70-130	1	20	
cis-1,2-Dichloroethene	10.4		ug/L	10.00		104	70-130	4	20	
cis-1,3-Dichloropropene	10.4		ug/L	10.00		104	70-130	2	20	
Dibromochloromethane	9.0		ug/L	10.00		90	70-130	0.8	20	
Dibromomethane	10.9		ug/L	10.00		109	70-130	3	20	
Dichlorodifluoromethane	12.1		ug/L	10.00		121	70-130	5	20	
Diethyl Ether	9.4		ug/L	10.00		94	70-130	0.7	20	
Di-isopropyl ether	9.7		ug/L	10.00		97	70-130	1	20	
Ethyl tertiary-butyl ether	9.2		ug/L	10.00		92	70-130	2	20	
Ethylbenzene	10.1		ug/L	10.00		101	70-130	0	20	
Hexachlorobutadiene	11.7		ug/L	10.00		117	70-130	5	20	
Hexachloroethane	10.9		ug/L	10.00		109	70-130	7	20	
Isopropylbenzene	10.0		ug/L	10.00		100	70-130	2	20	
Methyl tert-Butyl Ether	9.9		ug/L	10.00		99	70-130	0.2	20	
Methylene Chloride	11.0		ug/L	10.00		110	70-130	1	20	
Naphthalene	9.4		ug/L	10.00		94	70-130	0.3	20	
n-Butylbenzene	10.1		ug/L	10.00		101	70-130	5	20	
n-Propylbenzene	9.6		ug/L	10.00		96	70-130	5	20	
sec-Butylbenzene	10.0		ug/L	10.00		100	70-130	6	20	
Styrene	10.0		ug/L	10.00		100	70-130	2	20	
tert-Butylbenzene	10.0		ug/L	10.00		100	70-130	4	20	
Tertiary-amyl methyl ether	9.4		ug/L	10.00		94	70-130	3	20	
Tetrachloroethene	9.7		ug/L	10.00		97	70-130	1	20	
Tetrahydrofuran	11.5		ug/L	10.00		115	70-130	3	20	
Toluene	10.4		ug/L	10.00		104	70-130	3	20	
trans-1,2-Dichloroethene	10.2		ug/L	10.00		102	70-130	3	20	
trans-1,3-Dichloropropene	10.0		ug/L	10.00		100	70-130	5	20	
Trichloroethene	10.8		ug/L	10.00		108	70-130	2	20	
Trichlorofluoromethane	11.8		ug/L	10.00		118	70-130	0.3	20	
Vinyl Chloride	11.8		ug/L	10.00		118	70-130	5	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903697

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CC92759 - 5030B

Xylene O	9.9		ug/L	10.00		99	70-130	5	20	
Xylene P,M	20.3		ug/L	20.00		101	70-130	0.4	20	
Surrogate: 1,2-Dichloroethane-d4	25.8		ug/L	25.00		103	70-130			
Surrogate: 4-Bromofluorobenzene	23.8		ug/L	25.00		95	70-130			
Surrogate: Dibromofluoromethane	26.1		ug/L	25.00		104	70-130			
Surrogate: Toluene-d8	24.0		ug/L	25.00		96	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

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ESS Laboratory Work Order: 1903697

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903697

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM

ESS Project ID: 1903697

Shipped/Delivered Via: ESS Courier

Date Received: 3/26/2019

Project Due Date: 4/2/2019

Days for Project: 5 Day

1. Air bill manifest present? ☐ No

Air No.: NA

6. Does COC match bottles? ☐ Yes

2. Were custody seals present? ☐ No

7. Is COC complete and correct? ☐ Yes

3. Is radiation count <100 CPM? ☐ Yes

8. Were samples received intact? ☐ Yes

4. Is a Cooler Present? ☐ Yes

Temp: 0.3 Iced with: Ice

9. Were labs informed about short holds & rushes? Yes / No / NA

5. Was COC signed and dated by client? ☐ Yes

10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No

ESS Sample IDs:

Analysis: _____

TAT: _____

12. Were VOAs received?

a. Air bubbles in aqueous VOAs?

b. Does methanol cover soil completely?

Yes / No

Yes / No

Yes / No / NA

13. Are the samples properly preserved?

Yes / No

a. If metals preserved upon receipt:

Date: _____

Time: _____

By: _____

b. Low Level VOA vials frozen:

Date: _____

Time: _____

By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager?

Yes / No

a. Was there a need to contact the client?

Yes / No

Who was contacted? _____

Date: _____

Time: _____

By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608.3 Pesticides)
01	327695	Yes	No	Yes	VOA Vial - HCl	HCl	
01	327696	Yes	No	Yes	VOA Vial - HCl	HCl	
01	327697	Yes	No	Yes	VOA Vial - HCl	HCl	
02	327692	Yes	No	Yes	VOA Vial - HCl	HCl	
02	327693	Yes	No	Yes	VOA Vial - HCl	HCl	
02	327694	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review

All containers scanned into storage/lab

Are barcode labels on correct containers?

Are all necessary stickers attached?

Initials: GA

Yes / No

Yes / No

Completed

By: [Signature]

Date & Time: 3/26/19 1756

Reviewed

By: [Signature]

Date & Time: 3/26/19 1800

Delivered

By: [Signature]

Date & Time: 3/26/19 1800



CERTIFICATE OF ANALYSIS

Susan O'Brien
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric (223812.03)
ESS Laboratory Work Order Number: 19F0777

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 3:08 pm, Jul 01, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19F0777

SAMPLE RECEIPT

The following samples were received on June 24, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
19F0777-01	Influent	Waste Water	8260B
19F0777-02	Effluent	Waste Water	8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19F0777

PROJECT NARRATIVE

8260B Volatile Organic Compounds

C9F0417-CCV1 [Continuing Calibration %Diff/Drift is below control limit \(CD-\).](#)
1,4-Dioxane - Screen (34% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19F0777

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Influent
Date Sampled: 06/21/19 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19F0777
ESS Laboratory Sample ID: 19F0777-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,1,1-Trichloroethane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,1,2-Trichloroethane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,1-Dichloroethane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,1-Dichloroethene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,1-Dichloropropene	ND (2.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,2,3-Trichloropropane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,2-Dibromoethane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,2-Dichlorobenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,2-Dichloroethane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,2-Dichloropropane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,3-Dichlorobenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,3-Dichloropropane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,4-Dichlorobenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
1,4-Dioxane - Screen	ND (500)		8260B		1	06/25/19 15:48	C9F0417	CF92518
2,2-Dichloropropane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
2-Butanone	ND (10.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
2-Chlorotoluene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
2-Hexanone	ND (10.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
4-Chlorotoluene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
4-Isopropyltoluene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Acetone	ND (10.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Benzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Bromobenzene	ND (2.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Bromochloromethane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Influent
Date Sampled: 06/21/19 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19F0777
ESS Laboratory Sample ID: 19F0777-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Bromoform	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Bromomethane	ND (2.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Carbon Disulfide	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Carbon Tetrachloride	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Chlorobenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Chloroethane	ND (2.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Chloroform	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Chloromethane	ND (2.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
cis-1,2-Dichloroethene	4.2 (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Dibromochloromethane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Dibromomethane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Dichlorodifluoromethane	ND (2.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Diethyl Ether	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Di-isopropyl ether	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Ethylbenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Hexachlorobutadiene	ND (0.6)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Hexachloroethane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Isopropylbenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Methylene Chloride	ND (2.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Naphthalene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
n-Butylbenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
n-Propylbenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
sec-Butylbenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Styrene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
tert-Butylbenzene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Tetrachloroethene	ND (1.0)		8260B	1	1	06/25/19 15:48	C9F0417	CF92518
Tetrahydrofuran	ND (5.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Influent
Date Sampled: 06/21/19 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19F0777
ESS Laboratory Sample ID: 19F0777-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Trichloroethene	13.8 (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Trichlorofluoromethane	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Vinyl Chloride	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Xylene O	ND (1.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Xylene P,M	ND (2.0)		8260B		1	06/25/19 15:48	C9F0417	CF92518
Xylenes (Total)	ND (2.00)		8260B		1	06/25/19 15:48		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	103 %		70-130
Surrogate: 4-Bromofluorobenzene	98 %		70-130
Surrogate: Dibromofluoromethane	104 %		70-130
Surrogate: Toluene-d8	97 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 06/21/19 12:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19F0777
ESS Laboratory Sample ID: 19F0777-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,1,1-Trichloroethane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,1,2-Trichloroethane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,1-Dichloroethane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,1-Dichloroethene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,1-Dichloropropene	ND (2.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,2,3-Trichloropropane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,2-Dibromoethane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,2-Dichlorobenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,2-Dichloroethane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,2-Dichloropropane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,3-Dichlorobenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,3-Dichloropropane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,4-Dichlorobenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
1,4-Dioxane - Screen	ND (500)		8260B		1	06/25/19 16:14	C9F0417	CF92518
2,2-Dichloropropane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
2-Butanone	ND (10.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
2-Chlorotoluene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
2-Hexanone	ND (10.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
4-Chlorotoluene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
4-Isopropyltoluene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Acetone	ND (10.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Benzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Bromobenzene	ND (2.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Bromochloromethane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 06/21/19 12:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19F0777
ESS Laboratory Sample ID: 19F0777-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Bromoform	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Bromomethane	ND (2.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Carbon Disulfide	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Carbon Tetrachloride	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Chlorobenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Chloroethane	ND (2.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Chloroform	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Chloromethane	ND (2.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Dibromochloromethane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Dibromomethane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Dichlorodifluoromethane	ND (2.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Diethyl Ether	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Di-isopropyl ether	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Ethylbenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Hexachlorobutadiene	ND (0.6)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Hexachloroethane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Isopropylbenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Methylene Chloride	ND (2.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Naphthalene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
n-Butylbenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
n-Propylbenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
sec-Butylbenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Styrene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
tert-Butylbenzene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Tetrachloroethene	ND (1.0)		8260B	1	1	06/25/19 16:14	C9F0417	CF92518
Tetrahydrofuran	ND (5.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric
Client Sample ID: Effluent
Date Sampled: 06/21/19 12:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19F0777
ESS Laboratory Sample ID: 19F0777-02
Sample Matrix: Waste Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Trichloroethene	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Trichlorofluoromethane	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Vinyl Chloride	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Xylene O	ND (1.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Xylene P,M	ND (2.0)		8260B		1	06/25/19 16:14	C9F0417	CF92518
Xylenes (Total)	ND (2.00)		8260B		1	06/25/19 16:14		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	99 %		70-130
Surrogate: 4-Bromofluorobenzene	93 %		70-130
Surrogate: Dibromofluoromethane	101 %		70-130
Surrogate: Toluene-d8	98 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19F0777

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF92518 - 5030B

Blank

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloropropene	ND	2.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,4-Dioxane - Screen	ND	500	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
2-Butanone	ND	10.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
2-Hexanone	ND	10.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
4-Isopropyltoluene	ND	1.0	ug/L
4-Methyl-2-Pentanone	ND	10.0	ug/L
Acetone	ND	10.0	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	2.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	0.6	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon Disulfide	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	0.4	ug/L
Dibromochloromethane	ND	1.0	ug/L





CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19F0777

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF92518 - 5030B

Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Hexachloroethane	ND	1.0	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	24.4		ug/L	25.00		97	70-130			
Surrogate: 4-Bromofluorobenzene	24.6		ug/L	25.00		99	70-130			
Surrogate: Dibromofluoromethane	24.8		ug/L	25.00		99	70-130			
Surrogate: Toluene-d8	25.2		ug/L	25.00		101	70-130			

LCS

1,1,1,2-Tetrachloroethane	8.3		ug/L	10.00		83	70-130			
1,1,1-Trichloroethane	10.0		ug/L	10.00		100	70-130			
1,1,2,2-Tetrachloroethane	9.0		ug/L	10.00		90	70-130			
1,1,2-Trichloroethane	8.7		ug/L	10.00		87	70-130			
1,1-Dichloroethane	9.7		ug/L	10.00		97	70-130			
1,1-Dichloroethene	10.2		ug/L	10.00		102	70-130			
1,1-Dichloropropene	9.8		ug/L	10.00		98	70-130			
1,2,3-Trichlorobenzene	9.5		ug/L	10.00		95	70-130			
1,2,3-Trichloropropane	8.9		ug/L	10.00		89	70-130			
1,2,4-Trichlorobenzene	9.2		ug/L	10.00		92	70-130			
1,2,4-Trimethylbenzene	9.0		ug/L	10.00		90	70-130			
1,2-Dibromo-3-Chloropropane	8.0		ug/L	10.00		80	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
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ESS Laboratory Work Order: 19F0777

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF92518 - 5030B

1,2-Dibromoethane	9.5		ug/L	10.00		95	70-130			
1,2-Dichlorobenzene	8.9		ug/L	10.00		89	70-130			
1,2-Dichloroethane	9.9		ug/L	10.00		99	70-130			
1,2-Dichloropropane	9.6		ug/L	10.00		96	70-130			
1,3,5-Trimethylbenzene	9.8		ug/L	10.00		98	70-130			
1,3-Dichlorobenzene	8.8		ug/L	10.00		88	70-130			
1,3-Dichloropropane	10.3		ug/L	10.00		103	70-130			
1,4-Dichlorobenzene	9.4		ug/L	10.00		94	70-130			
1,4-Dioxane - Screen	228		ug/L	200.0		114	0-332			
2,2-Dichloropropane	10.2		ug/L	10.00		102	70-130			
2-Butanone	43.0		ug/L	50.00		86	70-130			
2-Chlorotoluene	9.4		ug/L	10.00		94	70-130			
2-Hexanone	42.8		ug/L	50.00		86	70-130			
4-Chlorotoluene	9.5		ug/L	10.00		95	70-130			
4-Isopropyltoluene	9.9		ug/L	10.00		99	70-130			
4-Methyl-2-Pentanone	41.4		ug/L	50.00		83	70-130			
Acetone	42.3		ug/L	50.00		85	70-130			
Benzene	10.0		ug/L	10.00		100	70-130			
Bromobenzene	9.2		ug/L	10.00		92	70-130			
Bromochloromethane	9.7		ug/L	10.00		97	70-130			
Bromodichloromethane	8.6		ug/L	10.00		86	70-130			
Bromoform	9.5		ug/L	10.00		95	70-130			
Bromomethane	9.7		ug/L	10.00		97	70-130			
Carbon Disulfide	10.5		ug/L	10.00		105	70-130			
Carbon Tetrachloride	10.0		ug/L	10.00		100	70-130			
Chlorobenzene	9.4		ug/L	10.00		94	70-130			
Chloroethane	9.8		ug/L	10.00		98	70-130			
Chloroform	10.0		ug/L	10.00		100	70-130			
Chloromethane	9.9		ug/L	10.00		99	70-130			
cis-1,2-Dichloroethene	10.0		ug/L	10.00		100	70-130			
cis-1,3-Dichloropropene	8.8		ug/L	10.00		88	70-130			
Dibromochloromethane	7.6		ug/L	10.00		76	70-130			
Dibromomethane	8.9		ug/L	10.00		89	70-130			
Dichlorodifluoromethane	9.2		ug/L	10.00		92	70-130			
Diethyl Ether	9.4		ug/L	10.00		94	70-130			
Di-isopropyl ether	9.5		ug/L	10.00		95	70-130			
Ethyl tertiary-butyl ether	9.2		ug/L	10.00		92	70-130			
Ethylbenzene	10.4		ug/L	10.00		104	70-130			
Hexachlorobutadiene	11.0		ug/L	10.00		110	70-130			
Hexachloroethane	8.5		ug/L	10.00		85	70-130			
Isopropylbenzene	9.4		ug/L	10.00		94	70-130			
Methyl tert-Butyl Ether	10.1		ug/L	10.00		101	70-130			
Methylene Chloride	9.2		ug/L	10.00		92	70-130			
Naphthalene	8.3		ug/L	10.00		83	70-130			
n-Butylbenzene	9.6		ug/L	10.00		96	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19F0777

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF92518 - 5030B

n-Propylbenzene	9.6		ug/L	10.00		96	70-130			
sec-Butylbenzene	9.3		ug/L	10.00		93	70-130			
Styrene	9.8		ug/L	10.00		98	70-130			
tert-Butylbenzene	8.6		ug/L	10.00		86	70-130			
Tertiary-amyl methyl ether	9.3		ug/L	10.00		93	70-130			
Tetrachloroethene	8.6		ug/L	10.00		86	70-130			
Tetrahydrofuran	9.3		ug/L	10.00		93	70-130			
Toluene	9.2		ug/L	10.00		92	70-130			
trans-1,2-Dichloroethene	9.8		ug/L	10.00		98	70-130			
trans-1,3-Dichloropropene	8.3		ug/L	10.00		83	70-130			
Trichloroethene	9.3		ug/L	10.00		93	70-130			
Trichlorofluoromethane	10.0		ug/L	10.00		100	70-130			
Vinyl Chloride	9.1		ug/L	10.00		91	70-130			
Xylene O	9.9		ug/L	10.00		99	70-130			
Xylene P,M	20.2		ug/L	20.00		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.2		ug/L	25.00		97	70-130			
Surrogate: 4-Bromofluorobenzene	25.6		ug/L	25.00		102	70-130			
Surrogate: Dibromofluoromethane	24.7		ug/L	25.00		99	70-130			
Surrogate: Toluene-d8	24.8		ug/L	25.00		99	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	8.0		ug/L	10.00		80	70-130	4	20	
1,1,1-Trichloroethane	10.1		ug/L	10.00		101	70-130	1	20	
1,1,2,2-Tetrachloroethane	10.0		ug/L	10.00		100	70-130	11	20	
1,1,2-Trichloroethane	9.4		ug/L	10.00		94	70-130	8	20	
1,1-Dichloroethane	9.8		ug/L	10.00		98	70-130	0.9	20	
1,1-Dichloroethene	9.7		ug/L	10.00		97	70-130	5	20	
1,1-Dichloropropene	10.1		ug/L	10.00		101	70-130	3	20	
1,2,3-Trichlorobenzene	9.3		ug/L	10.00		93	70-130	2	20	
1,2,3-Trichloropropane	9.3		ug/L	10.00		93	70-130	4	20	
1,2,4-Trichlorobenzene	9.2		ug/L	10.00		92	70-130	0.2	20	
1,2,4-Trimethylbenzene	9.4		ug/L	10.00		94	70-130	4	20	
1,2-Dibromo-3-Chloropropane	9.0		ug/L	10.00		90	70-130	13	20	
1,2-Dibromoethane	9.3		ug/L	10.00		93	70-130	1	20	
1,2-Dichlorobenzene	9.6		ug/L	10.00		96	70-130	7	20	
1,2-Dichloroethane	9.7		ug/L	10.00		97	70-130	1	20	
1,2-Dichloropropane	9.3		ug/L	10.00		93	70-130	3	20	
1,3,5-Trimethylbenzene	9.6		ug/L	10.00		96	70-130	2	20	
1,3-Dichlorobenzene	9.2		ug/L	10.00		92	70-130	5	20	
1,3-Dichloropropane	9.9		ug/L	10.00		99	70-130	3	20	
1,4-Dichlorobenzene	9.2		ug/L	10.00		92	70-130	1	20	
1,4-Dioxane - Screen	201		ug/L	200.0		101	0-332	12	200	
2,2-Dichloropropane	10.0		ug/L	10.00		100	70-130	1	20	
2-Butanone	44.9		ug/L	50.00		90	70-130	4	20	
2-Chlorotoluene	9.9		ug/L	10.00		99	70-130	5	20	
2-Hexanone	42.5		ug/L	50.00		85	70-130	0.8	20	



CERTIFICATE OF ANALYSIS

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ESS Laboratory Work Order: 19F0777

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF92518 - 5030B

4-Chlorotoluene	9.4		ug/L	10.00		94	70-130	1	20	
4-Isopropyltoluene	9.9		ug/L	10.00		99	70-130	0.2	20	
4-Methyl-2-Pentanone	44.9		ug/L	50.00		90	70-130	8	20	
Acetone	42.0		ug/L	50.00		84	70-130	0.8	20	
Benzene	10.0		ug/L	10.00		100	70-130	0.8	20	
Bromobenzene	9.3		ug/L	10.00		93	70-130	2	20	
Bromochloromethane	9.2		ug/L	10.00		92	70-130	5	20	
Bromodichloromethane	8.6		ug/L	10.00		86	70-130	0.6	20	
Bromoform	9.0		ug/L	10.00		90	70-130	6	20	
Bromomethane	9.9		ug/L	10.00		99	70-130	2	20	
Carbon Disulfide	10.5		ug/L	10.00		105	70-130	0.2	20	
Carbon Tetrachloride	10.0		ug/L	10.00		100	70-130	0	20	
Chlorobenzene	9.5		ug/L	10.00		95	70-130	1	20	
Chloroethane	10.0		ug/L	10.00		100	70-130	2	20	
Chloroform	10.5		ug/L	10.00		105	70-130	5	20	
Chloromethane	9.0		ug/L	10.00		90	70-130	10	20	
cis-1,2-Dichloroethene	9.7		ug/L	10.00		97	70-130	3	20	
cis-1,3-Dichloropropene	8.7		ug/L	10.00		87	70-130	0.7	20	
Dibromochloromethane	7.6		ug/L	10.00		76	70-130	0.5	20	
Dibromomethane	9.2		ug/L	10.00		92	70-130	4	20	
Dichlorodifluoromethane	9.3		ug/L	10.00		93	70-130	0.8	20	
Diethyl Ether	9.5		ug/L	10.00		95	70-130	1	20	
Di-isopropyl ether	9.6		ug/L	10.00		96	70-130	1	20	
Ethyl tertiary-butyl ether	9.5		ug/L	10.00		95	70-130	3	20	
Ethylbenzene	9.8		ug/L	10.00		98	70-130	6	20	
Hexachlorobutadiene	9.5		ug/L	10.00		95	70-130	14	20	
Hexachloroethane	9.2		ug/L	10.00		92	70-130	7	20	
Isopropylbenzene	9.7		ug/L	10.00		97	70-130	3	20	
Methyl tert-Butyl Ether	10.3		ug/L	10.00		103	70-130	1	20	
Methylene Chloride	8.9		ug/L	10.00		89	70-130	3	20	
Naphthalene	8.6		ug/L	10.00		86	70-130	3	20	
n-Butylbenzene	10.0		ug/L	10.00		100	70-130	4	20	
n-Propylbenzene	10.0		ug/L	10.00		100	70-130	4	20	
sec-Butylbenzene	9.6		ug/L	10.00		96	70-130	4	20	
Styrene	8.9		ug/L	10.00		89	70-130	9	20	
tert-Butylbenzene	8.9		ug/L	10.00		89	70-130	3	20	
Tertiary-amyl methyl ether	9.8		ug/L	10.00		98	70-130	5	20	
Tetrachloroethene	7.9		ug/L	10.00		79	70-130	8	20	
Tetrahydrofuran	7.7		ug/L	10.00		77	70-130	18	20	
Toluene	9.5		ug/L	10.00		95	70-130	2	20	
trans-1,2-Dichloroethene	10.6		ug/L	10.00		106	70-130	8	20	
trans-1,3-Dichloropropene	8.3		ug/L	10.00		83	70-130	0.4	20	
Trichloroethene	9.3		ug/L	10.00		93	70-130	0.1	20	
Trichlorofluoromethane	10.2		ug/L	10.00		102	70-130	1	20	
Vinyl Chloride	9.7		ug/L	10.00		97	70-130	7	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19F0777

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CF92518 - 5030B

Xylene O	9.4		ug/L	10.00		94	70-130	5	20	
Xylene P,M	19.2		ug/L	20.00		96	70-130	6	20	
Surrogate: 1,2-Dichloroethane-d4	25.5		ug/L	25.00		102	70-130			
Surrogate: 4-Bromofluorobenzene	24.6		ug/L	25.00		98	70-130			
Surrogate: Dibromofluoromethane	25.7		ug/L	25.00		103	70-130			
Surrogate: Toluene-d8	23.9		ug/L	25.00		96	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19F0777

Notes and Definitions

U	Analyte included in the analysis, but not detected
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric

ESS Laboratory Work Order: 19F0777

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 19F0777
 Date Received: 6/24/2019
 Project Due Date: 7/1/2019
 Days for Project: 5 Day

1. Air bill manifest present? ☐ No
 Air No.: NA
2. Were custody seals present? ☐ No
3. Is radiation count <100 CPM? ☐ Yes
4. Is a Cooler Present? ☐ Yes
 Temp: 1.6 Iced with: Ice
5. Was COC signed and dated by client? ☐ Yes

6. Does COC match bottles? ☐ Yes
7. Is COC complete and correct? ☐ Yes
8. Were samples received intact? ☐ Yes
9. Were labs informed about short holds & rushes? Yes / No / ☒ NA
10. Were any analyses received outside of hold time? Yes / ☒ No

11. Any Subcontracting needed? Yes ☒ No
 ESS Sample IDs: _____
 Analysis: _____
 TAT: _____

12. Were VOAs received? ☒ Yes / No
 a. Air bubbles in aqueous VOAs? Yes / ☒ No
 b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? ☒ Yes / No
 a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
 b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / ☒ No
 a. Was there a need to contact the client? Yes / ☒ No
 Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	359460	Yes	No	Yes	VOA Vial - HCl	HCl	
01	359461	Yes	No	Yes	VOA Vial - HCl	HCl	
01	359462	Yes	No	Yes	VOA Vial - HCl	HCl	
02	359457	Yes	No	Yes	VOA Vial - HCl	HCl	
02	359458	Yes	No	Yes	VOA Vial - HCl	HCl	
02	359459	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review

Were all containers scanned into storage/lab?

Initials us

Are barcode labels on correct containers?

Yes / No

Are all Flashpoint stickers attached/container ID # circled?

Yes / No / NA

Are all Hex Chrome stickers attached?

Yes / No / NA

Are all QC stickers attached?

Yes / No / NA

Are VOA stickers attached if bubbles noted?

Yes / No / NA

Completed By: [Signature] Date & Time: 6/24/19 1714
 Reviewed By: [Signature] Date & Time: 6/24/19 1725
 Delivered By: [Signature] Date & Time: 6/24/19 1725



CERTIFICATE OF ANALYSIS

Susan O'Brien
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (223812)
ESS Laboratory Work Order Number: 19K0785

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 3:03 pm, Dec 04, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 19K0785

SAMPLE RECEIPT

The following samples were received on November 25, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
19K0785-01	Sump System Effluent	Ground Water	200.7, 200.8, 245.1
19K0785-02	Influent	Ground Water	8260B
19K0785-03	Effluent	Ground Water	8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 19K0785

PROJECT NARRATIVE

8260B Volatile Organic Compounds

C9K0433-CCV1 Continuing Calibration %Diff/Drift is below control limit (CD-).
Acetone (42% @ 20%), Trichlorofluoromethane (37% @ 20%)
CK92633-BS1 Blank Spike recovery is below lower control limit (B-).
Acetone (57% @ 70-130%), Trichlorofluoromethane (60% @ 70-130%)
CK92633-BSD1 Relative percent difference for duplicate is outside of criteria (D+).
Acetone (73% @ 20%), Trichlorofluoromethane (47% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)
[Semivolatile Organics Internal Standard Information](#)
[Semivolatile Organics Surrogate Information](#)
[Volatile Organics Internal Standard Information](#)
[Volatile Organics Surrogate Information](#)
[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 19K0785

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Sump System Effluent
Date Sampled: 11/21/19 11:00
Percent Solids: N/A

ESS Laboratory Work Order: 19K0785
ESS Laboratory Sample ID: 19K0785-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

MA - Permit										
<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Cadmium	ND (0.2)		200.8	0.2	5	NAR	11/27/19 12:17	100	10	CK92537
Copper	68.4 (2.0)		200.7	0.5	1	KJK	11/26/19 21:54	100	10	CK92537
Lead	3.8 (0.5)		200.8	0.5	5	NAR	11/27/19 12:17	100	10	CK92537
Mercury	ND (0.2)		245.1	0.2	1	MKS	12/03/19 9:23	20	40	CK92639
Zinc	117 (5.0)		200.7	5	1	KJK	11/26/19 21:54	100	10	CK92537



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 11/21/19 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19K0785
ESS Laboratory Sample ID: 19K0785-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,1,1-Trichloroethane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,1,2-Trichloroethane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,1-Dichloroethane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,1-Dichloroethene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,1-Dichloropropene	ND (2.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,2,3-Trichloropropane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,2-Dibromoethane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,2-Dichlorobenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,2-Dichloroethane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,2-Dichloropropane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,3-Dichlorobenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,3-Dichloropropane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,4-Dichlorobenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
1,4-Dioxane - Screen	ND (500)		8260B		1	11/26/19 18:12	C9K0433	CK92633
2,2-Dichloropropane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
2-Butanone	ND (10.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
2-Chlorotoluene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
2-Hexanone	ND (10.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
4-Chlorotoluene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
4-Isopropyltoluene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Acetone	ND (10.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Benzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Bromobenzene	ND (2.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Bromochloromethane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 11/21/19 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19K0785
ESS Laboratory Sample ID: 19K0785-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Bromoform	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Bromomethane	ND (2.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Carbon Disulfide	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Carbon Tetrachloride	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Chlorobenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Chloroethane	ND (2.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Chloroform	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Chloromethane	ND (2.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
cis-1,2-Dichloroethene	7.5 (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Dibromochloromethane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Dibromomethane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Dichlorodifluoromethane	ND (2.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Diethyl Ether	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Di-isopropyl ether	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Ethylbenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Hexachlorobutadiene	ND (0.6)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Hexachloroethane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Isopropylbenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Methylene Chloride	ND (2.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Naphthalene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
n-Butylbenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
n-Propylbenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
sec-Butylbenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Styrene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
tert-Butylbenzene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Tetrachloroethene	ND (1.0)		8260B	1	1	11/26/19 18:12	C9K0433	CK92633
Tetrahydrofuran	ND (5.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Influent
Date Sampled: 11/21/19 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19K0785
ESS Laboratory Sample ID: 19K0785-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Trichloroethene	17.7 (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Trichlorofluoromethane	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Vinyl Chloride	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Xylene O	ND (1.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Xylene P,M	ND (2.0)		8260B		1	11/26/19 18:12	C9K0433	CK92633
Xylenes (Total)	ND (2.00)		8260B		1	11/26/19 18:12		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	104 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	96 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	105 %		70-130
<i>Surrogate: Toluene-d8</i>	99 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 11/21/19 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19K0785
ESS Laboratory Sample ID: 19K0785-03
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,1,1-Trichloroethane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,1,2-Trichloroethane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,1-Dichloroethane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,1-Dichloroethene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,1-Dichloropropene	ND (2.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,2,3-Trichloropropane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,2-Dibromoethane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,2-Dichlorobenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,2-Dichloroethane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,2-Dichloropropane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,3-Dichlorobenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,3-Dichloropropane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,4-Dichlorobenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
1,4-Dioxane - Screen	ND (500)		8260B		1	11/26/19 18:38	C9K0433	CK92633
2,2-Dichloropropane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
2-Butanone	ND (10.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
2-Chlorotoluene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
2-Hexanone	ND (10.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
4-Chlorotoluene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
4-Isopropyltoluene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Acetone	ND (10.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Benzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Bromobenzene	ND (2.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Bromochloromethane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 11/21/19 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19K0785
ESS Laboratory Sample ID: 19K0785-03
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Bromodichloromethane	ND (0.6)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Bromoform	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Bromomethane	ND (2.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Carbon Disulfide	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Carbon Tetrachloride	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Chlorobenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Chloroethane	ND (2.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Chloroform	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Chloromethane	ND (2.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Dibromochloromethane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Dibromomethane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Dichlorodifluoromethane	ND (2.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Diethyl Ether	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Di-isopropyl ether	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Ethyl tertiary-butyl ether	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Ethylbenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Hexachlorobutadiene	ND (0.6)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Hexachloroethane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Isopropylbenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Methylene Chloride	ND (2.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Naphthalene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
n-Butylbenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
n-Propylbenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
sec-Butylbenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Styrene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
tert-Butylbenzene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Tetrachloroethene	ND (1.0)		8260B	1	1	11/26/19 18:38	C9K0433	CK92633
Tetrahydrofuran	ND (5.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Effluent
Date Sampled: 11/21/19 10:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19K0785
ESS Laboratory Sample ID: 19K0785-03
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Toluene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Trichloroethene	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Trichlorofluoromethane	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Vinyl Chloride	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Xylene O	ND (1.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Xylene P,M	ND (2.0)		8260B		1	11/26/19 18:38	C9K0433	CK92633
Xylenes (Total)	ND (2.00)		8260B		1	11/26/19 18:38		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	108 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	91 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	108 %		70-130
<i>Surrogate: Toluene-d8</i>	103 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 19K0785

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch CK92537 - 3005A/200.7

Blank

Copper	ND	2.0	ug/L
Zinc	ND	5.0	ug/L

Blank

Cadmium	ND	0.2	ug/L
Lead	ND	0.5	ug/L

LCS

Copper	50.3	2.0	ug/L	50.00	101	85-115
Zinc	48.4	5.0	ug/L	50.00	97	85-115

LCS

Cadmium	24.0	1.0	ug/L	25.00	96	85-115
Lead	46.9	2.5	ug/L	50.00	94	85-115

Batch CK92639 - 245.1/7470A

Blank

Mercury	ND	0.2	ug/L
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LCS

Mercury	6.2	0.2	ug/L	6.042	103	85-115
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LCS Dup

Mercury	6.3	0.2	ug/L	6.042	104	85-115	0.7	20
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8260B Volatile Organic Compounds

Batch CK92633 - 5030B

Blank

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloropropene	ND	2.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 19K0785

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92633 - 5030B

1,4-Dioxane - Screen	ND	500	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
2-Butanone	ND	10.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
2-Hexanone	ND	10.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
4-Isopropyltoluene	ND	1.0	ug/L
4-Methyl-2-Pentanone	ND	10.0	ug/L
Acetone	ND	10.0	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	2.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	0.6	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon Disulfide	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	0.4	ug/L
Dibromochloromethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
Diethyl Ether	ND	1.0	ug/L
Di-isopropyl ether	ND	1.0	ug/L
Ethyl tertiary-butyl ether	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Hexachlorobutadiene	ND	0.6	ug/L
Hexachloroethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl tert-Butyl Ether	ND	1.0	ug/L
Methylene Chloride	ND	2.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Tertiary-amyl methyl ether	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 19K0785

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92633 - 5030B

trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	24.3		ug/L	25.00		97	70-130			
Surrogate: 4-Bromofluorobenzene	23.8		ug/L	25.00		95	70-130			
Surrogate: Dibromofluoromethane	24.4		ug/L	25.00		98	70-130			
Surrogate: Toluene-d8	24.8		ug/L	25.00		99	70-130			

LCS

1,1,1,2-Tetrachloroethane	10.0		ug/L	10.00		100	70-130			
1,1,1-Trichloroethane	9.6		ug/L	10.00		96	70-130			
1,1,2,2-Tetrachloroethane	9.9		ug/L	10.00		99	70-130			
1,1,2-Trichloroethane	9.1		ug/L	10.00		91	70-130			
1,1-Dichloroethane	8.6		ug/L	10.00		86	70-130			
1,1-Dichloroethene	9.9		ug/L	10.00		99	70-130			
1,1-Dichloropropene	9.0		ug/L	10.00		90	70-130			
1,2,3-Trichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,2,3-Trichloropropane	9.0		ug/L	10.00		90	70-130			
1,2,4-Trichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2,4-Trimethylbenzene	10.9		ug/L	10.00		109	70-130			
1,2-Dibromo-3-Chloropropane	10.6		ug/L	10.00		106	70-130			
1,2-Dibromoethane	10.2		ug/L	10.00		102	70-130			
1,2-Dichlorobenzene	9.8		ug/L	10.00		98	70-130			
1,2-Dichloroethane	9.8		ug/L	10.00		98	70-130			
1,2-Dichloropropane	9.0		ug/L	10.00		90	70-130			
1,3,5-Trimethylbenzene	10.5		ug/L	10.00		105	70-130			
1,3-Dichlorobenzene	10.2		ug/L	10.00		102	70-130			
1,3-Dichloropropane	9.8		ug/L	10.00		98	70-130			
1,4-Dichlorobenzene	10.2		ug/L	10.00		102	70-130			
1,4-Dioxane - Screen	201		ug/L	200.0		100	0-332			
2,2-Dichloropropane	9.7		ug/L	10.00		97	70-130			
2-Butanone	46.7		ug/L	50.00		93	70-130			
2-Chlorotoluene	9.9		ug/L	10.00		99	70-130			
2-Hexanone	50.5		ug/L	50.00		101	70-130			
4-Chlorotoluene	9.7		ug/L	10.00		97	70-130			
4-Isopropyltoluene	10.1		ug/L	10.00		101	70-130			
4-Methyl-2-Pentanone	44.2		ug/L	50.00		88	70-130			
Acetone	28.5		ug/L	50.00		57	70-130			B-
Benzene	8.9		ug/L	10.00		89	70-130			
Bromobenzene	9.9		ug/L	10.00		99	70-130			
Bromochloromethane	9.2		ug/L	10.00		92	70-130			
Bromodichloromethane	9.0		ug/L	10.00		90	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 19K0785

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92633 - 5030B

Bromoform	9.4		ug/L	10.00		94	70-130			
Bromomethane	10.5		ug/L	10.00		105	70-130			
Carbon Disulfide	8.4		ug/L	10.00		84	70-130			
Carbon Tetrachloride	10.0		ug/L	10.00		100	70-130			
Chlorobenzene	10.2		ug/L	10.00		102	70-130			
Chloroethane	10.5		ug/L	10.00		105	70-130			
Chloroform	9.4		ug/L	10.00		94	70-130			
Chloromethane	11.5		ug/L	10.00		115	70-130			
cis-1,2-Dichloroethene	9.8		ug/L	10.00		98	70-130			
cis-1,3-Dichloropropene	9.1		ug/L	10.00		91	70-130			
Dibromochloromethane	9.6		ug/L	10.00		96	70-130			
Dibromomethane	10.0		ug/L	10.00		100	70-130			
Dichlorodifluoromethane	8.2		ug/L	10.00		82	70-130			
Diethyl Ether	8.4		ug/L	10.00		84	70-130			
Di-isopropyl ether	8.8		ug/L	10.00		88	70-130			
Ethyl tertiary-butyl ether	9.2		ug/L	10.00		92	70-130			
Ethylbenzene	10.1		ug/L	10.00		101	70-130			
Hexachlorobutadiene	11.2		ug/L	10.00		112	70-130			
Hexachloroethane	9.7		ug/L	10.00		97	70-130			
Isopropylbenzene	10.0		ug/L	10.00		100	70-130			
Methyl tert-Butyl Ether	9.5		ug/L	10.00		95	70-130			
Methylene Chloride	9.1		ug/L	10.00		91	70-130			
Naphthalene	11.1		ug/L	10.00		111	70-130			
n-Butylbenzene	10.5		ug/L	10.00		105	70-130			
n-Propylbenzene	9.7		ug/L	10.00		97	70-130			
sec-Butylbenzene	10.3		ug/L	10.00		103	70-130			
Styrene	9.9		ug/L	10.00		99	70-130			
tert-Butylbenzene	9.9		ug/L	10.00		99	70-130			
Tertiary-amyl methyl ether	9.2		ug/L	10.00		92	70-130			
Tetrachloroethene	8.2		ug/L	10.00		82	70-130			
Tetrahydrofuran	8.2		ug/L	10.00		82	70-130			
Toluene	9.6		ug/L	10.00		96	70-130			
trans-1,2-Dichloroethene	9.1		ug/L	10.00		91	70-130			
trans-1,3-Dichloropropene	9.3		ug/L	10.00		93	70-130			
Trichloroethene	9.7		ug/L	10.00		97	70-130			
Trichlorofluoromethane	6.0		ug/L	10.00		60	70-130			B-
Vinyl Chloride	10.0		ug/L	10.00		100	70-130			
Xylene O	10.6		ug/L	10.00		106	70-130			
Xylene P,M	20.8		ug/L	20.00		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.0		ug/L	25.00		96	70-130			
Surrogate: 4-Bromofluorobenzene	25.2		ug/L	25.00		101	70-130			
Surrogate: Dibromofluoromethane	24.3		ug/L	25.00		97	70-130			
Surrogate: Toluene-d8	24.5		ug/L	25.00		98	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	9.8		ug/L	10.00		98	70-130	2	20	
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CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 19K0785

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92633 - 5030B

1,1,1-Trichloroethane	9.8		ug/L	10.00		98	70-130	2	20	
1,1,2,2-Tetrachloroethane	9.6		ug/L	10.00		96	70-130	3	20	
1,1,2-Trichloroethane	8.9		ug/L	10.00		89	70-130	3	20	
1,1-Dichloroethane	8.4		ug/L	10.00		84	70-130	2	20	
1,1-Dichloroethene	10.4		ug/L	10.00		104	70-130	4	20	
1,1-Dichloropropene	9.8		ug/L	10.00		98	70-130	8	20	
1,2,3-Trichlorobenzene	9.6		ug/L	10.00		96	70-130	8	20	
1,2,3-Trichloropropane	8.4		ug/L	10.00		84	70-130	6	20	
1,2,4-Trichlorobenzene	9.8		ug/L	10.00		98	70-130	5	20	
1,2,4-Trimethylbenzene	10.2		ug/L	10.00		102	70-130	7	20	
1,2-Dibromo-3-Chloropropane	9.3		ug/L	10.00		93	70-130	13	20	
1,2-Dibromoethane	9.7		ug/L	10.00		97	70-130	4	20	
1,2-Dichlorobenzene	9.5		ug/L	10.00		95	70-130	3	20	
1,2-Dichloroethane	9.4		ug/L	10.00		94	70-130	4	20	
1,2-Dichloropropane	8.6		ug/L	10.00		86	70-130	4	20	
1,3,5-Trimethylbenzene	10.4		ug/L	10.00		104	70-130	2	20	
1,3-Dichlorobenzene	9.7		ug/L	10.00		97	70-130	5	20	
1,3-Dichloropropane	9.6		ug/L	10.00		96	70-130	2	20	
1,4-Dichlorobenzene	9.8		ug/L	10.00		98	70-130	4	20	
1,4-Dioxane - Screen	193		ug/L	200.0		97	0-332	4	200	
2,2-Dichloropropane	9.2		ug/L	10.00		92	70-130	5	20	
2-Butanone	50.0		ug/L	50.00		100	70-130	7	20	
2-Chlorotoluene	9.7		ug/L	10.00		97	70-130	2	20	
2-Hexanone	50.9		ug/L	50.00		102	70-130	0.9	20	
4-Chlorotoluene	9.2		ug/L	10.00		92	70-130	6	20	
4-Isopropyltoluene	9.8		ug/L	10.00		98	70-130	3	20	
4-Methyl-2-Pentanone	43.3		ug/L	50.00		87	70-130	2	20	
Acetone	61.2		ug/L	50.00		122	70-130	73	20	D+
Benzene	9.2		ug/L	10.00		92	70-130	3	20	
Bromobenzene	10.0		ug/L	10.00		100	70-130	1	20	
Bromochloromethane	9.2		ug/L	10.00		92	70-130	0.2	20	
Bromodichloromethane	9.2		ug/L	10.00		92	70-130	2	20	
Bromoform	9.5		ug/L	10.00		95	70-130	1	20	
Bromomethane	9.6		ug/L	10.00		96	70-130	9	20	
Carbon Disulfide	8.9		ug/L	10.00		89	70-130	6	20	
Carbon Tetrachloride	10.7		ug/L	10.00		107	70-130	6	20	
Chlorobenzene	10.0		ug/L	10.00		100	70-130	1	20	
Chloroethane	9.7		ug/L	10.00		97	70-130	9	20	
Chloroform	9.6		ug/L	10.00		96	70-130	2	20	
Chloromethane	10.8		ug/L	10.00		108	70-130	6	20	
cis-1,2-Dichloroethene	10.0		ug/L	10.00		100	70-130	2	20	
cis-1,3-Dichloropropene	9.2		ug/L	10.00		92	70-130	1	20	
Dibromochloromethane	9.8		ug/L	10.00		98	70-130	2	20	
Dibromomethane	9.8		ug/L	10.00		98	70-130	3	20	
Dichlorodifluoromethane	8.2		ug/L	10.00		82	70-130	0.1	20	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 19K0785

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CK92633 - 5030B

Diethyl Ether	8.6		ug/L	10.00		86	70-130	2	20	
Di-isopropyl ether	8.9		ug/L	10.00		89	70-130	1	20	
Ethyl tertiary-butyl ether	8.9		ug/L	10.00		89	70-130	3	20	
Ethylbenzene	10.2		ug/L	10.00		102	70-130	0.6	20	
Hexachlorobutadiene	10.4		ug/L	10.00		104	70-130	7	20	
Hexachloroethane	9.8		ug/L	10.00		98	70-130	0.3	20	
Isopropylbenzene	9.6		ug/L	10.00		96	70-130	3	20	
Methyl tert-Butyl Ether	9.5		ug/L	10.00		95	70-130	0.4	20	
Methylene Chloride	9.6		ug/L	10.00		96	70-130	5	20	
Naphthalene	9.6		ug/L	10.00		96	70-130	14	20	
n-Butylbenzene	10.0		ug/L	10.00		100	70-130	5	20	
n-Propylbenzene	9.6		ug/L	10.00		96	70-130	0.5	20	
sec-Butylbenzene	9.8		ug/L	10.00		98	70-130	4	20	
Styrene	9.9		ug/L	10.00		99	70-130	0.2	20	
tert-Butylbenzene	10.2		ug/L	10.00		102	70-130	3	20	
Tertiary-amyl methyl ether	9.1		ug/L	10.00		91	70-130	0.7	20	
Tetrachloroethene	8.1		ug/L	10.00		81	70-130	0.1	20	
Tetrahydrofuran	9.2		ug/L	10.00		92	70-130	12	20	
Toluene	9.7		ug/L	10.00		97	70-130	0.6	20	
trans-1,2-Dichloroethene	9.4		ug/L	10.00		94	70-130	3	20	
trans-1,3-Dichloropropene	9.4		ug/L	10.00		94	70-130	1	20	
Trichloroethene	9.6		ug/L	10.00		96	70-130	2	20	
Trichlorofluoromethane	9.8		ug/L	10.00		98	70-130	47	20	D+
Vinyl Chloride	9.8		ug/L	10.00		98	70-130	1	20	
Xylene O	10.8		ug/L	10.00		108	70-130	2	20	
Xylene P,M	20.5		ug/L	20.00		103	70-130	1	20	
Surrogate: 1,2-Dichloroethane-d4	24.8		ug/L	25.00		99	70-130			
Surrogate: 4-Bromofluorobenzene	25.3		ug/L	25.00		101	70-130			
Surrogate: Dibromofluoromethane	24.4		ug/L	25.00		98	70-130			
Surrogate: Toluene-d8	25.3		ug/L	25.00		101	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 19K0785

Notes and Definitions

U	Analyte included in the analysis, but not detected
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
B-	Blank Spike recovery is below lower control limit (B-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 19K0785

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002
<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - RI - KPB/TB/HDM
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 19K0785
 Date Received: 11/25/2019
 Project Due Date: 12/4/2019
 Days for Project: 5 Day

1. Air bill manifest present? ☐ No
 Air No.: NA
2. Were custody seals present? ☐ No
3. Is radiation count <100 CPM? ☐ Yes
4. Is a Cooler Present? ☐ Yes
 Temp: 0.8 Iced with: Ice
5. Was COC signed and dated by client? ☐ Yes

6. Does COC match bottles? ☐ Yes
7. Is COC complete and correct? ☐ Yes
8. Were samples received intact? ☐ Yes
9. Were labs informed about short holds & rushes? Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
 ESS Sample IDs: _____
 Analysis: _____
 TAT: _____

12. Were VOAs received? Yes / No
 a. Air bubbles in aqueous VOAs? Yes / No
 b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
 a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
 b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
 a. Was there a need to contact the client? Yes / No
 Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	416057	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
02	416061	Yes	No	Yes	VOA Vial - HCl	HCl	
02	416062	Yes	No	Yes	VOA Vial - HCl	HCl	
02	416063	Yes	No	Yes	VOA Vial - HCl	HCl	
03	416058	Yes	No	Yes	VOA Vial - HCl	HCl	
03	416059	Yes	No	Yes	VOA Vial - HCl	HCl	
03	416060	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review

Were all containers scanned into storage/lab?

Initials: MS
 Yes / No
 Yes / No / NA
 Yes / No / NA
 Yes / No / NA
 Yes / No / NA

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

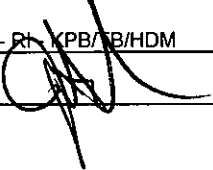
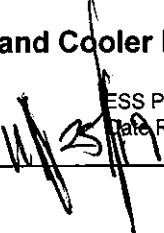
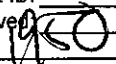
Completed By: [Signature] Date & Time: 11/25/19 1854
 Reviewed By: [Signature] Date & Time: 11/28/19 1951
 Delivered

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - Rm. CPB/TB/HDM

ESS Project ID: 19K0785

Date Received: 11/25/2019

By:   



Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com
CHAIN OF CUSTODY RECORD

Doc # 381 Rev 1_03242017

39 Spruce Street
East Longmeadow, MA 01028

19K0785
Page 1 of 1

Company Name:

Address: 990 Washington St.

Phone:

Project Name:

Project Location: Foxboro

Project Number: 223812 - Schneider Elec. Inc.

Project Manager: Susan O'Brien + Jason Anderson

Con-Test Quote Name/Number:

Invoice Recipient:

Sampled By: JH

Con-Test
Work Order #

1

2

3

Sump System Effluent

Influent

Effluent

11/21/19

11/21/19

11/21/19

1100

1030

1030

✓

J

J

✓

✓

✓

✓

✓

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✓

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✓

✓

Comments: Metals (quant limits) copper - 0.5 ug/L
cadmium - 0.5 ug/L
mercury - 0.2 ug/L
zinc - 5 ug/L
lead - 0.5 ug/L

Relinquished by: (signature)

Received by: (signature)

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Date/Time: 11/25/19 10:07

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CERTIFICATE OF ANALYSIS

Susan O'Brien
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Quarterly WET Sampling and Testing (223812.03)
ESS Laboratory Work Order Number: 19I0684

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 2:25 pm, Oct 04, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

Subcontracted Analyses

EnviroSystems, Inc. - Hampton, NH

Alkalinity (Subcontracted), Aluminum (Subcontracted),
Ammonia (Subcontracted), Bioassay (Subcontracted),
Cadmium (Subcontracted), Copper (Subcontracted), Hardness
(Subcontracted), Lead (Subcontracted), Metals Prep
(Subcontracted), Nickel (Subcontracted), Total Dissolved
Solids (Subcontracted), Total Organic Carbon (Subcontracted),
Total Solids (Subcontracted), Zinc (Subcontracted)



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Quarterly WET Sampling and Testing

ESS Laboratory Work Order: 19I0684

SAMPLE RECEIPT

The following samples were received on September 20, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

Lab Number	Sample Name	Matrix	Analysis
19I0684-01	Effluent Outfall 001 Start	Waste Water	SUB
19I0684-02	Effluent Outfall 001 First Renewal	Waste Water	SUB
19I0684-03	Effluent Outfall 001 Second Renewal	Waste Water	SUB



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Quarterly WET Sampling and Testing

ESS Laboratory Work Order: 1910684

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Quarterly WET Sampling and Testing

ESS Laboratory Work Order: 19I0684

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Quarterly WET Sampling and Testing
Client Sample ID: Effluent Outfall 001 Start
Date Sampled: 09/16/19 08:25

ESS Laboratory Work Order: 19I0684
ESS Laboratory Sample ID: 19I0684-01
Sample Matrix: Waste Water

All methods used are in accordance with 40 CFR 136.

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Alkalinity as CaCO ₃	See Attached (10)								
Aluminum	See Attached (N/A)								
Ammonia as N	See Attached (0.01)								
Bioassay	See Attached (N/A)								
Cadmium	See Attached (N/A)								
Copper	See Attached (N/A)								
Hardness	See Attached (N/A)								
Lead	See Attached (N/A)								
Nickel	See Attached (N/A)								
Total Dissolved Solids	See Attached (10)								
Total Organic Carbon	See Attached (1.0)								
Total Solids	See Attached (N/A)								
Zinc	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Quarterly WET Sampling and Testing
Client Sample ID: Effluent Outfall 001 First Renewal
Date Sampled: 09/18/19 08:25

ESS Laboratory Work Order: 19I0684
ESS Laboratory Sample ID: 19I0684-02
Sample Matrix: Waste Water

All methods used are in accordance with 40 CFR 136.

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Alkalinity as CaCO ₃	See Attached (10)								
Aluminum	See Attached (N/A)								
Ammonia as N	See Attached (0.01)								
Cadmium	See Attached (N/A)								
Copper	See Attached (N/A)								
Hardness	See Attached (N/A)								
Lead	See Attached (N/A)								
Nickel	See Attached (N/A)								
Total Organic Carbon	See Attached (1.0)								
Zinc	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Quarterly WET Sampling and Testing
Client Sample ID: Effluent Outfall 001 Second Renewal
Date Sampled: 09/20/19 09:15

ESS Laboratory Work Order: 19I0684
ESS Laboratory Sample ID: 19I0684-03
Sample Matrix: Waste Water

All methods used are in accordance with 40 CFR 136.

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Alkalinity as CaCO ₃	See Attached (10)								
Aluminum	See Attached (N/A)								
Ammonia as N	See Attached (0.01)								
Cadmium	See Attached (N/A)								
Copper	See Attached (N/A)								
Hardness	See Attached (N/A)								
Lead	See Attached (N/A)								
Nickel	See Attached (N/A)								
Total Organic Carbon	See Attached (1.0)								
Zinc	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Quarterly WET Sampling and Testing

ESS Laboratory Work Order: 19I0684

Notes and Definitions

Z-08	See Attached
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Quarterly WET Sampling and Testing

ESS Laboratory Work Order: 19I0684

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meedc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

October 1, 2019

Mr. Joe Sirbak
ESS Laboratories
185 Frances Avenue
Cranston, Rhode Island 02910

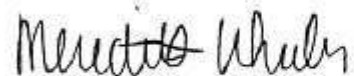
Dear Mr. Sirbak:

Enclosed, please find a copy of our report evaluating the toxicity of samples received from the Schneider Electric Facility located in Foxboro, Massachusetts for the September 2019 sampling period. Chronic toxicity was evaluated using the freshwater species, *Ceriodaphnia dubia* and *Pimephales promelas*.

Please do not hesitate to call me should you have any questions regarding the report.

Sincerely,

Enthalpy Analytical, LLC



Meredith Wheeler
Project Manager

Enclosure:

WET Test Report Certification
Report 32276-19-09
One (1) Copy (email only)

cc: Michelle Mirenda, Shawn Morrell and Heather Masse ESS (email only)

WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION

Permittee Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: _____

Authorized Signature

Print or Type Name

Schneider Electric Systems USA, Inc.

Print or Type the Permittee's Name

MA0004120

Type or Print the NPDES Permit No.

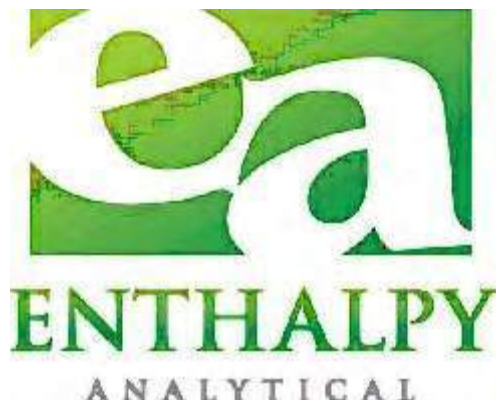
WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION (Bioassay Laboratory)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: October 1, 2019



Kirk Cram
Laboratory Director - Enthalpy Analytical, LLC



**TOXICOLOGICAL EVALUATION
OF A TREATED STORM WATER AND GROUNDWATER EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
September 2019**

Schneider Electric
Foxboro, Massachusetts
NPDES Permit Number: MA0004120

Prepared For:

ESS Laboratories
185 Frances Avenue
Cranston, Rhode Island 02910

Prepared By:

Enthalpy Analytical, LLC
One Lafayette Road
Hampton, New Hampshire 03842

September 2019
Reference Number: ESS-Schneider Electric32276-19-09

STUDY NUMBER 32276

EXECUTIVE SUMMARY

The following summarizes the results of 7 day chronic exposure bioassays completed during September 2019 to support the NPDES biomonitoring requirements of the Schneider Electric facility located in Foxboro, Massachusetts. Samples were provided by ESS Laboratories, Cranston, Rhode Island. Chronic assays were completed using the freshwater species, *Ceriodaphnia dubia* and *Pimephales promelas*.

C. dubia, cultured at Enthalpy, were <24 hours old juveniles released within 8 hours of one another. *P. promelas*, supplied by Aquatic BioSystems, Inc. of Fort Collins, Colorado, were <48 hours old at the start of the test. Dilution water was moderately soft synthetic reconstituted water prepared at Enthalpy according to protocol (US EPA 2002). This water has been used to successfully culture freshwater organisms since 1992. Samples were received under chain of custody in good order. All sample receipt, test conditions and control endpoints were within protocol specifications, except where otherwise noted.

The results presented in this report relate only to the samples described on the chain(s) of custody and sample receipt log(s) and are to be used only by the submitter. Results from the chronic exposure assays and their relationship to permit limits are summarized in the following matrix.

Chronic Toxicity Evaluation

Species	Exposure	C-NOEC	IC-25	Permit Limit (C-NOEC)	Effluent Meets Permit Limit	Assay Meets Protocol Limits
<i>Ceriodaphnia dubia</i>	7 Days	100%	NC	100%	Yes	Yes
<i>Pimephales promelas</i>	7 Days	100%	NC	100%	Yes	Yes

COMMENTS:

NC = Not Calculated.

**TOXICOLOGICAL EVALUATION
OF A TREATED STORMWATER AND GROUNDWATER EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
September 2019**

Schneider Electric
Foxboro, Massachusetts
NPDES Permit Number: MA0004120

1.0 INTRODUCTION

This report presents the results of toxicity tests completed on a series of effluent samples collected from the Schneider Electric facility located in Foxboro, Massachusetts. The effluent samples were provided by ESS Laboratories, Cranston, Rhode Island. Testing was based on programs and protocols developed by the US EPA (2002), with exceptions as noted by US EPA Region I (2011, 2013), and involved conducting 7 day chronic toxicity tests with the freshwater species, *Ceriodaphnia dubia* and *Pimephales promelas*. Testing was performed at Enthalpy Analytical, LLC (Enthalpy), Hampton, New Hampshire in accordance with the provisions of TNI Standards (2009).

Chronic toxicity tests involve preparing a series of test concentrations by diluting effluent with control water. Groups of test organisms are exposed to each test concentration and a control for a specified period. The mortality data for each concentration can be used to calculate the median lethal concentration or LC-50, defined as the concentration of effluent that kills half of the test organisms. Samples with a high LC-50 value are less likely to cause significant environmental impacts. Using Analysis of Variance techniques to evaluate the data, it is possible to determine the lowest tested concentration that had an effect (C-LOEC) and the highest tested concentration where no effect (C-NOEC) was observed. Chronic toxicity tests measure sublethal effects, exposing test organisms to samples during a sensitive period in the life cycle. Minnow chronic tests measure survival and growth (weight) during the first seven days post hatch, and daphnid chronic tests measure survival and juvenile production. An Inhibition Concentration (IC) may be calculated by linear interpolation to confirm the C-NOEC in situations where a non-standard dose-response or sample toxicity are encountered. The IC-25 is calculated to best approximate the C-NOEC (US EPA 2000).

2.0 MATERIALS AND METHODS

2.1 General Methods

Toxicological and analytical protocols used in this program follow procedures primarily designed to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms (US EPA 2002), and for the analysis of water samples (APHA 2012). See Section 4.0 for a list of references.

2.2 Test Species

C. dubia were maintained in laboratory water at 25±1 °C with a photoperiod of 16:8 hours light:dark. Cultures are fed daily with a yeast/trout chow/Cerophyll or alfalfa leaves (YTC) mixture supplemented with *Pseudokirchneriella subcapitata* (algae) (US EPA 2002). Adults on a brood board were isolated 24 hours prior to test start and allowed to reproduce for 8 hours.

P. promelas were acclimated to approximate test conditions prior to use in the assay. Organisms were transferred to test chambers using an inverted glass pipet, minimizing the amount of water added to test solutions.

2.3 Effluent, Receiving Water and Laboratory Water

Effluent and receiving water collection information is provided in Table 1. Samples were received at 0-6 °C as per 40 CFR §136.3 unless otherwise noted, stored at 4±2 °C and warmed to 25±1 °C prior to preparing test solutions. Laboratory water was synthetic reconstituted water prepared at Enthalpy according

to protocol (US EPA 2002). This water has been used to successfully culture freshwater organisms since 1992.

Total residual chlorine (TRC) was measured by amperometric titration (MDL 0.02 mg/L) in the effluent samples prior to use in the assays. Samples with 0.02 mg/L TRC were dechlorinated using sodium thiosulfate (US EPA 2002) and a control treatment using laboratory water adjusted with the same amount of sodium thiosulfate used to dechlorinate the effluent was run concurrently with the assay. If sample pH measured <6.0 SU or >9.0 SU, samples were adjusted using sodium hydroxide or hydrochloric acid, respectively, and a control treatment using laboratory water adjusted with the same amount of either compound used to modify sample pH was run concurrently with the assay. When applicable, data from sodium thiosulfate and/or pH adjusted laboratory control treatments can be found in Appendix A.

2.4 Chronic Exposure Bioassays

The chronic exposure bioassays were conducted according to protocol (US EPA 2002), which called for the daily renewal of test solutions. Test treatments were 100% (undiluted), 50%, 25%, 12.5% and 6.25% effluent. Dissolved oxygen, pH, specific conductivity and temperature were measured in one replicate of each new and old test solution.

Test chambers for the daphnid assay were 30 mL portion cups containing approximately 20 mL of test solution in each of 10 replicates with 1 organism/replicate. Replicates were not randomized during testing; rather, organisms were added at test initiation by blocking by known parentage. Survival and juvenile production were monitored daily. Daphnids were each fed 200 µL of a mixture of YTC and algae after daily renewals.

Test chambers for the fathead minnow assay were 400 mL beakers with 250 mL of solution in each of 4 replicates containing 10 organisms/replicate. Replicates were not randomized during testing; rather, organisms were added randomly at test initiation by replicate across test solutions in an alternating fashion (alternating allocation). Prior to daily test solution renewals, survival and dissolved oxygen were measured in all replicates, and pH, conductivity and temperature were measured in one replicate of each concentration. Fish were fed newly hatched *Artemia* nauplii daily. Dead nauplii from previous feedings were removed during daily renewals. On Day 7 of the assay, surviving fish were tranquilized using Finquel® tricaine methanesulfonate and rinsed in deionized water. Fish were placed on tared weighing pans and dried overnight at 104±5 °C to obtain dry weight to 0.01 mg. Final dry biomass/fish for statistical comparison was calculated by dividing the net dry weight by the number of organisms introduced at the initiation of the assay.

2.5 Data Analysis

Statistical analysis of chronic exposure data was completed using CETIS™ v1.9.6.3, Comprehensive Environmental Toxicity Information System, software. The program computes chronic exposure endpoints based on US EPA decision tree guidelines specified in individual test methods. For chronic exposure endpoints statistical significance was accepted at $\alpha = 0.05$. For statistical calculations of *C. dubia* juvenile production, data from only the first three broods are used.

2.6 Quality Control

As part of the laboratory quality control program, reference toxicant evaluations are completed on a regular basis for each test species. These results, presented in Table 2, provide regular laboratory performance evaluation through the comparison of historic data sets.

3.0 RESULTS AND DISCUSSION

Results of the chronic exposure assays completed using *C. dubia* and *P. promelas* are presented in Tables 3 and 4, respectively. Water quality data collected during the assays are summarized in Table 5. US EPA Region I Attachment F toxicity test summary sheets are provided after the tables. Support data, including copies of laboratory bench sheets, are provided in Appendix A.

3.1 Chronic Exposure Bioassay - *Ceriodaphnia dubia*

Minimum test acceptability criteria require 80% control survival, mean production of 15 juveniles/female, production of 3 broods by at least 60% of control females, and the MSDp for reproduction to be <47% for *Ceriodaphnia dubia* (US EPA 2002). Achievement of these results indicates that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 3 for test acceptability.

3.2 Chronic Exposure Bioassay - *Pimephales promelas*

Minimum test acceptability criteria require 80% control survival, a mean dry weight of 0.25 mg/fish based on Day 7 survival, and the MSDp for biomass to be <30% for *Pimephales promelas* (US EPA 2002). Achievement of these results indicates that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 4 for test acceptability.

4.0 LITERATURE CITED

40 CFR §136.3. *Code of Federal Regulations* (CFR), Protection of the Environment (Title 40), Guidelines Establishing Test Procedures for the Analysis of Pollutants (Part 136), Identification of Test Procedures (sub-part 3), Table II-Required Containers, Preservation Techniques, and Holding Times.

APHA. 2012. *Standard Methods for the Examination of Water and Wastewater*, 22nd Edition. Washington D.C.

The NELAC Institute (TNI). 2009. *Environmental Laboratory Sector, Volume 1: Management and Technical Requirements for Laboratories Performing Environmental Analysis (TNI Standard)*. EL-V1-2009.

US EPA. 2000. *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)*. EPA 821-B-00-004.

US EPA. 2002. *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*. Fourth Edition. EPA-821-R-02-013.

US EPA Region I. 2011. *US EPA Region 1 Freshwater Acute Toxicity Test Procedure and Protocol*. US EPA Region I Office, Boston, Massachusetts. February 28, 2011.

US EPA Region I. 2013. *Freshwater Chronic Toxicity Test Procedure and Protocol - US EPA Region I*. US EPA Region I Office, Boston, Massachusetts. September 2013.

**TABLE 1. Summary of Sample Collection Information.
Schneider Electric Effluent Evaluation. September 2019.**

Sample		Collection		Receipt		Arrival
Description	Type	Date	Time	Date	Time	Temp C
EFFLUENT						
Start	Grab	09/16/19	0825	09/16/19	1325	3
First Renewal	Grab	09/18/19	0825	09/18/19	1400	3
Second Renewal	Grab	09/20/19	0915	09/20/19	1225	3

**TABLE 2. Summary of Reference Toxicant Data.
Schneider Electric Effluent Evaluation. September 2019.**

Date	Organism Lot	Endpoint	Value	Historic Mean / Tendency	Acceptable Range	Reference Toxicant
<i>C. dubia</i>						
09/05/19	00CdEnt090519	Survival: LC-50	20.3	22.5	4.9 – 40.1	SDS (mg/L)
08/27/19	00CdESI082719	Survival: C-NOEC	30.0	30.0	15.0 - 60.0	Copper (µg/L)
08/27/19	00CdESI082719	Reproduction: C-NOEC	30.0	30.0	15.0 - 60.0	Copper (µg/L)
08/27/19	00CdESI082719	Reproduction: MSDp	22.5	29.4	11.1 – 47.7	Copper (µg/L)
<i>P. promelas</i>						
09/05/19	09PpABS090519	Survival: LC-50	31.2	34.2	23.5 – 44.8	SDS (mg/L)
08/27/19	02PpABS082719	Survival: C-NOEC	10	10.0	5.0 - 20.0	SDS (mg/L)
08/27/19	02PpABS082719	Growth: C-NOEC	10	10.0	5.0 - 20.0	SDS (mg/L)
08/27/19	02PpABS082719	Growth: MSDp	8.3	26.7	0.3 – 53.1	SDS (mg/L)

Means and Acceptable Ranges based on the 20 most recent reference toxicant assays.

**TABLE 3. *C. dubia* Chronic Exposure Assay Data Summary.
Schneider Electric Effluent Evaluation. September 2019.**

Effluent Conc.	Mean Percent Survival	Mean Reproduction	Females Producing 3 Broods	Is There a Significant Difference Based on:	
	Day 7	(Juv/Female)		Survival (%)	Reproduction
LAB	100%	27.8	90%	-	-
6.25%	100%	28.3	80%	No	No
12.5%	100%	29.2	90%	No	No
25%	100%	29.9	90%	No	No
50%	100%	31.1	100%	No	No
100%	90%	23.5	80%	No	No
		MSDp = 26.7%		C-NOEC = 100%	C-NOEC = 100%

**TABLE 4. *P. promelas* Chronic Exposure Assay Data Summary.
Schneider Electric Effluent Evaluation. September 2019.**

Effluent Conc.	Mean Percent Survival	Mean Biomass	Is There a Significant Difference Based on:	
	Day 7	(mg/fish)	Survival (%)	Growth (Biomass)
LAB	100%	0.530	-	-
6.25%	100%	0.559	No	No
12.5%	100%	0.502	No	No
25%	97.5%	0.512	No	No
50%	97.5%	0.514	No	No
100%	100%	0.554	No	No
		MSDp = 14.6%	C-NOEC = 100%	C-NOEC = 100%

COMMENTS:

LAB = Moderately Soft Reconstituted laboratory water; used as the diluent.

**TABLE 5. WET Support Chemistry Data.
Schneider Electric Effluent Evaluation. September 2019.**

PARAMETER	UNITS	EFFLUENT	LABORATORY WATER
Specific Conductance	µ mhos/cm	585	240
pH	SU	6.24	7.74
Total Residual Chlorine	mg/L	<0.02	-
Alkalinity	mg/L	20	38
Hardness	mg/L	72	60
Total Solids	mg/L	370	-
Total Dissolved Solids	mg/L	410	-
Ammonia	mg/L	0.21	<0.1
Total Organic Carbon	mg/L	3	<0.4
Aluminum, total	mg/L	0.055	<0.01
Cadmium, total	mg/L	0.0004	<0.0001
Copper, total	mg/L	0.0035	<0.0005
Lead, total	mg/L	<0.0003	<0.0002
Nickel, total	mg/L	0.0021	0.0005
Zinc, total	mg/L	0.021	0.002

COMMENTS:

Additional water quality and analytical support data are provided in Appendix A.

TOXICITY TEST SUMMARY SHEET

FACILITY NAME:	<u>Schneider Electric</u>	TEST START DATE:	<u>09/17/19</u>
NPDES PERMIT NO.:	<u>MA0004120</u>	TEST END DATE:	<u>09/24/19</u>

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
☐ Acute	☐ <i>Pimephales promelas</i>	☐ Prechlorinated	☒ Grab
☒ Chronic	☒ <i>Ceriodaphnia dubia</i>	☐ Dechlorinated	☐ Composite
☐ Modified Chronic	☐ <i>Daphnia pulex</i>	☐ Chlorine Spiked in Lab	☐ Flow-thru
☐ (Reporting Acute Values)	☐ <i>Americamysis bahia</i>	☐ Chlorinated on Site	☐ Other
☐ 24 Hour Screen	☐ <i>Cyprinodon variegatus</i>	☐ Unchlorinated	
	☐ <i>Menidia beryllina</i>	☒ No Detectable Chlorine Upon Receipt	
	☐ <i>Arbacia punctulata</i>		

DILUTION WATER:

☐ Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: _____

☐ Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

☒ Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

☐ Artificial sea salts mixed with deionized water

☐ Deionized water and hypersaline brine

☐ Other

EFFLUENT SAMPLING DATES: 09/16/19 09/18/19 09/20/19

EFFLUENT CONCENTRATIONS TESTED(%): 6.25%; 12.5%; 25%; 50%; 100

Permit Limit Concentration: 100 %

Was the effluent salinity adjusted? No If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 08/27/19 NOEC: 30.0 mg/L Copper

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Mean Diluent Survival: <u>100%</u>	Mean Juvenile Produced: <u>27.8</u>
	MSDp <u>26.7%</u>

LIMITS

LC-50: - %

A-NOEC: - %

C-NOEC: 100 %

IC- - %

RESULTS

C-NOEC: 100% %

C-LOEC: >100% %

IC- - %

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: Schneider Electric TEST START DATE: 09/17/19
 NPDES PERMIT NO.: MA0004120 TEST END DATE: 09/24/19

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
☐ Acute	☒ <i>Pimephales promelas</i>	☐ Prechlorinated	☒ Grab
☒ Chronic	☐ <i>Ceriodaphnia dubia</i>	☐ Dechlorinated	☐ Composite
☐ Modified Chronic (Reporting Acute Values)	☐ <i>Daphnia pulex</i>	☐ Chlorine Spiked in Lab	☐ Flow-thru
	☐ <i>Americamysis bahia</i>	☐ Chlorinated on Site	☐ Other
	☐ <i>Cyprinodon variegatus</i>	☐ Unchlorinated	
☐ 24 Hour Screen	☐ <i>Menidia beryllina</i>	☒ No Detectable Chlorine Upon Receipt	
	☐ <i>Arbacia punctulata</i>		

DILUTION WATER:

☐ Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: _____

☐ Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

☒ Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

☐ Artificial sea salts mixed with deionized water

☐ Deionized water and hypersaline brine

☐ Other

EFFLUENT SAMPLING DATES: 09/16/19 09/18/19 09/20/19

EFFLUENT CONCENTRATIONS TESTED (%): 6.25%; 12.5%; 25%; 50% 100

Permit Limit Concentration: 100 %

Was the effluent salinity adjusted? No If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 08/27/19 NOEC: 10.0 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Mean Diluent Control Survival: <u>100%</u>	Mean Diluent Growth: <u>0.530</u> mg/fish
	MSDp <u>14.6%</u>

LIMITS

LC-50: - %

A-NOEC: - %

C-NOEC: 100 %

IC- - %

RESULTS

C-NOEC: 100 %

C-LOEC: >100 %

IC- - %

APPENDIX A

DATA SHEETS

STATISTICAL SUPPORT

Contents	Number of Pages
Methods Used in NPDES Permit Biomonitoring Testing	1
Massachusetts DEP Accreditation Certification and Certified Parameter List	2
<i>C. dubia</i> Chronic Reproduction Assay Bench Sheets	2
<i>C. dubia</i> Survival and Reproduction Statistical Analysis	5
<i>C. dubia</i> Blocking by Parentage Tracking Sheet	1
<i>C. dubia</i> Reference Toxicant Analysis	4
<i>P. promelas</i> 7 Day Chronic Assay Daily Observation Bench Sheet	1
<i>P. promelas</i> Larval Fish Dry Weights	1
<i>P. promelas</i> Statistical Analysis	6
<i>P. promelas</i> Organism Culture Data	1
<i>P. promelas</i> Reference Toxicant Analysis	4
Daily Water Quality Data Bench Sheets	3
Preparation of Dilutions	1
Record of Meters Used	1
Analytical Chemistry Biomonitoring Support Data	2
Sample Receipt Record	1
Chain of Custody Record	3
Assay Review Checklist	1
Total Appendix Pages	40

METHODS USED IN NPDES PERMIT BIOMONITORING TESTING

Parameter	Method
Acute Exposure Bioassays:	
<i>Ceriodaphnia dubia</i>	EPA-821-R-02-012 2002.0
<i>Daphnia pulex</i>	EPA-821-R-02-012 2021.0
<i>Pimephales promelas</i>	EPA-821-R-02-012 2000.0
<i>Americamysis bahia</i>	EPA-821-R-02-012 2007.0
<i>Menidia beryllina</i>	EPA-821-R-02-012 2006.0
<i>Cyprinodon variegatus</i>	EPA-821-R-02-012 2004.0
Chronic Exposure Bioassays:	
<i>Ceriodaphnia dubia</i>	EPA-821-R-02-013 1002.0
<i>Pimephales promelas</i>	EPA-821-R-02-013 1000.0
<i>Cyprinodon variegatus</i>	EPA-821-R-02-014 1004.0
<i>Menidia beryllina</i>	EPA-821-R-02-014 1006.0
<i>Arbacia punctulata</i>	EPA-821-R-02-014 1008.0
<i>Champia parvula</i>	EPA-821-R-02-014 1009.0
Trace Metals:	
Trace Metals	EPA 200.8/SW 6020, EPA 245.7
Hardness	EPA SW846 3rd Ed. 6010
Wet Chemistries:	
Alkalinity	EPA 310.2
Chlorine, Residual	Standard Methods 22 nd Edition - Method 4500-Cl D
Total Organic Carbon	Standard Methods 22 nd Edition - Method 5310 C
Specific Conductance	Standard Methods 22 nd Edition - Method 2510 B
Nitrogen - Ammonia	Standard Methods 22 nd Edition - Method 4500-NH ₃ G
pH	Standard Methods 22 nd Edition - Method 4500-H+ B
Solids, Total (TS)	Standard Methods 22 nd Edition - Method 2540 B
Solids, Total Dissolved (TDS)	Standard Methods 22 nd Edition - Method 2540 C
Solids, Total Suspended (TSS)	Standard Methods 22 nd Edition - Method 2540 D
Dissolved Oxygen	Standard Methods 22 nd Edition - Method 4500-O G

Please visit our web site at www.enthalpy.com/accreditations for a copy of our accreditations and state certifications.

The Commonwealth of Massachusetts



Department of Environmental Protection

Division of Environmental Laboratory Sciences

Senator William X. Wall Experiment Station

certifies

M-NH906

ENTHALPY ANALYTICAL, LLC

1 LAFAYETTE RD

HAMPTON, NH 03842-0000

Laboratory Director: **JASON HOBBS**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Laboratory Sciences to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

A handwritten signature in dark ink, reading "Oscar C. Sarcobello".

Director, Division of Environmental Laboratory Sciences

Issued: **01 JUL 2019**

Expires: **30 JUN 2020**

**COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Certified Parameter List as of: **02 AUG 2019**

**M-NH906 ENTHALPY ANALYTICAL, LLC
HAMPTON NH**

NON POTABLE WATER (CHEMISTRY)	Effective Date	02 AUG 2019	Expiration Date	30 JUN 2020
<u>Analytes</u>			<u>Methods</u>	
ALUMINUM			EPA 200.8	
ANTIMONY			EPA 200.8	
ARSENIC			EPA 200.8	
BERYLLIUM			EPA 200.8	
CADMIUM			EPA 200.8	
CHROMIUM			EPA 200.8	
COBALT			EPA 200.8	
COPPER			EPA 200.8	
IRON			EPA 200.8	
LEAD			EPA 200.8	
MANGANESE			EPA 200.8	
MERCURY			EPA 245.7	
MOLYBDENUM			EPA 200.8	
NICKEL			EPA 200.8	
SELENIUM			EPA 200.8	
SILVER			EPA 200.8	
THALLIUM			EPA 200.8	
VANADIUM			EPA 200.8	
ZINC			EPA 200.8	
PH			SM 4500-H-B	
SPECIFIC CONDUCTIVITY			SM 2510B	
TOTAL DISSOLVED SOLIDS			SM 2540C	
ALKALINITY, TOTAL			EPA 310.2	
CHLORIDE			EPA 300.0	
SULFATE			EPA 300.0	
AMMONIA-N			SM 4500-NH3-B, G	
NITRATE-N			SM 4500-NO3-F	
KJELDAHL-N			SM 4500-NH3-B, G	
ORTHOPHOSPHATE			SM 4500-P-E	
PHOSPHORUS, TOTAL			SM 4500-P-B,E	
BIOCHEMICAL OXYGEN DEMAND			SM 5210B	
NON-FILTERABLE RESIDUE			SM 2540D	
OIL AND GREASE			EPA 1664	

Ceriodaphnia dubia Chronic Reproduction Assay

STUDY#	CONC	Day	A	B	C	D	E	F	G	H	I	J	SUM	SURV
32276	MSR	0	+	+	+	+	+	+	+	+	+	+	0	10
CLIENT:		1	+	+	+	+	+	+	+	+	+	+	0	10
ESS-Schneider		2	+	+	+	+	+	+	+	+	+	+	0	10
Electric		3	+	+	+	+	+	+	+	+	+	+	0	10
SAMPLE:		4	4	4	3	+	4	5	4	4	5	6	39	10
Effluent 001		5	9	8	+	3	+	+	+	+	+	(2)	22	10
DILUENT:		6	+	+	10	+	11	10	11	11	11	(2)	66	10
MSR		7	18	15	16	3	17	15	14	18	17	18	151	10
Cerio Data		8												
source: MSR ☒		Total	31	27	29	6	32	30	29	33	33	28	278	10
MHR ☒	6.25%	0	+	+	+	+	+	+	+	+	+	+	0	10
collected:		1	+	+	+	+	+	+	+	+	+	+	0	10
previous pm ☐		2	+	+	+	+	+	+	+	+	+	+	0	10
test day am ☒		3	+	+	+	+	+	+	+	+	+	+	0	10
Day 0 09/17/19		4	6	6	3	+	5	4	4	4	4	5	41	10
Time: 1700		5	11	12	+	(1)	+	+	+	+	+	+	24	10
Initial: BG		6	+	9	+	(12)	10	12	12	12	12	8	87	10
Day 1 09/18/19		7	14	15	18	3	18	16	15	14	17	16	131	10
Time: 1500		8												
Initial: BG		Total	31	27	21	16	33	32	31	30	33	29	283	10
Day 2 09/19/19	12.5%	0	+	+	+	+	+	+	+	+	+	+	0	10
Time: 1700		1	+	+	+	+	+	+	+	+	+	+	0	10
Initial: CA		2	+	+	+	+	+	+	+	+	+	+	0	10
Day 4 09/21/19		3	+	+	+	+	+	+	+	+	+	+	0	10
Time: 1420		4	3	5	6	+	3	5	3	4	4	5	38	10
Initial: BG		5	10	11	+	4	+	+	+	+	+	+	25	10
Day 5 09/22/19		6	+	+	9	11	10	9	9	12	11	11	82	10
Time: 1540		7	17	13	16	+	15	18	16	16	22	14	147	10
Initial: LCI		8												
Day 6 09/23/19		Total	30	29	31	15	28	32	28	32	37	30	292	10
Time: 1830	25%	0	+	+	+	+	+	+	+	+	+	+	0	10
Initial: LCI		1	+	+	+	+	+	+	+	+	+	+	0	10
Day 7 09/24/19		2	+	+	+	+	+	+	+	+	+	+	0	10
Time: 1715		3	+	+	+	+	+	+	+	+	+	+	0	10
Initial: MS		4	4	4	5	+	4	5	5	6	6	4	43	10
Day 8		5	11	7	+	4	+	+	+	+	+	+	22	10
Time:		6	+	+	11	+	11	13	13	12	14	11	85	10
Initial:		7	15	15	16	12	12	14	16	18	15	16	149	10
LEGEND:		8												
+ = Live		Total	30	26	32	16	27	32	34	36	35	31	299	10
- = Dead														
♂ = Male														
M = Missing														
Calculations:														
Initials: MW														
Date: 9/25/19														

90

80

90

90

Ceriodaphnia dubia Chronic Reproduction Assay

STUDY#	CONC	Day	A	B	C	D	E	F	G	H	I	J	SUM	SURV
32276	50%	0	+	+	+	+	+	+	+	+	+	+	0	10
CLIENT:		1	+	+	+	+	+	+	+	+	+	+	0	10
ESS-Schneider		2	+	+	+	+	+	+	+	+	+	+	0	10
Electric		3	+	+	+	+	+	+	+	+	+	+	0	10
SAMPLE:		4	5	4	4	5	4	5	4	4	5	4	44	10
Effluent 001		5	13	13	+	+	+	+	+	+	+	+	26	10
DILUENT:		6	+	+	11	8	9	14	13	12	13	8	88	10
MSR		7	17	14	16	10	16	15	17	16	17	15	153	10
Cerio Data		8												
source: MSR ☒	Total		35	31	31	23	29	34	34	32	35	27	311	10
MHR ☒	100%	0	+	+	+	+	+	+	+	+	+	+	0	10
collected:		1	+	+	+	+	+	+	+	+	+	+	0	10
previous pm ☐		2	+	+	+	+	+	+	+	+	+	+	0	10
test day am ☒		3	+	+	+	+	+	+	+	+	+	+	0	10
Day 0 09/17/19		4	6	7	5	+	4	4	4	4	3	4	41	10
Time: 1700		5	9	12	+	+	+	+	+	+	+	+	21	9
Initial: BG		6	+	+	10	+	8	8	10	12	+	9	57	9
Day 1 09/18/19		7	16	15	15	+	13	15	14	13	+	15	116	9
Time: 1500		8												
Initial: BG	Total		31	34	30	0	25	27	28	29	3	28	235	9
Day 3 09/20/19		0												
Time: 1700		1												
Initial: CA		2												
Day 4 09/21/19		3												
Time: 1420		4												
Initial: BG		5												
Day 5 09/22/19		6												
Time: 1540		7												
Initial: LC		8												
Day 6 09/23/19		Total												
Time: 1830		0												
Initial: LC		1												
Day 7 09/24/19		2												
Time: 1715		3												
Initial: MS		4												
Day 8		5												
Time:		6												
Initial:		7												
LEGEND:		8												
+ = Live		Total												
- = Dead		0												
♂ = Male		1												
M = Missing		2												
Calculations:		3												
Initials: MW		4												
Date: 9/25/19		5												
		6												
		7												
		8												
		Total												

CETIS Test Data Worksheet

Report Date: 25 Sep-19 12:15 (p 1 of 2)
Test Code/ID: 32276Cd / 00-6697-7404

Enthalpy Analytical, LLC

Ceriodaphnia 7-d Survival and Reproduction Test

Start Date: 17 Sep-19 17:00 Species: Ceriodaphnia dubia Sample Code: 32276Cd
End Date: 24 Sep-19 17:15 Protocol: EPA/821/R-02-013 (2002) Sample Source: Schneider Electric
Sample Date: 16 Sep-19 08:25 Material: WWTP, Municipal Treatment Plant Sample Station: MA0004120; Outfall 001 Effluent

Conc.-%	Code	Rep	Pos	# Exposed	1d Survival	2d Survival	3d Survival	4d Survival	5d Survival	6d Survival	7d Survival	Neonates	Male	Notes
0	MS	1	43	1							1	31	0	
0	MS	2	40	1							1	27	0	
0	MS	3	33	1							1	29	0	
0	MS	4	22	1							1	6	0	
0	MS	5	26	1							1	32	0	
0	MS	6	29	1							1	30	0	
0	MS	7	49	1							1	29	0	
0	MS	8	36	1							1	33	0	
0	MS	9	35	1							1	33	0	
0	MS	10	42	1							1	28	0	
6.25		1	23	1							1	31	0	
6.25		2	53	1							1	27	0	
6.25		3	48	1							1	21	0	
6.25		4	19	1							1	16	0	
6.25		5	6	1							1	33	0	
6.25		6	39	1							1	32	0	
6.25		7	59	1							1	31	0	
6.25		8	20	1							1	30	0	
6.25		9	58	1							1	33	0	
6.25		10	4	1							1	29	0	
12.5		1	57	1							1	30	0	
12.5		2	34	1							1	29	0	
12.5		3	51	1							1	31	0	
12.5		4	17	1							1	15	0	
12.5		5	18	1							1	28	0	
12.5		6	50	1							1	32	0	
12.5		7	1	1							1	28	0	
12.5		8	8	1							1	32	0	
12.5		9	25	1							1	37	0	
12.5		10	52	1							1	30	0	
25		1	10	1							1	30	0	
25		2	27	1							1	26	0	
25		3	46	1							1	32	0	
25		4	38	1							1	16	0	

CETIS Test Data Worksheet

Report Date: 25 Sep-19 12:15 (p 2 of 2)
Test Code/ID: 32276Cd / 00-6697-7404

Conc-%	Code	Rep	Pos	# Exposed	1d Survival	2d Survival	3d Survival	4d Survival	5d Survival	6d Survival	7d Survival	Neonates	Male	Notes
25		5	2	1							1	27	0	
25		6	41	1							1	32	0	
25		7	9	1							1	34	0	
25		8	11	1							1	36	0	
25		9	12	1							1	35	0	
25		10	56	1							1	31	0	
50		1	32	1							1	35	0	
50		2	14	1							1	31	0	
50		3	54	1							1	31	0	
50		4	31	1							1	23	0	
50		5	21	1							1	29	0	
50		6	3	1							1	34	0	
50		7	55	1							1	34	0	
50		8	28	1							1	32	0	
50		9	13	1							1	35	0	
50		10	47	1							1	27	0	
100		1	16	1							1	31	0	
100		2	45	1							1	34	0	
100		3	30	1							1	30	0	
100		4	7	1							1	0	0	
100		5	60	1							1	25	0	
100		6	37	1							1	27	0	
100		7	44	1							1	28	0	
100		8	5	1							1	29	0	
100		9	24	1							0	3	0	
100		10	15	1							1	28	0	

CETIS Summary Report

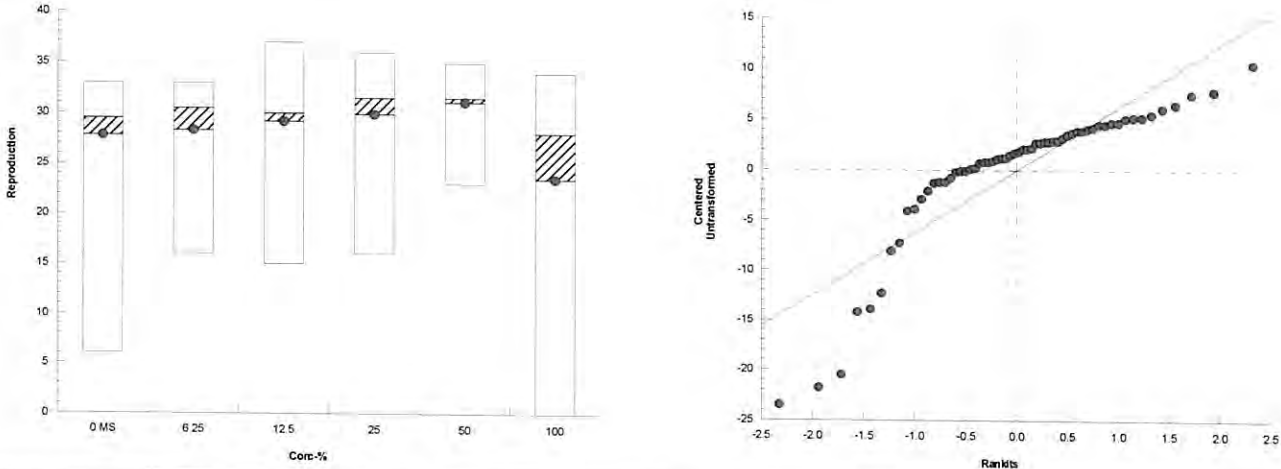
Report Date: 25 Sep-19 12:16 (p 1 of 1)

Test Code/ID: 32276Cd / 00-6697-7404

Ceriodaphnia 7-d Survival and Reproduction Test										Enthalpy Analytical, LLC	
Batch ID: 12-6620-4021		Test Type: Reproduction-Survival (7d)				Analyst: Meredith Wheeler					
Start Date: 17 Sep-19 17:00		Protocol: EPA/821/R-02-013 (2002)				Diluent: Mod-Soft Synthetic Water					
Ending Date: 24 Sep-19 17:15		Species: Ceriodaphnia dubia				Brine: Not Applicable					
Test Length: 7d 0h		Taxon: Branchiopoda				Source: In-House Culture		Age: <24			
Sample ID: 11-9137-1396		Code: 32276Cd				Project: Third Quarter WET Compliance Test					
Sample Date: 16 Sep-19 08:25		Material: WWTP, Municipal Treatment Plant				Source: Schneider Electric					
Receipt Date: 16 Sep-19 13:25		CAS (PC):				Station: MA0004120; Outfall 001 Effluent					
Sample Age: 33h (3 °C)		Client: ESS Laboratory									
Multiple Comparison Summary											
Analysis ID	Endpoint	Comparison Method				✓	NOEL	LOEL	TOEL	TU	PMSD S
06-9191-3341	7d Proportion Survived	Fisher Exact/Bonferroni-Holm Test					100	>100	n/a	1	n/a 1
05-2477-2883	Reproduction	Steel Many-One Rank Sum Test					100	>100	n/a	1	26.7% 1
7d Proportion Survived Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	MS	10	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
6.25		10	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
12.5		10	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
25		10	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
50		10	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
100		10	0.900	0.674	1.000	0.000	1.000	0.100	0.316	35.14%	10.00%
Reproduction Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	MS	10	27.8	22.1	33.5	6	33	2.51	7.93	28.52%	0.00%
6.25		10	28.3	24.3	32.3	16	33	1.77	5.6	19.78%	-1.80%
12.5		10	29.2	25.2	33.2	15	37	1.78	5.63	19.29%	-5.04%
25		10	29.9	25.7	34.1	16	36	1.85	5.84	19.53%	-7.55%
50		10	31.1	28.3	33.9	23	35	1.22	3.87	12.45%	-11.87%
100		10	23.5	15	32	0	34	3.75	11.9	50.48%	15.47%
7d Proportion Survived Detail											
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	MS	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.25		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
12.5		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
25		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
50		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
100		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	1.000
Reproduction Detail											
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	MS	31	27	29	6	32	30	29	33	33	28
6.25		31	27	21	16	33	32	31	30	33	29
12.5		30	29	31	15	28	32	28	32	37	30
25		30	26	32	16	27	32	34	36	35	31
50		35	31	31	23	29	34	34	32	35	27
100		31	34	30	0	25	27	28	29	3	28

CETIS Analytical Report

Report Date: 25 Sep-19 12:16 (p 1 of 1)
Test Code/ID: 32276Cd / 00-6697-7404

Ceriodaphnia 7-d Survival and Reproduction Test						Enthalpy Analytical, LLC					
Analysis ID: 05-2477-2883		Endpoint: Reproduction		CETIS Version: CETISv1.9.6							
Analyzed: 25 Sep-19 12:15		Analysis: Nonparametric-Control vs Treatments		Status Level: 1							
Sample ID: 11-9137-1396		Code: 32276Cd		Project: Third Quarter WET Compliance Test							
Sample Date: 16 Sep-19 08:25		Material: WWTP, Municipal Treatment Plant		Source: Schneider Electric							
Receipt Date: 16 Sep-19 13:25		CAS (PC):		Station: MA0004120; Outfall 001 Effluent							
Sample Age: 33h (3 °C)		Client: ESS Laboratory									
Data Transform		Alt Hyp		NOEL	LOEL	TOEL	TU	PMSD			
Untransformed		C > T		100	>100	n/a	1	26.71%			
Steel Many-One Rank Sum Test											
Control	vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)		
Moderately Soft		6.25	106	75	7	18	CDF	0.8650	Non-Significant Effect		
		12.5	108	75	5	18	CDF	0.8837	Non-Significant Effect		
		25	116	75	4	18	CDF	0.9727	Non-Significant Effect		
		50	122	75	4	18	CDF	0.9941	Non-Significant Effect		
		100	88.5	75	5	18	CDF	0.3061	Non-Significant Effect		
ANOVA Table											
Source	Sum Squares		Mean Square		DF	F Stat	P-Value	Decision(α:5%)			
Between	345		69		5	1.31	0.2731	Non-Significant Effect			
Error	2841.6		52.6222		54						
Total	3186.6				59						
ANOVA Assumptions Tests											
Attribute	Test				Test Stat	Critical	P-Value	Decision(α:1%)			
Variance	Bartlett Equality of Variance Test				13.4	15.1	0.0200	Equal Variances			
Distribution	Shapiro-Wilk W Normality Test				0.789	0.946	7.2E-08	Non-Normal Distribution			
Reproduction Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	MS	10	27.8	22.1	33.5	29.5	6	33	2.51	28.52%	0.00%
6.25		10	28.3	24.3	32.3	30.5	16	33	1.77	19.78%	-1.80%
12.5		10	29.2	25.2	33.2	30	15	37	1.78	19.29%	-5.04%
25		10	29.9	25.7	34.1	31.5	16	36	1.85	19.53%	-7.55%
50		10	31.1	28.3	33.9	31.5	23	35	1.22	12.45%	-11.87%
100		10	23.5	15	32	28	0	34	3.75	50.48%	15.47%
Graphics											
											

CETIS Analytical Report

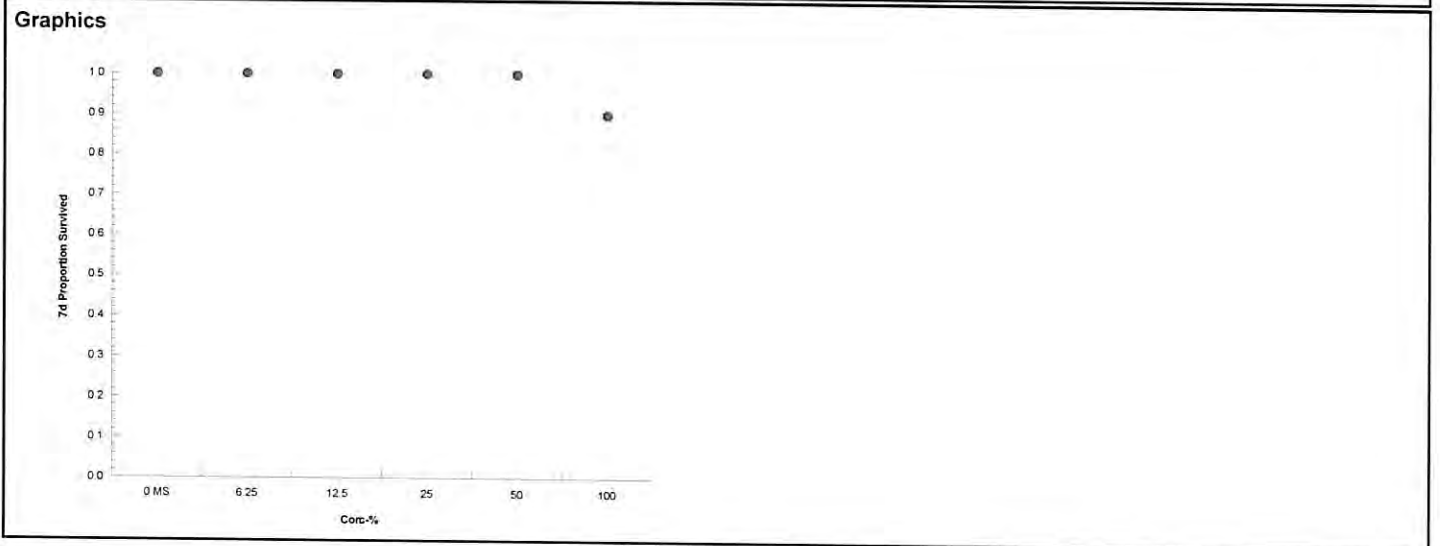
Report Date: 25 Sep-19 12:16 (p 1 of 1)
Test Code/ID: 32276Cd / 00-6697-7404

Ceriodaphnia 7-d Survival and Reproduction Test			Enthalpy Analytical, LLC	
Analysis ID: 06-9191-3341		Endpoint: 7d Proportion Survived	CETIS Version:	CETISv1.9.6
Analyzed: 25 Sep-19 12:16		Analysis: STP 2xK Contingency Tables	Status Level:	1
Sample ID: 11-9137-1396		Code: 32276Cd	Project:	Third Quarter WET Compliance Test
Sample Date: 16 Sep-19 08:25		Material: WWTP, Municipal Treatment Plant	Source:	Schneider Electric
Receipt Date: 16 Sep-19 13:25		CAS (PC):	Station:	MA0004120; Outall 001 Effluent
Sample Age: 33h (3 °C)		Client: ESS Laboratory		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C > T	100	>100	n/a	1

Fisher Exact/Bonferroni-Holm Test						
Control	vs	Group	Test Stat	P-Type	P-Value	Decision(α:5%)
Moderately Soft		6.25	1.000	Exact	1.0000	Non-Significant Effect
		12.5	1.000	Exact	1.0000	Non-Significant Effect
		25	1.000	Exact	1.0000	Non-Significant Effect
		50	1.000	Exact	1.0000	Non-Significant Effect
		100	0.500	Exact	1.0000	Non-Significant Effect

Data Summary							
Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	MS	10	0	10	1	0	-11.1%
6.25		10	0	10	1	0	-11.1%
12.5		10	0	10	1	0	-11.1%
25		10	0	10	1	0	-11.1%
50		10	0	10	1	0	-11.1%
100		9	1	10	0.9	0.1	0.0%



***Ceriodaphnia dubia* - Blocking by Parentage
Tracking Sheet**

ESI #: 32276

CLIENT: Schneider Electric

START DATE: 09/17/19

START TIME: 1700

INITIAL: BG

COLUMN added to	<i>C. dubia</i> ADULT USED	
	board #	cup#
A	MHR 879	4C
B	MSR 1023	4E
C	↓	3G
D	↓	1D
E	MHR 880	1C
F	↓	2E
G	↓	2I
H	↓	2G ^{3G} 2C ^{24 6/17}
I	↓	2C
J	↓	3H

STANDARD REFERENCE TOXICANT ANALYSIS

Exposure: Acute - 48 Hours

Species: Ceriodaphnia dubia

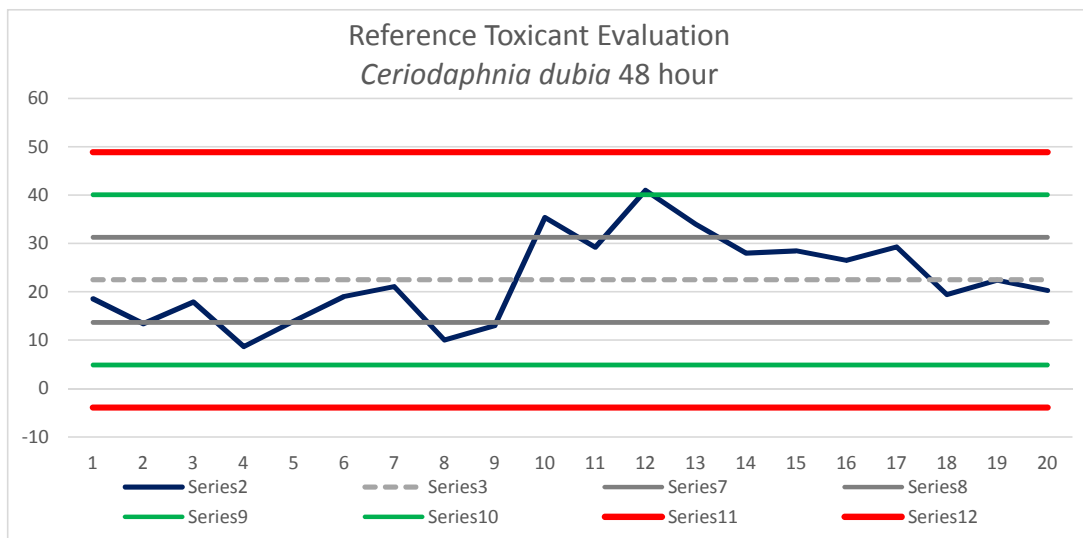
Toxicant: SDS

Temperature: 25C

Long Term Mean: 22.48 mg/L SDS

Long Term CV: 39%

Date	LC-50	Mean	Std Dev	2 Std Dev	CV	Mean -1 Std	Mean +1 Std	Mean -2 Std	Mean +2 Std	Mean -3 Std	Mean +3 Std	Notes
3/6/2018	1	18.6	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
4/3/2018		13.4	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89 Lab Fails TAC for survival
5/1/2018		17.9	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
6/5/2018		8.66	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
7/5/2018	5	14	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
8/30/2018		19	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
9/5/2018		21.1	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
10/2/2018		10	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
11/27/2018		13	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
12/4/2018	10	35.4	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
1/15/2019		29.2	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
2/19/2019		41	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
3/19/2019		34	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
4/23/2019		28	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
4/30/2019	15	28.5	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
6/4/2019		26.5	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
6/26/2019		29.3	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
7/25/2019		19.4	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
8/1/2019		22.4	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89
9/5/2019	20	20.3	22.48	8.80	17.61	39.15	13.68	31.29	4.88	40.09	-3.93	48.89



STANDARD REFERENCE TOXICANT ANALYSIS

Exposure: 7 day Chronic

Species: Ceriodaphnia dubia

Toxicant: Copper - ug/L

Endpoint: Survival

DATE	C-NOEC	Mean	Std Dev	CV	CT	-1 Conc	+1 Conc	Notes
2/27/2018	1	60	32.25	10.06	31.20	60	30	120
3/6/2018	2	60	32.25	10.06	31.20	60	30	120
4/3/2018	3	30	32.25	10.06	31.20	60	30	120
4/24/2018	4	30	32.25	10.06	31.20	60	30	120
6/5/2018	5	30	32.25	10.06	31.20	60	30	120
7/3/2018	6	30	32.25	10.06	31.20	60	30	120
8/28/2018	7	30	32.25	10.06	31.20	30	15	60
9/5/2018	8	30	32.25	10.06	31.20	30	15	60
10/2/2018	9	30	32.25	10.06	31.20	30	15	60
11/27/2018	10	30	32.25	10.06	31.20	30	15	60
12/4/2018	11	30	32.25	10.06	31.20	30	15	60
12/12/2018	12	30	32.25	10.06	31.20	30	15	60
1/15/2019	13	30	32.25	10.06	31.20	30	15	60
2/19/2019	14	30	32.25	10.06	31.20	30	15	60
3/19/2019	15	30	32.25	10.06	31.20	30	15	60
4/23/2019	16	15	32.25	10.06	31.20	30	15	60
4/30/2019	17	30	32.25	10.06	31.20	30	15	60
6/4/2019	18	30	32.25	10.06	31.20	30	15	60
7/30/2019	19	30	32.25	10.06	31.20	30	15	60
8/27/2019	20	30	32.25	10.06	31.20	30	15	60

Acceptable	+ / - 1 mean
Range:	concentration
15	
30	
60	
120	
240	

STANDARD REFERENCE TOXICANT ANALYSIS

Exposure: 7 day Chronic

Species: Ceriodaphnia dubia

Toxicant: Copper - ug/L

Endpoint: Reproduction

DATE	C-NOEC	Mean	Std Dev	CV	CT	-1 Conc	+1 Conc	Notes
2/27/2018	1	60	25.88	11.28	43.58	30	15	60
3/6/2018	2	30	25.88	11.28	43.58	30	15	60
4/3/2018	3	30	25.88	11.28	43.58	30	15	60
4/24/2018	4	30	25.88	11.28	43.58	30	15	60
6/5/2018	5	15	25.88	11.28	43.58	30	15	60
7/3/2018	6	15	25.88	11.28	43.58	30	15	60
8/28/2018	7	15	25.88	11.28	43.58	30	15	60
9/5/2018	8	30	25.88	11.28	43.58	30	15	60
10/2/2018	9	30	25.88	11.28	43.58	30	15	60 Lab Fails TAC
11/27/2018	10	30	25.88	11.28	43.58	30	15	60 MSDp fails. Based on IC-25 = 33.5
12/4/2018	11	30	25.88	11.28	43.58	30	15	60
12/12/2018	12	30	25.88	11.28	43.58	30	15	60
1/15/2019	13	30	25.88	11.28	43.58	30	15	60
2/19/2019	14	30	25.88	11.28	43.58	30	15	60
3/19/2019	15	15	25.88	11.28	43.58	30	15	60
4/23/2019	16	7.5	25.88	11.28	43.58	30	15	60
4/30/2019	17	15	25.88	11.28	43.58	30	15	60
6/4/2019	18	30	25.88	11.28	43.58	30	15	60
7/30/2019	19	15	25.88	11.28	43.58	30	15	60
8/27/2019	20	30	25.88	11.28	43.58	30	15	60

Acceptable	+ / - 1 mean
Range:	concentration
	15
	30
	60
	120
	240

STANDARD REFERENCE TOXICANT ANALYSIS

Exposure: 7 day Chronic

Species: *Ceriodaphnia dubia*

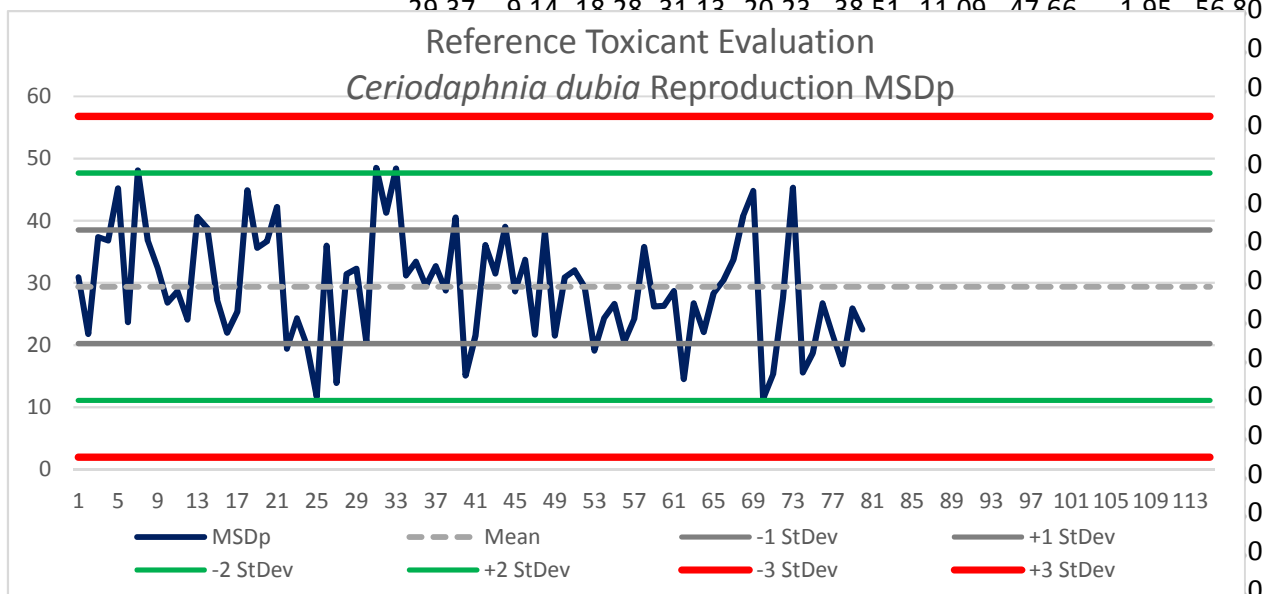
Toxicant: Copper - ug/L

Temperature: 25C

Long Term Mean: 29.3725

Long Term CV: 31%

Date		MSDp	Mean	Std Dev	2 Std Dev	CV	Mean -1 Std	Mean +1 Std	Mean -2 Std	Mean +2 Std	Mean -3 Std	Mean +3 Std
2/27/2018		28.7	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
3/6/2018		14.5	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
4/3/2018		26.7	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
4/24/2018		22.1	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
6/5/2018	65	28.3	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
7/3/2018		30.4	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
8/28/2018		33.7	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
9/5/2018		40.8	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
10/2/2018		44.8	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
11/27/2018	70	11.3	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
12/4/2018		15.3	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
12/12/2018		27.6	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
1/15/2019		45.3	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
2/19/2019		15.6	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
3/19/2019	75	18.7	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
4/23/2019		26.7	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
4/30/2019		21.7	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
6/4/2019		16.9	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
7/30/2019		25.9	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80
8/27/2019	80	22.5	29.37	9.14	18.28	31.13	20.23	38.51	11.09	47.66	1.95	56.80



Pimephales promelas 7 DAY CHRONIC ASSAY

STUDY:		CLIENT:				SAMPLE:				DILUENT:				FISH/BATCH:			
32276		ESS - Schneider Electric				Effluent Outfall 001				MSR				02PpABS091719			
		NUMBER OF SURVIVORS								OLD DISSOLVED OXYGEN (mg/L)							
CON	REP	0	1	2	3	4	5	6	7	1	2	3	4	5	6	7	
MSR	A	10	10	10	10	10	10	10	10	7.3	7.9	7.8	7.4	7.3	7.3	7.3	
	B	10	10	10	10	10	10	10	10	7.6	7.8	8.0	7.3	7.6	7.2	7.3	
	C	10	10	10	10	10	10	10	10	7.7	7.7	8.1	7.3	7.5	7.2	7.2	
	D	10	10	10	10	10	10	10	10	7.3	8.0	8.1	7.2	7.4	7.2	7.2	
6.25%	A	10	10	10	10	10	10	10	10	7.2	7.7	7.9	7.6	7.0	7.2	7.1	
	B	10	10	10	10	10	10	10	10	7.0	7.3	7.9	6.9	6.7	7.0	6.9	
	C	10	10	10	10	10	10	10	10	6.6	7.0	7.9	6.9	7.5	7.0	6.6	
	D	10	10	10	10	10	10	10	10	6.8	6.9	7.9	6.9	7.6	7.0	6.9	
12.5%	A	10	10	10	10	10	10	10	10	6.9	6.9	7.8	7.1	7.1	7.1	7.3	
	B	10	10	10	10	10	10	10	10	6.8	7.5	8.0	6.7	7.1	7.1	7.2	
	C	10	10	10	10	10	10	10	10	6.2	6.6	8.1	6.8	7.4	7.2	7.2	
	D	10	10	10	10	10	10	10	10	6.5	6.4	8.1	6.6	7.6	7.4	7.3	
25%	A	10	10	10	10	10	10	9	9	6.3	7.1	8.0	7.2	7.6	7.4	7.5	
	B	10	10	10	10	10	10	10	10	5.5	7.3	8.0	6.9	7.7	7.3	7.3	
	C	10	10	10	10	10	10	10	10	5.9	7.3	7.7	7.0	7.6	7.2	6.7	
	D	10	10	10	10	10	10	10	10	6.0	7.6	7.9	6.8	7.6	7.2	7.2	
50%	A	10	10	10	10	10	10	10	10	6.4	7.4	7.8	6.9	7.6	7.2	7.3	
	B	10	10	10	10	10	10	9	9	6.8	7.6	7.9	7.3	7.4	7.0	6.8	
	C	10	10	10	10	10	10	10	10	6.8	7.3	7.9	7.3	7.6	7.1	7.1	
	D	10	10	10	10	10	10	10	10	6.3	7.1	7.8	6.9	7.7	7.1	6.9	
100%	A	10	10	10	10	10	10	10	10	7.1	7.6	7.9	7.4	7.9	7.2	7.4	
	B	10	10	10	10	10	10	10	10	6.7	7.2	7.7	7.5	7.5	7.2	7.3	
	C	10	10	10	10	10	10	10	10	7.2	7.2	7.7	6.8	7.5	7.2	7.2	
	D	10	10	10	10	10	10	10	10	6.9	7.3	7.8	7.4	7.7	7.2	7.0	
INC TEMP:		26	26.5	26	26.5	25	25	25	25								
DATE:		09/17/19	09/18/19	09/19	09/20/19	09/21/19	09/22	09/23	09/24	09/18/19	09/19/19	09/20/19	09/21/19	09/22/19	09/23/19	09/24	
TIME:		1745	1040	1245	1110	1150	1545	1305	1120	0935	1100	0843	1055	1330	1115	1045	
INITIALS:		CFS	LCI	CFS	GRS	BC	LAG	LCI	CA	GRS	CA	CA	CA	LCI	GRS	CFS	

STUDY: 32276
CLIENT: ESS
PROJECT: Schneider Electric
ASSAY: PP7DCR
Organism Lot #: 02PPABS091719
TASK: Dry Weight Data - Balance Output File
BALANCE: Ohaus Discovery Balance Model DV215CD
Serial #: 112402024313

Date / Init: 09/26/19 KM		09/23/19 KM		Duplicates	
Sample	Rep	Total Wt. (mg)	Tare Wt (mg)	Total Wt (mg)	Tare Wt (mg)
MSR	A	15.54	9.96	15.56	9.95
MSR	B	14.67	9.89		
MSR	C	17.68	12.09		
MSR	D	17.42	12.19		
6.25	A	14.47	9.32		
6.25	B	15.75	10.17		
6.25	C	14.83	8.65		
6.25	D	16.96	11.49		
12.5	A	15.27	9.4		
12.5	B	14.21	9.18	14.2	9.19
12.5	C	17.42	12.62		
12.5	D	15.64	11.27		
25	A	14.6	10.36		
25	B	13.84	8.4		
25	C	16.26	10.59		
25	D	17.15	12.03		
50	A	15.64	10.44		
50	B	15.86	10.91		
50	C	16.03	10.87	16.05	10.88
50	D	16.74	11.51		
100	A	15.45	10.2		
100	B	15.81	10.51		
100	C	17.31	11.49		
100	D	18.2	12.42		

CETIS Test Data Worksheet

Report Date: 30 Sep-19 16:23 (p 1 of 1)
 Test Code/ID: 32276Pp / 08-1788-4409

Fathead Minnow 7-d Larval Survival and Growth Test

Enthalpy Analytical, LLC

Start Date: 17 Sep-19 17:45 Species: *Pimephales promelas* Sample Code: 32276d
 End Date: 24 Sep-19 11:20 Protocol: EPA/821/R-02-013 (2002) Sample Source: Schneider Electric
 Sample Date: 16 Sep-19 08:25 Material: WWTP, Municipal Treatment Plant Sample Station: MA0004120; Outfall 001 Effluent

Conc.-%	Code	Rep	Pos	# Exposed	1d Survival	2d Survival	3d Survival	4d Survival	5d Survival	6d Survival	7d Survival	Total Weight-mg	Tare Weight-mg	Pan Count	Notes
0	MS	1	22	10							10	15.54	9.96	10	
0	MS	2	3	10							10	14.67	9.89	10	
0	MS	3	2	10							10	17.68	12.09	10	
0	MS	4	24	10							10	17.42	12.19	10	
6.25		1	13	10							10	14.47	9.32	10	
6.25		2	5	10							10	15.75	10.17	10	
6.25		3	9	10							10	14.83	8.65	10	
6.25		4	6	10							10	16.96	11.49	10	
12.5		1	23	10							10	15.27	9.4	10	
12.5		2	16	10							10	14.21	9.18	10	
12.5		3	21	10							10	17.42	12.62	10	
12.5		4	10	10							10	15.64	11.27	10	
25		1	7	10							9	14.6	10.36	9	
25		2	11	10							10	13.84	8.4	10	
25		3	4	10							10	16.26	10.59	10	
25		4	8	10							10	17.15	12.03	10	
50		1	18	10							10	15.64	10.44	10	
50		2	17	10							9	15.86	10.91	9	
50		3	14	10							10	16.03	10.87	10	
50		4	19	10							10	16.74	11.51	10	
100		1	20	10							10	15.45	10.2	10	
100		2	1	10							10	15.81	10.51	10	
100		3	12	10							10	17.31	11.49	10	
100		4	15	10							10	18.2	12.42	10	

CETIS Summary Report

Report Date: 03 Oct-19 16:42 (p 1 of 2)
Test Code/ID: 32276Pp / 08-1788-4409

Fathead Minnow 7-d Larval Survival and Growth Test				Enthalpy Analytical, LLC	
Batch ID:	14-6359-6585	Test Type:	Growth-Survival (7d)	Analyst:	Meredith Wheeler
Start Date:	17 Sep-19 17:45	Protocol:	EPA/821/R-02-013 (2002)	Diluent:	Mod-Soft Synthetic Water
Ending Date:	24 Sep-19 11:20	Species:	Pimephales promelas	Brine:	Not Applicable
Test Length:	6d 18h	Taxon:	Actinopterygii	Source:	ABS - Aquatic Biosystems, Age: <48
Sample ID:	05-9950-8828	Code:	32276d	Project:	Third Quarter WET Compliance Test
Sample Date:	16 Sep-19 08:25	Material:	WWTP, Municipal Treatment Plant	Source:	Schneider Electric
Receipt Date:	16 Sep-19 13:25	CAS (PC):		Station:	MA0004120; Outall 001 Effluent
Sample Age:	33h (3 °C)	Client:	ESS Laboratory		

Multiple Comparison Summary									
Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	TU	PMSD	S
07-1690-9564	7d Proportion Survived	Steel Many-One Rank Sum Test		100	>100	n/a	1	5.6%	1
01-6847-4102	Mean Dry Biomass-mg	Dunnett Multiple Comparison Test		100	>100	n/a	1	14.6%	1
09-4069-3054	Mean Dry Weight-mg	Dunnett Multiple Comparison Test		100	>100	n/a	1	13.2%	1

7d Proportion Survived Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	MS	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
6.25		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
12.5		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
25		4	0.975	0.895	1.000	0.900	1.000	0.025	0.050	5.13%	2.50%
50		4	0.975	0.895	1.000	0.900	1.000	0.025	0.050	5.13%	2.50%
100		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%

Mean Dry Biomass-mg Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	MS	4	0.53	0.469	0.59	0.478	0.559	0.0191	0.0382	7.21%	0.00%
6.25		4	0.559	0.491	0.628	0.515	0.618	0.0215	0.0431	7.70%	-5.67%
12.5		4	0.502	0.401	0.602	0.437	0.587	0.0315	0.0631	12.57%	5.24%
25		4	0.512	0.412	0.612	0.424	0.567	0.0313	0.0627	12.25%	3.35%
50		4	0.514	0.493	0.534	0.495	0.523	0.00633	0.0127	2.47%	3.02%
100		4	0.554	0.505	0.602	0.525	0.582	0.0152	0.0304	5.49%	-4.58%

Mean Dry Weight-mg Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	MS	4	0.53	0.469	0.59	0.478	0.559	0.0191	0.0382	7.21%	0.00%
6.25		4	0.559	0.491	0.628	0.515	0.618	0.0215	0.0431	7.70%	-5.67%
12.5		4	0.502	0.401	0.602	0.437	0.587	0.0315	0.0631	12.57%	5.24%
25		4	0.524	0.457	0.59	0.471	0.567	0.0208	0.0416	7.94%	1.13%
50		4	0.527	0.503	0.552	0.516	0.55	0.00772	0.0154	2.93%	0.42%
100		4	0.554	0.505	0.602	0.525	0.582	0.0152	0.0304	5.49%	-4.58%

CETIS Summary Report

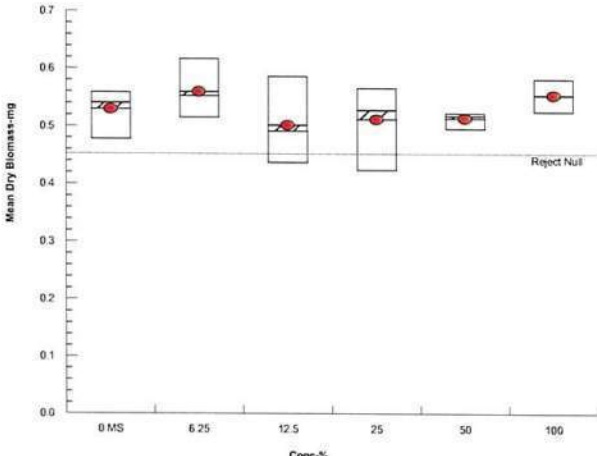
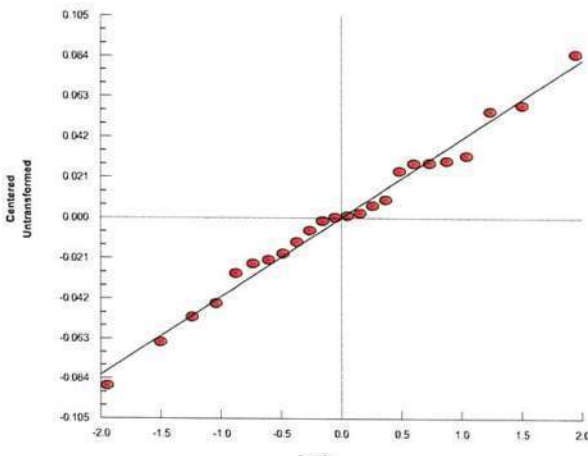
Report Date: 03 Oct-19 16:42 (p 2 of 2)
 Test Code/ID: 32276Pp / 08-1788-4409

Fathead Minnow 7-d Larval Survival and Growth Test					Enthalpy Analytical, LLC
7d Proportion Survived Detail					
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	MS	1.000	1.000	1.000	1.000
6.25		1.000	1.000	1.000	1.000
12.5		1.000	1.000	1.000	1.000
25		0.900	1.000	1.000	1.000
50		1.000	0.900	1.000	1.000
100		1.000	1.000	1.000	1.000
Mean Dry Biomass-mg Detail					
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	MS	0.558	0.478	0.559	0.523
6.25		0.515	0.558	0.618	0.547
12.5		0.587	0.503	0.48	0.437
25		0.424	0.544	0.567	0.512
50		0.52	0.495	0.516	0.523
100		0.525	0.53	0.582	0.578
Mean Dry Weight-mg Detail					
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	MS	0.558	0.478	0.559	0.523
6.25		0.515	0.558	0.618	0.547
12.5		0.587	0.503	0.48	0.437
25		0.471	0.544	0.567	0.512
50		0.52	0.55	0.516	0.523
100		0.525	0.53	0.582	0.578

CETIS Analytical Report

Report Date: 03 Oct-19 16:42 (p 1 of 3)
Test Code/ID: 32276Pp / 08-1788-4409

Fathead Minnow 7-d Larval Survival and Growth Test										Enthalpy Analytical, LLC		
Analysis ID: 07-1690-9564			Endpoint: 7d Proportion Survived				CETIS Version: CETISv1.9.6					
Analyzed: 30 Sep-19 16:22			Analysis: Nonparametric-Control vs Treatments				Status Level: 1					
Sample ID: 05-9950-8828			Code: 32276d				Project: Third Quarter WET Compliance Test					
Sample Date: 16 Sep-19 08:25			Material: WWTP, Municipal Treatment Plant				Source: Schneider Electric					
Receipt Date: 16 Sep-19 13:25			CAS (PC):				Station: MA0004120; Outall 001 Effluent					
Sample Age: 33h (3 °C)			Client: ESS Laboratory									
Data Transform		Alt Hyp						NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)		C > T						100	>100	n/a	1	5.60%
Steel Many-One Rank Sum Test												
Control	vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)			
Moderately Soft		6.25	18	10	1	6	CDF	0.8333	Non-Significant Effect			
		12.5	18	10	1	6	CDF	0.8333	Non-Significant Effect			
		25	16	10	1	6	CDF	0.6105	Non-Significant Effect			
		50	16	10	1	6	CDF	0.6105	Non-Significant Effect			
		100	18	10	1	6	CDF	0.8333	Non-Significant Effect			
ANOVA Table												
Source	Sum Squares		Mean Square		DF	F Stat		P-Value	Decision(α:5%)			
Between	0.0088531		0.0017706		5	0.8		0.5640	Non-Significant Effect			
Error	0.039839		0.0022133		18							
Total	0.0486921				23							
ANOVA Assumptions Tests												
Attribute	Test				Test Stat	Critical	P-Value		Decision(α:1%)			
Variance	Levene Equality of Variance Test				7.2	4.25	7.3E-04		Unequal Variances			
	Mod Levene Equality of Variance Test				0.8	4.25	0.5640		Equal Variances			
Distribution	Shapiro-Wilk W Normality Test				0.615	0.884	9.2E-07		Non-Normal Distribution			
7d Proportion Survived Summary												
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect	
0	MS	4	1.000	1.000	1.000		1.000	1.000	0.000	0.00%	0.00%	
6.25		4	1.000	1.000	1.000		1.000	1.000	0.000	0.00%	0.00%	
12.5		4	1.000	1.000	1.000		1.000	1.000	0.000	0.00%	0.00%	
25		4	0.975	0.895	1.000		0.900	1.000	0.025	5.13%	2.50%	
50		4	0.975	0.895	1.000		0.900	1.000	0.025	5.13%	2.50%	
100		4	1.000	1.000	1.000		1.000	1.000	0.000	0.00%	0.00%	
Angular (Corrected) Transformed Summary												
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect	
0	MS	4	1.41	1.41	1.41		1.41	1.41	0	0.00%	0.00%	
6.25		4	1.41	1.41	1.41		1.41	1.41	0	0.00%	0.00%	
12.5		4	1.41	1.41	1.41		1.41	1.41	0	0.00%	0.00%	
25		4	1.37	1.24	1.5		1.25	1.41	0.0407	5.94%	2.89%	
50		4	1.37	1.24	1.5		1.25	1.41	0.0407	5.94%	2.89%	
100		4	1.41	1.41	1.41		1.41	1.41	0	0.00%	0.00%	

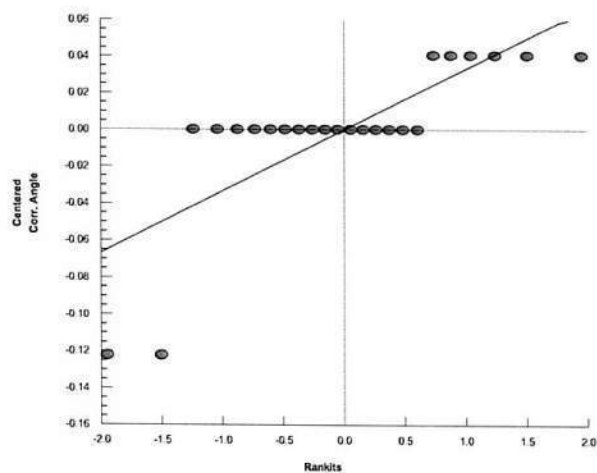
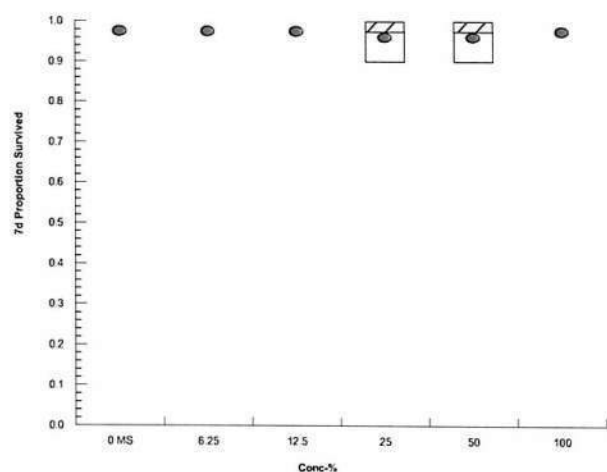
Fathead Minnow 7-d Larval Survival and Growth Test						Enthalpy Analytical, LLC					
Analysis ID: 01-6847-4102		Endpoint: Mean Dry Biomass-mg		CETIS Version: CETISv1.9.6							
Analyzed: 30 Sep-19 16:22		Analysis: Parametric-Control vs Treatments		Status Level: 1							
Sample ID: 05-9950-8828		Code: 32276d		Project: Third Quarter WET Compliance Test							
Sample Date: 16 Sep-19 08:25		Material: WWTP, Municipal Treatment Plant		Source: Schneider Electric							
Receipt Date: 16 Sep-19 13:25		CAS (PC):		Station: MA0004120; Outfall 001 Effluent							
Sample Age: 33h (3 °C)		Client: ESS Laboratory									
Data Transform		Alt Hyp		NOEL	LOEL	TOEL	TU	PMSD			
Untransformed		C > T		100	>100	n/a	1	14.56%			
Dunnett Multiple Comparison Test											
Control	vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)		
Moderately Soft		6.25	-0.937	2.41	0.077	6	CDF	0.9795	Non-Significant Effect		
		12.5	0.866	2.41	0.077	6	CDF	0.4818	Non-Significant Effect		
		25	0.554	2.41	0.077	6	CDF	0.6237	Non-Significant Effect		
		50	0.5	2.41	0.077	6	CDF	0.6477	Non-Significant Effect		
		100	-0.757	2.41	0.077	6	CDF	0.9674	Non-Significant Effect		
ANOVA Table											
Source	Sum Squares		Mean Square		DF	F Stat	P-Value	Decision(α:5%)			
Between	0.0112817		0.0022563		5	1.1	0.3945	Non-Significant Effect			
Error	0.0369233		0.0020513		18						
Total	0.048205				23						
ANOVA Assumptions Tests											
Attribute	Test				Test Stat	Critical	P-Value	Decision(α:1%)			
Variance	Bartlett Equality of Variance Test				6.57	15.1	0.2546	Equal Variances			
Distribution	Shapiro-Wilk W Normality Test				0.989	0.884	0.9934	Normal Distribution			
Mean Dry Biomass-mg Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	MS	4	0.53	0.469	0.59	0.541	0.478	0.559	0.0191	7.21%	0.00%
6.25		4	0.559	0.491	0.628	0.552	0.515	0.618	0.0215	7.70%	-5.67%
12.5		4	0.502	0.401	0.602	0.491	0.437	0.587	0.0315	12.57%	5.24%
25		4	0.512	0.412	0.612	0.528	0.424	0.567	0.0313	12.25%	3.35%
50		4	0.514	0.493	0.534	0.518	0.495	0.523	0.00633	2.47%	3.02%
100		4	0.554	0.505	0.602	0.554	0.525	0.582	0.0152	5.49%	-4.58%
Graphics											
											

Fathead Minnow 7-d Larval Survival and Growth Test

Enthalpy Analytical, LLC

Analysis ID: 07-1690-9564
Analyzed: 30 Sep-19 16:22Endpoint: 7d Proportion Survived
Analysis: Nonparametric-Control vs TreatmentsCETIS Version: CETISv1.9.6
Status Level: 1

Graphics



1300 Blue Spruce Drive, Suite C
Fort Collins, Colorado 80524



02PpABS091719

Toll Free: 800/331-5916
Tel: 970/484-5091 Fax: 970/484-2514

ORGANISM HISTORY

DATE: 9/16/2019

SPECIES: Pimephales promelas

AGE: 1 day

LIFE STAGE: Larvae

HATCH DATE: 9/15/2019

BEGAN FEEDING: 9/16/2019

FOOD: Artemia sp.

Water Chemistry Record:

	Current	Range
TEMPERATURE:	<u>25°C</u>	<u>--</u>
SALINITY/CONDUCTIVITY:	<u>--</u>	<u>--</u>
TOTAL HARDNESS (as CaCO ₃):	<u>114 mg/l</u>	<u>--</u>
TOTAL ALKALINITY (as CaCO ₃):	<u>80 mg/l</u>	<u>--</u>
pH:	<u>7.87</u>	<u>--</u>

Comments:


Facility Supervisor

STANDARD REFERENCE TOXICANT ANALYSIS

Exposure: Acute - 48 Hours

Species: *Pimephales promelas* (ARO)

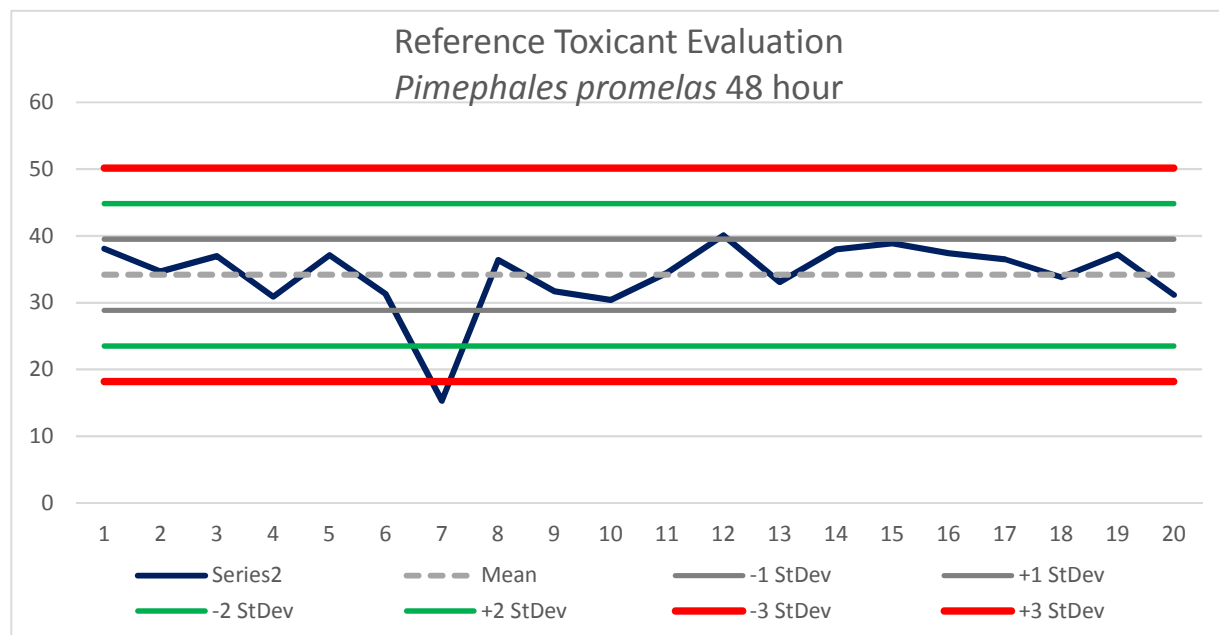
Toxicant: SDS

Temperature: 25C

Long Term Mean: 34.18 mg/L SDS

Long Term CV: 16%

Date		LC-50	Mean	Std	2 Std	CV	Mean	Mean	Mean	Mean	Mean	Mean
				Dev	Dev		-1 Std	+1 Std	-2 Std	+2 Std	-3 Std	+3 Std
2/27/2018	1	38.1	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
3/6/2018		34.7	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
4/3/2018		37	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
5/1/2018		30.9	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
6/5/2018	5	37.1	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
7/5/2018		31.3	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
8/30/2018		15.3	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
9/6/2018		36.4	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
10/2/2018		31.7	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
11/27/2018	10	30.4	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
12/4/2018		34.5	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
1/15/2019		40.1	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
2/19/2019		33.1	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
3/21/2019		38	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
4/16/2019	15	38.9	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
4/30/2019		37.4	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
6/20/2019		36.5	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
7/25/2019		33.8	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
8/1/2019		37.2	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17
9/5/2019	20	31.2	34.18	5.33	10.66	15.60	28.85	39.51	23.52	44.84	18.19	50.17



Issued by:

Reviewed by:

STANDARD REFERENCE TOXICANT ANALYSIS

Exposure: 7 day Chronic

Species: Pimephales promelas (ABS)

Toxicant: Sodium Dodecyl Sulfate

Endpoint: Survival

DATE	C-NOEC	Mean	Std Dev	CV	CT	-1 Conc	+1 Conc	Notes
3/6/2018	1	5	12.75	7.16	56.15	10	5	20
4/3/2018	2	5	12.75	7.16	56.15	10	5	20
4/3/2018	3	5	12.75	7.16	56.15	10	5	20
5/1/2018	4	10	12.75	7.16	56.15	10	5	20
7/17/2018	5	5	12.75	7.16	56.15	10	5	20
7/17/2018	6	10	12.75	7.16	56.15	10	5	20
8/28/2018	7	5	12.75	7.16	56.15	10	5	20
9/18/2018	8	10	12.75	7.16	56.15	10	5	20
10/4/2018	9	20	12.75	7.16	56.15	10	5	20
11/27/2018	10	10	12.75	7.16	56.15	10	5	20
12/4/2018	11	20	12.75	7.16	56.15	10	5	20
1/22/2019	12	20	12.75	7.16	56.15	10	5	20
2/12/2019	13	20	12.75	7.16	56.15	10	5	20
3/26/2019	14	20	12.75	7.16	56.15	10	5	20
4/16/2019	15	30	12.75	7.16	56.15	10	5	20
4/30/2019	16	10	12.75	7.16	56.15	10	5	20
6/4/2019	17	10	12.75	7.16	56.15	10	5	20
6/18/2019	18	10	12.75	7.16	56.15	10	5	20
7/23/2019	19	20	12.75	7.16	56.15	10	5	20
8/27/2019	20	10	12.75	7.16	56.15	10	5	20

Acceptable	+ / - 1 mean
Range:	concentration
	5
	10
	20
	30
	40

STANDARD REFERENCE TOXICANT ANALYSIS

Exposure: 7 day Chronic

Species: *Pimephales promelas* (ABS)

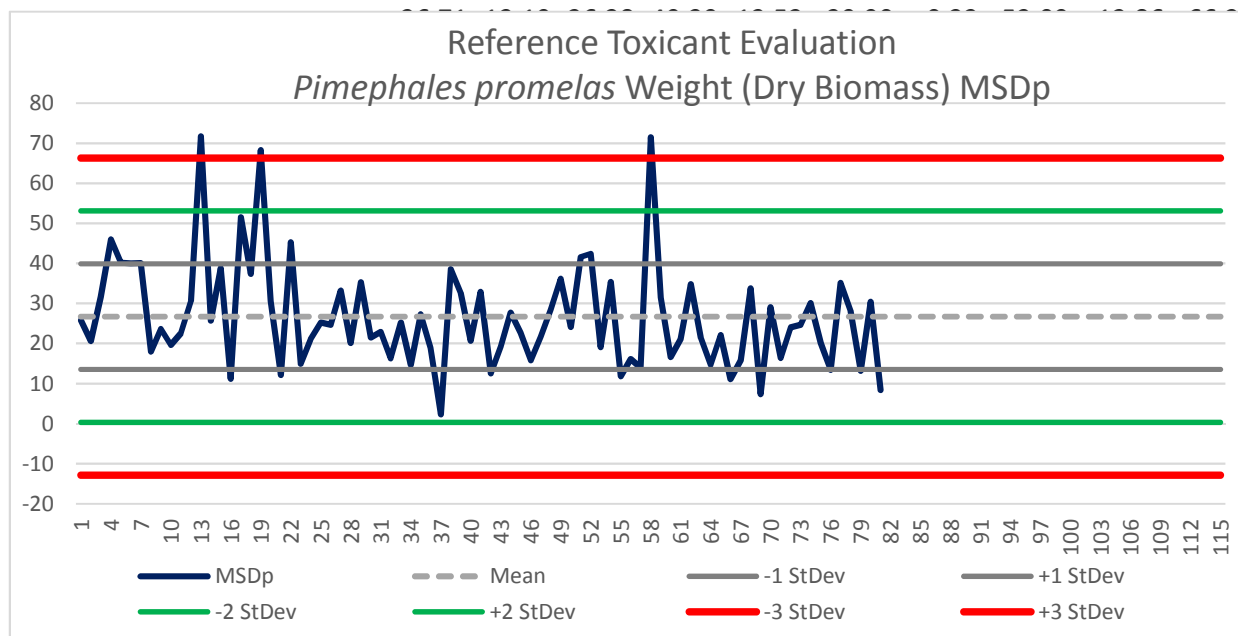
Toxicant: Sodium Dodecyl Sulfate

Temperature: 25C

Long Term Mean: 26.70679 mg/L SDS

Long Term CV: 49%

Date		MSDp	Mean	Std	2 Std	CV	Mean	Mean	Mean	Mean	Mean	Mean
				Dev	Dev		-1 Std	+1 Std	-2 Std	+2 Std	-3 Std	+3 Std
3/6/2018		34.8	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
4/3/2018		21.5	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
4/3/2018		14.7	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
5/1/2018	65	22.1	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
7/17/2018		11.1	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
7/17/2018		15.8	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
8/28/2018		33.8	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
9/18/2018		7.31	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
10/4/2018	70	29.1	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
11/27/2018		16.4	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
12/4/2018		24	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
1/22/2019		24.7	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
2/12/2019		30.1	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
3/26/2019	75	20.1	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
4/16/2019		13.4	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
4/30/2019		35.1	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
6/4/2019		28.2	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
6/18/2019		13.2	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
7/23/2019	80	30.4	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27
8/27/2019		8.34	26.71	13.19	26.38	49.39	13.52	39.90	0.33	53.09	-12.86	66.27



STANDARD REFERENCE TOXICANT ANALYSIS

Exposure: 7 day Chronic

Species: Pimephales promelas (ABS)

Toxicant: Sodium Dodecyl Sulfate

Endpoint: Growth (dry biomass)

DATE	C-NOEC	Mean	Std Dev	CV	CT	-1 Conc	+1 Conc	Notes	Acceptable Range:	+ / - 1 mean concentration
3/6/2018	1	5	13.30	7.39	55.58	20	10	30	MSDp fails. Based on IC-25 = 6.82	5 10 20 30 40
4/3/2018	2	5	13.30	7.39	55.58	20	10	30		
4/3/2018	3	5	13.30	7.39	55.58	20	10	30		
5/1/2018	4	10	13.30	7.39	55.58	10	5	20		
7/17/2018	5	10	13.30	7.39	55.58	10	5	20		
7/17/2018	6	10	13.30	7.39	55.58	10	5	20		
8/28/2018	7	1	13.30	7.39	55.58	10	5	20		
9/18/2018	8	10	13.30	7.39	55.58	10	5	20		
10/4/2018	9	20	13.30	7.39	55.58	10	5	20		
11/27/2018	10	10	13.30	7.39	55.58	10	5	20		
12/4/2018	11	20	13.30	7.39	55.58	10	5	20	MSDp fails. Based on IC-25 = 23.8	
1/22/2019	12	20	13.30	7.39	55.58	10	5	20		
2/12/2019	13	20	13.30	7.39	55.58	10	5	20		
3/26/2019	14	20	13.30	7.39	55.58	10	5	20		
4/16/2019	15	30	13.30	7.39	55.58	10	5	20		
4/30/2019	16	20	13.30	7.39	55.58	10	5	20		
6/4/2019	17	10	13.30	7.39	55.58	10	5	20		
6/18/2019	18	10	13.30	7.39	55.58	10	5	20		
7/23/2019	19	20	13.30	7.39	55.58	10	5	20		
8/27/2019	20	10	13.30	7.39	55.58	10	5	20		
								MSDp meets crit by rounding. Based on IC-25 = 21.4		
								MSDp fails. Based on IC-25 = 5		
								MSDp fails. Based on IC-25 = >10		
								MSDp fails. Based on IC-25 = 6.82		
								MSDp fails. Based on IC-25 = 23.8		
								MSDp fails. Based on IC-25 = 13.6		

FRESHWATER CHRONIC ASSAY - *C. dubia* and *P. promelas* NEW WATER QUALITIES

STUDY: 32276 CLIENT: ESS - Schneider Electric SAMPLE: Effluent 001 DILUENT: MSR

NEW DISSOLVED OXYGEN (mg/L)										NEW pH (SU)							
CONC	REP	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
LAB	A	8.5	8.6	8.0	8.6	8.5	8.4	8.4		7.92	7.91	7.92	7.90	7.86	7.86	8.03	
6.25%	A	8.5	8.7	7.8	8.6	8.5	8.4	8.3		7.74	7.81	7.58	7.73	7.70	7.67	7.91	
12.5%	A	8.5	8.6	7.9	8.6	8.5	8.5	8.4		7.58	7.66	7.53	7.58	7.56	7.53	7.73	
25%	A	8.5	8.6	7.9	8.6	8.5	8.4	8.4		7.28	7.41	7.37	7.40	7.20	7.27	7.55	
50%	A	8.4	8.6	7.7	8.6	8.5	8.4	8.4		6.92	7.00	7.08	7.07	6.81	6.93	7.21	
100%	A	8.0	8.5	7.6	8.7	8.4	8.4	8.4		6.24	6.26	6.53	6.48	6.27	6.37	6.75	

NEW SPECIFIC CONDUCTIVITY (µMHOS/CM)										NEW TEMPERATURE (°C)							
CONC	REP	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
LAB	A	219	221	219	222	213	210	221		24	24	23	24	23	22	24	
6.25%	A	240	240	245	240	239	236	243		24	24	24	23	23	22	24	
12.5%	A	262	264	269	271	265	258	274		24	24	24	23	23	22	24	
25%	A	309	309	299	308	309	312	322		24	24	24	23	23	22	24	
50%	A	400	406	415	412	411	410	426		24	24	24	23	23	23	24	
100%	A	585	596	613	620	616	611	630		24	25	24	23	23	23	24	

INC TEMP	25	25	25	25	25	25	25	25	
DATE:	09/17/19	09/18/19	09/19/19	09/20	09/21	09/22	09/23/19		
TIME:	1345	1120	1615	1330	1220	1720	1705		
INITIALS:	LCI	GRS	CA	CA	CA	LAG	MS		

DAY 0 (START)								DAY 2 (1 ST RENEWAL)				DAY 4 (2 ND RENEWAL)			
	METALS	TOC	ALK	HARD	AMM	TS/TDS	TRC	ALK	HARD	AMM	TRC	ALK	HARD	AMM	TRC
EFF	-002	-003	-004	-005	-006	-007	<0.02	-017	-018	-019	<0.02	-027	-028	-029	<0.02
MSR	001	002	003	004	005			008	009	010		017	018	019	

Did 1st Renewal sample cause ≥50% mortality? Yes _____ No ☒
 If "YES" put into circulation TOC and METALS bottles. _____

Did 2nd Renewal sample cause ≥50% mortality? Yes _____ No ☒
 If "YES" put into circulation TOC and METALS bottles. _____

P. promelas CHRONIC ASSAY - OLD WATER QUALITIES

STUDY: 32276		CLIENT: ESS - Schneider Electric							SAMPLE: Effluent 001			DILUENT: MSR				
OLD Temperature (°C)									OLD pH (SU)							
CONC	REP	1	2	3	4	5	6	7	1	2	3	4	5	6	7	
MSR	A	24	24	23	23	24	24	24	7.50	7.54	7.44	7.54	7.49	7.53	7.63	
6.25%	A	24	24	23	24	24	24	24	7.49	7.52	7.49	7.48	7.46	7.52	7.59	
12.5%	A	24	24	23	24	24	25	24	7.43	7.61	7.50	7.51	7.44	7.50	7.61	
25%	A	24	24	22	24	24	25	24	7.27	7.57	7.55	7.52	7.49	7.54	7.62	
50%	A	24	24	22	24	24	24	24	7.20	7.45	7.40	7.40	7.47	7.35	7.52	
100%	A	24	24	22	24	24	25	24	6.97	7.31	7.15	7.32	7.35	7.03	7.36	
OLD SPECIFIC CONDUCTIVITY (µMHOS/CM)																
CONC	REP	1	2	3	4	5	6	7								
MSR	A	229	229	243	243	235	229	226								
6.25%	A	251	252	254	265	261	257	252								
12.5%	A	272	281	288	291	287	285	280								
25%	A	320	324	319	357	345	341	333								
50%	A	412	424	431	440	443	438	435								
100%	A	600	632	630	645	661	649	649								
INC TEMP:		26	26	26	25	25	25	25								
DATE:		09/18/19	09/19/19	09/20/19	09/21	09/22	09/23/19	09/24								
TIME:		0935	1100	0843	1055	1330	1115	1045								
INITIALS:		GRS	CA	CA	CA	LCI	GRS	CFS								

C. dubia Old Water Qualities

STUDY: 32276		CLIENT: ESS - Schneider Electric				SAMPLE: Effluent Outfall 001						DILUENT:	
CONC	DAY	pH	DO	TEMP	SPEC	CONC	DAY	pH	DO	TEMP	SPEC	INC TEMP	INIT
MSR	1	8.18	8.9	22	229	100%	1	7.72	8.7	22	581	25	LAG
	2	8.02	8.8	23	239		2	7.70	8.7	23	617	25	CA
	3	8.20	9.0	17	234		3	7.74	8.9	18	611	25	GES
	4	8.24	9.0	20	232		4	7.76	8.8	19	593	25	CA
	5	8.12	8.3	20	223		5	7.68	8.4	19	517	25	MS
	6	8.00	8.3	21	232		6	7.69	8.1	21	612	25	MS
	7	7.49	8.7	22	237		7	7.71	8.6	22	689	25	CA
	8						8						
6.25%	1	8.09	8.8	22	251		1						
	2	8.01	8.7	23	265		2						
	3	8.16	9.1	18	259		3						
	4	8.17	8.9	20	242		4						
	5	8.09	8.2	20	244		5						
	6	7.97	8.1	21	259		6						
	7	7.98	8.7	22	263		7						
	8						8						
12.5%	1	8.02	8.8	22	270		1						
	2	7.97	8.7	23	284		2						
	3	8.12	8.9	18	276		3						
	4	8.11	8.9	20	263		4						
	5	8.03	8.2	19	266		5						
	6	7.91	8.7	21	301		6						
	7	7.95	8.6	22	290		7						
	8						8						
25%	1	7.96	8.7	22	314		1						
	2	7.94	8.7	23	327		2						
	3	8.07	8.9	18	313		3						
	4	8.06	8.8	20	313		4						
	5	7.96	8.2	19	310		5						
	6	7.86	8.1	21	333		6						
	7	7.91	8.6	22	344		7						
	8						8						
50%	1	7.87	8.7	22	403		1						
	2	7.87	8.7	23	423		2						
	3	7.94	8.9	18	402		3						
	4	7.97	8.8	20	407		4						
	5	7.87	8.4	19	409		5						
	6	7.79	8.1	21	431		6						
	7	7.84	8.6	22	461		7						
	8						8						

Report No: 32276 SDG:
Project: ESS - Schneider

Sample ID: Effluent Outfall 001 Start
Matrix: Water
Sampled: 09/16/19 0825

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	32276-007	370	10	mg/L	09/23/19 1420	09/25/19 1010	AL /SM 2540B
Total dissolved solids	32276-007	410	5	mg/L	09/23/19 1505	09/26/19 1315	AL /SM 2540C
Alkalinity as CaCO3	32276-004	20	2	mg/L	09/23/19 1030	09/23/19 1030	JHW/EPA 310.2
Total organic carbon	32276-003	3	0.4	mg/L	09/19/19 1230	09/19/19 1245	JLH/SM 5310 B
Ammonia-N	32276-006	0.21	0.1	mg/L as N	09/19/19 1045	09/19/19 1045	JHW/SM 4500-NH3 G
Hardness as CaCO3	32276-005	72	0.7	mg/L	09/28/19 1300	09/28/19 1600	JLH/ess/SW846 3rd Ed. 6020
Aluminum, total	32276-002	0.055	0.02	mg/L	09/20/19 0945	09/25/19 2128	JLH/EPA 200.8
Cadmium, total	32276-002	0.0004	0.0003	mg/L	09/20/19 0945	09/25/19 2128	JLH/EPA 200.8
Calcium, total	32276-002	21.3	0.05	mg/L	09/20/19 0945	09/25/19 2128	JLH/EPA 200.8
Chromium, total	32276-002	ND	0.001	mg/L	09/20/19 0945	09/25/19 2128	JLH/EPA 200.8
Copper, total	32276-002	0.0035	0.0005	mg/L	09/20/19 0945	09/25/19 2128	JLH/EPA 200.8
Lead, total	32276-002	ND	0.0003	mg/L	09/20/19 0945	09/25/19 2128	JLH/EPA 200.8
Magnesium, total	32276-002	4.42	0.05	mg/L	09/20/19 0945	09/25/19 2128	JLH/EPA 200.8
Nickel, total	32276-002	0.0021	0.001	mg/L	09/20/19 0945	09/25/19 2128	JLH/EPA 200.8
Selenium, total	32276-002	ND	0.002	mg/L	09/20/19 0945	09/25/19 2128	JLH/EPA 200.8
Zinc, total	32276-002	0.021	0.002	mg/L	09/20/19 0945	09/25/19 2128	JLH/EPA 200.8

Sample ID: Effluent Outfall 001 First Renewal
Matrix: Water
Sampled: 09/18/19 0825

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Alkalinity as CaCO3	32276-011	21	2	mg/L	09/23/19 1030	09/23/19 1030	JHW/EPA 310.2
Hardness as CaCO3	32276-012	74	0.7	mg/L	09/28/19 1300	09/28/19 1602	JLH/ess/SW846 3rd Ed. 6020
Ammonia-N	32276-013	0.27	0.1	mg/L as N	09/19/19 1045	09/19/19 1045	JHW/SM 4500-NH3 G

Sample ID: Effluent Outfall 001 Second Renewal
Matrix: Water
Sampled: 09/20/19 0915

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Alkalinity as CaCO3	32276-017	19	2	mg/L	09/23/19 1030	09/23/19 1030	JHW/EPA 310.2
Ammonia-N	32276-019	0.29	0.1	mg/L as N	09/23/19 1430	09/23/19 1430	JHW/SM 4500-NH3 G
Hardness as CaCO3	32276-018	76	0.7	mg/L	09/28/19 1300	09/28/19 1838	JLH/ess/SW846 3rd Ed. 6020

Notes:

ND = Not Detected

EA

Report No: 32282 SDG:
Project: ESI

Sample ID: MSR W-1243 09/17/19
Matrix: Water
Sampled: 09/17/19 1815

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	32282-007	120	10	mg/L	09/23/19 1420	09/25/19 1010	AL /SM 2540B
Total dissolved solids	32282-007	160	5	mg/L	09/23/19 1505	09/26/19 1315	AL /SM 2540C
Alkalinity as CaCO3	32282-003	38	2	mg/L	09/23/19 1030	09/23/19 1030	JHW/EPA 310.2
Total organic carbon	32282-002	ND	0.4	mg/L	09/19/19 1230	09/19/19 1245	JLH/SM 5310 B
Ammonia-N	32282-005	ND	0.1	mg/L as N	09/19/19 1045	09/19/19 1045	JHW/SM 4500-NH3 G
Hardness as CaCO3	32282-004	60	0.7	mg/L	09/26/19 1415	09/26/19 2033	JLH/ess/SW846 3rd Ed. 6020
Aluminum, total	32282-001	ND	0.01	mg/L	09/18/19 1530	09/19/19 0226	JLH/EPA 200.8
Cadmium, total	32282-001	ND	0.0001	mg/L	09/18/19 1530	09/19/19 0226	JLH/EPA 200.8
Calcium, total	32282-001	12	0.05	mg/L	09/18/19 1530	09/19/19 0226	JLH/EPA 200.8
Chromium, total	32282-001	ND	0.0008	mg/L	09/18/19 1530	09/19/19 0226	JLH/EPA 200.8
Copper, total	32282-001	ND	0.0005	mg/L	09/18/19 1530	09/19/19 0226	JLH/EPA 200.8
Lead, total	32282-001	ND	0.0002	mg/L	09/18/19 1530	09/19/19 0226	JLH/EPA 200.8
Magnesium, total	32282-001	7.27	0.05	mg/L	09/18/19 1530	09/19/19 0226	JLH/EPA 200.8
Nickel, total	32282-001	ND	0.0005	mg/L	09/18/19 1530	09/19/19 0226	JLH/EPA 200.8
Selenium, total	32282-001	0.003	0.002	mg/L	09/18/19 1530	09/19/19 0226	JLH/EPA 200.8
Zinc, total	32282-001	ND	0.002	mg/L	09/18/19 1530	09/19/19 0226	JLH/EPA 200.8

Sample ID: MSR W-1243 09/19/19
Matrix: Water
Sampled: 09/19/19 1705

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Alkalinity as CaCO3	32282-008	39	2	mg/L	09/23/19 1030	09/23/19 1030	JHW/EPA 310.2
Ammonia-N	32282-010	ND	0.1	mg/L as N	09/26/19 1300	09/26/19 1300	JHW/SM 4500-NH3 G
Hardness as CaCO3	32282-009	62	0.7	mg/L	09/28/19 1300	09/28/19 1609	JLH/ess/SW846 3rd Ed. 6020

Sample ID: MSR W-1243 09/21/19
Matrix: Water
Sampled: 09/21/19 1645

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Alkalinity as CaCO3	32282-011	39	2	mg/L	09/23/19 1030	09/23/19 1030	JHW/EPA 310.2
Ammonia-N	32282-013	ND	0.1	mg/L as N	09/26/19 1300	09/26/19 1300	JHW/SM 4500-NH3 G
Hardness as CaCO3	32282-012	60	0.7	mg/L	09/28/19 1300	09/28/19 1840	JLH/ess/SW846 3rd Ed. 6020

Notes:

ND = Not Detected

EA

PREPARATION of DILUTIONS

STUDY: 32276

CLIENT: ESS - Schneider Electric Outfall 001

SPECIES: *C. dubia* & *P. promelas* TEST: chronic renewal

DILUENT: MSR

START Diluent: MSR Concentration	Day: 0 $E_0 = 24.8^\circ\text{C}$ Sample: E_0		Day: 1 $E_0 = 26.0^\circ\text{C}$ Sample: E_0	
	Vol Eff	Final Vol	Vol Eff	Final Vol
Lab	0	1200	0	1000
6.25%	75		62.5	
12.5%	150		125	
25%	300		250	
50%	600		500	
100%	1200	↓	1000	↓

	Date / Time / Init	Selenastrum	YCT	Brine Shrimp
Day 0	09/17/19 1325 LCI	A-5702	F138	A-5443
Day 1	09/18/19 1100 LCI	A-5702	F138	A-5443
Day 2	09/19/19 1300 CFS	A-5702	F138	A-5443
Day 3	09/20/19 1130 GRS	A-5702	F138	A-5443
Day 4	09/21/19 1205 BIF	A-5702	F138	A-5443
Day 5	09/22/19 1555 LAG	A-5702	F138	A-5443
Day 6	09/23/19 1330 LCI	A-5702	F138	A-5443
Day 7				

1 st Renewal Diluent: MSR Concentration	Day: 2 $E_1 = 25.9^\circ\text{C}$ Sample: E_1		Day: 3 $E_1 = 25.6^\circ\text{C}$ Sample: E_1		Day: Sample:	
	Vol Eff	Final Vol	Vol Eff	Final Vol	Vol Eff	Final Vol
Lab	0	1,000	0	1000		
6.25%	62.5		62.5			
12.5%	125		125			
25%	250		250			
50%	500		500			
100%	1,000	↓	1000	↓		

Lab Water ID:	
Day 0	32282, W-1243
Day 1	32282, W-1243
Day 2	32282, W-1243
Day 3	32282, W-1243
Day 4	32282, W-1243
Day 5	32282, W-1243
Day 6	32282, W-1243
Day 7	

2 nd Renewal Diluent: MSR Concentration	Day: 4 $E_2 = 24.4^\circ\text{C}$ Sample: E_2		Day: 5 $E_2 = 25.1^\circ\text{C}$ Sample: E_2		Day: 6 $E_2 = 25.0^\circ\text{C}$ Sample: E_2		Day: Sample:	
	Vol Eff	Final Vol	Vol Eff	Final Vol	Vol Eff	Final Vol	Vol Eff	Final Vol
Lab	0	1000	0	1000	0	1000		
6.25%	62.5		62.5		62.5			
12.5%	125		125		125			
25%	250		250		250			
50%	500		500		500			
100%	1000	↓	1000	↓	1000	↓		

METER USE RECORD FRESHWATER CHRONIC

C. dubia & *P. promelas*

STUDY: 32276		CLIENT: ESS - Schneider Electric Effluent Outfall 001							
OLD WATER QUALITIES - <i>P. promelas</i>									
	0	1	2	3	4	5	6	7	8
Water Quality Station #		1	1	1	1	1	1	2	
Initials		GRS	CA	CA	CA	LCI	GRS	CFS	
OLD WATER QUALITIES - <i>C. dubia</i>									
	0	1	2	3	4	5	6	7	8
Water Quality Station #		1	1	2	1	1	MP03	2	
Initials		LAG	CA	CA GRS	CA	LCI	MS	CA	
2 GRS 09/10									
NEW WATER QUALITIES - Both Species									
	0	1	2	3	4	5	6	7	8
Water Quality Station #	1	1	1	1	1	2	2		
Initials	LCI	GRS	CA	CA	CA	LAG	MS		
Date	09/17/19	09/18/19	09/19/19	09/20/19	09/21/19	09/22	09/23/19	09/24	

Water Quality Station #1		Water Quality Station #2		COMMENTS
DO meter #	ML01	DO meter #	ML02	
DO probe #	96	DO probe #	160	
pH meter #	ML01	pH meter #	ML02	
pH probe #	166	pH probe #	167	
S/C meter #	ML01	S/C meter #	ML02	
S/C probe #	159	S/C probe #	1	

SAMPLE RECEIPT RECORD FOR CHRONIC TOXICITY EVALUATIONS

STUDY #: 32276		CLIENT: ESS Laboratories - Schneider Electric	
SAMPLE RECEIPT INFORMATION			
	Start Sample	First Renewal	Second Renewal
Sample Receipt Date & Time:	09/16/19 1325	09/18/19 1510	09/20/19 1345
Received By:	RS	RS	RS
Delivered Via:	Fed Ex UPS Client Courier ☒ ESI	Fed Ex UPS Client Courier ☒ ESI	Fed Ex UPS Client Courier ☒ ESI
Logged Into Lab By:	MS	GRS	CA
Date & Time Logged In:	09/16/19 1540	09/18/19 1615	09/20/19 1640
SAMPLE CONDITION INFORMATION			
Chain of Custody?	☒ Yes or No	☒ Yes or No	☒ Yes or No
Chain of Custody Signed?	☒ Yes or No	☒ Yes or No	☒ Yes or No
Chain of Custody Complete?	☒ Yes or No	☒ Yes or No	☒ Yes or No
Sample Date?	☒ Yes or No	☒ Yes or No	☒ Yes or No
Sample Time?	☒ Yes or No	☒ Yes or No	☒ Yes or No
Sample Type?	☒ Yes or No	☒ Yes or No	☒ Yes or No
Custody Seal in Place?	Yes ☒ NA No	Yes ☒ NA No	Yes ☒ NA No
Shipping Container Intact?	☒ Yes or No	☒ Yes or No	☒ Yes or No
Temp Blank Temperature:	0.4°C / 30°C	0.2 / 2.8 °C	2.4 / 2.9 °C
DOES CLIENT NEED NOTIFICATION OF TEMP?	Yes or ☒ No	Yes or ☒ No	Yes or ☒ No
Sample Arrived on Ice?	☒ Yes or No	☒ Yes or No	☒ Yes or No
COMMENTS:	See COC	SEE COC	See COC

CHAIN OF CUSTODY DOCUMENTATION

Client:	ESS Laboratory	Contact: Joe Sirbak	Project Name: Schneider Electric
Report to:	Joe Sirbak	Address: 5 Avenue D	Project Number: P0613 Task: 0001
Invoice to:	Joe Sirbak	Address: Hopkinton, MA 01748	Project Manager: Joe Sirbak
Voice:	508-435-9244 x4720	Fax: 508-435-9912	email: Jsirbak@thielsch.com P.O: B02801

[illegible]

Relinquished By:

Date: 2/6/0 Time: 9:15

Received By:

11

Date:

Time: 1525 Temp (C): 21.9

Relinquished By:

Date: 9/16/19 Time: 1:44

Received at Lab By: ✓

By: 

Date: _____

Time: 1440 Temp (C): 3.0 °C

Comments: elb^{MS} Client reserved with H₂SO₄

CHAIN OF CUSTODY DOCUMENTATION

Client:	ESS Laboratory	Contact:	Joe Sirbak	Project Name:	Schneider Electric
Report to:	Joe Sirbak	Address:	5 Avenue D	Project Number:	P0613
Invoice to:	Joe Sirbak	Address:	Hopkinton, MA 01748	Project Manager:	Joe Sirbak
Voice:	508-435-9244 x4720	Fax:	508-435-9912	email:	jsrbak@thielsch.com
					P.O.: B02801

[illegible]

Relinquished By:

Date: 9/18/12 Time: 11:37

Received By:

1102

Date:

Time: 4:10

Temp (C): 0.2

Relinquished By:

Date: 9/18/19 Time: 1510

Received at L:

3y: Lett Shell

Date: _____

Time: 510

Temp (C): 78.6

Comments:

COC Number: A1017012

Sample Delivery Group No: Sept 2019

Page

of

P.O: B02801

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Assay Review Checklist

DATE IN: 09/17/19

STUDY#: 32276

DATE DUE: 10/2/19

CLIENT: ESS

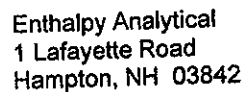
PROJECT: Schneider Electric

ASSAY: CDPP7DCR

Project Paperwork Check for Completeness				
	Date	Analyst	Supervisor	Comments
Day 0	09/17/19	CFS	CFS	PP7DCR PUT INTO TOR200
Day 1	09/18	LAG	GRS	
Day 2	09/19	CA		Pp7DCR put into inc.#2
Day 3	09/20/19	GRS	GRS	
Day 4	09/21	CA		
Day 5	09/22/19	MS		
Day 6	09/23/19	MS	GRS	
Day 7	09/24	CA		
Day 8				

Analyst Data Review	Date	Initials	Comments
Chains of Custody Complete	10/01/19	GRS	
Sample Receipt Complete			
Organism Culture Sheet(s)			
Bench Sheets Complete (dates, times, initials, etc...)			
Water Quality Data Complete			
TRC Values & Bottle Numbers			
Daphnid Calculations Complete			
Weights Reported			
Assay Acceptability Review			

Technical Report Review	Date	Initials	Comments
Statistical Analysis Complete	9/23/19	MW	
Statistical Analysis Reviewed	10/1/19	MR	
Data Acceptability Review	9/30/19	MW	
Supporting Chemistry Report			
Draft Report			
QA Audit/Review Complete			
Final Report Reviewed	10/1/19	MR	
Final Report Printed - PDF	10/1/19	MW	
Executive Summary / Chems Sent			
Report E-mailed / Faxed	10/1/19	MW	
Report Logged Out / Invoice Sent			
Report Scanned to Archive			



Enthalpy Job No:

1970684

CHAIN OF CUSTODY DOCUMENTATION

Client: ESS Laboratory	Contact: Joe Sirbak	Project Name: Schneider Electric	
Report to: Joe Sirbak	Address: 5 Avenue D	Project Number: P0613	Task: 0001
Invoice to: Joe Sirbak	Address: Hopkinton, MA 01748	Project Manager: Joe Sirbak	
Voice: 508-435-9244 x4720	Fax: 508-435-9912	email: Jsirbak@thielsch.com	P.O: B02801

[illegible]

Relinquished By: 	Date: 9/16/10	Time: 9:15	Received By:	Date:	Time:	Temp (C):
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:	Temp (C):

Comments:

COC Number: A1017011

Sample Delivery Group No:

Sept 2019

Page

of



Enthalpy Analytical
1 Lafayette Road
Hampton, NH 03842

Voice: 603-926-3345

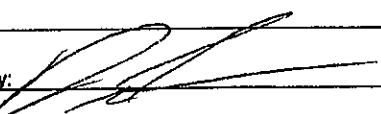
Enthalpy Job No:

1910684

CHAIN OF CUSTODY DOCUMENTATION

Client: ESS Laboratory	Contact: Joe Sirbak	Project Name: Schneider Electric	
Report to: Joe Sirbak	Address: 5 Avenue D	Project Number: P0613	Task: 0001
Invoice to: Joe Sirbak	Address: Hopkinton, MA 01748	Project Manager: Joe Sirbak	
Voice: 508-435-9244 x4720	Fax: 508-435-9912	email: Jsirbak@thielsch.com	P.O: B02801

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
008	Effluent Outfall 001 First Renewal	9/18/10	0825	JS	G	2	3750	P	4 C	Water	N	CDPP7DCR 1stRenewal Sample
009	Effluent Outfall 001 First Renewal	↓	↓	↓	↓	1	250	P	HNO3	Water	N	Total Metals Cd,Ni,Pb,Cu,Zn,Al;
010	Effluent Outfall 001 First Renewal	↓	↓	↓	↓	1	40	G	4 C	Water	N	TOC
011	Effluent Outfall 001 First Renewal	↓	↓	↓	↓	1	125	P	4 C	Water	N	ALK
012	Effluent Outfall 001 First Renewal	↓	↓	↓	↓	1	125	P	HNO3	Water	N	Metals hard;
013	Effluent Outfall 001 First Renewal	9/18/10	0825	JS	G	1	125	P	H2SO4	Water	N	NH3;

Relinquished By:  Date: 9/18/10 Time: 1137 Received By: Date: Time: Temp (C):

Relinquished By: Date: Time: Received at Lab By: Date: Time: Temp (C):

Comments:

COC Number: A1017012

Sample Delivery Group No: Sept 2019

Page of



Enthalpy Analytical
1 Lafayette Road
Hampton, NH 03842

Voice: 603-926-3345

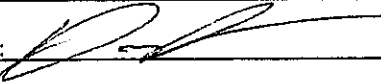
Enthalpy Job No:

1950684

CHAIN OF CUSTODY DOCUMENTATION

Client: ESS Laboratory	Contact: Joe Sirbak	Project Name: Schneider Electric	
Report to: Joe Sirbak	Address: 5 Avenue D	Project Number: P0613	Task: 0001
Invoice to: Joe Sirbak	Address: Hopkinton, MA 01748	Project Manager: Joe Sirbak	
Voice: 508-435-9244 x4720	Fax: 508-435-9912	email: jsirbak@thielsch.com	P.O: B02801

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
014	Effluent Outfall 001 Second Renewal	9/20/19	0915	DES	G	2	3750	P	4 C	Water	N	CDPP7DCR, 2ndRenewal Sample
015	Effluent Outfall 001 Second Renewal	↓	↓	↓	↓	1	250	P	HNO3	Water	N	Total Metals Cd,Ni,Pb,Cu,Zn,Al;
016	Effluent Outfall 001 Second Renewal	↓	↓	↓	↓	1	40	G	4 C	Water	N	TOC
017	Effluent Outfall 001 Second Renewal	↓	↓	↓	↓	1	125	P	4 C	Water	N	ALK
018	Effluent Outfall 001 Second Renewal	↓	↓	↓	↓	1	125	P	HNO3	Water	N	Metals hard;
019	Effluent Outfall 001 Second Renewal	9/20/19	0915	DES	G	1	125	P	H2SO4	Water	N	NH3;

Relinquished By: 	Date: 9/20/19	Time: 10:10	Received By:	Date:	Time:	Temp (C):
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:	Temp (C):

Comments: _____

COC Number: A1017013

Sample Delivery Group No:	Sept 2019	Page	of
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**ATTACHMENT 4: OUTFALL 001 – DILUTION FACTOR CONFIRMATION FROM
STATE AND STREAMSTATS 7Q10 DATA**

From: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@state.ma.us>
Sent: Tuesday, December 10, 2019 2:24 PM
To: Duff Collins <dcollins@woodardcurran.com>
Cc: Paul Ahearn <Paul.Ahearn@se.com>; 'Little, Shauna' <Little.Shauna@epa.gov>
Subject: RE: Foxboro MA RGP Dilution Report and Supporting Information

Hi Duff,

As we discussed over the telephone, your dilution factor calculation of 2.23 for the discharge (with a design flow of 0.036 MGD) to the Neponset Reservoir is correct. Using USGS StreamStats at the lat/long you provided, I obtained a slightly different 7Q10 of 0.696 cfs = 0.045 MGD. This calculates out to a dilution factor of 2.25 which you may use instead.

Please let me know if you have any additional questions.

Cathy

Cathy Vakalopoulos, Massachusetts Department of Environmental Protection
1 Winter St., Boston, MA 02108, 617-348-4026

 Please consider the environment before printing this e-mail

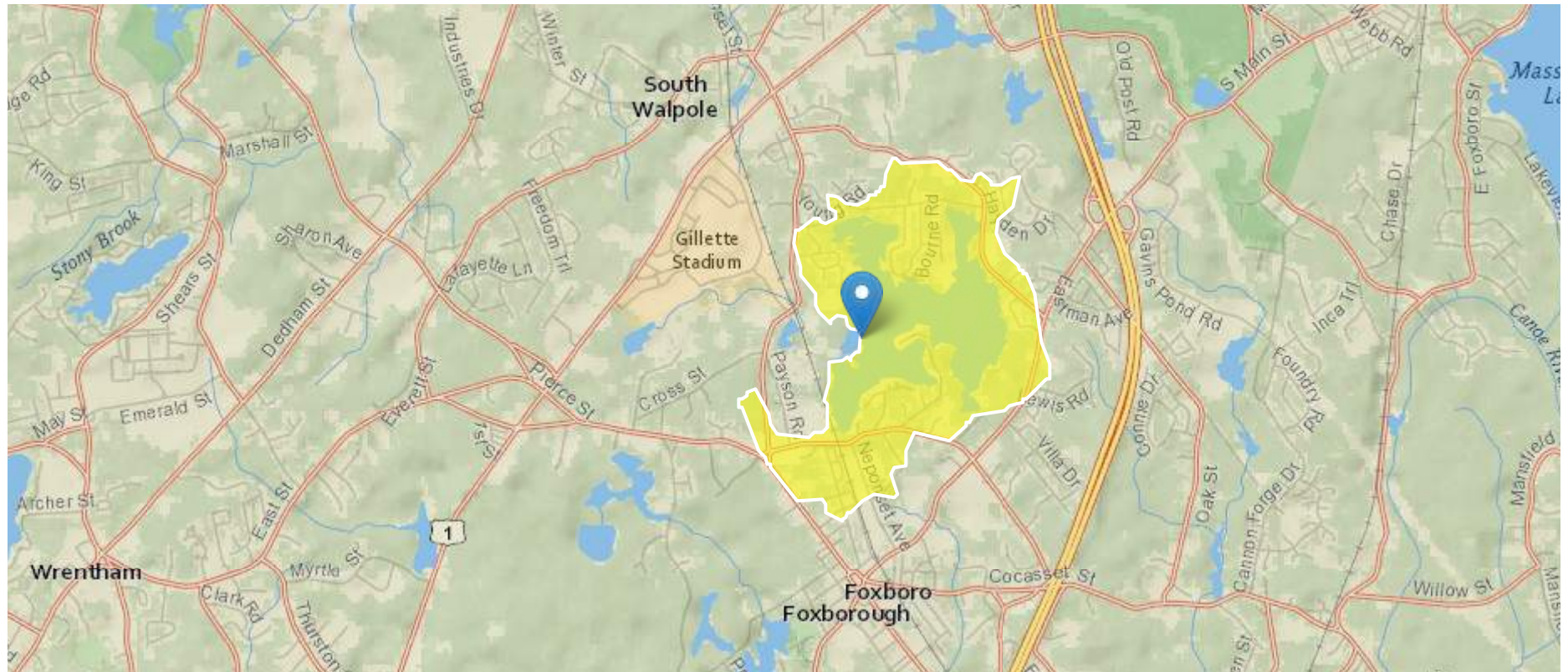
Schneider Electric Systems USA, Inc - Outfall 001

Region ID: MA

Workspace ID: MA20200129152657971000

Clicked Point (Latitude, Longitude): 42.08324, -71.24986

Time: 2020-01-29 10:27:13 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
----------------	-----------------------	-------	------

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.66	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	0.546	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.6	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

Low-Flow Statistics Parameters^[Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.66	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	0.546	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.6	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Flow Report^[Statewide Low Flow WRIR00 4135]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	SE	SEp
7 Day 2 Year Low Flow	0.192	ft ³ /s	0.0431	0.821	49.5	49.5
7 Day 10 Year Low Flow	0.0696	ft ³ /s	0.0127	0.356	70.8	70.8

Low-Flow Statistics Citations

Ries, K.G., III, 2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (<http://pubs.usgs.gov/wri/wri004135/>)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.3.11

ATTACHMENT 5: OUTFALL 001 – APPENDIX V CALCULATION SPREADSHEET

Enter number values in green boxes below

Enter values in the units specified

↓
0.045 Q_R = Enter upstream flow in **MGD**
0.036 Q_P = Enter discharge flow in **MGD**
Downstream 7Q10

Enter a dilution factor, if other than zero

↓
2.25

Enter values in the units specified

↓
75.2 C_d = Enter influent hardness in **mg/L** CaCO_3
72 C_s = Enter receiving water hardness in **mg/L** CaCO_3

Enter **receiving water** concentrations in the units specified

↓
6.24 pH in **Standard Units**
17 Temperature in **°C**
0 Ammonia in **mg/L**
72 Hardness in **mg/L** CaCO_3
0 Salinity in **ppt**
0 Antimony in **µg/L**
0 Arsenic in **µg/L**
0 Cadmium in **µg/L**
0 Chromium III in **µg/L**
0 Chromium VI in **µg/L**
0 Copper in **µg/L**
0 Iron in **µg/L**
0 Lead in **µg/L**
0 Mercury in **µg/L**
0 Nickel in **µg/L**
0 Selenium in **µg/L**
0 Silver in **µg/L**
0 Zinc in **µg/L**

Enter **influent** concentrations in the units specified

↓
0 TRC in **µg/L**
0 Ammonia in **mg/L**
0 Antimony in **µg/L**
0 Arsenic in **µg/L**
0.4 Cadmium in **µg/L**
0 Chromium III in **µg/L**
0 Chromium VI in **µg/L**
7.8 Copper in **µg/L**
0 Iron in **µg/L**
1.1 Lead in **µg/L**
0 Mercury in **µg/L**
0 Nickel in **µg/L**
0 Selenium in **µg/L**
0 Silver in **µg/L**
62.1 Zinc in **µg/L**
0 Cyanide in **µg/L**
0 Phenol in **µg/L**
0 Carbon Tetrachloride in **µg/L**
0 Tetrachloroethylene in **µg/L**
0 Total Phthalates in **µg/L**
0 Diethylhexylphthalate in **µg/L**
0 Benzo(a)anthracene in **µg/L**
0 Benzo(a)pyrene in **µg/L**
0 Benzo(b)fluoranthene in **µg/L**
0 Benzo(k)fluoranthene in **µg/L**
0 Chrysene in **µg/L**
0 Dibenzo(a,h)anthracene in **µg/L**
0 Indeno(1,2,3-cd)pyrene in **µg/L**
0 Methyl-tert butyl ether in **µg/L**

Notes:

Freshwater: Q_R equal to the 7Q10; enter alternate Q_R if approved by the State; enter 0 if no dilution factor approve

Saltwater (estuarine and marine): enter Q_R if approved by the State; enter 0 if no entry

Discharge flow is equal to the design flow or 1 MGD, whichever is less

Only if approved by State as the entry for Q_R ; leave 0 if no entry

Saltwater (estuarine and marine): only if approved by the State

Leave 0 if no entry

Freshwater only

pH, temperature, and ammonia required for all discharges

Hardness required for freshwater

Salinity required for saltwater (estuarine and marine)

Metals required for all discharges if present and if dilution factor is > 1

Enter 0 if non-detect or testing not required

if >1 sample, enter maximum

if >10 samples, may enter 95th percentile

Enter 0 if non-detect or testing not required

Dilution Factor	2.3					
A. Inorganics	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
Ammonia	Report	mg/L	---			
Chloride	Report	µg/L	---			
Total Residual Chlorine	0.2	mg/L	25	µg/L	50	µg/L
Total Suspended Solids	30	mg/L	---			
Antimony	206	µg/L	1440	µg/L		
Arsenic	104	µg/L	23	µg/L		
Cadmium	10.2	µg/L	0.4843	µg/L		
Chromium III	323	µg/L	150.6	µg/L		
Chromium VI	323	µg/L	25.7	µg/L		
Copper	242	µg/L	16.1	µg/L		
Iron	5000	µg/L	2250	µg/L		
Lead	160	µg/L	4.83	µg/L		
Mercury	0.739	µg/L	2.04	µg/L		
Nickel	1450	µg/L	90.4	µg/L		
Selenium	235.8	µg/L	11.3	µg/L		
Silver	35.1	µg/L	5.0	µg/L		
Zinc	420	µg/L	207.5	µg/L		
Cyanide	178	mg/L	11.7	µg/L	---	µg/L
B. Non-Halogenated VOCs						
Total BTEX	100	µg/L	---			
Benzene	5.0	µg/L	---			
1,4 Dioxane	200	µg/L	---			
Acetone	7970	µg/L	---			
Phenol	1,080	µg/L	675	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	4.4	µg/L	3.6	µg/L		
1,2 Dichlorobenzene	600	µg/L	---			
1,3 Dichlorobenzene	320	µg/L	---			
1,4 Dichlorobenzene	5.0	µg/L	---			
Total dichlorobenzene	---	µg/L	---			
1,1 Dichloroethane	70	µg/L	---			
1,2 Dichloroethane	5.0	µg/L	---			
1,1 Dichloroethylene	3.2	µg/L	---			
Ethylene Dibromide	0.05	µg/L	---			
Methylene Chloride	4.6	µg/L	---			
1,1,1 Trichloroethane	200	µg/L	---			
1,1,2 Trichloroethane	5.0	µg/L	---			
Trichloroethylene	5.0	µg/L	---			
Tetrachloroethylene	5.0	µg/L	7.4	µg/L		
cis-1,2 Dichloroethylene	70	µg/L	---			
Vinyl Chloride	2.0	µg/L	---			
D. Non-Halogenated SVOCs						
Total Phthalates	190	µg/L	---	µg/L		
Diethylhexyl phthalate	101	µg/L	5.0	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	1.0	µg/L	---			
Benzo(a)anthracene	1.0	µg/L	0.0086	µg/L	---	µg/L
Benzo(a)pyrene	1.0	µg/L	0.0086	µg/L	---	µg/L
Benzo(b)fluoranthene	1.0	µg/L	0.0086	µg/L	---	µg/L
Benzo(k)fluoranthene	1.0	µg/L	0.0086	µg/L	---	µg/L
Chrysene	1.0	µg/L	0.0086	µg/L	---	µg/L
Dibenzo(a,h)anthracene	1.0	µg/L	0.0086	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	1.0	µg/L	0.0086	µg/L	---	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	100	µg/L	---			
Naphthalene	20	µg/L	---			
E. Halogenated SVOCs						
Total Polychlorinated Biphenyls	0.000064	µg/L	---		0.5	µg/L
Pentachlorophenol	1.0	µg/L	---			
F. Fuels Parameters						
Total Petroleum Hydrocarbons	5.0	mg/L	---			
Ethanol	Report	mg/L	---			
Methyl-tert-Butyl Ether	70	µg/L	45	µg/L		
tert-Butyl Alcohol	120	µg/L	---			
tert-Amyl Methyl Ether	90	µg/L	---			

ATTACHMENT 6: OUTFALL 002 – LABORATORY ANALYTICAL REPORTS

CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (223813)
ESS Laboratory Work Order Number: 1811243

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.



Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 2:48 pm, Nov 20, 2018

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1811243

SAMPLE RECEIPT

The following samples were received on November 09, 2018 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1811243-01	Fox In	Aqueous	200.8
1811243-02	Fox In-2	Aqueous	200.8
1811243-03	CB 33	Aqueous	200.8
1811243-04	CB 33-2	Aqueous	200.8
1811243-05	MH39	Aqueous	200.8
1811243-06	MH39-2	Aqueous	200.8
1811243-07	MH26	Aqueous	200.8
1811243-08	MH26-2	Aqueous	200.8



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1811243

PROJECT NARRATIVE

Total Metals

CK81250-BS1 [Blank Spike recovery is above upper control limit \(B+\).](#)
Cadmium (137% @ 85-115%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1811243

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 04-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Fox In
Date Sampled: 11/07/18 16:00
Percent Solids: N/A

ESS Laboratory Work Order: 1811243
ESS Laboratory Sample ID: 1811243-01
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	NAR	11/15/18 16:13	100	10	CK81250
Lead	3.0 (0.5)		200.8	0.5	5	NAR	11/19/18 14:28	100	10	CK81643



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Fox In-2
Date Sampled: 11/07/18 16:00
Percent Solids: N/A

ESS Laboratory Work Order: 1811243
ESS Laboratory Sample ID: 1811243-02
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	NAR	11/15/18 16:40	100	10	CK81250
Lead	1.2 (0.5)		200.8	0.5	5	NAR	11/19/18 14:33	100	10	CK81643



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: CB 33
Date Sampled: 11/07/18 16:10
Percent Solids: N/A

ESS Laboratory Work Order: 1811243
ESS Laboratory Sample ID: 1811243-03
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	NAR	11/15/18 16:46	100	10	CK81250
Lead	1.6 (0.5)		200.8	0.5	5	NAR	11/19/18 14:39	100	10	CK81643



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: CB 33-2
Date Sampled: 11/07/18 16:10
Percent Solids: N/A

ESS Laboratory Work Order: 1811243
ESS Laboratory Sample ID: 1811243-04
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	NAR	11/15/18 16:51	100	10	CK81250
Lead	0.9 (0.5)		200.8	0.5	5	NAR	11/19/18 14:55	100	10	CK81643



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH39
Date Sampled: 11/07/18 16:20
Percent Solids: N/A

ESS Laboratory Work Order: 1811243
ESS Laboratory Sample ID: 1811243-05
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	NAR	11/15/18 16:57	100	10	CK81250
Lead	1.5 (0.5)		200.8	0.5	5	NAR	11/19/18 15:00	100	10	CK81643



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH39-2
Date Sampled: 11/07/18 16:20
Percent Solids: N/A

ESS Laboratory Work Order: 1811243
ESS Laboratory Sample ID: 1811243-06
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	NAR	11/15/18 17:02	100	10	CK81250
Lead	1.1 (0.5)		200.8	0.5	5	NAR	11/19/18 15:06	100	10	CK81643



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH26
Date Sampled: 11/07/18 16:30
Percent Solids: N/A

ESS Laboratory Work Order: 1811243
ESS Laboratory Sample ID: 1811243-07
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	NAR	11/15/18 17:08	100	10	CK81250
Lead	1.6 (0.5)		200.8	0.5	5	NAR	11/19/18 15:11	100	10	CK81643



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH26-2
Date Sampled: 11/07/18 16:30
Percent Solids: N/A

ESS Laboratory Work Order: 1811243
ESS Laboratory Sample ID: 1811243-08
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	NAR	11/15/18 17:13	100	10	CK81250
Lead	1.0 (0.5)		200.8	0.5	5	NAR	11/19/18 15:28	100	10	CK81643



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1811243

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch CK81250 - 3005A/200.7

Blank

Cadmium	ND	0.200	ug/L
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LCS

Cadmium	34.3	1.00	ug/L	25.02	137	85-115	B+
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Batch CK81643 - 3005A/200.7

Blank

Lead	ND	0.5	ug/L
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LCS

Lead	48.3	2.5	ug/L	50.00	97	85-115
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CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1811243

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
B+	Blank Spike recovery is above upper control limit (B+).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1811243

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002
<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

Turn Time	5-Day	Rush
Regulatory State	Massachusetts	
Is this project for any of the following?:		
☐ CT RCP	☐ MA MCP	☐ RGP

Reporting Limits	see attached
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Electronic Deliverables ☐ Limit Checker ☒ Standard Excel ☐ Other (Please Specify →)

Schneider Electric Foxboro

980 Washington St, Suite 325

Telephone Number
781 613 0640

FAX Number

Email Address

rmcgrath@woodardcurran.com

Sample ID

Fox In

Fox In - 2

CB 33

CB 33 - 2

MH 39

MH 39 - 2

MH 26

MH 26 - 2

Container Type:	AC-Air Cassette	AG-Amber Glass	B-BOD Bottle	C-Cubitainer	G - Glass	O-Other	P-Poly	S-Sterile	V-Vial
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Container Volume: 1-100 mL	2-2.5 gal	3-250 mL	4-300 mL	5-500 mL	6-1L	7-VOA	8-2 oz	9-4 oz	10-8 oz	11-Other*
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Preservation Code:	1-Non Preserved	2-HCl	3-H ₂ SO ₄	4-HNO ₃	5-NaOH	6-Methanol	7-Na ₂ S ₂ O ₃	8-ZnAc ₂ , NaOH	9-NH ₄ Cl	10-DI H ₂ O	11-Other*
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Number of Containers per Sample:

Laboratory Use Only

Cooler Present:

Seals Intact:

Cooler Temperature:

Sampled by : RWM

Comments:

Please specify "Other" preservative and containers types in this space

Metals - cadmium and lead.

Aqueous Samples - water collected from storm water drain line system and sump

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)



CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (221813)
ESS Laboratory Work Order Number: 1812075

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 4:01 pm, Dec 11, 2018

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812075

SAMPLE RECEIPT

The following samples were received on December 04, 2018 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1812075-01	Fox In	Aqueous	200.8
1812075-02	CB 33	Aqueous	200.8
1812075-03	MH-39	Aqueous	200.8
1812075-04	MH-26	Aqueous	200.8
1812075-05	MH-26A	Aqueous	200.8



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812075

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812075

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 04-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812075

Total Metals

Client Sample ID: Fox In
Date Sampled: 11/30/18 14:50
Percent Solids: N/A

ESS Laboratory Sample ID: 1812075-01
Sample Matrix: Aqueous

All methods used are in accordance with 40 CFR 136.											
<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>MA Permit L</u>	<u>Method</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	
Cadmium	ND	ug/L	0.200	0.5	200.8	5	NAR	12/10/18 18:33	100	10	
Lead	1.4	ug/L	0.5	0.5	200.8	5	NAR	12/10/18 18:33	100	10	

Client Sample ID: CB 33
Date Sampled: 11/30/18 15:10
Percent Solids: N/A

ESS Laboratory Sample ID: 1812075-02
Sample Matrix: Aqueous

All methods used are in accordance with 40 CFR 136.											
<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>MA Permit L</u>	<u>Method</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	
Cadmium	ND	ug/L	0.200	0.5	200.8	5	NAR	12/10/18 18:39	100	10	
Lead	0.8	ug/L	0.5	0.5	200.8	5	NAR	12/10/18 18:39	100	10	

Client Sample ID: MH-39
Date Sampled: 11/30/18 15:20
Percent Solids: N/A

ESS Laboratory Sample ID: 1812075-03
Sample Matrix: Aqueous

All methods used are in accordance with 40 CFR 136.											
<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>MA Permit L</u>	<u>Method</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	
Cadmium	ND	ug/L	0.200	0.5	200.8	5	NAR	12/10/18 18:55	100	10	
Lead	0.9	ug/L	0.5	0.5	200.8	5	NAR	12/10/18 18:55	100	10	

Client Sample ID: MH-26
Date Sampled: 11/30/18 15:30
Percent Solids: N/A

ESS Laboratory Sample ID: 1812075-04
Sample Matrix: Aqueous

All methods used are in accordance with 40 CFR 136.											
<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>MA Permit L</u>	<u>Method</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	
Cadmium	ND	ug/L	0.200	0.5	200.8	5	NAR	12/10/18 19:01	100	10	
Lead	0.9	ug/L	0.5	0.5	200.8	5	NAR	12/10/18 19:01	100	10	

Client Sample ID: MH-26A
Date Sampled: 11/30/18 15:50
Percent Solids: N/A

ESS Laboratory Sample ID: 1812075-05
Sample Matrix: Aqueous

All methods used are in accordance with 40 CFR 136.											
<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>MA Permit L</u>	<u>Method</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	
Cadmium	ND	ug/L	0.200	0.5	200.8	5	NAR	12/10/18 19:06	100	10	
Lead	0.9	ug/L	0.5	0.5	200.8	5	NAR	12/10/18 19:06	100	10	



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812075

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch CL80553 - 3005A/200.7

Blank

Cadmium	ND	0.200	ug/L
Lead	ND	0.5	ug/L

LCS

Cadmium	28.2	1.00	ug/L	25.02	113	85-115
Lead	54.1	2.5	ug/L	50.00	108	85-115



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812075

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1812075

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>



ESS Laboratory

Division of Thielsch Engineering, Inc.

BAL Laboratory

*The Microbiology Division
of Thielsch Engineering, Inc.*



CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (221813)
ESS Laboratory Work Order Number: 1901278

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 1:31 pm, Feb 11, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1901278

SAMPLE RECEIPT

The following samples were received on January 14, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

Revision 1 February 8, 2019: This report has been revised to include lower limits for Cadmium on all samples per client request.

Revision 2 February 11, 2019: This report has been revised to include redigested results for Lead on all samples per client request.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1901278-01	Fox In	Aqueous	200.8, 8260B
1901278-02	CB 33	Aqueous	200.8, 8260B
1901278-03	MH 39	Aqueous	200.8, 8260B
1901278-04	MH 26	Aqueous	200.8, 8260B
1901278-05	MH 26A	Aqueous	200.8, 8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1901278

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1901278

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 04-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Fox In
Date Sampled: 01/07/19 14:05
Percent Solids: N/A

ESS Laboratory Work Order: 1901278
ESS Laboratory Sample ID: 1901278-01
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	KJK	01/25/19 11:22	100	10	CA91534
Lead	3.1 (0.5)		200.8	0.5	5	NAR	02/08/19 16:42	100	10	CB90744



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Fox In
Date Sampled: 01/07/19 14:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1901278
ESS Laboratory Sample ID: 1901278-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	01/15/19 18:02	C9A0248	CA91520
Trichloroethene	ND (1.0)		8260B	5	1	01/15/19 18:02	C9A0248	CA91520

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	113 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	90 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	105 %		70-130
<i>Surrogate: Toluene-d8</i>	104 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: CB 33
Date Sampled: 01/07/19 13:50
Percent Solids: N/A

ESS Laboratory Work Order: 1901278
ESS Laboratory Sample ID: 1901278-02
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	KJK	01/25/19 11:28	100	10	CA91534
Lead	0.8 (0.5)		200.8	0.5	5	NAR	02/08/19 16:48	100	10	CB90744



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: CB 33
Date Sampled: 01/07/19 13:50
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1901278
ESS Laboratory Sample ID: 1901278-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	01/15/19 18:28	C9A0248	CA91520
Trichloroethene	ND (1.0)		8260B	5	1	01/15/19 18:28	C9A0248	CA91520

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	115 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	90 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	109 %		70-130
<i>Surrogate: Toluene-d8</i>	102 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 39
Date Sampled: 01/07/19 14:15
Percent Solids: N/A

ESS Laboratory Work Order: 1901278
ESS Laboratory Sample ID: 1901278-03
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	KJK	01/25/19 11:33	100	10	CA91534
Lead	0.8 (0.5)		200.8	0.5	5	NAR	02/08/19 17:04	100	10	CB90744



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 39
Date Sampled: 01/07/19 14:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1901278
ESS Laboratory Sample ID: 1901278-03
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	01/15/19 18:53	C9A0248	CA91520
Trichloroethene	ND (1.0)		8260B	5	1	01/15/19 18:53	C9A0248	CA91520

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	114 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	89 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	106 %		70-130
<i>Surrogate: Toluene-d8</i>	103 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 26
Date Sampled: 01/07/19 14:45
Percent Solids: N/A

ESS Laboratory Work Order: 1901278
ESS Laboratory Sample ID: 1901278-04
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	KJK	01/25/19 11:39	100	10	CA91534
Lead	1.5 (0.5)		200.8	0.5	5	NAR	02/08/19 17:10	100	10	CB90744



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 26
Date Sampled: 01/07/19 14:45
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1901278
ESS Laboratory Sample ID: 1901278-04
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	01/15/19 19:19	C9A0248	CA91520
Trichloroethene	ND (1.0)		8260B	5	1	01/15/19 19:19	C9A0248	CA91520

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	113 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	90 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	105 %		70-130
<i>Surrogate: Toluene-d8</i>	103 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 26A
Date Sampled: 01/07/19 14:30
Percent Solids: N/A

ESS Laboratory Work Order: 1901278
ESS Laboratory Sample ID: 1901278-05
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.5	5	KJK	01/25/19 11:44	100	10	CA91534
Lead	0.8 (0.5)		200.8	0.5	5	NAR	02/08/19 17:15	100	10	CB90744



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 26A
Date Sampled: 01/07/19 14:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1901278
ESS Laboratory Sample ID: 1901278-05
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	01/15/19 19:45	C9A0248	CA91520
Trichloroethene	ND (1.0)		8260B	5	1	01/15/19 19:45	C9A0248	CA91520

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	113 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	90 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	105 %		70-130
<i>Surrogate: Toluene-d8</i>	101 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1901278

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch CA91534 - 3005A/200.7

Blank

Cadmium	ND	0.200	ug/L
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LCS

Cadmium	27.5	1.00	ug/L	25.00	110	85-115
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Batch CB90744 - 3005A/200.7

Blank

Lead	ND	0.5	ug/L
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LCS

Lead	50.9	2.5	ug/L	50.00	102	85-115
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8260B Volatile Organic Compounds

Batch CA91520 - 5030B

Blank

Tetrachloroethene	ND	1.0	ug/L			
Trichloroethene	ND	1.0	ug/L			
Surrogate: 1,2-Dichloroethane-d4	27.5		ug/L	25.00	110	70-130
Surrogate: 4-Bromofluorobenzene	23.6		ug/L	25.00	94	70-130
Surrogate: Dibromofluoromethane	25.9		ug/L	25.00	104	70-130
Surrogate: Toluene-d8	25.6		ug/L	25.00	102	70-130

LCS

Tetrachloroethene	9.2		ug/L	10.00	92	70-130
Trichloroethene	9.9		ug/L	10.00	99	70-130
Surrogate: 1,2-Dichloroethane-d4	25.7		ug/L	25.00	103	70-130
Surrogate: 4-Bromofluorobenzene	26.0		ug/L	25.00	104	70-130
Surrogate: Dibromofluoromethane	25.3		ug/L	25.00	101	70-130
Surrogate: Toluene-d8	24.4		ug/L	25.00	97	70-130

LCS Dup

Tetrachloroethene	9.0		ug/L	10.00	90	70-130	2	25
Trichloroethene	9.7		ug/L	10.00	97	70-130	2	25
Surrogate: 1,2-Dichloroethane-d4	24.5		ug/L	25.00	98	70-130		
Surrogate: 4-Bromofluorobenzene	25.6		ug/L	25.00	102	70-130		
Surrogate: Dibromofluoromethane	24.8		ug/L	25.00	99	70-130		
Surrogate: Toluene-d8	24.6		ug/L	25.00	99	70-130		



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1901278

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1901278

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM

ESS Project ID: 1901278

Date Received: 1/14/2019

Project Due Date: 1/21/2019

Days for Project: 5 Day

Shipped/Delivered Via: ESS Courier

1. Air bill manifest present? ☐ No
Air No.: NA

6. Does COC match bottles? ☐ No

2. Were custody seals present? ☐ No

7. Is COC complete and correct? ☐ Yes

3. Is radiation count <100 CPM? ☐ Yes

8. Were samples received intact? ☐ Yes

4. Is a Cooler Present? ☐ Yes
Temp: 2.1 Iced with: Ice

9. Were labs informed about short holds & rushes? Yes / No / NA

5. Was COC signed and dated by client? ☐ Yes

10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
ESS Sample IDs: _____
Analysis: _____
TAT: _____

12. Were VOAs received? Yes / No
a. Air bubbles in aqueous VOAs? Yes / No
b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
a. If metals preserved upon receipt: Date: _____
b. Low Level VOA vials frozen: Date: _____

Time: _____ By: _____
Time: _____ By: _____

Sample Receiving Notes:

COC = 500ml HNO3 ; rec'd 250 ml

14. Was there a need to contact Project Manager? Yes / No
a. Was there a need to contact the client? Yes / No
Who was contacted? _____ Date: _____

Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608.3 Pesticides)
01	309718	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
01	309731	Yes	No	Yes	VOA Vial - HCl	HCl	
01	309732	Yes	No	Yes	VOA Vial - HCl	HCl	
01	309733	Yes	No	Yes	VOA Vial - HCl	HCl	
02	309717	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
02	309728	Yes	No	Yes	VOA Vial - HCl	HCl	
02	309729	Yes	No	Yes	VOA Vial - HCl	HCl	
02	309730	Yes	No	Yes	VOA Vial - HCl	HCl	
03	309716	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
03	309725	Yes	No	Yes	VOA Vial - HCl	HCl	
03	309726	Yes	No	Yes	VOA Vial - HCl	HCl	
03	309727	Yes	No	Yes	VOA Vial - HCl	HCl	
04	309715	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
04	309722	Yes	No	Yes	VOA Vial - HCl	HCl	
04	309723	Yes	No	Yes	VOA Vial - HCl	HCl	
04	309724	Yes	No	Yes	VOA Vial - HCl	HCl	
05	309714	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
05	309719	Yes	No	Yes	VOA Vial - HCl	HCl	
05	309720	Yes	No	Yes	VOA Vial - HCl	HCl	
05	309721	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review

All containers scanned into storage/lab

Initials: VA

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM

ESS Project ID: 1901278

Date Received: 1/14/2019

Are barcode labels on correct containers?

Are all necessary stickers attached?

Yes / No
Yes / No

Completed

By: [Signature]

Date & Time: 1/14/19 1644

Reviewed

By: [Signature]

Date & Time: 1/14/19 1715

Delivered

By: [Signature]

Date & Time: 1/14/19 1715

CHAIN OF CUSTODY

Division of Thielsch Engineering, Inc.

185 Frances Avenue, Cranston RI 02910

Tel. (401) 461-7181 Fax (401) 461-4486

www.esslaboratory.com

[illegible]



CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (221813)
ESS Laboratory Work Order Number: 1903055

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 2:16 pm, Mar 15, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903055

SAMPLE RECEIPT

The following samples were received on March 05, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

Revision 1 March 15, 2019: This report has been revised to include lower limits for Cd.

Lab Number	Sample Name	Matrix	Analysis
1903055-01	Fox In	Aqueous	200.8, 8260B
1903055-02	CB 33	Aqueous	200.8, 8260B
1903055-03	MH 39	Aqueous	200.8, 8260B
1903055-04	MH 26	Aqueous	200.8, 8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903055

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903055

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Fox In
Date Sampled: 02/20/19 14:45
Percent Solids: N/A

ESS Laboratory Work Order: 1903055
ESS Laboratory Sample ID: 1903055-01
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	0.320 (0.200)		200.8	0.2	5	KJK	03/07/19 19:06	100	10	CC90638
Lead	8.9 (0.5)		200.8	0.5	5	KJK	03/07/19 19:06	100	10	CC90638



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Fox In
Date Sampled: 02/20/19 14:45
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903055
ESS Laboratory Sample ID: 1903055-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	03/06/19 15:54	C9C0087	CC90623
Trichloroethene	ND (1.0)		8260B	5	1	03/06/19 15:54	C9C0087	CC90623

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	89 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	98 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	95 %		70-130
<i>Surrogate: Toluene-d8</i>	97 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: CB 33
Date Sampled: 02/20/19 15:00
Percent Solids: N/A

ESS Laboratory Work Order: 1903055
ESS Laboratory Sample ID: 1903055-02
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	0.221 (0.200)		200.8	0.2	5	KJK	03/07/19 19:11	100	10	CC90638
Lead	0.6 (0.5)		200.8	0.5	5	KJK	03/07/19 19:11	100	10	CC90638



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: CB 33
Date Sampled: 02/20/19 15:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903055
ESS Laboratory Sample ID: 1903055-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	03/06/19 16:20	C9C0087	CC90623
Trichloroethene	ND (1.0)		8260B	5	1	03/06/19 16:20	C9C0087	CC90623

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	90 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	96 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	96 %		70-130
<i>Surrogate: Toluene-d8</i>	96 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 39
Date Sampled: 02/20/19 15:10
Percent Solids: N/A

ESS Laboratory Work Order: 1903055
ESS Laboratory Sample ID: 1903055-03
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	0.237 (0.200)		200.8	0.2	5	KJK	03/07/19 19:15	100	10	CC90638
Lead	ND (0.5)		200.8	0.5	5	KJK	03/07/19 19:15	100	10	CC90638



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 39
Date Sampled: 02/20/19 15:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903055
ESS Laboratory Sample ID: 1903055-03
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	03/06/19 16:47	C9C0087	CC90623
Trichloroethene	1.0 (1.0)		8260B	5	1	03/06/19 16:47	C9C0087	CC90623

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	88 %		70-130
Surrogate: 4-Bromofluorobenzene	97 %		70-130
Surrogate: Dibromofluoromethane	99 %		70-130
Surrogate: Toluene-d8	98 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 26
Date Sampled: 02/20/19 15:20
Percent Solids: N/A

ESS Laboratory Work Order: 1903055
ESS Laboratory Sample ID: 1903055-04
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	0.245 (0.200)		200.8	0.2	5	KJK	03/07/19 19:20	100	10	CC90638
Lead	0.9 (0.5)		200.8	0.5	5	KJK	03/07/19 19:20	100	10	CC90638



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 26
Date Sampled: 02/20/19 15:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903055
ESS Laboratory Sample ID: 1903055-04
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	03/06/19 17:14	C9C0087	CC90623
Trichloroethene	1.0 (1.0)		8260B	5	1	03/06/19 17:14	C9C0087	CC90623

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	90 %		70-130
Surrogate: 4-Bromofluorobenzene	96 %		70-130
Surrogate: Dibromofluoromethane	103 %		70-130
Surrogate: Toluene-d8	97 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903055

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch CC90638 - 3005A/200.7

Blank

Cadmium	ND	0.200	ug/L
Lead	ND	0.5	ug/L

Blank

Cadmium	ND	0.200	ug/L
Lead	ND	0.5	ug/L

LCS

Cadmium	25.2	1.00	ug/L	25.00	101	85-115
Lead	50.9	2.5	ug/L	50.00	102	85-115

8260B Volatile Organic Compounds

Batch CC90623 - 5030B

Blank

Tetrachloroethene	ND	1.0	ug/L			
Trichloroethene	ND	1.0	ug/L			
Surrogate: 1,2-Dichloroethane-d4	21.7		ug/L	25.00	87	70-130
Surrogate: 4-Bromofluorobenzene	24.3		ug/L	25.00	97	70-130
Surrogate: Dibromofluoromethane	24.1		ug/L	25.00	97	70-130
Surrogate: Toluene-d8	23.4		ug/L	25.00	94	70-130

LCS

Tetrachloroethene	8.4		ug/L	10.00	84	70-130
Trichloroethene	9.6		ug/L	10.00	96	70-130
Surrogate: 1,2-Dichloroethane-d4	22.6		ug/L	25.00	91	70-130
Surrogate: 4-Bromofluorobenzene	23.8		ug/L	25.00	95	70-130
Surrogate: Dibromofluoromethane	23.5		ug/L	25.00	94	70-130
Surrogate: Toluene-d8	23.5		ug/L	25.00	94	70-130

LCS Dup

Tetrachloroethene	9.0		ug/L	10.00	90	70-130	7	25
Trichloroethene	9.9		ug/L	10.00	99	70-130	3	25
Surrogate: 1,2-Dichloroethane-d4	22.9		ug/L	25.00	91	70-130		
Surrogate: 4-Bromofluorobenzene	24.9		ug/L	25.00	100	70-130		
Surrogate: Dibromofluoromethane	24.8		ug/L	25.00	99	70-130		
Surrogate: Toluene-d8	24.6		ug/L	25.00	98	70-130		



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903055

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903055

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 1903055
 Date Received: 3/5/2019
 Project Due Date: 3/12/2019
 Days for Project: 5 Day

1. Air bill manifest present? ☐ No
 Air No.: NA
2. Were custody seals present? ☐ No
3. Is radiation count <100 CPM? ☐ Yes
4. Is a Cooler Present? ☐ Yes
 Temp: 1.3 Iced with: Ice
5. Was COC signed and dated by client? ☐ Yes

6. Does COC match bottles? ☐ Yes
7. Is COC complete and correct? ☐ Yes
8. Were samples received intact? ☐ Yes
9. Were labs informed about short holds & rushes? ☒ Yes / No / NA
10. Were any analyses received outside of hold time? Yes ☒ No

11. Any Subcontracting needed? Yes / ☒ No
 ESS Sample IDs: _____
 Analysis: _____
 TAT: _____

12. Were VOAs received? ☒ Yes / No
 a. Air bubbles in aqueous VOAs? Yes ☒ No
 b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? ☒ Yes / No
 a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
 b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

VOAs govt of hold 3/6

14. Was there a need to contact Project Manager? Yes ☒ No
 a. Was there a need to contact the client? Yes / ☒ No
 Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608.3 Pesticides)
01	320774	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
01	320784	Yes	No	Yes	VOA Vial - HCl	HCl	
01	320785	Yes	No	Yes	VOA Vial - HCl	HCl	
02	320773	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
02	320781	Yes	No	Yes	VOA Vial - HCl	HCl	
02	320782	Yes	No	Yes	VOA Vial - HCl	HCl	
03	320772	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
03	320778	Yes	No	Yes	VOA Vial - HCl	HCl	
03	320779	Yes	No	Yes	VOA Vial - HCl	HCl	
04	320771	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
04	320775	Yes	No	Yes	VOA Vial - HCl	HCl	
04	320776	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review

All containers scanned into storage/lab
 Are barcode labels on correct containers?
 Are all necessary stickers attached?

Initials: de
 Yes / No
 Yes / No

Completed By: [Signature] Date & Time: 3/5/19 1851
 Reviewed By: [Signature] Date & Time: 3/5/19 1859
 Delivered

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM

ESS Project ID: 1903055

By: AK

Date Received: 3/5/19

1859



CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (221813)
ESS Laboratory Work Order Number: 1903695

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 4:56 pm, Apr 02, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903695

SAMPLE RECEIPT

The following samples were received on March 26, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1903695-01	Fox In	Aqueous	200.8, 8260B
1903695-02	CB 33	Aqueous	200.8, 8260B
1903695-03	MH 39	Aqueous	200.8, 8260B
1903695-04	MH 26	Aqueous	200.8, 8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903695

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903695

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Fox In
Date Sampled: 03/20/19 12:50
Percent Solids: N/A

ESS Laboratory Work Order: 1903695
ESS Laboratory Sample ID: 1903695-01
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	0.219 (0.200)		200.8	0.2	5	KJK	04/01/19 13:53	100	10	CC92749
Lead	0.8 (0.5)		200.8	0.5	5	KJK	03/28/19 15:29	100	10	CC92749



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Fox In
Date Sampled: 03/20/19 12:50
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903695
ESS Laboratory Sample ID: 1903695-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	03/27/19 23:07	C9C0441	CC92758
Trichloroethene	ND (1.0)		8260B	5	1	03/27/19 23:07	C9C0441	CC92758

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	95 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	92 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	97 %		70-130
<i>Surrogate: Toluene-d8</i>	92 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: CB 33
Date Sampled: 03/20/19 13:05
Percent Solids: N/A

ESS Laboratory Work Order: 1903695
ESS Laboratory Sample ID: 1903695-02
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	0.223 (0.200)		200.8	0.2	5	KJK	04/01/19 13:58	100	10	CC92749
Lead	0.7 (0.5)		200.8	0.5	5	KJK	03/28/19 15:58	100	10	CC92749



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: CB 33
Date Sampled: 03/20/19 13:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903695
ESS Laboratory Sample ID: 1903695-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	03/27/19 23:34	C9C0441	CC92758
Trichloroethene	ND (1.0)		8260B	5	1	03/27/19 23:34	C9C0441	CC92758

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	85 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	94 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	93 %		70-130
<i>Surrogate: Toluene-d8</i>	96 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 39
Date Sampled: 03/20/19 13:25
Percent Solids: N/A

ESS Laboratory Work Order: 1903695
ESS Laboratory Sample ID: 1903695-03
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	0.209 (0.200)		200.8	0.2	5	KJK	04/01/19 14:02	100	10	CC92749
Lead	0.7 (0.5)		200.8	0.5	5	KJK	03/28/19 16:12	100	10	CC92749



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 39
Date Sampled: 03/20/19 13:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903695
ESS Laboratory Sample ID: 1903695-03
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	03/28/19 0:00	C9C0441	CC92758
Trichloroethene	ND (1.0)		8260B	5	1	03/28/19 0:00	C9C0441	CC92758

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	91 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	94 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	95 %		70-130
<i>Surrogate: Toluene-d8</i>	93 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 26
Date Sampled: 03/20/19 13:30
Percent Solids: N/A

ESS Laboratory Work Order: 1903695
ESS Laboratory Sample ID: 1903695-04
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	0.213 (0.200)		200.8	0.2	5	KJK	04/01/19 14:17	100	10	CC92749
Lead	0.7 (0.5)		200.8	0.5	5	KJK	03/28/19 16:17	100	10	CC92749



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 26
Date Sampled: 03/20/19 13:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1903695
ESS Laboratory Sample ID: 1903695-04
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	03/28/19 0:27	C9C0441	CC92758
Trichloroethene	1.0 (1.0)		8260B	5	1	03/28/19 0:27	C9C0441	CC92758

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichloroethane-d4	92 %		70-130
Surrogate: 4-Bromofluorobenzene	90 %		70-130
Surrogate: Dibromofluoromethane	95 %		70-130
Surrogate: Toluene-d8	89 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903695

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch CC92749 - 3005A/200.7

Blank

Cadmium	ND	0.200	ug/L							
Lead	ND	0.5	ug/L							

Blank

Cadmium	ND	0.200	ug/L							
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LCS

Cadmium	25.6	1.00	ug/L	25.00	102	85-115				
Lead	50.2	2.5	ug/L	50.00	100	85-115				

8260B Volatile Organic Compounds

Batch CC92758 - 5030B

Blank

Tetrachloroethene	ND	1.0	ug/L							
Trichloroethene	ND	1.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	23.3		ug/L	25.00	93	70-130				
Surrogate: 4-Bromofluorobenzene	24.4		ug/L	25.00	98	70-130				
Surrogate: Dibromofluoromethane	24.4		ug/L	25.00	98	70-130				
Surrogate: Toluene-d8	24.5		ug/L	25.00	98	70-130				

LCS

Tetrachloroethene	8.1		ug/L	10.00	81	70-130				
Trichloroethene	9.9		ug/L	10.00	99	70-130				
Surrogate: 1,2-Dichloroethane-d4	22.8		ug/L	25.00	91	70-130				
Surrogate: 4-Bromofluorobenzene	24.6		ug/L	25.00	98	70-130				
Surrogate: Dibromofluoromethane	25.7		ug/L	25.00	103	70-130				
Surrogate: Toluene-d8	24.5		ug/L	25.00	98	70-130				

LCS Dup

Tetrachloroethene	7.6		ug/L	10.00	76	70-130	7	25		
Trichloroethene	9.2		ug/L	10.00	92	70-130	7	25		
Surrogate: 1,2-Dichloroethane-d4	21.9		ug/L	25.00	88	70-130				
Surrogate: 4-Bromofluorobenzene	24.6		ug/L	25.00	99	70-130				
Surrogate: Dibromofluoromethane	25.0		ug/L	25.00	100	70-130				
Surrogate: Toluene-d8	24.4		ug/L	25.00	98	70-130				



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran

Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903695

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1903695

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM

ESS Project ID: 1903695

Shipped/Delivered Via: ESS Courier

Date Received: 3/26/2019

Project Due Date: 4/2/2019

Days for Project: 5 Day

1. Air bill manifest present? ☒ No
Air No.: NA

6. Does COC match bottles? ☒ Yes

2. Were custody seals present? ☒ No

7. Is COC complete and correct? ☒ Yes

3. Is radiation count <100 CPM? ☒ Yes

8. Were samples received intact? ☒ Yes

4. Is a Cooler Present? ☒ Yes
Temp: 0.3 Iced with: Ice

9. Were labs informed about short holds & rushes? Yes / No / NA

5. Was COC signed and dated by client? ☒ Yes

10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes ☒ No
ESS Sample IDs: _____
Analysis: _____
TAT: _____

12. Were VOAs received? Yes ☒ No ☒
a. Air bubbles in aqueous VOAs? Yes / No
b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes ☒ No ☒
a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes ☒ No ☒
a. Was there a need to contact the client? Yes ☒ No ☒
Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608.3 Pesticides)
01	327678	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
01	327688	Yes	No	Yes	VOA Vial - HCl	HCl	
01	327689	Yes	No	Yes	VOA Vial - HCl	HCl	
01	327690	Yes	No	Yes	VOA Vial - HCl	HCl	
02	327677	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
02	327685	Yes	No	Yes	VOA Vial - HCl	HCl	
02	327686	Yes	No	Yes	VOA Vial - HCl	HCl	
02	327687	Yes	No	Yes	VOA Vial - HCl	HCl	
03	327676	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
03	327682	Yes	No	Yes	VOA Vial - HCl	HCl	
03	327683	Yes	No	Yes	VOA Vial - HCl	HCl	
03	327684	Yes	No	Yes	VOA Vial - HCl	HCl	
04	327675	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
04	327679	Yes	No	Yes	VOA Vial - HCl	HCl	
04	327680	Yes	No	Yes	VOA Vial - HCl	HCl	
04	327681	Yes	No	Yes	VOA Vial - HCl	HCl	

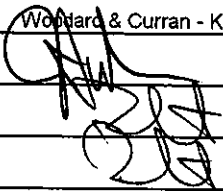
2nd Review

All containers scanned into storage/lab
Are barcode labels on correct containers?
Are all necessary stickers attached?

Initials: [Signature]
Yes / No
Yes / No

Completed

ESS Laboratory Sample and Cooler Receipt Checklist

Client:	Woodard & Curran - KPB/TB/HDM	ESS Project ID:	1903695
		Date Received:	3/26/2019
By:		Date & Time:	3/26/19 1753
Reviewed			
By:		Date & Time:	3/26/19 1802
Delivered			
By:		Date & Time:	3/26/19 1802



CERTIFICATE OF ANALYSIS

Rob McGrath
Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Schneider Electric Foxboro (221813)
ESS Laboratory Work Order Number: 1904448

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 2:20 pm, Apr 22, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1904448

SAMPLE RECEIPT

The following samples were received on April 15, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1904448-01	Fox In	Aqueous	200.8, 8260B
1904448-02	CB 33	Aqueous	200.8, 8260B
1904448-03	MH 39	Aqueous	200.8, 8260B
1904448-04	MH 26	Aqueous	200.8, 8260B



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1904448

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1904448

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Fox In
Date Sampled: 04/10/19 13:25
Percent Solids: N/A

ESS Laboratory Work Order: 1904448
ESS Laboratory Sample ID: 1904448-01
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.2	5	KJK	04/17/19 14:39	100	10	CD91638
Lead	1.3 (0.5)		200.8	0.5	5	KJK	04/17/19 14:39	100	10	CD91638



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: Fox In
Date Sampled: 04/10/19 13:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1904448
ESS Laboratory Sample ID: 1904448-01
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	04/16/19 19:26	C9D0294	CD91644
Trichloroethene	ND (1.0)		8260B	5	1	04/16/19 19:26	C9D0294	CD91644
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
<i>Surrogate: 1,2-Dichloroethane-d4</i>		106 %		70-130				
<i>Surrogate: 4-Bromofluorobenzene</i>		90 %		70-130				
<i>Surrogate: Dibromofluoromethane</i>		102 %		70-130				
<i>Surrogate: Toluene-d8</i>		91 %		70-130				



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: CB 33
Date Sampled: 04/10/19 13:45
Percent Solids: N/A

ESS Laboratory Work Order: 1904448
ESS Laboratory Sample ID: 1904448-02
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.2	5	KJK	04/17/19 14:44	100	10	CD91638
Lead	1.0 (0.5)		200.8	0.5	5	KJK	04/17/19 14:44	100	10	CD91638



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: CB 33
Date Sampled: 04/10/19 13:45
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1904448
ESS Laboratory Sample ID: 1904448-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	04/16/19 19:53	C9D0294	CD91644
Trichloroethene	ND (1.0)		8260B	5	1	04/16/19 19:53	C9D0294	CD91644
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95 %		70-130				
<i>Surrogate: 4-Bromofluorobenzene</i>		93 %		70-130				
<i>Surrogate: Dibromofluoromethane</i>		95 %		70-130				
<i>Surrogate: Toluene-d8</i>		95 %		70-130				



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 39
Date Sampled: 04/10/19 14:00
Percent Solids: N/A

ESS Laboratory Work Order: 1904448
ESS Laboratory Sample ID: 1904448-03
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.2	5	KJK	04/17/19 14:49	100	10	CD91638
Lead	0.8 (0.5)		200.8	0.5	5	KJK	04/17/19 14:49	100	10	CD91638



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 39
Date Sampled: 04/10/19 14:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1904448
ESS Laboratory Sample ID: 1904448-03
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	04/16/19 20:20	C9D0294	CD91644
Trichloroethene	ND (1.0)		8260B	5	1	04/16/19 20:20	C9D0294	CD91644
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97 %		70-130				
<i>Surrogate: 4-Bromofluorobenzene</i>		87 %		70-130				
<i>Surrogate: Dibromofluoromethane</i>		100 %		70-130				
<i>Surrogate: Toluene-d8</i>		95 %		70-130				



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 26
Date Sampled: 04/10/19 14:25
Percent Solids: N/A

ESS Laboratory Work Order: 1904448
ESS Laboratory Sample ID: 1904448-04
Sample Matrix: Aqueous
Units: ug/L

Extraction Method: 3005A/200.7

All methods used are in accordance with 40 CFR 136.

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>					
Cadmium	ND (0.200)		200.8	0.2	5	KJK	04/17/19 14:54	100	10	CD91638
Lead	1.3 (0.5)		200.8	0.5	5	KJK	04/17/19 14:54	100	10	CD91638



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro
Client Sample ID: MH 26
Date Sampled: 04/10/19 14:25
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1904448
ESS Laboratory Sample ID: 1904448-04
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

All methods used are in accordance with 40 CFR 136.

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>MA - Permit</u>		<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
				<u>Limit</u>	<u>DF</u>			
Tetrachloroethene	ND (1.0)		8260B	5	1	04/16/19 20:47	C9D0294	CD91644
Trichloroethene	ND (1.0)		8260B	5	1	04/16/19 20:47	C9D0294	CD91644

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	102 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	84 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	98 %		70-130
<i>Surrogate: Toluene-d8</i>	91 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1904448

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

Total Metals

Batch CD91638 - 3005A/200.7

Blank

Cadmium	ND	0.200	ug/L							
Lead	ND	0.5	ug/L							

LCS

Cadmium	26.7	1.00	ug/L	25.00		107	85-115			
Lead	51.1	2.5	ug/L	50.00		102	85-115			

8260B Volatile Organic Compounds

Batch CD91644 - 5030B

Blank

Tetrachloroethene	ND	1.0	ug/L							
Trichloroethene	ND	1.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	25.0		ug/L	25.00		100	70-130			
Surrogate: 4-Bromofluorobenzene	22.4		ug/L	25.00		89	70-130			
Surrogate: Dibromofluoromethane	24.2		ug/L	25.00		97	70-130			
Surrogate: Toluene-d8	23.8		ug/L	25.00		95	70-130			

LCS

Tetrachloroethene	8.2		ug/L	10.00		82	70-130			
Trichloroethene	8.5		ug/L	10.00		85	70-130			
Surrogate: 1,2-Dichloroethane-d4	22.3		ug/L	25.00		89	70-130			
Surrogate: 4-Bromofluorobenzene	23.2		ug/L	25.00		93	70-130			
Surrogate: Dibromofluoromethane	23.8		ug/L	25.00		95	70-130			
Surrogate: Toluene-d8	23.5		ug/L	25.00		94	70-130			

LCS Dup

Tetrachloroethene	8.2		ug/L	10.00		82	70-130	0.1	25	
Trichloroethene	9.3		ug/L	10.00		93	70-130	10	25	
Surrogate: 1,2-Dichloroethane-d4	23.3		ug/L	25.00		93	70-130			
Surrogate: 4-Bromofluorobenzene	24.2		ug/L	25.00		97	70-130			
Surrogate: Dibromofluoromethane	24.0		ug/L	25.00		96	70-130			
Surrogate: Toluene-d8	24.4		ug/L	25.00		97	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1904448

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran
Client Project ID: Schneider Electric Foxboro

ESS Laboratory Work Order: 1904448

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPB/TB/HDM

ESS Project ID: 1904448

Date Received: 4/15/2019

Shipped/Delivered Via: ESS Courier

Project Due Date: 4/22/2019

Days for Project: 5 Day

1. Air bill manifest present? ☐ No
Air No.: NA

6. Does COC match bottles? ☐ Yes

2. Were custody seals present? ☐ No

7. Is COC complete and correct? ☐ Yes

3. Is radiation count <100 CPM? ☐ Yes

8. Were samples received intact? ☐ Yes

4. Is a Cooler Present? ☐ Yes
Temp: 1.9 Iced with: Ice

9. Were labs informed about short holds & rushes? Yes / No / NA

5. Was COC signed and dated by client? ☐ Yes

10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
ESS Sample IDs: _____
Analysis: _____
TAT: _____

12. Were VOAs received? Yes / No
a. Air bubbles in aqueous VOAs? Yes / No
b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
a. Was there a need to contact the client? Yes / No
Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608.3 Pesticides)
01	334241	Yes	No	Yes	VOA Vial - HCl	HCl	
01	334242	Yes	No	Yes	VOA Vial - HCl	HCl	
01	334243	Yes	No	Yes	VOA Vial - HCl	HCl	
01	334247	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
02	334238	Yes	No	Yes	VOA Vial - HCl	HCl	
02	334239	Yes	No	Yes	VOA Vial - HCl	HCl	
02	334240	Yes	No	Yes	VOA Vial - HCl	HCl	
02	334246	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
03	334235	Yes	No	Yes	VOA Vial - HCl	HCl	
03	334236	Yes	No	Yes	VOA Vial - HCl	HCl	
03	334237	Yes	No	Yes	VOA Vial - HCl	HCl	
03	334245	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
04	334232	Yes	No	Yes	VOA Vial - HCl	HCl	
04	334233	Yes	No	Yes	VOA Vial - HCl	HCl	
04	334234	Yes	No	Yes	VOA Vial - HCl	HCl	
04	334244	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	

2nd Review

All containers scanned into storage/lab

Are barcode labels on correct containers?

Are all necessary stickers attached?

Initials: du

Yes / No

Yes / No

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Woodard & Curran - KPBTB/HDM

ESS Project ID: 1904448

Date Received: 4/15/2019

Completed By: [Signature] Date & Time: 4/15/19 1525

Reviewed By: [Signature] Date & Time: 4/15/19 16:39

Delivered By: [Signature] Date & Time: 4/15/19 16:39

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.eslaboratory.com

Turn Time	5	Days
Regulatory State		
Is this project for any of the following?:		
☐ CT RCP	☐ MA MCP	☐ RGP

Reporting Limits	see below
------------------	-----------

Electronic ☐ Data Checker ☐ Excel
Deliverables ☐ Other (Please Specify →)

Company Name Woodard + Curran		Project # 221813	Project Name Schneider Electric Foxboro		Analysis
Contact Person Rob McGrath		Address			
City Dedham	State MA	Zip Code 02026	PO # 223812.03		
Telephone Number 781.613.0640	FAX Number	Email Address rmcgrath@woodardcurran.com			

[illegible]

Container Type:	AC-Air Cassette	AG-Amber Glass	B-BOD Bottle	C-Cubitainer	J-Jar	O-Other	P-Poly	S-Sterile	V-Vial
-----------------	-----------------	----------------	--------------	--------------	-------	---------	--------	-----------	--------

Container Volume:	1-100 mL	2-2.5 gal	3-250 mL	4-300 mL	5-500 mL	6-1L	7-VOA	8-2 oz	9-4 oz	10-8 oz	11-Other*
-------------------	----------	-----------	----------	----------	----------	------	-------	--------	--------	---------	-----------

Preservation Code:	1-Non Preserved	2-HCl	3-H ₂ SO ₄	4-HNO ₃	5-NaOH	6-Methanol	7-Na ₂ S ₂ O ₃	8-ZnAce, NaOH	9-NH ₄ Cl	10-DI H ₂ O	11-Other*
--------------------	-----------------	-------	----------------------------------	--------------------	--------	------------	---	---------------	----------------------	------------------------	-----------

Number of Containers per Sample:	1	3
----------------------------------	---	---

Laboratory Use Only

Cooler Present: ☐ Drop OffSeals Intact: ☒ Pickup

Cooler Temperature: 19 °C ICE 2C

Sampled by :

Comments: Metals - cadmium and lead; quantification limits cad 0.2 ug/L, pb 0.5 ug/L

Aqueous samples - water collected from storm water drain line system and sump.

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

ATTACHMENT 7: OUTFALL 002 – STREAMSTATS 7Q10 DATA

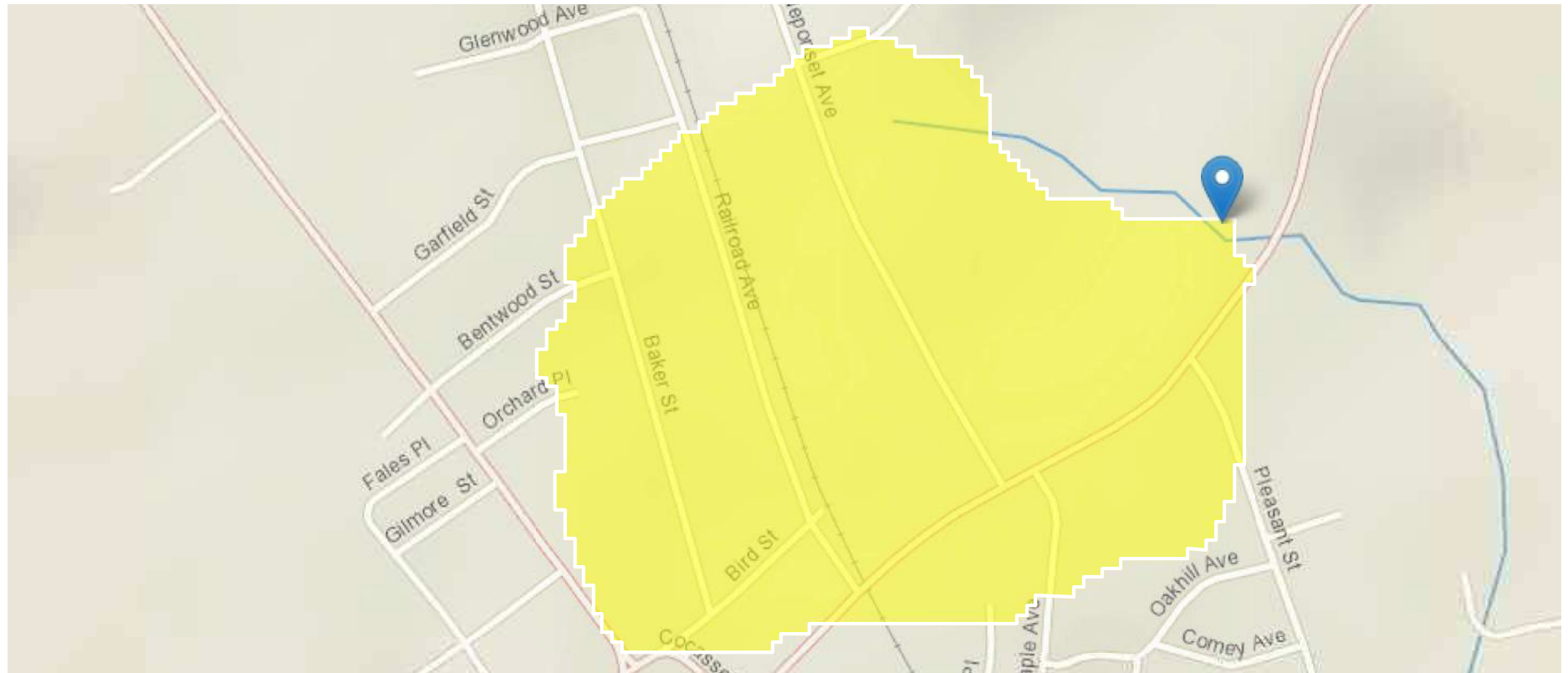
Schneider Electric Systems USA, Inc - Outfall 002

Region ID: MA

Workspace ID: MA20190926183508788000

Clicked Point (Latitude, Longitude): 42.06954, -71.24353

Time: 2019-09-26 14:35:25 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
----------------	-----------------------	-------	------

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.14	square miles
ELEV	Mean Basin Elevation	287	feet
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	0	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	-100000	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
BSLDEM250	Mean basin slope computed from 1:250K DEM	0.391	percent

Peak-Flow Statistics Parameters^[Peak Statewide 2016 5156]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.14	square miles	0.16	512
ELEV	Mean Basin Elevation	287	feet	80.6	1948
LC06STOR	Percent Storage from NLCD2006	0	percent	0	32.3

Peak-Flow Statistics Disclaimers^[Peak Statewide 2016 5156]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errorsOne or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Peak-Flow Statistics Flow Report^[Peak Statewide 2016 5156]

Statistic	Value	Unit
2 Year Peak Flood	9.97	ft^3/s
5 Year Peak Flood	17.1	ft^3/s
10 Year Peak Flood	23	ft^3/s

Statistic	Value	Unit
25 Year Peak Flood	31.6	ft^3/s
50 Year Peak Flood	38.9	ft^3/s
100 Year Peak Flood	46.8	ft^3/s
200 Year Peak Flood	55.5	ft^3/s
500 Year Peak Flood	68.1	ft^3/s

Peak-Flow Statistics Citations

Zarriello, P.J.,2017, Magnitude of flood flows at selected annual exceedance probabilities for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2016–5156, 99 p. (<https://dx.doi.org/10.3133/sir20165156>)

Flow-Duration Statistics Parameters^[Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.14	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	0.391	percent	0.32	24.6

Flow-Duration Statistics Flow Report^[Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
-----------	-------	------

Flow-Duration Statistics Citations

Low-Flow Statistics Parameters[Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.14	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	0.391	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Flow Report[Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
-----------	-------	------

Low-Flow Statistics Citations

August Flow-Duration Statistics Parameters[Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.14	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	0.391	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

August Flow-Duration Statistics Flow Report[Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
-----------	-------	------

August Flow-Duration Statistics Citations

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.3.8

ATTACHMENT 8: OUTFALL 002 – APPENDIX V CALCULATION SPREADSHEET

Enter number values in green boxes below

Enter values in the units specified

↓

0	Q _R = Enter upstream flow in MGD
0.036	Q _P = Enter discharge flow in MGD
0	Downstream 7Q10

Enter a dilution factor, if other than zero

↓

0

Enter values in the units specified

↓

83	C _d = Enter influent hardness in mg/L CaCO ₃
50	C _s = Enter receiving water hardness in mg/L CaCO ₃

Enter **receiving water** concentrations in the units specified

↓

6.5	pH in Standard Units
18	Temperature in °C
0	Ammonia in mg/L
50	Hardness in mg/L CaCO ₃
0	Salinity in ppt
0	Antimony in µg/L
0	Arsenic in µg/L
0	Cadmium in µg/L
0	Chromium III in µg/L
0	Chromium VI in µg/L
0	Copper in µg/L
0	Iron in µg/L
0	Lead in µg/L
0	Mercury in µg/L
0	Nickel in µg/L
0	Selenium in µg/L
0	Silver in µg/L
0	Zinc in µg/L

Enter **influent** concentrations in the units specified

↓

0	TRC in µg/L
0	Ammonia in mg/L
0	Antimony in µg/L
0	Arsenic in µg/L
0.23	Cadmium in µg/L
0	Chromium III in µg/L
0	Chromium VI in µg/L
0	Copper in µg/L
0	Iron in µg/L
1.5	Lead in µg/L
0	Mercury in µg/L
0	Nickel in µg/L
0	Selenium in µg/L
0	Silver in µg/L
0	Zinc in µg/L
0	Cyanide in µg/L
0	Phenol in µg/L
0	Carbon Tetrachloride in µg/L
0	Tetrachloroethylene in µg/L
0	Total Phthalates in µg/L
0	Diethylhexylphthalate in µg/L
0	Benzo(a)anthracene in µg/L
0	Benzo(a)pyrene in µg/L
0	Benzo(b)fluoranthene in µg/L
0	Benzo(k)fluoranthene in µg/L
0	Chrysene in µg/L
0	Dibenzo(a,h)anthracene in µg/L
0	Indeno(1,2,3-cd)pyrene in µg/L
0	Methyl-tert butyl ether in µg/L

Dilution Factor	1.0						
A. Inorganics	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown		
Ammonia	Report	mg/L	---				
Chloride	Report	µg/L	---				
Total Residual Chlorine	0.2	mg/L	11	µg/L	50	µg/L	
Total Suspended Solids	30	mg/L	---				
Antimony	206	µg/L	640	µg/L			
Arsenic	104	µg/L	10	µg/L			
Cadmium	10.2	µg/L	0.2357	µg/L			
Chromium III	323	µg/L	74.0	µg/L			
Chromium VI	323	µg/L	11.4	µg/L			
Copper	242	µg/L	8.0	µg/L			
Iron	5000	µg/L	1000	µg/L			
Lead	160	µg/L	2.51	µg/L			
Mercury	0.739	µg/L	0.91	µg/L			
Nickel	1450	µg/L	44.6	µg/L			
Selenium	235.8	µg/L	5.0	µg/L			
Silver	35.1	µg/L	2.7	µg/L			
Zinc	420	µg/L	102.3	µg/L			
Cyanide	178	mg/L	5.2	µg/L	---	µg/L	
B. Non-Halogenated VOCs							
Total BTEX	100	µg/L	---				
Benzene	5.0	µg/L	---				
1,4 Dioxane	200	µg/L	---				
Acetone	7970	µg/L	---				
Phenol	1,080	µg/L	300	µg/L			
C. Halogenated VOCs							
Carbon Tetrachloride	4.4	µg/L	1.6	µg/L			
1,2 Dichlorobenzene	600	µg/L	---				
1,3 Dichlorobenzene	320	µg/L	---				
1,4 Dichlorobenzene	5.0	µg/L	---				
Total dichlorobenzene	---	µg/L	---				
1,1 Dichloroethane	70	µg/L	---				
1,2 Dichloroethane	5.0	µg/L	---				
1,1 Dichloroethylene	3.2	µg/L	---				
Ethylene Dibromide	0.05	µg/L	---				
Methylene Chloride	4.6	µg/L	---				
1,1,1 Trichloroethane	200	µg/L	---				
1,1,2 Trichloroethane	5.0	µg/L	---				
Trichloroethylene	5.0	µg/L	---				
Tetrachloroethylene	5.0	µg/L	3.3	µg/L			
cis-1,2 Dichloroethylene	70	µg/L	---				
Vinyl Chloride	2.0	µg/L	---				
D. Non-Halogenated SVOCs							
Total Phthalates	190	µg/L	---	µg/L			
Diethylhexyl phthalate	101	µg/L	2.2	µg/L			
Total Group I Polycyclic Aromatic Hydrocarbons	1.0	µg/L	---				
Benzo(a)anthracene	1.0	µg/L	0.0038	µg/L	---	µg/L	
Benzo(a)pyrene	1.0	µg/L	0.0038	µg/L	---	µg/L	
Benzo(b)fluoranthene	1.0	µg/L	0.0038	µg/L	---	µg/L	
Benzo(k)fluoranthene	1.0	µg/L	0.0038	µg/L	---	µg/L	
Chrysene	1.0	µg/L	0.0038	µg/L	---	µg/L	
Dibenzo(a,h)anthracene	1.0	µg/L	0.0038	µg/L	---	µg/L	
Indeno(1,2,3-cd)pyrene	1.0	µg/L	0.0038	µg/L	---	µg/L	
Total Group II Polycyclic Aromatic Hydrocarbons	100	µg/L	---				
Naphthalene	20	µg/L	---				
E. Halogenated SVOCs							
Total Polychlorinated Biphenyls	0.000064	µg/L	---		0.5	µg/L	
Pentachlorophenol	1.0	µg/L	---				
F. Fuels Parameters							
Total Petroleum Hydrocarbons	5.0	mg/L	---				
Ethanol	Report	mg/L	---				
Methyl-tert-Butyl Ether	70	µg/L	20	µg/L			
tert-Butyl Alcohol	120	µg/L	---				
tert-Amyl Methyl Ether	90	µg/L	---				



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