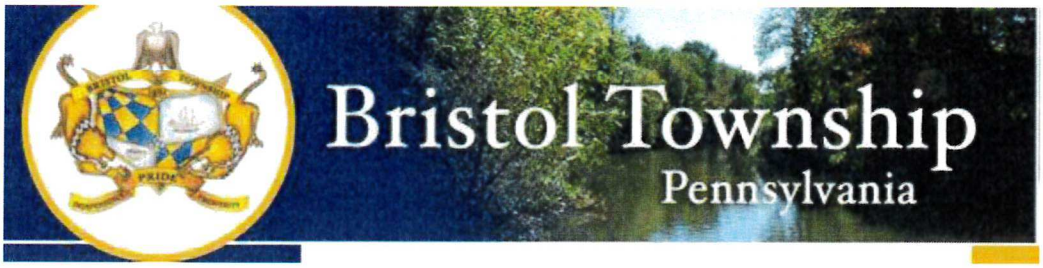

2020 Industrial Pre-Treatment Annual Report
Croydon Wastewater Treatment Plant
Bristol Township, Bucks County, Pennsylvania

MARCH 2021

NPDES Permit No. PA0026450, Effective June 1, 2020, Expires May 31, 2025
WQM Permit No. 0920403, Issued July 16, 2020

Prepared For:

Bristol Township
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Bristol, PA 19007
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GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

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Pretreatment Performance Summary Checklist

I. General Information

Control Authority Name: Croydon Wastewater Treatment Plant

Address: 1800 River Road

City: Croydon State: PA Zip+4: 19021

Contact Person: Kyle Pomykala/Mike Wolgemuth

Contact Title: Plant Superintendent

Contact Telephone Number: 267-812-3016

E-mail Address: Kyle.Pomykala@inframark.com

NPDES Nos: PA0026450

Permit Issuance Date: 6/1/2020 Expiration Date: 5/31/2025

Reporting Period: 6/1/2020-5/31/2025

Total Categorical IUs (CIUs): 0

Total "Middle Tier" CIUs (MTCIUs): 0

Total Nonsignificant CIUs (NSCIUs): 0

Total Significant Noncategorical IUs (SNIUs): 5

II. Compliance Monitoring Program

1. No. of SIUs with current Control Documents..... **5**
2. No. of SIU Facilities Inspected..... **5**
3. No. of SIU Facilities Sampled..... **4**
4. No. of SIUs Submitting Self-Monitoring Reports..... **5**

III. Significant Industrial User Compliance

1. No. of SIUs Violating a Compliance Schedule/No. On a Schedule..... **0/5**
2. No. of SIUs in SNC At Any Time During Calendar Year..... **5**
3. No. of SIUs in SNC That Were Also in SNC During the Previous Calendar Year… **5**

4. No. of NSCIUs that Violated any Standards or Requirements..... **2**

IV. Enforcement Actions

1. Notices/Letters of Violation Issued to SIUs..... **5**
2. Enforceable Compliance Schedules Issued to SIUs..... **0**
3. Civil/Criminal Suits Filed..... **0**
4. No. of SIUs from which Penalties have been Collected in 2020..... **0**
5. Other Actions (sewer bans, etc.)..... **1**

I certify that the information contained in this report and attachments is complete and accurate to the best of my knowledge.

Randee Elton
Name of Authorized Representative (Print)

Township Manager
Title (Print)

Randee J. Elton
Signature

3/30/2021
Date

Part A: Pretreatment Performance Summary

Gilmore & Associates, Inc. (G&A) has prepared this 2020 Annual Report on Industrial Users in significant noncompliance in Bristol Township, PA. This report covers the sampling conducted from January 1, 2020 through December 31, 2020. The industrial users are outlined in the following section.

I. General Information

Bristol Township's Croydon Wastewater Treatment Plant (WWTP) operates under the National Pollutant Discharge Elimination System (NPDES) Permit PA0026450. Treatment plant information is provided below.

Croydon Wastewater Treatment Plant
1800 River Road
Croydon, Bucks County, PA 19021
Phone: (215) 348-7518

Project Manager: Mike Wolgemuth Phone: (610) 812-3016
Plant Superintendent: Kyle Pomykala

Township Manager: Randee Elton Phone: (215) 768-5068

There are five (5) Significant Non-categorical Industrial Users (SNIU) that discharge to the collection system for the Croydon WWTP. Information for these SNIUs are detailed below:

UniFirst Corporation
940 River Road
Croydon, PA 19021
Phone: 215-785-3215

Contacts: Timothy Cosgrave, Sr. EHS Manager
John J. Burns, Production Manager

Lower Bucks Hospital
501 Bath Road
Bristol, PA 19007
Phone: 215-785-9014

Contact: George Lodish, Director of Engineering
Michael Havard, Project Engineer

Roscom
2925 State Road
Croydon, PA 19021
Phone: 215-781-1700

Contact: Michael Goldberg

George S. Coyne Chemical Co., Inc.
3015 State Road
Croydon, PA 19021
Phone: 215-785-3000

Contact: Thomas Coyne Sr.
Terry Sturgis, EHS Director

Neshaminy Creek Brewing Company – ***Ceased discharging to Croydon WWTP collection system in October 2018. Has been collecting process wastewater in a holding tank and hauling since.***
909 Ray Avenue
Croydon, PA 19021
Phone: 215-785-3215

Contact: Steve Capelli, Facilities Manager

Broken Goblet Brewing Company - ***Moved operations out of Bristol Township in mid-2019.***
1500 Grundy Lane
Bristol, PA 19007

Second Sin Brewing Company – ***Took over operations at the former Broken Goblet Brewing Company in mid-2019. Was issued a DRAFT Permit in 2020 that has not yet been finalized.***
1500 Grundy Lane
Bristol, PA 19007

Contact: Phil Harris, Facilities Manager

II. Compliance Monitoring Program

Each SIU has individual Industrial Wastewater Discharge Permits. Copies of the industrial wastewater discharge permits are included in Appendix I.

In early 2019, the Township switched its sampling frequency for each facility to once a year. Each SIU is inspected once per year by the control authority's Pretreatment Coordinator and sampled by the control authority. Each of the SIU's self-monitor by using an independent laboratory service for sampling. The sample parameters are described in the following sections.

The treatment plant is also sampled by an outside private laboratory service each month.

In 2019, the DRBC removed their $CBOD_{20}$ permit limit from the Township's Docket, requested that PADEP remove it from their NPDES Permit, and agreed both would use $CBOD_5$ as a surrogate. In March 2020, the DRBC and PADEP memorialized this parameter removal in their issued Docket and Permit, respectively. Each industrial user was then notified that $CBOD_{20}$ would no longer be a parameter of concern and that they could cease monitoring. The Township intends to officially remove $CBOD_{20}$ monitoring from all permits in 2021.

III. Significant Industrial User Compliance

Letters addressed to users of significant non-compliance are included in Appendix 4. Below is a summary of those letters.

1. Unifirst

- A Courtesy Correspondence letter was issued on February 26, 2020 reminding the Permit Holder that sampling of MBAS are to be done as grab samples instead of composite samples per the permit requirements.

- A Notice of Violation (NOV) letter was issued on August 21, 2020 regarding the July 21, 2020 reporting of 1,150 mg/l of $CBOD_{20}$. Since $CBOD_{20}$ is no longer a parameter in the Township's NPDES Permit nor DRBC Docket, penalties were not sought. UniFirst was reminded that $CBOD_{20}$ monitoring was no longer required.

- A NOV letter was issued on September 21, 2020 regarding the August 2020 reporting of 985.5 mg/l of $CBOD_{20}$. Since $CBOD_{20}$ is no longer a parameter in the Township's NPDES Permit nor DRBC Docket, penalties were not sought. UniFirst was reminded that $CBOD_{20}$ monitoring was no longer required.

2. Lower Bucks Hospital

- No letters were issued to Lower Bucks Hospital in 2020 for violations. In July 2020, Lower Bucks Hospital reported a pH of 9.11. They promptly informed the Township of the excursion. The Croydon WWTP did not appear to experience a violation as a result of the exceedance and the industrial user was back in compliance the following month. Therefore, a Notice of Violation and penalties were not issued/sought.

3. Roscom

- No letters were issued to Roscom in 2020 for violations.

4. Neshaminy Creek Brewing Company (NCBC)

- No letters were issued to NCBC in 2020 for violations.

5. Broken Goblet

- Broken Goblet ceased operations in Bristol Township in mid-2019. Second Sin Brewing Company promptly started operation on site after Broken Goblet relocated. A DRAFT Permit was issued to Second Sin Brewing Company in 2020 and a FINAL Permit is expected in 2021. All reference to Broken Goblet will be removed in the next IPP Annual Report.

6. Coyne Chemical

- A NOV letter was issued on October 15, 2020 regarding the September 29, 2020 reporting of 1,160 mg/l of BOD_5.

- Due to Covid-19 closures, Coyne Chemical did not perform effluent testing for periods of time in 2020. The Township was not informed of this until after several months had passed.

- A NOV and Notice of Administrative Fines letter was issued on March 5, 2021 regarding all 2020 exceedances and non-reporting violations. According to the Township's Code the result could have been a fine of as much as $4,924,000. Due to the bulk of the violations being a result on non-reporting, mostly due to the Covid Pandemic, Coyne Chemical was offered a reduced fine of $173,500. The Township will inform PADEP when this matter has been finalized.

1.0 Industrial Wastewater Discharge Permit Requirements

1.1 UniFirst Permit Requirements

The following parameters are monitored as required by the Bristol Township Industrial Wastewater Discharge Permit:

Table 1- UniFirst Monitoring Requirements

Parameter	Frequency	Type
Daily Flow Rate	Daily	Meter
pH	Daily	Grab
Total Suspended Solids (TSS)	Weekly	Composite
Organic Fats, Oils and Grease	Weekly	Grab
Biochemical Oxygen Demand (BOD5)	Bi-Weekly	Composite
Chemical Oxygen Demand (COD)	Monthly	Composite
Ammonia as N (NH3-N)	Monthly	Composite
Cadmium (Total)	Monthly	Composite
Chromium (Total)	Monthly	Composite
Copper (Total)	Monthly	Composite
Lead (Total)	Monthly	Composite
Mercury (Total)	Monthly	Composite
Nickel (Total)	Monthly	Composite
Silver (Total)	Monthly	Composite
Arsenic (Total)	Monthly	Composite
Zinc (Total)	Monthly	Composite
Cyanide (Total)	Quarterly	Grab
Phenols (Total)	Quarterly	Grab
Total Petroleum Hydrocarbons (TPH)	Quarterly	Grab
MBAS	Monthly	Grab

The facility has two (2) outfall flows. Outfall UN01 discharges treated process water into the Bristol Township Sewer Department's Sanitary Sewer System. Outfall UN02 discharges sanitary wastewater. The outfall data for both UN01 and UN02 shall not exceed the effluent limitations as stated in the permit.

The limitations for 2020 stated in the permit are provided in Table 2.

Table 2- UniFirst Effluent Limitations

Parameters	**Monthly Average (mg/l)**
Biochemical Oxygen Demand (BOD5)	750.0[1]
Chemical Oxygen Demand (COD)	3,000.0[2]
Total Suspended Solids (TSS)	700.0[3]
Organic Fats, Oils and Grease (FOG)	150.0[4]
Ammonia as N (NH3-N)	50.0
Cadmium (Total)	0.10
Chromium (Total)	1.80
Copper (Total)	0.51
Cyanide (Total)	2.31
Lead (Total)	0.43
Mercury (Total)	0.003
Nickel (Total)	0.51
Silver (Total)	0.14
Arsenic (Total)	2.30
Zinc (Total)	2.90
Phenols (Total)	1.83
Daily Flow, gallons per day	Report
pH	6.0 to 9.0
Total Petroleum Hydrocarbons (TPH)	Report
MBAS	Report

[1] Variance from base limit (500 mg/l) per Code §160-70.26; strength surcharge for concentration >220 mg/l. See, Part 3, Section 1

[2] Variance from base limit (1,550 mg/l) per Code §160-70.26. See, Part 3, Section 1

[3] Strength surcharge for concentration >250 mg/l. See, Part 3, Section 1

[4] Variance from base limit (100 mg/l) per Code §160-70.26; strength surcharge for concentration > 100 mg/l. See, Part 3, Section 1

1.2 Lower Bucks Hospital Permit Requirements

The following parameters are monitored as required by the Bristol Township Industrial Wastewater Discharge Permit. The facility has one (1) outfall. Outfall LBH01 discharges treated process water into the Bristol Township Sewer Department's Sanitary Sewer System. Any special conditions are outlined in the permit.

Table 3- Lower Bucks Hospital Monitoring Requirements

Parameter	**Frequency**	**Type**
Daily Flow Rate	Monthly	Meter
Chemical Oxygen Demand (COD)	Monthly	Composite
pH	Monthly	Grab
Total Suspended Solids (TSS)	Monthly	Composite
Organic Fats, Oils and Grease	Monthly	Composite
Biochemical Oxygen Demand (BOD5)	Monthly	Composite
Chemical Oxygen Demand (COD)	Monthly	Composite
Ammonia as N (NH3-N)	Monthly	Composite
Cadmium (Total)	Monthly	Composite
Chromium (Total)	Monthly	Composite
Copper (Total)	Monthly	Composite
Lead (Total)	Monthly	Composite
Mercury (Total)	Monthly	Composite
Nickel (Total)	Monthly	Composite
Silver (Total)	Monthly	Composite
Arsenic (Total)	Monthly	Composite
Zinc (Total)	Monthly	Composite
Cyanide (Total)	Quarterly	Grab
Phenols (Total)	Quarterly	Grab
Total Petroleum Hydrocarbons (TPH)	Quarterly	Grab
PCBs	Quarterly	Grab

The limitations for 2020 stated in the permit are provided in Table 4.

Table 4- Lower Bucks Hospital Effluent Limitations

Parameters	**Monthly Average (mg/l)**
Biochemical Oxygen Demand (BOD5)	550.0[1]
Chemical Oxygen Demand (COD)	1,200.0[2]
Total Suspended Solids (TSS)	650.0[3]
Organic Fats, Oils and Grease (FOG)	150.0[4]
Ammonia as N (NH_3-N)	50.0
Cadmium (Total)	0.10
Chromium (Total)	1.80
Copper (Total)	0.51
Cyanide (Total)	2.31
Lead (Total)	0.43
Mercury (Total)	0.003
Nickel (Total)	0.51
Silver (Total)	0.14
Arsenic (Total)	2.30
Zinc (Total)	2.90
Phenols (Total)	1.83
Daily Flow, gallons per day	Report
pH	6.0 to 9.0
Total Petroleum Hydrocarbons (TPH)	Report
PCBs (EPA Method 1668A)	Report

[1] Variance from base limit (500 mg/l) per Code §160-70.26; strength surcharge for concentration >220 mg/l. See, Part 3, Section 1

[2] Variance from base limit (1,550 mg/l) per Code §160-70.26. See, Part 3, Section 1

[3] Strength surcharge for concentration >250 mg/l. See, Part 3, Section 1

[4] Variance from base limit (100 mg/l) per Code §160-70.26; strength surcharge for concentration > 100 mg/l. See, Part 3, Section 1

1.3 Roscom Permit Requirements

The following parameters are monitored as required by the Bristol Township Industrial Wastewater Discharge Permit:

Table 5- Roscom Monitoring Requirements

Parameter	Frequency	Type
Daily Flow Rate	Daily	Meter
Chemical Oxygen Demand	Monthly	Grab
pH	Daily	Grab
Total Suspended Solids (TSS)	Monthly	Composite
Organic Fats, Oils and Grease	Monthly	Grab
Biochemical Oxygen Demand (BOD5)	Monthly	Composite
Chemical Oxygen Demand (COD)	Monthly	Composite
Ammonia as N (NH3-N)	Monthly	Composite
Cadmium (Total)	Monthly	Composite
Chromium (Total)	Monthly	Composite
Copper (Total)	Monthly	Composite
Lead (Total)	Monthly	Composite
Mercury (Total)	Monthly	Composite
Nickel (Total)	Monthly	Composite
Silver (Total)	Monthly	Composite
Arsenic (Total)	Monthly	Composite
Zinc (Total)	Monthly	Composite
Total Toxic Organics	Quarterly	Composite
Cyanide (Total)	Quarterly	Grab
Phenols (Total)	Monthly	Grab
Total Petroleum Hydrocarbons (TPH)	Quarterly	Grab
PCBs	Quarterly	Grab

The facility has one (1) outfall. Outfall ROS01 discharges treated process water into the Bristol Township Sewer Department's Sanitary Sewer System. Any special conditions are outlined in the permit.

The limitations for 2020 stated in the permit are provided in Table 6.

Table 6- Roscom Effluent Limitations

Parameters	**Monthly Average (mg/l)**
Biochemical Oxygen Demand (BOD5)	1,500.0[1]
Chemical Oxygen Demand (COD)	3,000.0[2]
Total Suspended Solids (TSS)	1,000.0[3]
Organic Fats, Oils and Grease (FOG)	150.0[4]
Ammonia as N (NH3-N)	69.0[5]
Cadmium (Total)	0.10
Chromium (Total)	1.80
Copper (Total)	0.51
Cyanide (Total)	2.31
Lead (Total)	0.43
Mercury (Total)	0.003
Nickel (Total)	0.51
Silver (Total)	0.14
Arsenic (Total)	2.30
Zinc (Total)	2.90
Phenols (Total)	1.83
Daily Flow, gallons per day	Report
pH	6.0 to 9.0
Total Petroleum Hydrocarbons (TPH)	Report
PCBs (EPA Method 1668A)	Report

[1] Variance from base limit (500 mg/l) per Code §160-70.26; strength surcharge for concentration >220 mg/l. See, Part 3, Section 1

[2] Variance from base limit (1,550 mg/l) per Code §160-70.26. See, Part 3, Section 1

[3] Strength surcharge for concentration >250 mg/l. See, Part 3, Section 1

[4] Variance from base limit (100 mg/l) per Code §160-70.26; strength surcharge for concentration > 100 mg/l. See, Part 3, Section 1

[3] Strength surcharge for concentration >69 mg/l. See, Part 3, Section 1

1.4 Coyne Chemical Permit Requirements

The following parameters are monitored as required by the Bristol Township Industrial Wastewater Discharge Permit:

Table 7- Coyne Monitoring Requirements

Parameter	Frequency	Sample Type
Daily Flow	Daily	Meter
pH	Daily	Grab
Total Suspended Solids (TSS)	Monthly	Grab
Organic Fats, Oils and Grease (FOG)	Monthly	Grab
Biochemical Oxygen Demand (5-day BOD)	Monthly	Composite
Chemical Oxygen Demand (COD)	Monthly	Composite
Ammonia (NH3-N)	Monthly	Composite
Cadmium (Total)	Monthly	Composite
Chromium (Total)	Monthly	Composite
Copper (Total)	Monthly	Composite
Lead (Total)	Monthly	Composite
Mercury (Total)	Monthly	Composite
Nickel (Total)	Monthly	Composite
Silver (Total)	Monthly	Composite
Arsenic (Total)	Monthly	Composite
Zinc (Total)	Monthly	Composite
Cyanide (Total)	Quarterly	Grab
Phenols (Total)	Monthly	Grab
Total Petroleum Hydrocarbons (TPH)	Quarterly	Grab
PCBs	Quarterly	Grab

The facility has one (1) outfall. Outfall COY01 discharges treated process water into the Bristol Township Sewer Department's Sanitary Sewer System. Any special conditions are outlined in the permit.

The limitations for 2020 stated in the permit are provided in Table 8.

Table 8- Coyne Effluent Limitations

Parameters	Monthly Average (mg/l)
Biochemical Oxygen Demand (BOD5)	750.0 [1]
Chemical Oxygen Demand (COD)	1,550.0 [2]
Total Suspended Solids (TSS)	1,054.0 [3]
Organic Fats, Oils and Grease	107.0 [4]
Ammonia as N (NH3-N)	69.0
Cadmium (Total)	0.10
Chromium (Total)	1.80
Copper (Total)	0.51
Cyanide (Total)	2.30
Lead (Total)	0.43
Mercury (Total)	0.003
Nickel (Total)	0.51
Silver (Total)	0.14
Sulfate as SO	360
Arsenic (Total)	2.30
Zinc (Total)	2.90
Phenols (Total)	1.83
Daily Flow	Report
pH	6.0 to 9.0
PCBs (EPA Method 1668A)	Report

[1] Variance from base limit (500 mg/l) per Code §160-70.26; strength surcharge for concentration >220 mg/l. See, Part 3, Section 1

[2] Variance from base limit (1,550 mg/l) per Code §160-70.26. See, Part 3, Section

[3] Strength surcharge for concentration >250 mg/l. See, Part 3, Section 1

[4] Variance from base limit (100 mg/l) per Code §160-70.26; strength surcharge for concentration > 100 mg/l. See, Part 3, Section 1

1.5 Neshaminy Creek Brewing Company Permit Requirements

Neshaminy Creek Brewing Company was permitted in 2018 under a Township Industrial Waste Discharge Permit to monitor the parameters listed below. In September 2018, NCBC installed a tank and piping to side stream the waste from their beer making process. NCBC has the tank pumped and the waste hauled off site by McGovern, Inc. The waste is not hauled to the Croydon WWTP. Now, NCBC provides the Township with monthly hauling records in lieu of monitoring since they no longer discharge process waste into the collection system. Copies of these hauling slips are included in Appendix 3 of this report.

1.6 Broken Goblet Brewing Company/Second Sin Brewing Company Permit Requirements

In mid-2019, Broken Goblet Brewing Company moved their operations out of Bristol Township. Second Sin Brewing Company took over operations shortly after. The Township supplied Second Sin Brewing Company with a DRAFT Permit in February 2021. The Permit is expected to become active later this year.

2.0 2020 Monitoring Results

Following are tables of the January through December 2020 self-monitoring results and sampling results conducted by Suburban Testing Labs for the Township for each industrial user. Any parameter which exceeds the requirements determined by the industrial wastewater discharge permit is **highlighted**.

2.1 UniFirst Sampling Data

The 2020 monitoring results for Unifirst are provided in Table 9 and Table 10 below.

Table 9 - UniFirst Township Monitoring Results

	Limit	Sep-20
BOD5 (mg/l)	750	213
COD (mg/l)	3,000	484
TSS (mg/l)	700	62
FOG (mg/l)	150	87.3
Ammonia (mg/l)	50	0.98
Cadmium (mg/l)	0.1	0.001
Chromium (mg/l)	1.8	0.007
Copper (mg/l)	0.51	0.132
Cyanide (mg/l)	2.31	0.040
Lead (mg/l)	0.43	0.011
Mercury (mg/l)	0.003	<0.0002
Nickel (mg/l)	0.51	0.019
Silver (mg/l)	0.14	< 0.002
Arsenic (mg/l)	2.3	<0.002
Zinc (mg/l)	2.9	0.242
Phenols	1.83	0.21
Daily Flow (MGD)	Report	-
pH	6.0 to 9.0	6.81
TPH	Report	41.3
MBAS	Report	6.9

Table 10 - UniFirst Self-Monitoring Results

	Limit	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
BOD5 (mg/l)	750	466	397	523.5	422.5	515.67	350.5	344.33	420	577	341	331	347
COD (mg/l)	3,000	1230	1310	886	1000	1,295	568	1020	326	1260	661	676	789
TSS (mg/l)	700	93.25	92.75	99.46	70.5	146.8	97	141.2	133.33	118	117.38	111	71.54
FOG (mg/l)	150	21.48	11.9	<8.33	21.34	46.1	27.58	<46.26	52.05	95.96	18.6	95.96	95.96
Ammonia (mg/l)	50	<0.1	1.02	1.25	1.14	1.67	1.19	1.26	1.75	0.85	0.95	1.05	1.41
Cadmium (mg/l)	0.1	<0.002	<0.002	<0.002	<0.002	< 0.005	< 0.002	0.002	< 0.005	< 0.005	0.001	< 0.005	<0.002
Chromium (mg/l)	1.8	< 0.020	< 0.020	< 0.020	<0.020	< 0.050	< 0.020	< 0.020	< 0.050	< 0.050	< 0.010	< 0.050	<0.020
Copper (mg/l)	0.51	0.259	0.248	0.201	0.165	0.23	0.195	0.202	0.228	0.275	0.149	0.185	0.172
Cyanide (mg/l)	2.31	0.174	-	-	0.019	-	-	0.016	-	-	0.037	-	-
Lead (mg/l)	0.43	<0.02	0.045	0.023	0.021	<0.050	0.023	<0.020	< 0.050	< 0.050	0.016	< 0.050	<0.020
Mercury (mg/l)	0.003	< 0.0003	< 0.0003	< 0.0002	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0007	< 0.0005	< 0.0002	< 0.0002
Nickel (mg/l)	0.51	<0.02	0.021	<0.020	<0.02	<0.050	<0.02	0.034	< 0.050	<0.050	< 0.050	< 0.050	<0.020
Silver (mg/l)	0.14	< 0.020	< 0.020	< 0.020	< 0.020	< 0.050	< 0.020	< 0.020	< 0.050	< 0.050	< 0.010	< 0.050	<0.020
Arsenic (mg/l)	2.3	< 0.020	< 0.020	< 0.020	<0.020	< 0.050	< 0.020	< 0.020	< 0.050	<0.050	< 0.020	< 0.050	<0.020
Zinc (mg/l)	2.9	0.418	0.309	0.291	0.351	<0.524	0.242	0.369	< 0.500	<0.500	0.251	<0.500	0.244
Phenols	1.83	0.12	-	-	0.27	-	-	0.29	-	-	0.12	-	-
Daily Flow (MGD)	Report	0.08	0.08	0.073	0.062	0.063	0.066	0.067	0.069	0.073	0.07	0.073	0.068
pH	6.0 to 9.0	7.35	7.33	7.61	7.31	7.63	7.59	7.8	7.64	7.41	7.61	7.30	7.41
TPH	Report	< 5.0	-	-	<5.0	-	-	36.6	-	-	< 5.0	-	-
MBAS	Report	4.75	3.2	<2.5	5.2	1.83	3.65	4.75	5.9	3.1	<0.50	2.7	4.2

2.2 Lower Bucks Hospital Sampling Data

The 2020 monitoring results for Lower Bucks Hospital are provided in Table 11 and Table 12 as follows.

Table 11 - Lower Bucks Hospital Township Monitoring Results

	Limit	**Sep-20**
BOD5	550	221
COD	1200	413
TSS	650	354
FOG	150	16.4
Ammonia	50	16.4
Cadmium	0.1	<0.002
Chromium	1.8	<0.005
Copper	0.51	0.281
Cyanide	2.31	0.022
Lead	0.43	0.016
Mercury	0.003	0.0003
Nickel	0.51	0.011
Silver	0.14	0.065
Arsenic	2.3	<0.005
Zinc	2.9	0.208
Phenols	1.83	<0.05
Daily Flow	Report	-
pH	6.0 to 9.0	6.85
TPH	Report	<5.0
PCBs	Report	-

Table 12 - Lower Bucks Hospital Self-Monitoring Results

	Limit	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
BOD5	550	53.5	40.1	34.2	29.2	31.8	70.8	87.6	373	49.6	70.9	64.2	60.2
COD	1200	72.6	718	92.6	153	82.2	390	149	496	177	111	191	160
TSS	650	15.5	163	14.4	15	10.1	57.5	56	66.7	24.5	64	69	52
FOG	150	4.1	8.2	6.3	3.7	2.2	2.1	13.5	2.0	1.9	5	5	5
Ammonia	50	9.9	7.6	10.2	5.6	6.6	5.2	3.1	5.3	13	19.1	10.4	7
Cadmium	0.1	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	0.00089	<0.00043	<0.00043	<0.00043	<0.00043	<0.00043	<0.00043
Chromium	1.8	0.00087	0.001	<0.00054	<0.00054	0.00079	0.00076	0.001	0.00067	<0.00045	0.0015	0.00051	0.00045
Copper	0.51	0.0784	0.0892	0.0422	0.0579	0.0274	0.0504	0.0397	0.063	0.0503	0.213	0.0451	0.0446
Cyanide	2.31	-	-	0.004	-	-	0.004	-	-	0.004	-	-	0.0092
Lead	0.43	0.00076	0.0016	0.00034	0.0023	0.00035	0.0011	0.001	0.0023	0.00041	0.0046	0.0011	0.00072
Mercury	0.003	<0.000091	0.00014	0.000091	0.00011	0.000091	0.00012	0.00015	0.00026	<0.000091	0.00029	0.00014	0.00026
Nickel	0.51	0.0024	0.0022	0.0015	0.0019	0.0016	0.0024	0.0016	0.0025	0.0016	0.0034	0.0015	0.0017
Silver	0.14	<0.00059	0.00071	<0.00059	<0.00059	<0.00059	<0.00059	0.00026	0.00043	<0.00012	<0.00012	<0.00012	<0.00012
Arsenic	2.3	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.00061	<0.00061	<0.00061	0.00069	<0.00061	<0.00061
Zinc	2.9	0.0534	0.104	0.0453	0.0769	0.0336	0.075	0.0433	0.085	0.0667	0.166	0.0545	0.0583
Phenols	1.83	-	-	0.082	-	-	0.82	-	-	0.041	-	-	0.21
Daily Flow (MGD)	Report	0.016	0.017	0.018	0.017	0.020	-	0.031	0.032	0.024	0.022	0.020	0.017
pH	6.0 to 9.0	7.31	7.29	6.81	6.67	6.79	7.2	**9.11**	6.99	7.28	6.96	6.61	6.08
TPH	Report	-	-	1.4	1.4	1.4	4.5	13.5	-	2.7	-	-	15.3
PCBs	Report	-	-	See Appendix 2	-	-	See Appendix 2	-	-	See Appendix 2	-	-	See Appendix 2

2.3 Roscom Sampling Data

The 2020 monitoring results for Roscom are provided in Table 13 and Table 14 as follows.

Table 13 - Roscom Township Monitoring Results

	Limit	**Sep-20**
BOD5	1,500	62.5
COD	3,000	126
TSS	1,000	62.9
FOG	150	<5.3
Ammonia	69	2.96
Cadmium	0.1	<0.0008
Chromium	1.8	<0.002
Copper	0.51	0.047
Cyanide	2.31	0.011
Lead	0.43	0.004
Mercury	0.003	<0.002
Nickel	0.51	0.003
Silver	0.14	<0.002
Arsenic	2.3	<0.002
Zinc	2.9	0.119
Phenols	1.83	<0.05
Daily Flow	Report	---
pH	6.0 – 9.0	8.71
TPH	Report	<5.0
PCBs	Report	<0.0054

Table 14 - Roscom Self-Monitoring Results

	Limit	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
BOD5	1500	112	49.7	63.7	47.3	54	38	11	22	38	13	120	9.2
COD	3000	75.1	884	191	68.6	60	26	57	51	74	70	ND	**ND**
TSS	1000	111	98	82	33.5	21	20	6.5	21	20	9.6	49	2.9
FOG	150	ND	ND	ND	ND	ND	3	2.6	1.4	3	2	2.3	3.3
Ammonia	69	45.2	39.1	35.5	8.12	7.6	2.1	0.39	0.76	2.1	0.72	5.4	0.66
Cadmium	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	1.8	ND	ND	ND	ND	ND	ND	ND	0.002	ND	ND	ND	0.0016
Copper	0.51	0.074	0.0516	0.0333	0.0783	0.0901	0.019	0.099	0.013	0.019	0.039	0.057	0.018
Cyanide	2.31	0.050	-	-	0.019	-	-	ND	-		0.0061	-	-
Lead	0.43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	0.51	0.013	ND	ND	0.0123	ND	0.0035	0.0065	0.0021	0.0035	ND	0.0037	ND
Silver	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2.9	0.34	0.134	0.0824	0.574	0.191	0.058	0.19	0.043	0.058	0.063	0.17	0.037
Phenols	1.83	0.0011	ND	0.14	0.0637	0.11	0.027	0.011	**ND**	0.027	0.031	ND	ND
Daily Flow (MGD)	Report	0.040	0.053	0.072	0.086	0.104	0.120	0.140	0.156	0.175	0.19	0.205	0.221
pH	6.0-9.0	6.5	6.4	6.4	6.3	6.7	6.7	6.8	6.7	6.7	6.5	6.4	6.5
TPH	Report	ND	-	-	ND	-	-	ND	-	-	ND	-	-
PCBs	Report	See Appendix 2	-	-	See Appendix 2	-	-	See Appendix 2	-	-	See Appendix 2	-	-

2.4 Neshaminy Creek Brewing Company Sampling Data

In September 2018, NCBC began to side stream their industrial waste to be pumped and hauled off site. NCBC was in significant noncompliance prior to this operation for failure to provide self-monitoring reports per their permit. Copies of the receipts of each frac tank haul FOR 2020 are included in Appendix 3.

2.5 Coyne Chemical Sampling Data

The 2020 monitoring results for Coyne Chemical are provided in Table 15 and Table 16 as follows.

Table 15 - Coyne Chemical Township Monitoring Results

	Limit	Sep-20
BOD5	750	**1160**
COD	1550	1080
TSS	1054	**1480**
FOG	107	17.2
Ammonia	69	30.4
Cadmium	0.1	<0.002
Chromium	1.8	<0.005
Copper	0.51	0.074
Cyanide	2.30	0.013
Lead	0.43	<0.005
Mercury	0.003	<0.0005
Nickel	0.51	0.010
Silver	0.14	<0.005
Sulfate	360	46.7
Arsenic	2.3	<0.005
Zinc	2.9	0.418
Phenols	1.83	0.23
Daily Flow	Report	-
pH	6.0-9.0	8.12
TPH	Report	<5.0
PCBs	Report	-

Table 16 - Coyne Chemical Self-Monitoring Results

	Limit	Jan-20	Feb-20	Mar-20	Apr-20*	May-20*	Jun-20*	Jul-20*	Aug-20*	Sep-20**	Oct-20	Nov-20	Dec-20
BOD5	750	DNR	DNR	144	DNR	DNR	DNR	DNR	DNR	1450	180	120	725
COD	1550	DNR	DNR	527	DNR	DNR	DNR	DNR	DNR	3810	726	661	1640
TSS	1054	DNR	DNR	71	DNR	DNR	DNR	DNR	DNR	2100	357	460	330
FOG	107	DNR	DNR	<7	DNR	DNR	DNR	DNR	DNR	196	11	30	20
Ammonia	69	DNR	DNR	<0.10	DNR	DNR	DNR	DNR	DNR	23.8	1.46	1.98	70.2
Cadmium	0.1	DNR	DNR	<0.01	DNR	DNR	DNR	DNR	DNR	<0.01	0.0322	<0.01	<0.02
Chromium	1.8	DNR	DNR	0.0687	DNR	DNR	DNR	DNR	DNR	0.238	0.0526	0.0511	0.108
Copper	0.51	DNR	DNR	0.111	DNR	DNR	DNR	DNR	DNR	0.187	0.035	0.045	0.069
Cyanide	2.31	DNR	DNR	<0.004	DNR	DNR	DNR	DNR	DNR	0.014	<0.004	0.016	<0.004
Lead	0.43	DNR	DNR	0.035	DNR	DNR	DNR	DNR	DNR	0.013	<0.01	<0.01	<0.01
Mercury	0.003	DNR	DNR	0.0011	DNR	DNR	DNR	DNR	DNR	0.0006	<0.0002	<0.0002	<0.0002
Nickel	0.51	DNR	DNR	0.0844	DNR	DNR	DNR	DNR	DNR	0.354	0.0478	0.133	0.237
Silver	0.14	DNR	DNR	<0.01	DNR	DNR	DNR	DNR	DNR	<0.01	<0.01	<0.01	<0.02
Sulfate	360	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	7380	386	740	3890
Arsenic	2.3	DNR	DNR	0.011	DNR	DNR	DNR	DNR	DNR	<0.010	<0.01	<0.01	<0.02
Zinc	2.9	DNR	DNR	0.235	DNR	DNR	DNR	DNR	DNR	0.265	0.199	0.222	0.24
Phenols	1.83	DNR	DNR	<0.010	DNR	DNR	DNR	DNR	DNR	0.040	0.018	0.09	0.03
Daily Flow (Gallons per Month)	Report	4,475	4,204	6,656	7,384	3,817	5,161	2,457	5,907	4,183	4,132	0	3,342
pH	6.0-9.0	7.99	6.47	7.87	7.08	7.28	8.38	8.49	8.64	6.93	8.62	7.24	6.37
TPH	Report	DNR	DNR	<7	DNR	DNR	DNR	DNR	DNR	114	<5	5	10
PCBs	Report	-	-	See Appendix 2	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR

* Sampling was not performed as a result of decreased staff during the Covid Pandemic

** User reported that sampling was improperly performed and that results are invalid.

Part B: Pretreatment Developments

I. POTW Operations Summary

The Croydon WWTP is sampled each month in accordance with its NPDES Permit. The influent, effluent, and sludge are sampled. Sample data is included in Appendix 1 along with the frequency of sampling conducted.

The treatment plant does not receive hauled waste. All solid waste is removed from the plant by Waste Management and taken to their management facility for disposal.

II. Pretreatment Program Changes

In early 2019, the Township switched their sampling frequency from monthly to once a year. The Township has adopted an Enforcement Response Plan. As part of the Township's track down study under its pollution

minimization plan (PMP) for PCBs, each Industrial user is sampled for PCBs and Selenium. The Township last conducted its local limits analysis and the subsequent report was submitted to EPA in March 2020.

The following is the matrix of the existing, calculated, and proposed local limits for Bristol Township that was part of the March 2020 submission:

Parameter	Existing Limit (mg/L)	Calculated Limit (mg/L)	Proposed Limit Avg Monthly (mg/L)
Arsenic [1]	2.3	0.3756	**0.3**
Cadmium [1]	0.10	0.0119	**0.01**
Chromium	1.8	5.2491	1.8
Copper [1]	0.51	0.0240	**0.02**
Cyanide	2.30	5.9941	2.3
Lead [1]	0.43	0.1542	**0.15**
Mercury	0.003	0.0059	0.003
Nickel [1]	0.51	0.1964	**0.19**
Selenium [2]	-	0.8472	0.8
Silver	0.14	1.0407	0.14
Zinc [1]	2.90	0.2386	**0.2**
Ammonia	69.0	287.5396	69
BOD [1]	775.0	190.7077	**190**
TSS [1]	1054.0	352.8844	**350**
Phenol	1.83	61.2819	1.83
Sulfate	360.0	71086.4820	360
FOG	107.0	263.6916	107
COD [1]	1550.0	502.0840	**500**
PCB [2]	-	-0.0622	0

[1] – Denotes a more stringent proposed local limit value.

[2] – Denotes new parameters added.

Lastly, for new businesses that plan to operate in Bristol Township, the Township will be sending out Industrial Wastewater Questionnaires for evaluation of anticipated effluent limitations.

Appendices

Appendix 1 – Influent, Effluent, and Sludge Reporting for the Croydon WWTP

SUBURBAN TESTING LABS

Results Report

Order ID: 0011160

Bristol Township STP
1800 River Road
Croydon, PA 19021

Project: Quarterly Local Limits Analysis
1800 River Road
Croydon, PA 19021

Attn: Michael Wolgemuth

Regulatory ID:

Sample Number: 0011160-01 | Site: Effluent | Sample ID:
Collector: BS | Collect Date: 01/07/2020 7:31 am | Sample Type: 24 HC

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics									
Chromium (VI)	< 0.10	µg/L	EPA 218.6	0.10	1	01/14/20	DSM	01/14/20 12:48	DSM
Metals									
Arsenic	< 0.001	mg/L	EPA 200.8	0.001	1	01/14/20	RPV	01/15/20 13:53	RPV
Beryllium	< 0.0004	mg/L	EPA 200.8	0.0004	1	01/14/20	RPV	01/15/20 13:53	RPV
Cadmium	< 0.0004	mg/L	EPA 200.8	0.0004	1	01/14/20	RPV	01/15/20 13:53	RPV
Chromium	0.001	mg/L	EPA 200.8	0.001	1	01/14/20	RPV	01/15/20 13:53	RPV
Copper	0.023	mg/L	EPA 200.8	0.002	1	01/14/20	RPV	01/15/20 13:53	RPV
Lead	< 0.001	mg/L	EPA 200.8	0.001	1	01/14/20	RPV	01/15/20 13:53	RPV
Mercury	< 0.0002	mg/L	SM 3112-B	0.0002	1	01/08/20	MAW	01/09/20 11:59	MAW
Molybdenum	0.003	mg/L	EPA 200.8	0.001	1	01/14/20	RPV	01/15/20 13:53	RPV
Nickel	0.002	mg/L	EPA 200.8	0.001	1	01/14/20	RPV	01/15/20 13:53	RPV
Selenium	< 0.002	mg/L	EPA 200.8	0.002	1	01/14/20	RPV	01/15/20 13:53	RPV
Silver	< 0.001	mg/L	EPA 200.8	0.001	1	01/14/20	RPV	01/15/20 13:53	RPV
Zinc	0.049	mg/L	EPA 200.8	0.010	1	01/14/20	RPV	01/15/20 13:53	RPV
Pesticide/PCB									
Pesticides, 608, PPL									
Aldrin [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Alpha-BHC [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Beta-BHC [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Delta-BHC [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Gamma-BHC (Lindane) [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Chlordane [2C]	< 0.49	µg/L	EPA 608.3	0.49	1	01/14/20	KMH	01/16/20 22:58	CEK
Alpha Chlordane [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Gamma Chlordane [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
4,4'-DDD [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
4,4'-DDE [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
4,4'-DDT [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Dieldrin [2C]	0.03	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Endosulfan I [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Endosulfan II [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Endosulfan sulfate [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Endrin [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Endrin aldehyde [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Endrin ketone [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Heptachlor [2C]	< 0.02	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK

Report Generated On: 01/20/2020 3:46 pm 0011160
STL_Results Revision #1.7 Effective: 11/07/2019

SUBURBAN TESTING LABS

Sample Number: 0011160-01	Site: Effluent	Sample ID:
Collector: BS	Collect Date: 01/07/2020 7:31 am	Sample Type: 24 HC

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Pesticide/PCB (Continued)										
Pesticides, 608, PPL (Continued)										
Heptachlor epoxide [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Methoxychlor [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/16/20 22:58	CEK
Toxaphene [2C]	< 0.49		µg/L	EPA 608.3	0.49	1	01/14/20	KMH	01/16/20 22:58	CEK

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene [2C]	0.334	µg/L	EPA 608.3	68%	1	40-104	01/16/20 22:58
Surrogate: Decachlorobiphenyl [2C]	0.144	µg/L	EPA 608.3	29%	1	28-130	01/16/20 22:58

Semivolatiles										
SVOA, 625										
Benzidine	< 4.76	M2	µg/L	EPA 625.1	4.76	1	01/10/20	MKR	01/14/20 22:03	MAG

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	81.7	µg/L	EPA 625.1	43%	1	10-79	01/14/20 22:03
Surrogate: Phenol-d6	51.8	µg/L	EPA 625.1	27%	1	10-57	01/14/20 22:03
Surrogate: Nitrobenzene-d5	61.8	µg/L	EPA 625.1	65%	1	24-119	01/14/20 22:03
Surrogate: 2-Fluorobiphenyl	63.7	µg/L	EPA 625.1	67%	1	29-115	01/14/20 22:03
Surrogate: 2,4,6-Tribromophenol	162	µg/L	EPA 625.1	85%	1	10-141	01/14/20 22:03
Surrogate: p-Terphenyl-d14	46.2	µg/L	EPA 625.1	48%	1	44-124	01/14/20 22:03

Sample Number: 0011160-02	Site: Effluent - Grab	Sample ID:
Collector: BS	Collect Date: 01/07/2020 8:12 am	Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics										
Cyanide, Total	0.009		mg/L	ASTM D 7511-12	0.005	1	01/14/20	TML	01/14/20 13:27	TML
Phenolics	< 0.05		mg/L	EPA 420.1	0.05	1	01/16/20	SMD	01/17/20 9:27	SMD

SUBURBAN TESTING LABS
1037F MacArthur Road, Reading, PA 19605 Phone: 800-433-6595 Fax: 610-375-4090 suburbantestinglabs.com
PADEP 06-00208

SUBURBAN TESTING LABS

Sample Number: 0011160-03	Site: Influent	Sample ID:
Collector: BS	Collect Date: 01/07/2020 7:37 am	Sample Type: 24 HC

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics										
Chromium (VI)	< 0.10		µg/L	EPA 218.6	0.10	1	01/14/20	DSM	01/14/20 13:47	DSM
Metals										
Arsenic	< 0.005		mg/L	EPA 200.8	0.005	1	01/14/20	RPV	01/15/20 14:09	RPV
Beryllium	< 0.002		mg/L	EPA 200.8	0.002	1	01/14/20	RPV	01/15/20 14:09	RPV
Cadmium	< 0.002		mg/L	EPA 200.8	0.002	1	01/14/20	RPV	01/15/20 14:09	RPV
Chromium	< 0.005		mg/L	EPA 200.8	0.005	1	01/14/20	RPV	01/15/20 14:09	RPV
Copper	0.047		mg/L	EPA 200.8	0.010	1	01/14/20	RPV	01/15/20 14:09	RPV
Lead	< 0.005		mg/L	EPA 200.8	0.005	1	01/14/20	RPV	01/15/20 14:09	RPV
Mercury	< 0.0002		mg/L	SM 3112-B	0.0002	1	01/08/20	MAW	01/09/20 12:08	MAW
Molybdenum	< 0.005		mg/L	EPA 200.8	0.005	1	01/14/20	RPV	01/15/20 14:09	RPV
Nickel	< 0.005		mg/L	EPA 200.8	0.005	1	01/14/20	RPV	01/15/20 14:09	RPV
Selenium	< 0.010		mg/L	EPA 200.8	0.010	1	01/14/20	RPV	01/15/20 14:09	RPV
Silver	< 0.005		mg/L	EPA 200.8	0.005	1	01/14/20	RPV	01/15/20 14:09	RPV
Zinc	0.229		mg/L	EPA 200.8	0.050	1	01/14/20	RPV	01/15/20 14:09	RPV
Pesticide/PCB										
Pesticides, 608, PPL										
Aldrin	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
alpha-BHC	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
beta-BHC	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
delta-BHC	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
gamma-BHC (Lindane)	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Chlordane	< 0.49		µg/L	EPA 608.3	0.49	1	01/14/20	KMH	01/15/20 4:17	CEK
Alpha Chlordane	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Gamma Chlordane	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
4,4'-DDD	< 0.02	C4	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
4,4'-DDE	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
4,4'-DDT	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Dieldrin	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Endosulfan I	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Endosulfan II	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Endosulfan sulfate	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Endrin	< 0.02	C4	µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Endrin aldehyde	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Endrin ketone	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Heptachlor	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Heptachlor epoxide	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Methoxychlor	< 0.02		µg/L	EPA 608.3	0.02	1	01/14/20	KMH	01/15/20 4:17	CEK
Toxaphene	< 0.49		µg/L	EPA 608.3	0.49	1	01/14/20	KMH	01/15/20 4:17	CEK

Surrogate Recoveries	*Results*		*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene	0.144	V2	µg/L	EPA 608.3	29%	1	40-104	01/15/20 4:17
Surrogate: Decachlorobiphenyl	0.0421	V2	µg/L	EPA 608.3	9%	1	28-130	01/15/20 4:17

Report Generated On: 01/20/2020 3:46 pm 0011160
STL_Results Revision #1.7 Effective: 11/07/2019

SUBURBAN TESTING LABS

Sample Number: 0011160-03	Site: Influent	Sample ID:
Collector: BS	Collect Date: 01/07/2020 7:37 am	Sample Type: 24 HC

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Semivolatiles									
SVOA, 625									
Benzidine	< 5.26	µg/L	EPA 625.1	5.26	1	01/10/20	MKR	01/14/20 23:21	MAG

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	89.0	µg/L	EPA 625.1	42%	1	10-79	01/14/20 23:21
Surrogate: Phenol-d6	59.9	µg/L	EPA 625.1	28%	1	10-57	01/14/20 23:21
Surrogate: Nitrobenzene-d5	69.0	µg/L	EPA 625.1	66%	1	24-119	01/14/20 23:21
Surrogate: 2-Fluorobiphenyl	67.0	µg/L	EPA 625.1	64%	1	29-115	01/14/20 23:21
Surrogate: 2,4,6-Tribromophenol	154	µg/L	EPA 625.1	73%	1	10-141	01/14/20 23:21
Surrogate: p-Terphenyl-d14	59.4	µg/L	EPA 625.1	56%	1	44-124	01/14/20 23:21

Sample Number: 0011160-04	Site: Influent - Grab	Sample ID:
Collector: BS	Collect Date: 01/07/2020 8:20 am	Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics									
Cyanide, Total	0.012	mg/L	ASTM D 7511-12	0.005	1	01/14/20	TML	01/14/20 13:29	TML
Phenolics	0.14	mg/L	EPA 420.1	0.05	1	01/16/20	SMD	01/17/20 9:27	SMD

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PADEP 06-00208

SUBURBAN TESTING LABS

Sample Number: 0011160-05	Site: Digester Sludge	Sample ID:
Collector: BS	Collect Date: 01/07/2020 12:00 am	Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics										
Chromium (VI)	< 500		mg/kg dry	SW 846 7196A	500	1	01/16/20	ESB	01/16/20 15:35	ESB
Cyanide, Total	< 61.3		mg/kg dry	SW 846 9014	61.3	1	01/14/20	SMD	01/15/20 11:54	SMD
Phenolics	1280		mg/kg dry	SW 846 9065	595	1	01/17/20	SMD	01/17/20 9:59	SMD
Total Solids	0.4		%	SM 2540-G		1	01/08/20	CH	01/08/20 11:15	CH
Metals										
Arsenic	< 41.1		mg/kg dry	SW 846 6010D	41.1	1	01/10/20	RJS	01/14/20 17:46	MAW
Beryllium	< 8.22		mg/kg dry	SW 846 6010D	8.22	1	01/10/20	RJS	01/14/20 17:46	MAW
Cadmium	< 8.22		mg/kg dry	SW 846 6010D	8.22	1	01/10/20	RJS	01/14/20 17:46	MAW
Chromium	171		mg/kg dry	SW 846 6010D	164	1	01/10/20	RJS	01/14/20 17:46	MAW
Copper	963		mg/kg dry	SW 846 6010D	8.22	1	01/10/20	RJS	01/14/20 17:46	MAW
Lead	90.6		mg/kg dry	SW 846 6010D	41.1	1	01/10/20	RJS	01/14/20 17:46	MAW
Mercury	3.64		mg/kg dry	SW 846 7471B	1.28	1	01/13/20	RJS	01/14/20 15:19	RJS
Molybdenum	< 164		mg/kg dry	SW 846 6010D	164	1	01/10/20	RJS	01/14/20 17:46	MAW
Nickel	< 164		mg/kg dry	SW 846 6010D	164	1	01/10/20	RJS	01/14/20 17:46	MAW
Selenium	43.1	B1	mg/kg dry	SW 846 6010D	41.1	1	01/10/20	RJS	01/14/20 17:46	MAW
Silver	< 41.1		mg/kg dry	SW 846 6010D	41.1	1	01/10/20	RJS	01/14/20 17:46	MAW
Zinc	2190		mg/kg dry	SW 846 6010D	1640	1	01/10/20	RJS	01/14/20 17:46	MAW
Semivolatiles										
SVOA, 8270, PPL										
Acenaphthene	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Acenaphthylene	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Anthracene	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Benzidine	< 875000		µg/Kg dry	SW846 3550C/8270D	875000	1	01/13/20	SCD	01/14/20 19:51	MAG
Benzo(a)anthracene	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
Benzo(a)pyrene	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
Benzo(b)fluoranthene	< 24800		µg/Kg dry	SW846 3550C/8270D	24800	1	01/13/20	SCD	01/14/20 19:51	MAG
Benzo(g,h,i)perylene	< 24800		µg/Kg dry	SW846 3550C/8270D	24800	1	01/13/20	SCD	01/14/20 19:51	MAG
Benzo(k)fluoranthene	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
4-Bromophenyl phenyl ether	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
Butyl benzyl phthalate	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
4-Chloro-3-methylphenol	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
bis(2-Chloroethoxy) methane	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
bis(2-Chloroethyl) ether	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
bis(2-Chloroisopropyl) ether	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
2-Chloronaphthalene	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
2-Chlorophenol	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
4-Chlorophenyl phenyl ether	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Chrysene	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
Dibenz(a,h)anthracene	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
Di-n-butyl phthalate	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
3,3'-Dichlorobenzidine	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
2,4-Dichlorophenol	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Diethyl phthalate	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
2,4-Dimethylphenol	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG

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PADEP 06-00208

SUBURBAN TESTING LABS

Sample Number: 0011160-05	Site: Digester Sludge	Sample ID:
Collector: BS	Collect Date: 01/07/2020 12:00 am	Sample Type: Grab

Semivolatiles (Continued)

SVOA, 8270, PPL (Continued)

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Dimethyl phthalate	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
4,6-Dinitro-2-methylphenol	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
2,4-Dinitrophenol	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
2,6-Dinitrotoluene	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
2,4-Dinitrotoluene	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
Di-n-octyl phthalate	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
1,2-Diphenylhydrazine	< 24800		µg/Kg dry	SW846 3550C/8270D	24800	1	01/13/20	SCD	01/14/20 19:51	MAG
bis(2-Ethylhexyl) phthalate	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Fluoranthene	< 62200	C4	µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
Fluorene	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Hexachlorobenzene	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
Hexachlorobutadiene	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Hexachlorocyclopentadiene	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Hexachloroethane	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Indeno(1,2,3-cd)pyrene	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
Isophorone	< 24800		µg/Kg dry	SW846 3550C/8270D	24800	1	01/13/20	SCD	01/14/20 19:51	MAG
Naphthalene	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Nitrobenzene	< 24800		µg/Kg dry	SW846 3550C/8270D	24800	1	01/13/20	SCD	01/14/20 19:51	MAG
4-Nitrophenol	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
2-Nitrophenol	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
N-Nitrosodimethylamine	< 24800		µg/Kg dry	SW846 3550C/8270D	24800	1	01/13/20	SCD	01/14/20 19:51	MAG
n-Nitrosodiphenylamine	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
N-Nitrosodi-n-propylamine	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Pentachlorophenol	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Phenanthrene	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Phenol	< 125000		µg/Kg dry	SW846 3550C/8270D	125000	1	01/13/20	SCD	01/14/20 19:51	MAG
Pyrene	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG
1,2,4-Trichlorobenzene	< 24800		µg/Kg dry	SW846 3550C/8270D	24800	1	01/13/20	SCD	01/14/20 19:51	MAG
2,4,6-Trichlorophenol	< 62200		µg/Kg dry	SW846 3550C/8270D	62200	1	01/13/20	SCD	01/14/20 19:51	MAG

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	3010000	µg/Kg dry	SW846 3550C/8270D	60%	1	14-110	01/14/20 19:51
Surrogate: Phenol-d6	3410000	µg/Kg dry	SW846 3550C/8270D	68%	1	24-116	01/14/20 19:51
Surrogate: Nitrobenzene-d5	1640000	µg/Kg dry	SW846 3550C/8270D	66%	1	28-111	01/14/20 19:51
Surrogate: 2-Fluorobiphenyl	1630000	µg/Kg dry	SW846 3550C/8270D	65%	1	30-111	01/14/20 19:51
Surrogate: 2,4,6-Tribromophenol	3640000	µg/Kg dry	SW846 3550C/8270D	73%	1	25-117	01/14/20 19:51
Surrogate: p-Terphenyl-d14	1750000	µg/Kg dry	SW846 3550C/8270D	70%	1	44-116	01/14/20 19:51

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Data Qualifiers:

B1	The target analyte was detected in the Method, Dilution Water, Instrument or Extraction Blank at or above the method Reporting Limit, however it was <10% the concentration detected in the sample. Data may be fully usable under the 2009 TNI Standard.
C4	The CCV for this analyte was above acceptance criteria, however the analyte was not detected in the associated sample. Data may be fully useable under the 2009 TNI Standard.
M2	The Matrix Spike associated with this sample is below established acceptance criteria, indicating potential matrix interference. Results of this sample may be biased low.
V2	The surrogate associated with this sample was below extablished acceptance criteria. Data may be biased low.

Sample Receipt Conditions:

All samples met the sample receipt requirements for the relevant analyses.

The test *pH, Lab* is performed in the Laboratory as soon as possible. These results are not appropriate for compliance with NPDES, SDWA, or other regulatory programs that require analysis within 15 minutes of sample collection and should be considered for informational purposes only.

**pH, Final* for ASTM leachate is performed by method SM 4500-H-B.

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

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Results are considered Preliminary unless report is signed by authorized representative of STL.

Reviewed and Released By:
Charles Wanyo
Project Manager I

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SUBURBAN TESTING LABS

(2)

Chain of Custody Record

1037F MacArthur Road, Reading, PA 19605
Phone: 610-375-8378 - Fax: 610-375-4090 - suburbantestinglabs.com

TAT (Circle One): Standard - 24hr - 48hr - 72hr - Other _____
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply.)

ORDER ID: 0011160

Client Name / Address:
Bristol Township STP
1800 River Road
Croydon, PA 19021

Phone: 717-626-2172
Fax:

Client Project Manager: Michael Wolgemuth

Project Name / Address:
Quarterly Local Limits Analysis
1800 River Road
Croydon, PA 19021

Payment / P.O. Info: 85681

Project Description:

Order Comments: Client collects

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0011160-01	Effluent		1/7 0731	BS	Non-potable	24 HC	1/6 0753

Container Type / Preservation	Preservation Check
500mL P & HNO3 pH<2	A
250mL P & Cr6 Buffer - Field Filtered	B
1L GA & Na2S2O3	C
1L GA & Na2S2O3	D
1L GA & Na2S2O3	E
1L GA & Na2S2O3	F

Analysis - Method	Field Results
Inorganics	
Chromium (VI) - EPA 218.6	
Metals	
Arsenic, 200.8 - EPA 200.8	
Beryllium, 200.8 - EPA 200.8	
Cadmium, 200.8 - EPA 200.8	
Chromium, 200.8 - EPA 200.8	
Copper, 200.8 - EPA 200.8	
Lead, 200.8 - EPA 200.8	
Mercury, 3112 - SM 3112-B	
Molybdenum, 200.8 - EPA 200.8	
Nickel, 200.8 - EPA 200.8	
Selenium, 200.8 - EPA 200.8	
Silver, 200.8 - EPA 200.8	
Zinc, 200.8 - EPA 200.8	
Pesticide/PCB	
Pesticides, 608, PPL - EPA 608.3	
Semivolatiles	
SVOA, 625 - EPA 625.1	

0011160-02	Effluent - Grab		1/7 0812	BS	Non-potable	Grab	

Container Type / Preservation	Preservation Check
500mL P & NaOH pH>12	A
1L GA & H2SO4 pH<2	B

Analysis - Method	Field Results
Inorganics	
Cyanide, Total - ASTM D 7511-12	
Phenolics, Total - EPA 420.1	

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0011160-03	Influent		1/7 0737	BS	Non-potable	24 HC	1/6 0746

Container Type / Preservation		Preservation Check
500mL P & HNO3 pH<2	A	
250mL P & Cr6 Buffer - Field Filtered	B	
1L GA & Na2S2O3	C	
1L GA & Na2S2O3	D	
1L GA & Na2S2O3	E	
1L GA & Na2S2O3	F	

Analysis - Method	Field Results
Inorganics	
Chromium (VI) - EPA 218.6	
Metals	
Arsenic, 200.8 - EPA 200.8	
Beryllium, 200.8 - EPA 200.8	
Cadmium, 200.8 - EPA 200.8	
Chromium, 200.8 - EPA 200.8	
Copper, 200.8 - EPA 200.8	
Lead, 200.8 - EPA 200.8	
Mercury, 3112 - SM 3112-B	
Molybdenum, 200.8 - EPA 200.8	
Nickel, 200.8 - EPA 200.8	
Selenium, 200.8 - EPA 200.8	
Silver, 200.8 - EPA 200.8	
Zinc, 200.8 - EPA 200.8	
Pesticide/PCB	
Pesticides, 608, PPL - EPA 608.3	
Semivolatiles	
SVOA, 625 - EPA 625.1	

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0011160-04	Influent - Grab		1/7 0820	BS	Non-potable	Grab	—

Container Type / Preservation		Preservation Check
500mL P & NaOH pH>12	A	
1L GA & H2SO4 pH<2	B	

Analysis - Method	Field Results
Inorganics	
Cyanide, Total - ASTM D 7511-12	
Phenolics, Total - EPA 420.1	

ORDER ID: 0011160

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0011160-05	Digester Sludge		1/7 0827	BS	Solid (Dry Weight)	Grab	—

Container Type / Preservation	Preservation Check
4oz G	A
4oz G (Sub)	B
4oz G	C
4oz G	D

☆ = CL ✓ IN

Analysis - Method	Field Results

Inorganics
- Chromium (VI) Subcontract - SW 846 7196A
- Cyanide, 9014, Total - SW 846 9014
- Phenolics, Total - SW 846 9065
- Total Solids, 2540-G (%) - SM 2540-G

Metals
- Arsenic, 6010 - SW 846 6010D
- Beryllium, 6010 - SW 846 6010D
- Cadmium, 6010 - SW 846 6010D
- Chromium, 6010 - SW 846 6010D
- Copper, 6010 - SW 846 6010D
- Lead, 6010 - SW 846 6010D
- Mercury, 7471 - SW 846 7471B
- Molybdenum, 6010 - SW 846 6010D
- Nickel, 6010 - SW 846 6010D
- Selenium, 6010 - SW 846 6010D
- Silver, 6010 - SW 846 6010D
- Zinc, 6010 - SW 846 6010D

Pesticide/PCB
- Pesticides, 8081, PPL - SW846 3550C/8081B

Semivolatiles
- SVOA, 8270, PPL - SW846 3550C/8270D

WKO TAT = 10 Cool Sample(s) to 6 C

		Count		
Relinquished By:	[signature]	20	Date: 1/7/20 Time: 0937	Temp (°C): 3.1
Received By:	[signature]	20	Date: 1.7.20 Time: 0937	Temp (°C): 2.4
Relinquished By:	[signature]		Date: 1.7.20 Time: 1514	Temp (°C): 1.6 Acceptable:? (Y) / N
Received in Lab By:	[signature]	20	Date: 1-7-20 Time: 1515	Temp (°C): 1.6 Acceptable:? (Y) / N

Sample Conditions
- Number of Containers \ Cooler received matches number on COC? (Y) / N
- Sample labels and COC free of descrepancies? (Y) / N
- All Containers Intact? (Y) / N
- VOC vials for VOA analysis free of headspace, if applicable? ~~Y~~ / N

Sample Type Key
G = Grab
8HC = 8 Hr. Composite
24HC = 24 Hr. Composite

S D W A
D = Distribution
E = Entry Point
R = Raw
C = Check
S = Special
M = Maximum Residence

Reporting Options
- ☐ SDWA Reporting PWSID
- ☐ Email
- ☐ Other_____

Shaded areas are for STL use only

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SUBURBAN TESTING LABS

Results Report

Order ID: 0014543

Bristol Township STP
1800 River Road
Croydon, PA 19021

Project: Annual Priority Pollutant Scan
1800 River Road
Croydon, PA 19021

Attn: Michael Wolgemuth

Regulatory ID: PA0026450

Sample Number: 0014543-01 | Site: Influent | Sample ID:
Collector: BS | Collect Date: 02/11/2020 7:36 am | Sample Type: 24 HC

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Metals										
Antimony	0.0024		mg/L	EPA 200.8	0.0008	1	02/14/20	MAW	02/18/20 14:40	RPV
Arsenic	< 0.002		mg/L	EPA 200.8	0.002	1	02/14/20	MAW	02/18/20 14:40	RPV
Beryllium	< 0.0008		mg/L	EPA 200.8	0.0008	1	02/14/20	MAW	02/18/20 14:40	RPV
Cadmium	< 0.0008		mg/L	EPA 200.8	0.0008	1	02/14/20	MAW	02/18/20 14:40	RPV
Chromium	< 0.002		mg/L	EPA 200.8	0.002	1	02/14/20	MAW	02/18/20 14:40	RPV
Copper	0.041		mg/L	EPA 200.8	0.004	1	02/14/20	MAW	02/18/20 14:40	RPV
Lead	< 0.002		mg/L	EPA 200.8	0.002	1	02/14/20	MAW	02/18/20 14:40	RPV
Mercury	< 0.0002		mg/L	SM 3112-B	0.0002	1	02/17/20	MAW	02/17/20 13:55	MAW
Nickel	0.003		mg/L	EPA 200.8	0.002	1	02/14/20	MAW	02/18/20 14:40	RPV
Selenium	< 0.004		mg/L	EPA 200.8	0.004	1	02/14/20	MAW	02/18/20 14:40	RPV
Silver	< 0.002		mg/L	EPA 200.8	0.002	1	02/14/20	MAW	02/18/20 14:40	RPV
Thallium	< 0.0008		mg/L	EPA 200.8	0.0008	1	02/14/20	MAW	02/18/20 14:40	RPV
Zinc	0.098		mg/L	EPA 200.8	0.020	1	02/14/20	MAW	02/18/20 14:40	RPV
Pesticide/PCB										
PCBs, 608										
Aroclor 1016	< 0.49		µg/L	EPA 608.3	0.49	1	02/13/20	KMH	02/24/20 11:40	DMH
Aroclor 1221	< 0.49		µg/L	EPA 608.3	0.49	1	02/13/20	KMH	02/24/20 11:40	DMH
Aroclor 1232	< 0.49		µg/L	EPA 608.3	0.49	1	02/13/20	KMH	02/24/20 11:40	DMH
Aroclor 1242	< 0.49		µg/L	EPA 608.3	0.49	1	02/13/20	KMH	02/24/20 11:40	DMH
Aroclor 1248	< 0.49		µg/L	EPA 608.3	0.49	1	02/13/20	KMH	02/24/20 11:40	DMH
Aroclor 1254	< 0.49		µg/L	EPA 608.3	0.49	1	02/13/20	KMH	02/24/20 11:40	DMH
Aroclor 1260	< 0.49		µg/L	EPA 608.3	0.49	1	02/13/20	KMH	02/24/20 11:40	DMH

Surrogate Recoveries	*Results*		*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene	0.262		µg/L	EPA 608.3	53%	1	40-104	02/24/20 11:40
Surrogate: Decachlorobiphenyl	0.0768	V2	µg/L	EPA 608.3	16%	1	28-130	02/24/20 11:40

Pesticides, 608, PPL										
Aldrin	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
alpha-BHC	< 0.02	C4	µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
beta-BHC	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
delta-BHC	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
gamma-BHC (Lindane)	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Chlordane	< 0.49		µg/L	EPA 608.3	0.49	1	02/13/20	KMH	02/23/20 23:30	DMH
Alpha Chlordane	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH

Report Generated On: 02/26/2020 12:58 pm 0014543
STL_Results Revision #1.7 Effective: 11/07/2019

SUBURBAN TESTING LABS

Sample Number: 0014543-01	Site: Influent	Sample ID:
Collector: BS	Collect Date: 02/11/2020 7:36 am	Sample Type: 24 HC

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Pesticide/PCB (Continued)										
Pesticides, 608, PPL (Continued)										
Gamma Chlordane	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
4,4'-DDD	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
4,4'-DDE	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
4,4'-DDT	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Dieldrin	0.03		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Endosulfan I	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Endosulfan II	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Endosulfan sulfate	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Endrin	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Endrin aldehyde	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Endrin ketone	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Heptachlor	0.12		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Heptachlor epoxide	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Methoxychlor	< 0.02		µg/L	EPA 608.3	0.02	1	02/13/20	KMH	02/23/20 23:30	DMH
Toxaphene	< 0.49		µg/L	EPA 608.3	0.49	1	02/13/20	KMH	02/23/20 23:30	DMH

Surrogate Recoveries	*Results*		*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene	0.232		µg/L	EPA 608.3	47%	1	40-104	02/23/20 23:30
Surrogate: Decachlorobiphenyl	0.0682	V2	µg/L	EPA 608.3	14%	1	28-130	02/23/20 23:30

Semivolatiles										
SVOA, 625, PPL										
Acenaphthene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Acenaphthylene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Anthracene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Benzidine	< 23.8		µg/L	EPA 625.1	23.8	5	02/14/20	MAG	02/14/20 23:05	MAG
Benzo(a)anthracene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Benzo(a)pyrene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Benzo(b)fluoranthene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Benzo(g,h,i)perylene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Benzo(k)fluoranthene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
4-Bromophenyl phenyl ether	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Butyl benzyl phthalate	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
4-Chloro-3-methylphenol	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
bis(2-Chloroethoxy) methane	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
bis(2-Chloroethyl) ether	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
bis(2-Chloroisopropyl) ether	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
2-Chloronaphthalene	< 4.76	L1	µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
2-Chlorophenol	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
4-Chlorophenyl phenyl ether	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Chrysene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Dibenz(a,h)anthracene	< 4.76	L1	µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Di-n-butyl phthalate	< 14.3		µg/L	EPA 625.1	14.3	5	02/14/20	MAG	02/14/20 23:05	MAG
3,3'-Dichlorobenzidine	< 47.6		µg/L	EPA 625.1	47.6	5	02/14/20	MAG	02/14/20 23:05	MAG

SUBURBAN TESTING LABS
1037F MacArthur Road, Reading, PA 19605 Phone: 800-433-6595 Fax: 610-375-4090 suburbantestinglabs.com
PADEP 06-00208

SUBURBAN TESTING LABS

Sample Number: 0014543-01	Site: Influent	Sample ID:
Collector: BS	Collect Date: 02/11/2020 7:36 am	Sample Type: 24 HC

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Semivolatiles (Continued)										
SVOA, 625, PPL (Continued)										
2,4-Dichlorophenol	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Diethyl phthalate	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
2,4-Dimethylphenol	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Dimethyl phthalate	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
4,6-Dinitro-2-methylphenol	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
2,4-Dinitrophenol	< 14.3		µg/L	EPA 625.1	14.3	5	02/14/20	MAG	02/14/20 23:05	MAG
2,6-Dinitrotoluene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
2,4-Dinitrotoluene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Di-n-octyl phthalate	< 4.76	C4	µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
1,2-Diphenylhydrazine	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
bis(2-Ethylhexyl) phthalate	< 14.3		µg/L	EPA 625.1	14.3	5	02/14/20	MAG	02/14/20 23:05	MAG
Fluoranthene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Fluorene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Hexachlorobenzene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Hexachlorobutadiene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Hexachlorocyclopentadiene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Hexachloroethane	< 47.6		µg/L	EPA 625.1	47.6	5	02/14/20	MAG	02/14/20 23:05	MAG
Indeno(1,2,3-cd)pyrene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Isophorone	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Naphthalene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Nitrobenzene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
4-Nitrophenol	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
2-Nitrophenol	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
N-Nitrosodimethylamine	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
n-Nitrosodiphenylamine	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
N-Nitrosodi-n-propylamine	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Pentachlorophenol	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Phenanthrene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
Phenol	< 23.8		µg/L	EPA 625.1	23.8	5	02/14/20	MAG	02/14/20 23:05	MAG
Pyrene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
1,2,4-Trichlorobenzene	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG
2,4,6-Trichlorophenol	< 4.76		µg/L	EPA 625.1	4.76	5	02/14/20	MAG	02/14/20 23:05	MAG

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	75.7	µg/L	EPA 625.1	40%	5	10-79	02/14/20 23:05
Surrogate: Phenol-d6	54.6	µg/L	EPA 625.1	29%	5	10-57	02/14/20 23:05
Surrogate: Nitrobenzene-d5	65.0	µg/L	EPA 625.1	68%	5	24-119	02/14/20 23:05
Surrogate: 2-Fluorobiphenyl	64.3	µg/L	EPA 625.1	68%	5	29-115	02/14/20 23:05
Surrogate: 2,4,6-Tribromophenol	142	µg/L	EPA 625.1	74%	5	10-141	02/14/20 23:05
Surrogate: p-Terphenyl-d14	62.4	µg/L	EPA 625.1	66%	5	44-124	02/14/20 23:05

SUBURBAN TESTING LABS
1037F MacArthur Road, Reading, PA 19605 Phone: 800-433-6595 Fax: 610-375-4090 suburbantestinglabs.com
PADEP 06-00208

SUBURBAN TESTING LABS

Sample Number: 0014543-02	Site: Influent-Grab	Sample ID:
Collector: BS	Collect Date: 02/11/2020 8:00 am	Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics									
Cyanide, Total	0.012	mg/L	ASTM D 7511-12	0.005	1	02/18/20	SMD	02/18/20 13:05	SMD
Phenolics	0.08	mg/L	EPA 420.1	0.05	1	02/12/20	SMD	02/13/20 11:30	SMD
Volatiles									
VOA, 624, PPL									
Acrolein	< 1.0	µg/L	EPA 624.1	1.0	1	02/12/20	MWS	02/12/20 15:30	MWS
Acrylonitrile	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Benzene	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Bromodichloromethane	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Bromoform	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Bromomethane	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Carbon Tetrachloride	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Chlorobenzene	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Chloroethane	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
2-Chloroethyl vinyl ether	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Chloroform	24.0	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Chloromethane	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Dibromochloromethane	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
1,4-Dichlorobenzene	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
1,3-Dichlorobenzene	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
1,2-Dichlorobenzene	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
1,1-Dichloroethane	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
1,2-Dichloroethane	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
1,1-Dichloroethene	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
trans-1,2-Dichloroethene	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
1,2-Dichloropropane	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
trans-1,3-Dichloropropene	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
cis-1,3-Dichloropropene	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Ethyl Benzene	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Methylene Chloride	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
1,1,2,2-Tetrachloroethane	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Tetrachloroethene	11.9	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Toluene	2.2	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
1,1,1-Trichloroethane	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
1,1,2-Trichloroethane	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Trichloroethene	0.7	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS
Vinyl Chloride	< 0.5	µg/L	EPA 624.1	0.5	1	02/12/20	MWS	02/12/20 15:30	MWS

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Dibromofluoromethane	21.4	µg/L	EPA 624.1	107%	1	60-140	02/12/20 15:30
Surrogate: 1,2-Dichloroethane-d4	20.9	µg/L	EPA 624.1	105%	1	60-140	02/12/20 15:30
Surrogate: Toluene-d8	19.3	µg/L	EPA 624.1	96%	1	60-140	02/12/20 15:30
Surrogate: Bromofluorobenzene	20.6	µg/L	EPA 624.1	103%	1	60-140	02/12/20 15:30

Report Generated On: 02/26/2020 12:58 pm 0014543

STL_Results Revision #1.7 Effective: 11/07/2019

SUBURBAN TESTING LABS

Sample Number: 0014543-03	Site: Sludge Cake	Sample ID:
Collector: BS	Collect Date: 02/11/2020 8:13 am	Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics									
Cyanide, Total	< 6.39	mg/kg dry	SW 846 9014	6.39	1	02/20/20	TML	02/21/20 14:45	TML
Phenolics	132	mg/kg dry	SW 846 9065	68.1	1	02/18/20	SMD	02/19/20 13:53	SMD
Total Solids	3.4	%	SM 2540-G		1	02/14/20	CH	02/14/20 11:04	CH
Metals									
Antimony	16.3	mg/kg dry	SW 846 6010D	3.53	1	02/12/20	RJS	02/13/20 17:00	RJS
Arsenic	< 6.87	mg/kg dry	SW 846 6010D	6.87	1	02/12/20	RJS	02/13/20 17:00	RJS
Beryllium	< 1.37	mg/kg dry	SW 846 6010D	1.37	1	02/12/20	RJS	02/13/20 17:00	RJS
Cadmium	6.19	mg/kg dry	SW 846 6010D	1.37	1	02/12/20	RJS	02/13/20 17:00	RJS
Chromium	272	mg/kg dry	SW 846 6010D	27.5	1	02/12/20	RJS	02/13/20 17:00	RJS
Copper	1150	mg/kg dry	SW 846 6010D	1.37	1	02/12/20	RJS	02/13/20 17:00	RJS
Lead	89.8	mg/kg dry	SW 846 6010D	6.87	1	02/12/20	RJS	02/13/20 17:00	RJS
Mercury	2.93	mg/kg dry	SW 846 7471B	0.254	1	02/13/20	MAW	02/13/20 13:20	MAW
Nickel	35.4	mg/kg dry	SW 846 6010D	27.5	1	02/12/20	RJS	02/13/20 17:00	RJS
Selenium	10.8	mg/kg dry	SW 846 6010D	6.87	1	02/12/20	RJS	02/13/20 17:00	RJS
Silver	8.06	mg/kg dry	SW 846 6010D	6.87	1	02/12/20	RJS	02/13/20 17:00	RJS
Thallium	< 6.87	mg/kg dry	SW 846 6010D	6.87	1	02/12/20	RJS	02/13/20 17:00	RJS
Zinc	2120	mg/kg dry	SW 846 6010D	275	1	02/12/20	RJS	02/13/20 17:00	RJS
Pesticide/PCB									
PCBs, 8082									
Aroclor 1016 [2C]	< 1470	µg/Kg dry	SW846 3550C/8082A	1470	1	02/12/20	SCD	02/12/20 23:22	CEK
Aroclor 1221 [2C]	< 1470	µg/Kg dry	SW846 3550C/8082A	1470	1	02/12/20	SCD	02/12/20 23:22	CEK
Aroclor 1232 [2C]	< 1470	µg/Kg dry	SW846 3550C/8082A	1470	1	02/12/20	SCD	02/12/20 23:22	CEK
Aroclor 1242 [2C]	< 1470	µg/Kg dry	SW846 3550C/8082A	1470	1	02/12/20	SCD	02/12/20 23:22	CEK
Aroclor 1248 [2C]	< 1470	µg/Kg dry	SW846 3550C/8082A	1470	1	02/12/20	SCD	02/12/20 23:22	CEK
Aroclor 1254 [2C]	< 1470	µg/Kg dry	SW846 3550C/8082A	1470	1	02/12/20	SCD	02/12/20 23:22	CEK
Aroclor 1260 [2C]	< 1470	µg/Kg dry	SW846 3550C/8082A	1470	1	02/12/20	SCD	02/12/20 23:22	CEK
Aroclor 1262 [2C]	< 1470	µg/Kg dry	SW846 3550C/8082A	1470	1	02/12/20	SCD	02/12/20 23:22	CEK
Aroclor 1268 [2C]	< 1470	µg/Kg dry	SW846 3550C/8082A	1470	1	02/12/20	SCD	02/12/20 23:22	CEK
PCBS, Total [2C]	< 1470	µg/Kg dry	SW846 3550C/8082A	1470	1	02/12/20	SCD	02/12/20 23:22	CEK

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene [2C]	1190	µg/Kg dry	SW846 3550C/8082A	81%	1	35-135	02/12/20 23:22
Surrogate: Decachlorobiphenyl [2C]	1310	µg/Kg dry	SW846 3550C/8082A	89%	1	10-153	02/12/20 23:22

Pesticides, 8081									
Aldrin [2C]	< 58.9	µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Alpha-BHC [2C]	< 58.9	µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Beta-BHC [2C]	< 58.9	µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Delta-BHC [2C]	< 58.9	µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Gamma-BHC (Lindane) [2C]	< 58.9	µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Chlordane [2C]	< 1470	µg/Kg dry	SW846 3550C/8081B	1470	1	02/12/20	SCD	02/12/20 19:19	CEK
Alpha Chlordane [2C]	115	µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Gamma Chlordane [2C]	< 58.9	µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
4,4'-DDD [2C]	< 58.9	µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK

Report Generated On: 02/26/2020 12:58 pm 0014543

STL_Results Revision #1.7 Effective: 11/07/2019

SUBURBAN TESTING LABS

Sample Number: 0014543-03	Site: Sludge Cake	Sample ID:
Collector: BS	Collect Date: 02/11/2020 8:13 am	Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Pesticide/PCB (Continued)										
Pesticides, 8081 (Continued)										
4,4'-DDE [2C]	< 58.9		µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
4,4'-DDT [2C]	< 58.9		µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Dieldrin [2C]	152		µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Endosulfan I [2C]	< 58.9		µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Endosulfan II [2C]	< 58.9		µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Endosulfan sulfate [2C]	< 58.9		µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Endrin [2C]	< 58.9		µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Endrin aldehyde [2C]	< 58.9		µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Endrin ketone [2C]	< 58.9		µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Heptachlor [2C]	< 58.9		µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Heptachlor epoxide [2C]	< 58.9		µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Methoxychlor [2C]	< 58.9	C4	µg/Kg dry	SW846 3550C/8081B	58.9	1	02/12/20	SCD	02/12/20 19:19	CEK
Toxaphene [2C]	< 1470		µg/Kg dry	SW846 3550C/8081B	1470	1	02/12/20	SCD	02/12/20 19:19	CEK

Surrogate Recoveries	*Results*		*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene [2C]	1060		µg/Kg dry	SW846 3550C/8081B	72%	1	35-135	02/12/20 19:19
Surrogate: Decachlorobiphenyl [2C]	1160	C6	µg/Kg dry	SW846 3550C/8081B	79%	1	10-153	02/12/20 19:19

Semivolatiles										
SVOA, 8270, PPL										
Acenaphthene	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Acenaphthylene	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Anthracene	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Benzidine	< 103000		µg/Kg dry	SW846 3550C/8270D	103000	1	02/13/20	SCD	02/13/20 20:44	ESB
Benzo(a)anthracene	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
Benzo(a)pyrene	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
Benzo(b)fluoranthene	< 2910		µg/Kg dry	SW846 3550C/8270D	2910	1	02/13/20	SCD	02/13/20 20:44	ESB
Benzo(g,h,i)perylene	< 2910		µg/Kg dry	SW846 3550C/8270D	2910	1	02/13/20	SCD	02/13/20 20:44	ESB
Benzo(k)fluoranthene	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
4-Bromophenyl phenyl ether	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
Butyl benzyl phthalate	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
4-Chloro-3-methylphenol	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
bis(2-Chloroethoxy) methane	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
bis(2-Chloroethyl) ether	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
bis(2-Chloroisopropyl) ether	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
2-Chloronaphthalene	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
2-Chlorophenol	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
4-Chlorophenyl phenyl ether	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Chrysene	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
Dibenz(a,h)anthracene, SIM	< 294		µg/Kg dry	SW846 3550C/8270D	294	1	02/13/20	SCD	02/13/20 20:44	ESB
Di-n-butyl phthalate	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
3,3'-Dichlorobenzidine	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
2,4-Dichlorophenol	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Diethyl phthalate	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB

SUBURBAN TESTING LABS
1037F MacArthur Road, Reading, PA 19605 Phone: 800-433-6595 Fax: 610-375-4090 suburbantestinglabs.com
PADEP 06-00208

SUBURBAN TESTING LABS

Sample Number: 0014543-03	Site: Sludge Cake	Sample ID:
Collector: BS	Collect Date: 02/11/2020 8:13 am	Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Semivolatiles (Continued)										
SVOA, 8270, PPL (Continued)										
2,4-Dimethylphenol	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Dimethyl phthalate	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
4,6-Dinitro-2-methylphenol	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
2,4-Dinitrophenol	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
2,6-Dinitrotoluene	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
2,4-Dinitrotoluene	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
Di-n-octyl phthalate	< 14700	C4	µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
1,2-Diphenylhydrazine	< 2910		µg/Kg dry	SW846 3550C/8270D	2910	1	02/13/20	SCD	02/13/20 20:44	ESB
bis(2-Ethylhexyl) phthalate	31100		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Fluoranthene	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
Fluorene	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Hexachlorobenzene	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
Hexachlorobutadiene	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Hexachlorocyclopentadiene	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Hexachloroethane	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Indeno(1,2,3-cd)pyrene	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
Isophorone	< 2910		µg/Kg dry	SW846 3550C/8270D	2910	1	02/13/20	SCD	02/13/20 20:44	ESB
Naphthalene	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Nitrobenzene	< 2910		µg/Kg dry	SW846 3550C/8270D	2910	1	02/13/20	SCD	02/13/20 20:44	ESB
4-Nitrophenol	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
2-Nitrophenol	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
N-Nitrosodimethylamine	< 2910		µg/Kg dry	SW846 3550C/8270D	2910	1	02/13/20	SCD	02/13/20 20:44	ESB
n-Nitrosodiphenylamine	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
N-Nitrosodi-n-propylamine	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Pentachlorophenol	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Phenanthrene	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Phenol	< 14700		µg/Kg dry	SW846 3550C/8270D	14700	1	02/13/20	SCD	02/13/20 20:44	ESB
Pyrene	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB
1,2,4-Trichlorobenzene	< 2910		µg/Kg dry	SW846 3550C/8270D	2910	1	02/13/20	SCD	02/13/20 20:44	ESB
2,4,6-Trichlorophenol	< 7320		µg/Kg dry	SW846 3550C/8270D	7320	1	02/13/20	SCD	02/13/20 20:44	ESB

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	378000	µg/Kg dry	SW846 3550C/8270D	64%	1	14-110	02/13/20 20:44
Surrogate: Phenol-d6	472000	µg/Kg dry	SW846 3550C/8270D	80%	1	24-116	02/13/20 20:44
Surrogate: Nitrobenzene-d5	198000	µg/Kg dry	SW846 3550C/8270D	67%	1	28-111	02/13/20 20:44
Surrogate: 2-Fluorobiphenyl	221000	µg/Kg dry	SW846 3550C/8270D	75%	1	30-111	02/13/20 20:44
Surrogate: 2,4,6-Tribromophenol	529000	µg/Kg dry	SW846 3550C/8270D	90%	1	25-117	02/13/20 20:44
Surrogate: p-Terphenyl-d14	257000	µg/Kg dry	SW846 3550C/8270D	87%	1	44-116	02/13/20 20:44

Volatiles										
VOA, 8260, PPL										
Acrolein	< 7320		µg/Kg dry	SW 846 8260C	7320	50	02/13/20	LAS	02/17/20 21:49	MWS
Acrylonitrile	< 732		µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Benzene	< 732		µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS

Report Generated On: 02/26/2020 12:58 pm 0014543
STL_Results Revision #1.7 Effective: 11/07/2019

SUBURBAN TESTING LABS

Sample Number: 0014543-03	Site: Sludge Cake	Sample ID:
Collector: BS	Collect Date: 02/11/2020 8:13 am	Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Volatiles (Continued)									
VOA, 8260, PPL (Continued)									
Bromodichloromethane	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Bromoform	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Bromomethane	< 7320	µg/Kg dry	SW 846 8260C	7320	50	02/13/20	LAS	02/17/20 21:49	MWS
Carbon Tetrachloride	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Chlorobenzene	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Chloroethane	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
2-Chloroethyl vinyl ether	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Chloroform	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Chloromethane	< 7320	µg/Kg dry	SW 846 8260C	7320	50	02/13/20	LAS	02/17/20 21:49	MWS
Dibromochloromethane	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
1,4-Dichlorobenzene	< 7320	µg/Kg dry	SW 846 8260C	7320	50	02/13/20	LAS	02/17/20 21:49	MWS
1,3-Dichlorobenzene	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
1,2-Dichlorobenzene	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
1,1-Dichloroethane	< 7320	µg/Kg dry	SW 846 8260C	7320	50	02/13/20	LAS	02/17/20 21:49	MWS
1,2-Dichloroethane	< 7320	µg/Kg dry	SW 846 8260C	7320	50	02/13/20	LAS	02/17/20 21:49	MWS
1,1-Dichloroethene	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
trans-1,2-Dichloroethene	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
1,2-Dichloropropane	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
trans-1,3-Dichloropropene	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
cis-1,3-Dichloropropene	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Ethyl Benzene	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Methylene Chloride	< 7320	µg/Kg dry	SW 846 8260C	7320	50	02/13/20	LAS	02/17/20 21:49	MWS
1,1,2,2-Tetrachloroethane	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Tetrachloroethene	< 7320	µg/Kg dry	SW 846 8260C	7320	50	02/13/20	LAS	02/17/20 21:49	MWS
Toluene	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
1,1,1-Trichloroethane	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
1,1,2-Trichloroethane	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Trichloroethene	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS
Vinyl Chloride	< 732	µg/Kg dry	SW 846 8260C	732	50	02/13/20	LAS	02/17/20 21:49	MWS

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Dibromofluoromethane	18.4	µg/L	SW 846 8260C	92%	50	75-139	02/17/20 21:49
Surrogate: 1,2-Dichloroethane-d4	19.2	µg/L	SW 846 8260C	96%	50	81-125	02/17/20 21:49
Surrogate: Toluene-d8	19.5	µg/L	SW 846 8260C	98%	50	84-121	02/17/20 21:49
Surrogate: Bromofluorobenzene	19.7	µg/L	SW 846 8260C	98%	50	72-136	02/17/20 21:49

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PADEP 06-00208

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Data Qualifiers:

C4	The CCV for this analyte was above acceptance criteria, however the analyte was not detected in the associated sample. Data may be fully useable under the 2009 TNI Standard.
C6	The surrogate recovery of the CCV was below acceptance criteria.
L1	The Laboratory Control Sample for the analysis batch associated with this sample was below acceptance criteria. Results may have greater uncertainty.
V2	The surrogate associated with this sample was below extablished acceptance criteria. Data may be biased low.

Sample Receipt Conditions:

All samples met the sample receipt requirements for the relevant analyses.

The test *pH, Lab* is performed in the Laboratory as soon as possible. These results are not appropriate for compliance with NPDES, SDWA, or other regulatory programs that require analysis within 15 minutes of sample collection and should be considered for informational purposes only.

**pH, Final* for ASTM leachate is performed by method SM 4500-H-B.

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

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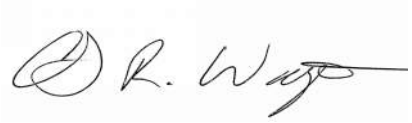
Results are considered Preliminary unless report is signed by authorized representative of STL.

Reviewed and Released By:
Charles Wanyo
Project Manager I



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SUBURBAN TESTING LABS

Chain of Custody Record

1037F MacArthur Road, Reading, PA 19605
Phone: 610-375-8378 - Fax: 610-375-4090 - suburbantestinglabs.com

TAT (Circle One): Standard - 24hr - 48hr - 72hr - Other _____
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply.)

ORDER ID: 0014543

Client Name / Address:
Bristol Township STP
1800 River Road
Croydon, PA 19021

Phone: 717-626-2172
Fax:

Client Project Manager: Michael Wolgemuth

Project Name / Address:
Annual Priority Pollutant Scan
1800 River Road
Croydon, PA 19021

Payment / P.O. Info: 85681

Project Description:

Order Comments: Please give paperwork to Project Manager to prepare bottles for delivery.

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0014543-01	Influent		2/11 0734	BS	Non-potable	24 HC	2/10 0754

Container Type / Preservation		Preservation Check
1L GA & Na2S2O3	A	
1L GA & Na2S2O3	B	
1L GA & Na2S2O3	C	
1L GA & Na2S2O3	D	
500mL P & HNO3	E	

CLV EW PKL 2-11-20

Analysis - Method	Field Results

[Group Analysis]
Priority Pollutants - varies

Metals
Antimony, 200.8 - EPA 200.8
Arsenic, 200.8 - EPA 200.8
Beryllium, 200.8 - EPA 200.8
Cadmium, 200.8 - EPA 200.8
Chromium, 200.8 - EPA 200.8
Copper, 200.8 - EPA 200.8
Lead, 200.8 - EPA 200.8
Mercury, 3112 - SM 3112-B
Nickel, 200.8 - EPA 200.8
Selenium, 200.8 - EPA 200.8
Silver, 200.8 - EPA 200.8
Thallium, 200.8 - EPA 200.8
Zinc, 200.8 - EPA 200.8

Pesticide/PCB
PCBs, 608 - EPA 608.3
Pesticides, 608, PPL - EPA 608.3

Semivolatiles
SVOA, 625, PPL - EPA 625.1

ORDER ID: 0014543

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time		Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0014543-02	Influent-Grab		2/11	0800	BS	Non-potable	Grab	—

Container Type / Preservation		Preservation Check
1L GA & H2SO4	A	pH<2 ✓
40ml VOA & AA	B	
40ml VOA & AA	C	
40ml VOA & AA	D	
500mL P & NaOH	E	CL ✓ pH>12

EW 2-11-20

Analysis - Method	Field Results
[Group Analysis]	
Priority Pollutants - Grab - varies	
Inorganics	
Cyanide, Total - ASTM D 7511-12	
Phenolics, Total - EPA 420.1	
Volatiles	
VOA, 624, PPL - EPA 624.1	

ORDER ID: 0014543

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0014543-03	Sludge Cake		2/11 0813	BS	Solid (Dry Weight)	Grab	—

Container Type / Preservation	Preservation Check
1L G	A
1L G	B

Analysis - Method	Field Results

[Group Analysis]
Priority Pollutants - Sludge - varies

Inorganics
Cyanide, 9014, Total - SW 846 9014
Phenolics, Total - SW 846 9065
Total Solids, 2540-G (%) - SM 2540-G

Metals
Antimony, 6010 - SW 846 6010D
Arsenic, 6010 - SW 846 6010D
Beryllium, 6010 - SW 846 6010D
Cadmium, 6010 - SW 846 6010D
Chromium, 6010 - SW 846 6010D
Copper, 6010 - SW 846 6010D
Lead, 6010 - SW 846 6010D
Mercury, 7471 - SW 846 7471B
Nickel, 6010 - SW 846 6010D
Selenium, 6010 - SW 846 6010D
Silver, 6010 - SW 846 6010D
Thallium, 6010 - SW 846 6010D
Zinc, 6010 - SW 846 6010D

Pesticide/PCB
PCBs, 8082 - SW846 3550C/8082A
Pesticides, 8081 - SW846 3550C/8081B

Semivolatiles
SVOA, 8270, PPL - SW846 3550C/8270D

Volatiles
VOA, 8260, PPL - SW 846 8260C

WKO TAT = 10

Cool Sample(s) to 6 C

		Count		
Relinquished By:	[signature]	12	Date: 2/11/20 Time: 0918	Temp (°C): 4.2
Received By:	[signature]	12	Date: 2.11.20 Time: 0918	Temp (°C): 10.2
Relinquished By:	[signature]		Date: 2.11.20 Time: 1345	Temp (°C): 1.7 Acceptable:? (Y)/ N
Received in Lab By:	[signature]	12	Date: 2/11/20 Time: 1345	Temp (°C): 1.7 Acceptable:? Y / N

Sample Conditions

Number of Containers \ Cooler received matches number on COC?	(Y)/ N
Sample labels and COC free of descrepancies?	(Y) / N
All Containers Intact?	(Y) / N
VOC vials for VOA analysis free of headspace, if applicable?	Y / N

Sample Type Key
G = Grab
8HC = 8 Hr. Composite
24HC = 24 Hr. Composite

SDWA
D = Distribution
E = Entry Point
R = Raw
C = Check
S = Special
M = Maximum Residence

Reporting Options
☐ SDWA Reporting PWSID PA0026450
☐ Email
☐ Other_____

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Shaded areas are for STL use only

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Results Report

Order ID: 0041586

Bristol Township STP
1800 River Road
Croydon, PA 19021

Project: Quarterly Local Limits Analysis
1800 River Road
Croydon, PA 19021

Attn: Michael Wolgemuth

Regulatory ID:

Sample Number: 0041586-01 | Site: Effluent | Sample ID:
Collector: JC | Collect Date: 04/21/2020 7:38 am | Sample Type: 24 HC

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics										
Chromium (VI)	See Attached		µg/L	EPA 218.6	0.10	1	04/25/20	SUB*	04/25/20 15:44	SUB*
Metals										
Arsenic	< 0.001		mg/L	EPA 200.8	0.001	1	04/27/20	RPV	04/28/20 13:20	RPV
Beryllium	< 0.0004		mg/L	EPA 200.8	0.0004	1	04/27/20	RPV	04/28/20 13:20	RPV
Cadmium	< 0.0004		mg/L	EPA 200.8	0.0004	1	04/27/20	RPV	04/28/20 13:20	RPV
Chromium	0.001		mg/L	EPA 200.8	0.001	1	04/27/20	RPV	04/28/20 13:20	RPV
Copper	0.021		mg/L	EPA 200.8	0.002	1	04/27/20	RPV	04/28/20 13:20	RPV
Lead	< 0.001		mg/L	EPA 200.8	0.001	1	04/27/20	RPV	04/28/20 13:20	RPV
Mercury	< 0.0002		mg/L	SM 3112-B	0.0002	1	04/22/20	RJS	04/22/20 16:39	RJS
Molybdenum	0.002		mg/L	EPA 200.8	0.001	1	04/27/20	RPV	04/28/20 13:20	RPV
Nickel	0.001		mg/L	EPA 200.8	0.001	1	04/27/20	RPV	04/28/20 13:20	RPV
Selenium	< 0.002		mg/L	EPA 200.8	0.002	1	04/27/20	RPV	04/28/20 13:20	RPV
Silver	< 0.001		mg/L	EPA 200.8	0.001	1	04/27/20	RPV	04/28/20 13:20	RPV
Zinc	0.035		mg/L	EPA 200.8	0.010	1	04/27/20	RPV	04/28/20 13:20	RPV
Pesticide/PCB										
Pesticides, 608, PPL										
Aldrin [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Alpha-BHC [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Beta-BHC [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Delta-BHC [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Gamma-BHC (Lindane) [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Chlordane [2C]	< 0.48		µg/L	EPA 608.3	0.48	1	04/22/20	SCD	04/22/20 21:34	CEK
Alpha Chlordane [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Gamma Chlordane [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
4,4'-DDD [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
4,4'-DDE [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
4,4'-DDT [2C]	< 0.02	C5, L1	µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Dieldrin [2C]	0.03		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Endosulfan I [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Endosulfan II [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Endosulfan sulfate [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Endrin [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Endrin aldehyde [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Endrin ketone [2C]	< 0.02	L1	µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Heptachlor [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK

Report Generated On: 05/05/2020 4:27 pm 0041586
STL_Results Revision #1.9 Effective: 04/16/2020

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Sample Number: 0041586-01	Site: Effluent	Sample ID:
Collector: JC	Collect Date: 04/21/2020 7:38 am	Sample Type: 24 HC

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Pesticide/PCB (Continued)										
Pesticides, 608, PPL (Continued)										
Heptachlor epoxide [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Methoxychlor [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 21:34	CEK
Toxaphene [2C]	< 0.48		µg/L	EPA 608.3	0.48	1	04/22/20	SCD	04/22/20 21:34	CEK

Surrogate Recoveries	*Results*		*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene [2C]	0.324		µg/L	EPA 608.3	67%	1	40-104	04/22/20 21:34
Surrogate: Decachlorobiphenyl [2C]	0.119	C6, V2	µg/L	EPA 608.3	25%	1	28-130	04/22/20 21:34

Semivolatiles

SVOA, 625										
Benzidine	< 4.76		µg/L	EPA 625.1	4.76	1	04/24/20	MKR	05/04/20 23:10	MAG

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	77.6	µg/L	EPA 625.1	41%	1	10-79	05/04/20 23:10
Surrogate: Phenol-d6	65.3	µg/L	EPA 625.1	34%	1	10-57	05/04/20 23:10
Surrogate: Nitrobenzene-d5	53.2	µg/L	EPA 625.1	56%	1	24-119	05/04/20 23:10
Surrogate: 2-Fluorobiphenyl	61.9	µg/L	EPA 625.1	65%	1	29-115	05/04/20 23:10
Surrogate: 2,4,6-Tribromophenol	129	µg/L	EPA 625.1	68%	1	10-141	05/04/20 23:10
Surrogate: p-Terphenyl-d14	58.9	µg/L	EPA 625.1	62%	1	44-124	05/04/20 23:10

Sample Number: 0041586-02	Site: Effluent - Grab	Sample ID:
Collector: JC	Collect Date: 04/21/2020 7:50 am	Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics										
Cyanide, Total	0.010		mg/L	ASTM D 7511-12	0.005	1	04/23/20	SMD	04/23/20 13:11	SMD
Phenolics	< 0.05		mg/L	EPA 420.1	0.05	1	04/27/20	EJJ	04/27/20 17:44	EJJ

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PA DEP # 06-00208
NJDEP# PA081

SUBURBAN TESTING LABS

Sample Number: 0041586-03	Site: Influent	Sample ID:
Collector: JC	Collect Date: 04/21/2020 8:07 am	Sample Type: 24 HC

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics										
Chromium (VI)	See Attached		µg/L	EPA 218.6	0.10	1	04/25/20	SUB*	04/25/20 15:44	SUB*
Metals										
Arsenic	< 0.002		mg/L	EPA 200.8	0.002	1	04/27/20	RPV	04/28/20 13:36	RPV
Beryllium	< 0.0008		mg/L	EPA 200.8	0.0008	1	04/27/20	RPV	04/28/20 13:36	RPV
Cadmium	< 0.0008		mg/L	EPA 200.8	0.0008	1	04/27/20	RPV	04/28/20 13:36	RPV
Chromium	0.003		mg/L	EPA 200.8	0.002	1	04/27/20	RPV	04/28/20 13:36	RPV
Copper	0.043		mg/L	EPA 200.8	0.004	1	04/27/20	RPV	04/28/20 13:36	RPV
Lead	0.003		mg/L	EPA 200.8	0.002	1	04/27/20	RPV	04/28/20 13:36	RPV
Mercury	< 0.0005		mg/L	SM 3112-B	0.0005	1	04/22/20	RJS	04/22/20 16:57	RJS
Molybdenum	0.005		mg/L	EPA 200.8	0.002	1	04/27/20	RPV	04/28/20 13:36	RPV
Nickel	0.003		mg/L	EPA 200.8	0.002	1	04/27/20	RPV	04/28/20 13:36	RPV
Selenium	< 0.004		mg/L	EPA 200.8	0.004	1	04/27/20	RPV	04/28/20 13:36	RPV
Silver	< 0.002		mg/L	EPA 200.8	0.002	1	04/27/20	RPV	04/28/20 13:36	RPV
Zinc	0.092		mg/L	EPA 200.8	0.020	1	04/27/20	RPV	04/28/20 13:36	RPV
Pesticide/PCB										
Pesticides, 608, PPL										
Aldrin [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Alpha-BHC [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Beta-BHC [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Delta-BHC [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Gamma-BHC (Lindane) [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Chlordane [2C]	< 0.53		µg/L	EPA 608.3	0.53	1	04/22/20	SCD	04/22/20 20:03	CEK
Alpha Chlordane [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Gamma Chlordane [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
4,4'-DDD [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
4,4'-DDE [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
4,4'-DDT [2C]	< 0.02	C5, L1	µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Dieldrin [2C]	0.04		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Endosulfan I [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Endosulfan II [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Endosulfan sulfate [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Endrin [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Endrin aldehyde [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Endrin ketone [2C]	< 0.02	L1	µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Heptachlor [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Heptachlor epoxide [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Methoxychlor [2C]	< 0.02		µg/L	EPA 608.3	0.02	1	04/22/20	SCD	04/22/20 20:03	CEK
Toxaphene [2C]	< 0.53		µg/L	EPA 608.3	0.53	1	04/22/20	SCD	04/22/20 20:03	CEK

Surrogate Recoveries	*Results*		*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene [2C]	0.288		µg/L	EPA 608.3	54%	1	40-104	04/22/20 20:03
Surrogate: Decachlorobiphenyl [2C]	0.123	C6, V2	µg/L	EPA 608.3	23%	1	28-130	04/22/20 20:03

Report Generated On: 05/05/2020 4:27 pm 0041586

STL_Results Revision #1.9 Effective: 04/16/2020

SUBURBAN TESTING LABS

Sample Number: 0041586-03	Site: Influent	Sample ID:
Collector: JC	Collect Date: 04/21/2020 8:07 am	Sample Type: 24 HC

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Semivolatiles									
SVOA, 625									
Benzidine	< 25.3	µg/L	EPA 625.1	25.3	5	04/24/20	MKR	05/05/20 0:55	MAG

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	59.8	µg/L	EPA 625.1	30%	5	10-79	05/05/20 0:55
Surrogate: Phenol-d6	49.7	µg/L	EPA 625.1	25%	5	10-57	05/05/20 0:55
Surrogate: Nitrobenzene-d5	38.6	µg/L	EPA 625.1	38%	5	24-119	05/05/20 0:55
Surrogate: 2-Fluorobiphenyl	52.9	µg/L	EPA 625.1	52%	5	29-115	05/05/20 0:55
Surrogate: 2,4,6-Tribromophenol	102	µg/L	EPA 625.1	50%	5	10-141	05/05/20 0:55
Surrogate: p-Terphenyl-d14	46.5	µg/L	EPA 625.1	46%	5	44-124	05/05/20 0:55

Sample Number: 0041586-04	Site: Influent - Grab	Sample ID:
Collector: JC	Collect Date: 04/21/2020 8:27 am	Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics									
Cyanide, Total	0.014	mg/L	ASTM D 7511-12	0.005	1	04/23/20	SMD	04/23/20 13:13	SMD
Phenolics	0.08	mg/L	EPA 420.1	0.05	1	04/27/20	EJJ	04/27/20 17:44	EJJ

SUBURBAN TESTING LABS
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PA DEP # 06-00208
NJDEP# PA081

SUBURBAN TESTING LABS

Sample Number: 0041586-05	Site: Digester Sludge	Sample ID:
Collector: JC	Collect Date: 04/21/2020 8:48 am	Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Chromium, Hexavalent										
Cr (VI)	< 35		mg/Kg dry	7196A	35	1	04/28/20		04/29/20 15:05	SUB*
Inorganics										
Cyanide, Total	3.85		mg/kg dry	SW 846 9014	3.85	1	04/30/20	SMD	05/01/20 14:57	SMD
Phenolics	94.0		mg/kg dry	SW 846 9065	41.1	1	04/28/20	SMD	04/28/20 13:41	SMD
Total Solids	5.9		%	SM 2540-G		1	04/22/20	CH	04/22/20 10:35	DWL
Metals										
Arsenic	5.32		mg/kg dry	SW 846 6010D	4.07	1	04/29/20	RJS	04/30/20 13:58	RJS
Beryllium	0.850		mg/kg dry	SW 846 6010D	0.815	1	04/29/20	RJS	04/30/20 13:58	RJS
Cadmium	5.53		mg/kg dry	SW 846 6010D	0.815	1	04/29/20	RJS	04/30/20 13:58	RJS
Chromium	277		mg/kg dry	SW 846 6010D	16.3	1	04/29/20	RJS	04/30/20 13:58	RJS
Copper	1060		mg/kg dry	SW 846 6010D	0.815	1	04/29/20	RJS	04/30/20 13:58	RJS
Lead	84.3		mg/kg dry	SW 846 6010D	4.07	1	04/29/20	RJS	04/30/20 13:58	RJS
Mercury	2.35		mg/kg dry	SW 846 7471B	0.146	1	04/29/20	RJS	04/29/20 14:46	RJS
Molybdenum	27.1		mg/kg dry	SW 846 6010D	16.3	1	04/29/20	RJS	04/30/20 13:58	RJS
Nickel	41.3		mg/kg dry	SW 846 6010D	16.3	1	04/29/20	RJS	04/30/20 13:58	RJS
Selenium	< 4.07		mg/kg dry	SW 846 6010D	4.07	1	04/29/20	RJS	04/30/20 13:58	RJS
Silver	8.71		mg/kg dry	SW 846 6010D	4.07	1	04/29/20	RJS	04/30/20 13:58	RJS
Zinc	1890		mg/kg dry	SW 846 6010D	163	1	04/29/20	RJS	04/30/20 13:58	RJS
Pesticide/PCB										
Pesticides, 8081, PPL										
Aldrin [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Alpha-BHC [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Beta-BHC [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Delta-BHC [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Gamma-BHC (Lindane) [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Chlordane [2C]	< 849		µg/Kg dry	SW846 3550C/8081B	849	1	04/30/20	SCD	04/30/20 18:46	CEK
Alpha Chlordane [2C]	39.5		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Gamma Chlordane [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
4,4'-DDD [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
4,4'-DDE [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
4,4'-DDT [2C]	< 33.9	C5	µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Dieldrin [2C]	107		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Endosulfan I [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Endosulfan II [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Endosulfan sulfate [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Endrin [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Endrin aldehyde [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Endrin ketone [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Heptachlor [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Heptachlor epoxide [2C]	< 33.9		µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Methoxychlor [2C]	< 33.9	C5	µg/Kg dry	SW846 3550C/8081B	33.9	1	04/30/20	SCD	04/30/20 18:46	CEK
Toxaphene [2C]	< 849	C5, X	µg/Kg dry	SW846 3550C/8081B	849	1	04/30/20	SCD	04/30/20 18:46	CEK

Report Generated On: 05/05/2020 4:27 pm 0041586
STL_Results Revision #1.9 Effective: 04/16/2020

SUBURBAN TESTING LABS

Sample Number: 0041586-05	Site: Digester Sludge	Sample ID:
Collector: JC	Collect Date: 04/21/2020 8:48 am	Sample Type: Grab

Pesticide/PCB (Continued)

Pesticides, 8081, PPL (Continued)

Surrogate Recoveries	*Results*		*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene [2C]	583		µg/Kg dry	SW846 3550C/8081B	69%	1	35-135	04/30/20 18:46
Surrogate: Decachlorobiphenyl [2C]	570	C6	µg/Kg dry	SW846 3550C/8081B	67%	1	10-153	04/30/20 18:46

Semivolatiles

SVOA, 8270, PPL

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Acenaphthene	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Acenaphthylene	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Anthracene	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Benzidine	< 297000	L4	µg/Kg dry	SW846 3550C/8270D	297000	5	04/30/20	SCD	05/04/20 20:06	MAG
Benzo(a)anthracene	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
Benzo(a)pyrene	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
Benzo(b)fluoranthene	< 8390		µg/Kg dry	SW846 3550C/8270D	8390	5	04/30/20	SCD	05/04/20 20:06	MAG
Benzo(g,h,i)perylene	< 8390		µg/Kg dry	SW846 3550C/8270D	8390	5	04/30/20	SCD	05/04/20 20:06	MAG
Benzo(k)fluoranthene	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
4-Bromophenyl phenyl ether	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
Butyl benzyl phthalate	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
4-Chloro-3-methylphenol	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
bis(2-Chloroethoxy) methane	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
bis(2-Chloroethyl) ether	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
bis(2-Chloroisopropyl) ether	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
2-Chloronaphthalene	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
2-Chlorophenol	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
4-Chlorophenyl phenyl ether	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Chrysene	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
Dibenz(a,h)anthracene	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
Di-n-butyl phthalate	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
3,3'-Dichlorobenzidine	< 42500	L4	µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
2,4-Dichlorophenol	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Diethyl phthalate	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
2,4-Dimethylphenol	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Dimethyl phthalate	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
4,6-Dinitro-2-methylphenol	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
2,4-Dinitrophenol	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
2,6-Dinitrotoluene	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
2,4-Dinitrotoluene	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
Di-n-octyl phthalate	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
1,2-Diphenylhydrazine	< 8390		µg/Kg dry	SW846 3550C/8270D	8390	5	04/30/20	SCD	05/04/20 20:06	MAG
bis(2-Ethylhexyl) phthalate	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Fluoranthene	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
Fluorene	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Hexachlorobenzene	< 21100		µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
Hexachlorobutadiene	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Hexachlorocyclopentadiene	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Hexachloroethane	< 42500		µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG

SUBURBAN TESTING LABS
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PA DEP # 06-00208
NJDEP# PA081

SUBURBAN TESTING LABS

Sample Number: 0041586-05	Site: Digester Sludge	Sample ID:
Collector: JC	Collect Date: 04/21/2020 8:48 am	Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Semivolatiles (Continued)									
SVOA, 8270, PPL (Continued)									
Indeno(1,2,3-cd)pyrene	< 21100	µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
Isophorone	< 8390	µg/Kg dry	SW846 3550C/8270D	8390	5	04/30/20	SCD	05/04/20 20:06	MAG
Naphthalene	< 42500	µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Nitrobenzene	< 8390	µg/Kg dry	SW846 3550C/8270D	8390	5	04/30/20	SCD	05/04/20 20:06	MAG
4-Nitrophenol	< 21100	µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
2-Nitrophenol	< 42500	µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
N-Nitrosodimethylamine	< 8390	µg/Kg dry	SW846 3550C/8270D	8390	5	04/30/20	SCD	05/04/20 20:06	MAG
n-Nitrosodiphenylamine	< 42500	µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
N-Nitrosodi-n-propylamine	< 42500	µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Pentachlorophenol	< 42500	µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Phenanthrene	< 42500	µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Phenol	< 42500	µg/Kg dry	SW846 3550C/8270D	42500	5	04/30/20	SCD	05/04/20 20:06	MAG
Pyrene	< 21100	µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG
1,2,4-Trichlorobenzene	< 8390	µg/Kg dry	SW846 3550C/8270D	8390	5	04/30/20	SCD	05/04/20 20:06	MAG
2,4,6-Trichlorophenol	< 21100	µg/Kg dry	SW846 3550C/8270D	21100	5	04/30/20	SCD	05/04/20 20:06	MAG

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	168000	µg/Kg dry	SW846 3550C/8270D	50%	5	14-110	05/04/20 20:06
Surrogate: Phenol-d6	194000	µg/Kg dry	SW846 3550C/8270D	57%	5	24-116	05/04/20 20:06
Surrogate: Nitrobenzene-d5	83500	µg/Kg dry	SW846 3550C/8270D	49%	5	28-111	05/04/20 20:06
Surrogate: 2-Fluorobiphenyl	102000	µg/Kg dry	SW846 3550C/8270D	60%	5	30-111	05/04/20 20:06
Surrogate: 2,4,6-Tribromophenol	180000	µg/Kg dry	SW846 3550C/8270D	53%	5	25-117	05/04/20 20:06
Surrogate: p-Terphenyl-d14	83000	µg/Kg dry	SW846 3550C/8270D	49%	5	44-116	05/04/20 20:06

Data Qualifiers:

C5	Calibration verification below minimum acceptance limits. A low level standard was analyzed to confirm detection. The reported analytes were below the concentration of the low level standard.
C6	The surrogate recovery of the CCV was below acceptance criteria.
L1	The Laboratory Control Sample for the analysis batch associated with this sample was below acceptance criteria. Results may have greater uncertainty.
L4	The Laboratory Control Sample for the analysis batch associated with this sample was above acceptance criteria, however the analyte was not detected in the associated sample. Data may be fully useable under the 2009 TNI Standard.
V2	The surrogate associated with this sample was below extablished acceptance criteria. Data may be biased low.
X	Associated sequence QC failed marginally low.

Sample Receipt Conditions:

All samples met the sample receipt requirements for the relevant analyses.

Work Order Memo

SUB: EPA 218.6 performed by LAB ID# 36-00037
SUB: 7196A performed by LAB ID# 68-00522

Report Generated On: 05/05/2020 4:27 pm 0041586
STL_Results Revision #1.9 Effective: 04/16/2020

The test *pH, Lab* is performed in the Laboratory as soon as possible. These results are not appropriate for compliance with NPDES, SDWA, or other regulatory programs that require analysis within 15 minutes of sample collection and should be considered for informational purposes only.

**pH, Final* for ASTM leachate is performed by method SM 4500-H-B.

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

This laboratory report may not be reproduced, except in full, without the written approval of STL.

Results are considered Preliminary unless report is signed by authorized representative of STL.

Reviewed and Released By:
Charles Wanyo
Project Manager I

SUBURBAN TESTING LABS
1037F MacArthur Road, Reading, PA 19605 Phone: 610-375-TEST Fax: 610-375-4090 suburbantestinglabs.com
PA DEP # 06-00208
NJDEP# PA081

SUBURBAN TESTING LABS

Chain of Custody Record

1037F MacArthur Road, Reading, PA 19605
Phone: 610-375-8378 - Fax: 610-375-4090 - suburbantestinglabs.com

TAT (Circle One): Standard - 24hr - 48hr - 72hr - Other _____
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply.)

ORDER ID: 0041586

Client Name / Address:
Bristol Township STP
1800 River Road
Croydon, PA 19021
Phone: 717-626-2172
Fax:
Client Project Manager: Michael Wolgemuth

Project Name / Address:
Quarterly Local Limits Analysis
1800 River Road
Croydon, PA 19021
Payment / P.O. Info: 94557

Project Description:

Order Comments: Added via by CW 03/30/2020 13:50

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0041586-01	Effluent		4-21 0738	JC	Non-potable	24 HC	4-20 / 0735

Container Type / Preservation		Preservation Check
500mL P & HNO3	A	✗
250mL P & Cr6 Buffer - Field Filtered	B	—
1L GA & Na2S2O3	C	
1L GA & Na2S2O3	D	
1L GA & Na2S2O3	E	
1L GA & Na2S2O3	F	

pH START = 9.91
pH FINISH = 9.64
ADDED A 'PINCH' of Ammonium Sulfate (S9E0923)

Analysis - Method	Field Results
Inorganics	
Chromium (VI) - EPA 218.6	
Metals	
Arsenic, 200.8 - EPA 200.8	
Beryllium, 200.8 - EPA 200.8	
Cadmium, 200.8 - EPA 200.8	
Chromium, 200.8 - EPA 200.8	
Copper, 200.8 - EPA 200.8	
Lead, 200.8 - EPA 200.8	
Mercury, 3112 - SM 3112-B	
Molybdenum, 200.8 - EPA 200.8	
Nickel, 200.8 - EPA 200.8	
Selenium, 200.8 - EPA 200.8	
Silver, 200.8 - EPA 200.8	
Zinc, 200.8 - EPA 200.8	
Pesticide/PCB	
Pesticides, 608, PPL - EPA 608.3	
Semivolatiles	
SVOA, 625 - EPA 625.1	

0041586-02	Effluent - Grab		4-21 0750	JC	Non-potable	Grab	—

Container Type / Preservation		Preservation Check
500mL P & NaOH	A	O
1L GA & H2SO4	B	✗

Analysis - Method	Field Results
Inorganics	
Cyanide, Total - ASTM D 7511-12	
Phenolics, Total - EPA 420.1	

ORDER ID: 0041586

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0041586-03	Influent		4-21 0807	JC	Non-potable	24 HC	4-20 / 0740

Container Type / Preservation		Preservation Check
500mL P & HNO3	A	A
250mL P & Cr6 Buffer - Field Filtered	B	
1L GA & Na2S2O3	C	
1L GA & Na2S2O3	D	
1L GA & Na2S2O3	E	
1L GA & Na2S2O3	F	

pH START = 9.80
pH FINISH = 9.69
ADDED A 'PINCH' OF AMMONIUM SULFATE (S9E0923)

Analysis - Method	Field Results
Inorganics	
Chromium (VI) - EPA 218.6	
Metals	
Arsenic, 200.8 - EPA 200.8	
Beryllium, 200.8 - EPA 200.8	
Cadmium, 200.8 - EPA 200.8	
Chromium, 200.8 - EPA 200.8	
Copper, 200.8 - EPA 200.8	
Lead, 200.8 - EPA 200.8	
Mercury, 3112 - SM 3112-B	
Molybdenum, 200.8 - EPA 200.8	
Nickel, 200.8 - EPA 200.8	
Selenium, 200.8 - EPA 200.8	
Silver, 200.8 - EPA 200.8	
Zinc, 200.8 - EPA 200.8	
Pesticide/PCB	
Pesticides, 608, PPL - EPA 608.3	
Semivolatiles	
SVOA, 625 - EPA 625.1	

0041586-04	Influent - Grab		4-21 0827	JC	Non-potable	Grab	

Container Type / Preservation		Preservation Check
500mL P & NaOH	A	O
1L GA & H2SO4	B	A

Analysis - Method	Field Results
Inorganics	
Cyanide, Total - ASTM D 7511-12	
Phenolics, Total - EPA 420.1	

A = pH<2 ea
O = CLV pH>12 ea 4-21-20

SUBURBAN TESTING LABS

Chain of Custody Record

1037F MacArthur Road, Reading, PA 19605
Phone: 610-375-8378 - Fax: 610-375-4090 - suburbantestinglabs.com

TAT (Circle One): Standard - 24hr - 48hr - 72hr - Other _____
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply.)

ORDER ID: 0041586

Client Name / Address:	Project Name / Address:
Bristol Township STP **1800 River Road** **Croydon, PA 19021** **Phone: 717-626-2172** **Fax:** Client Project Manager: Michael Wolgemuth	**Quarterly Local Limits Analysis** **1800 River Road** **Croydon, PA 19021** Payment / P.O. Info: 94557

Project Description:

Order Comments: Added via by CW 03/30/2020 13:50

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0041586-01	Effluent		4-21 0738	JC	Non-potable	24 HC	4-20 / 0735

Container Type / Preservation		Preservation Check
500mL P & HNO3	A	✱
250mL P & Cr6 Buffer - Field Filtered	B	—
1L GA & Na2S2O3	C	
1L GA & Na2S2O3	D	
1L GA & Na2S2O3	E	
1L GA & Na2S2O3	F	

pH START = 9.91
pH FINISH = 9.64
ADDED A 'PINCH' OF AMMONIUM SULFATE (59E0923)

Analysis - Method	Field Results
Inorganics	
Chromium (VI) - EPA 218.6	
Metals	
Arsenic, 200.8 - EPA 200.8	
Beryllium, 200.8 - EPA 200.8	
Cadmium, 200.8 - EPA 200.8	
Chromium, 200.8 - EPA 200.8	
Copper, 200.8 - EPA 200.8	
Lead, 200.8 - EPA 200.8	
Mercury, 3112 - SM 3112-B	
Molybdenum, 200.8 - EPA 200.8	
Nickel, 200.8 - EPA 200.8	
Selenium, 200.8 - EPA 200.8	
Silver, 200.8 - EPA 200.8	
Zinc, 200.8 - EPA 200.8	
Pesticide/PCB	
Pesticides, 608, PPL - EPA 608.3	
Semivolatiles	
SVOA, 625 - EPA 625.1	

0041586-02	Effluent - Grab		4-21 0750	JC	Non-potable	Grab	—

Container Type / Preservation		Preservation Check
500mL P & NaOH	A	O
1L GA & H2SO4	B	✱

Analysis - Method	Field Results
Inorganics	
Cyanide, Total - ASTM D 7511-12	
Phenolics, Total - EPA 420.1	

ORDER ID: 0041586

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0041586-03	Influent		4-21 0807	JC	Non-potable	24 HC	4-20 / 0740

Container Type / Preservation		Preservation Check
500mL P & HNO3	A	A
250mL P & Cr6 Buffer - Field Filtered	B	
1L GA & Na2S2O3	C	
1L GA & Na2S2O3	D	
1L GA & Na2S2O3	E	
1L GA & Na2S2O3	F	

pH START = 9.80
pH FINISH = 9.69
ADDED A 'PINCH' OF AMMONIUM SULFATE (S9E0923)

Analysis - Method	Field Results
Inorganics	
Chromium (VI) - EPA 218.6	
Metals	
Arsenic, 200.8 - EPA 200.8	
Beryllium, 200.8 - EPA 200.8	
Cadmium, 200.8 - EPA 200.8	
Chromium, 200.8 - EPA 200.8	
Copper, 200.8 - EPA 200.8	
Lead, 200.8 - EPA 200.8	
Mercury, 3112 - SM 3112-B	
Molybdenum, 200.8 - EPA 200.8	
Nickel, 200.8 - EPA 200.8	
Selenium, 200.8 - EPA 200.8	
Silver, 200.8 - EPA 200.8	
Zinc, 200.8 - EPA 200.8	
Pesticide/PCB	
Pesticides, 608, PPL - EPA 608.3	
Semivolatiles	
SVOA, 625 - EPA 625.1	

0041586-04	Influent - Grab		4-21 0827	JC	Non-potable	Grab	—

Container Type / Preservation		Preservation Check
500mL P & NaOH	A	O
1L GA & H2SO4	B	A

Analysis - Method	Field Results
Inorganics	
Cyanide, Total - ASTM D 7511-12	
Phenolics, Total - EPA 420.1	

A = pH<2 ea
O = CLV pH>12 ea 4-21-20

ORDER ID: 0041586

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0041586-05	Digester Sludge		4-21 0848	JC	Solid (Dry Weight)	Grab	—

Container Type / Preservation	Preservation Check
4oz G	A
4oz G (Sub)	B
4oz G	C
4oz G	D

Analysis - Method	Field Results

Inorganics
- Chromium (VI), Solid - SW 846 7196A
- Cyanide, 9014, Total - SW 846 9014
- Phenolics, Total - SW 846 9065
- Total Solids, 2540-G (%) - SM 2540-G

Metals
- Arsenic, 6010 - SW 846 6010D
- Beryllium, 6010 - SW 846 6010D
- Cadmium, 6010 - SW 846 6010D
- Chromium, 6010 - SW 846 6010D
- Copper, 6010 - SW 846 6010D
- Lead, 6010 - SW 846 6010D
- Mercury, 7471 - SW 846 7471B
- Molybdenum, 6010 - SW 846 6010D
- Nickel, 6010 - SW 846 6010D
- Selenium, 6010 - SW 846 6010D
- Silver, 6010 - SW 846 6010D
- Zinc, 6010 - SW 846 6010D

Pesticide/PCB
- Pesticides, 8081, PPL - SW846 3550C/8081B

Semivolatiles
- SVOA, 8270, PPL - SW846 3550C/8270D

WKO TAT = 10 Cool Sample(s) to 6 C

	Count	Date/Time	Temp (°C)
Relinquished By:	20	Date: 4-21-20 Time: 1024	7.0
Received By:	20	Date: 4.21.20 Time: 1024	7.8
Relinquished By:		Date: 4.21.20 Time: 1315	1.8 Acceptable: Y / N
Received in Lab By:	20	Date: 4-21-20 Time: 1315	1.8 Acceptable: Y / N

Sample Conditions
- Number of Containers \ Cooler received matches number on COC? Y / N
- Sample labels and COC free of descrepancies? Y / N
- All Containers Intact? Y / N
- VOC vials for VOA analysis free of headspace, if applicable? ~~Y / N~~

Sample Type Key
G = Grab
8HC = 8 Hr. Composite
24HC = 24 Hr. Composite

S D W A
D = Distribution
E = Entry Point
R = Raw
C = Check
S = Special
M = Maximum Residence

Reporting Options
- ☐ SDWA Reporting PWSID
- ☐ Email
- ☐ Other_____

Signing this form indicates your agreement with STL's Standard Terms and Conditions (www.suburbantestinglabs.com\resources\standard-terms-and-conditions.html) unless otherwise specified in writing.

Shaded areas are for STL use only

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Suburban Testing Lab Inc
1037F MacArthur Rd
Reading PA 19605

Report Date: April 28, 2020 10:55

Project: 0041586

Account #: 01182
Group Number: 2097239
PO Number: 0041586
State of Sample Origin: PA

Electronic Copy To	Suburban Testing Lab Inc	Attn: STL Results
Electronic Copy To	Suburban Water Testing Lab Inc	Attn: Accounts Payable

Respectfully Submitted,

Marrissa Williams
Project Manager

(717) 556-7246

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
0041586-01 Water	04/21/2020 07:38	1303687
0041586-03 Water	04/21/2020 08:07	1303688

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Analysis Report

Sample Description: **0041586-01 Water Effluent 0041586**

Project Name: **0041586**

Submittal Date/Time: 04/23/2020 16:50
Collection Date/Time: 04/21/2020 07:38

Suburban Testing Lab Inc
ELLE Sample #: WW 1303687
ELLE Group #: 2097239
Matrix: Water

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
Wet Chemistry		**EPA 218.6**		**ug/l**	**ug/l**	
12868	Hexavalent Chromium		18540-29-9	N.D.	0.15	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12868	Hexavalent Chromium	EPA 218.6	1	20116720114A	04/25/2020 15:00	Samantha Faverio	1

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Analysis Report

Sample Description: **0041586-03 Water Influent 0041586**

Project Name: **0041586**

Submittal Date/Time: 04/23/2020 16:50
Collection Date/Time: 04/21/2020 08:07

Suburban Testing Lab Inc
ELLE Sample #: WW 1303688
ELLE Group #: 2097239
Matrix: Water

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
Wet Chemistry		**EPA 218.6**		**ug/l**	**ug/l**	
12868	Hexavalent Chromium		18540-29-9	N.D.	0.15	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12868	Hexavalent Chromium	EPA 218.6	1	20116720114A	04/25/2020 15:44	Samantha Faverio	1

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Quality Control Summary

Client Name: Suburban Testing Lab Inc
Reported: 04/28/2020 10:55

Group Number: 2097239

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ug/l	MDL ug/l
Batch number: 20116720114A	Sample number(s): 1303687-1303688	
Hexavalent Chromium	N.D.	0.15

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 20116720114A	Sample number(s): 1303687-1303688								
Hexavalent Chromium	2.50	2.52	2.50	2.61	101	104	95-105	3	20

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

SUBURBAN TESTING LABS

SUBCONTRACT ORDER

0041586

A-1102 G2097239 S.1303087-88

SENDING LABORATORY:

Suburban Testing Labs
1037F MacArthur Road
Reading, PA 19605
Phone: 1-800-433-6595
Fax: 610-375-4090
Project Manager: Charles Wanyo

RECEIVING LABORATORY:

Eurofins Lancaster Labs, LLC
2425 New Holland Pike
Lancaster, PA 17601
Phone :(717) 656-2300
Fax: (717) 656-2681

Rush ☐ **Due:** 5/4/20

circle 1

Data Package Required : 1 2 3 4 Reduced

State of origin for cert. purposes: PA

Special Reporting Requirements:

Sample ID: **0041586-01**
Sample Name: **Effluent**
Matrix: **Non-potable**
Sample Type: **24 HC**

Analysis	Sampled	Expiration	Container	Comments
Chromium (VI)	04/21/2020 07:38	05/19/2020 07:38	1 250mL P & Cr6 Buffer - Field Filtered	

Sample ID: **0041586-03**
Sample Name: **Influent**
Matrix: **Non-potable**
Sample Type: **24 HC**

Analysis	Sampled	Expiration	Container	Comments
Chromium (VI)	04/21/2020 08:07	05/19/2020 08:07	1 250mL P & Cr6 Buffer - Field Filtered	

JC 2 cont
Sampled By

Released By	Date	Received By	Date
[signature]	4/23/2020	[signature]	4/23/20
[signature]	4/23/20	[signature]	4/23/20 1650

Email Results / Invoice / EDD to:
STLresults@suburbantestinglabs.com

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 282672

Group Number(s): 2097239

Client: Suburban Testing Labs

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Date:	04/23/2020
Number of Packages:	1	Number of Projects:	3
State/Province of Origin:	PA		

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Matrix	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	Water	DT131	0.7	DT	Wet	Y	Loose	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report
B	Detection in the Method Blank
Q0	LCS/LCSD Low
Q1	LCS/LCSD High
Q2	MS/MSD Low
Q3	MS/MSD High
Q7	LCS/LCSD RPD
Q8	DUP RPD
Q9	MS/MSD RPD

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Results Report

Order ID: 0071067

Bristol Township STP
1800 River Road
Croydon, PA 19021

Project: Quarterly Local Limits Analysis
1800 River Road
Croydon, PA 19021

Attn: Michael Wolgemuth

Regulatory ID:

Sample Number: 0071067-01 | Site: Effluent | Sample ID:
Collector: JC | Collect Date: 07/14/2020 8:20 am | Sample Type: 24 HC

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
218.6 Pres ORGF Chromium, Hexavalent (Ion Chromatography)									
Cr (VI)	<0.150	ug/L	218.6	0.150	1	07/18/20		07/18/20 13:34	SUB*
Metals									
Arsenic	< 0.001	mg/L	EPA 200.8	0.001	1	07/21/20	RPV	07/24/20 22:32	RJS
Beryllium	< 0.0004	mg/L	EPA 200.8	0.0004	1	07/21/20	RPV	07/24/20 22:32	RJS
Cadmium	< 0.0004	mg/L	EPA 200.8	0.0004	1	07/21/20	RPV	07/24/20 22:32	RJS
Chromium	0.002	mg/L	EPA 200.8	0.001	1	07/21/20	RPV	07/24/20 22:32	RJS
Copper	0.021	mg/L	EPA 200.8	0.002	1	07/21/20	RPV	07/24/20 22:32	RJS
Lead	< 0.001	mg/L	EPA 200.8	0.001	1	07/21/20	RPV	07/24/20 22:32	RJS
Mercury	< 0.0002	mg/L	SM 3112-B	0.0002	1	07/21/20	MKR	07/24/20 12:19	MKR
Molybdenum	0.004	mg/L	EPA 200.8	0.001	1	07/21/20	RPV	07/24/20 22:32	RJS
Nickel	0.002	mg/L	EPA 200.8	0.001	1	07/21/20	RPV	07/24/20 22:32	RJS
Selenium	< 0.002	mg/L	EPA 200.8	0.002	1	07/21/20	RPV	07/24/20 22:32	RJS
Silver	< 0.001	mg/L	EPA 200.8	0.001	1	07/21/20	RPV	07/24/20 22:32	RJS
Zinc	0.035	mg/L	EPA 200.8	0.010	1	07/21/20	RPV	07/24/20 22:32	RJS
Pesticide/PCB									
Pesticides, 608, PPL									
Aldrin	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
alpha-BHC	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
beta-BHC	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
delta-BHC	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
gamma-BHC (Lindane)	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Chlordane	< 0.51	µg/L	EPA 608.3	0.51	1	07/16/20	SCD	07/17/20 19:05	CEK
Alpha Chlordane	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Gamma Chlordane	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
4,4'-DDD	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
4,4'-DDE	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
4,4'-DDT	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Dieldrin	0.05	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Endosulfan I	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Endosulfan II	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Endosulfan sulfate	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Endrin	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Endrin aldehyde	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Endrin ketone	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Heptachlor	< 0.02	µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK

Report Generated On: 07/28/2020 3:40 pm 0071067
STL_Results Revision #1.9 Effective: 04/16/2020

SUBURBAN TESTING LABS

Sample Number: 0071067-01	Site: Effluent	Sample ID:
Collector: JC	Collect Date: 07/14/2020 8:20 am	Sample Type: 24 HC

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Pesticide/PCB (Continued)										
Pesticides, 608, PPL (Continued)										
Heptachlor epoxide	< 0.02		µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Methoxychlor	< 0.02		µg/L	EPA 608.3	0.02	1	07/16/20	SCD	07/17/20 19:05	CEK
Toxaphene	< 0.51		µg/L	EPA 608.3	0.51	1	07/16/20	SCD	07/17/20 19:05	CEK

Surrogate Recoveries	*Results*		*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene	0.537	V3	µg/L	EPA 608.3	106%	1	40-104	07/17/20 19:05
Surrogate: Decachlorobiphenyl	0.239		µg/L	EPA 608.3	47%	1	28-130	07/17/20 19:05

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Semivolatiles										
SVOA, 625										
Benzidine	< 4.85	M2	µg/L	EPA 625.1	4.85	1	07/20/20	MAG	07/21/20 16:44	ESB

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	74.7	µg/L	EPA 625.1	38%	1	10-79	07/21/20 16:44
Surrogate: Phenol-d6	56.6	µg/L	EPA 625.1	29%	1	10-57	07/21/20 16:44
Surrogate: Nitrobenzene-d5	60.5	µg/L	EPA 625.1	62%	1	24-119	07/21/20 16:44
Surrogate: 2,4,6-Tribromophenol	142	µg/L	EPA 625.1	73%	1	10-141	07/21/20 16:44
Surrogate: p-Terphenyl-d14	54.2	µg/L	EPA 625.1	56%	1	44-124	07/21/20 16:44

Sample Number: 0071067-02	Site: Effluent - Grab	Sample ID:
Collector: BS	Collect Date: 07/14/2020 7:44 am	Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics										
Cyanide, Total	0.006		mg/L	ASTM D 7511-12	0.005	1	07/22/20	SMD	07/22/20 12:16	SMD
Phenolics	< 0.05		mg/L	EPA 420.1	0.05	1	07/24/20	EJJ	07/24/20 17:40	EJJ

SUBURBAN TESTING LABS
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PA DEP # 06-00208
NJDEP# PA081

SUBURBAN TESTING LABS

Sample Number: 0071067-03	Site: Influent	Sample ID:
Collector: BS	Collect Date: 07/14/2020 8:20 am	Sample Type: 24 HC

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
218.6 Pres ORGF Chromium, Hexavalent (Ion Chromatography)									
Cr (VI)	<0.150	ug/L	218.6	0.150	1	07/18/20		07/18/20 13:49	SUB*
Metals									
Arsenic	< 0.005	mg/L	EPA 200.8	0.005	1	07/21/20	RPV	07/24/20 23:31	RJS
Beryllium	< 0.002	mg/L	EPA 200.8	0.002	1	07/21/20	RPV	07/24/20 23:31	RJS
Cadmium	< 0.002	mg/L	EPA 200.8	0.002	1	07/21/20	RPV	07/24/20 23:31	RJS
Chromium	< 0.005	mg/L	EPA 200.8	0.005	1	07/21/20	RPV	07/24/20 23:31	RJS
Copper	0.037	mg/L	EPA 200.8	0.010	1	07/21/20	RPV	07/24/20 23:31	RJS
Lead	< 0.005	mg/L	EPA 200.8	0.005	1	07/21/20	RPV	07/24/20 23:31	RJS
Mercury	< 0.0005	mg/L	SM 3112-B	0.0005	1	07/21/20	MKR	07/24/20 12:22	MKR
Molybdenum	< 0.005	mg/L	EPA 200.8	0.005	1	07/21/20	RPV	07/24/20 23:31	RJS
Nickel	< 0.005	mg/L	EPA 200.8	0.005	1	07/21/20	RPV	07/24/20 23:31	RJS
Selenium	< 0.010	mg/L	EPA 200.8	0.010	1	07/21/20	RPV	07/24/20 23:31	RJS
Silver	< 0.005	mg/L	EPA 200.8	0.005	1	07/21/20	RPV	07/24/20 23:31	RJS
Zinc	0.082	mg/L	EPA 200.8	0.050	1	07/21/20	RPV	07/24/20 23:31	RJS
Pesticide/PCB									
Pesticides, 608, PPL									
Aldrin	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
alpha-BHC	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
beta-BHC	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
delta-BHC	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
gamma-BHC (Lindane)	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Chlordane	< 2.38	µg/L	EPA 608.3	2.38	5	07/16/20	SCD	07/17/20 18:04	CEK
Alpha Chlordane	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Gamma Chlordane	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
4,4'-DDD	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
4,4'-DDE	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
4,4'-DDT	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Dieldrin	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Endosulfan I	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Endosulfan II	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Endosulfan sulfate	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Endrin	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Endrin aldehyde	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Endrin ketone	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Heptachlor	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Heptachlor epoxide	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Methoxychlor	< 0.10	µg/L	EPA 608.3	0.10	5	07/16/20	SCD	07/17/20 18:04	CEK
Toxaphene	< 2.38	µg/L	EPA 608.3	2.38	5	07/16/20	SCD	07/17/20 18:04	CEK

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene	0.390	µg/L	EPA 608.3	82%	5	40-104	07/17/20 18:04
Surrogate: Decachlorobiphenyl	0.168	µg/L	EPA 608.3	35%	5	28-130	07/17/20 18:04

Semivolatiles

Report Generated On: 07/28/2020 3:40 pm 0071067

STL_Results Revision #1.9 Effective: 04/16/2020

SUBURBAN TESTING LABS

Sample Number: 0071067-03	Site: Influent	Sample ID:
Collector: BS	Collect Date: 07/14/2020 8:20 am	Sample Type: 24 HC

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Semivolatiles (Continued)									
SVOA, 625									
Benzidine	< 4.76	µg/L	EPA 625.1	4.76	1	07/20/20	MAG	07/21/20 18:02	ESB

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	79.3	µg/L	EPA 625.1	42%	1	10-79	07/21/20 18:02
Surrogate: Phenol-d6	59.1	µg/L	EPA 625.1	31%	1	10-57	07/21/20 18:02
Surrogate: Nitrobenzene-d5	60.0	µg/L	EPA 625.1	63%	1	24-119	07/21/20 18:02
Surrogate: 2-Fluorobiphenyl	66.1	µg/L	EPA 625.1	69%	1	29-115	07/21/20 18:02
Surrogate: 2,4,6-Tribromophenol	147	µg/L	EPA 625.1	77%	1	10-141	07/21/20 18:02
Surrogate: p-Terphenyl-d14	62.7	µg/L	EPA 625.1	66%	1	44-124	07/21/20 18:02

Sample Number: 0071067-04	Site: Influent - Grab	Sample ID:
Collector: BS	Collect Date: 07/14/2020 7:35 am	Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics									
Cyanide, Total	0.020	mg/L	ASTM D 7511-12	0.005	1	07/22/20	SMD	07/22/20 12:18	SMD
Phenolics	< 0.05	mg/L	EPA 420.1	0.05	1	07/24/20	EJJ	07/24/20 17:40	EJJ

SUBURBAN TESTING LABS
1037F MacArthur Road, Reading, PA 19605 Phone: 610-375-TEST Fax: 610-375-4090 suburbantestinglabs.com
PA DEP # 06-00208
NJDEP# PA081

SUBURBAN TESTING LABS

Sample Number: 0071067-05	Site: Digester Sludge	Sample ID:
Collector: BS	Collect Date: 07/14/2020 7:27 am	Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Chromium, Hexavalent									
Cr (VI)	< 410	mg/Kg dry	7196A	410	1	07/22/20		07/22/20 15:40	SUB*
Inorganics									
Cyanide, Total	< 61.9	mg/kg dry	SW 846 9014	61.9	1	07/21/20	SMD	07/22/20 11:13	SMD
Phenolics	852	mg/kg dry	SW 846 9065	672	1	07/23/20	SMD	07/23/20 14:54	SMD
Total Solids	0.4	%	SM 2540-G		1	07/15/20	CH	07/15/20 13:35	CH
Metals									
Arsenic	< 30.9	mg/kg dry	SW 846 6010D	30.9	1	07/16/20	RJS	07/20/20 13:31	RJS
Beryllium	< 6.19	mg/kg dry	SW 846 6010D	6.19	1	07/16/20	RJS	07/20/20 13:31	RJS
Cadmium	< 6.19	mg/kg dry	SW 846 6010D	6.19	1	07/16/20	RJS	07/20/20 13:31	RJS
Chromium	219	mg/kg dry	SW 846 6010D	124	1	07/16/20	RJS	07/20/20 13:31	RJS
Copper	1170	mg/kg dry	SW 846 6010D	6.19	1	07/16/20	RJS	07/20/20 13:31	RJS
Lead	92.7	mg/kg dry	SW 846 6010D	30.9	1	07/16/20	RJS	07/20/20 13:31	RJS
Mercury	7.75	mg/kg dry	SW 846 7471B	2.50	1	07/21/20	MKR	07/21/20 12:29	MKR
Molybdenum	< 124	mg/kg dry	SW 846 6010D	124	1	07/16/20	RJS	07/20/20 13:31	RJS
Nickel	< 124	mg/kg dry	SW 846 6010D	124	1	07/16/20	RJS	07/20/20 13:31	RJS
Selenium	< 30.9	mg/kg dry	SW 846 6010D	30.9	1	07/16/20	RJS	07/20/20 13:31	RJS
Silver	< 30.9	mg/kg dry	SW 846 6010D	30.9	1	07/16/20	RJS	07/20/20 13:31	RJS
Zinc	2580	mg/kg dry	SW 846 6010D	1240	1	07/16/20	RJS	07/20/20 13:31	RJS
Pesticide/PCB									
Pesticides, 8081, PPL									
Aldrin	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
alpha-BHC	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
beta-BHC	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
delta-BHC	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
gamma-BHC (Lindane)	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Chlordane	< 12500	µg/Kg dry	SW846 3550C/8081B	12500	1	07/17/20	KMH	07/21/20 18:48	CEK
4,4'-DDD	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
4,4'-DDE	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
4,4'-DDT	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Dieldrin	520	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Endosulfan I	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Endosulfan II	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Endosulfan sulfate	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Endrin	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Endrin aldehyde	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Endrin ketone	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Heptachlor	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Heptachlor epoxide	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Methoxychlor	< 500	µg/Kg dry	SW846 3550C/8081B	500	1	07/17/20	KMH	07/21/20 18:48	CEK
Toxaphene	< 12500	µg/Kg dry	SW846 3550C/8081B	12500	1	07/17/20	KMH	07/21/20 18:48	CEK

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene	11700	µg/Kg dry	SW846 3550C/8081B	94%	1	35-135	07/21/20 18:48

Report Generated On: 07/28/2020 3:40 pm 0071067

STL_Results Revision #1.9 Effective: 04/16/2020

SUBURBAN TESTING LABS

Sample Number: 0071067-05	Site: Digester Sludge	Sample ID:
Collector: BS	Collect Date: 07/14/2020 7:27 am	Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By

Pesticide/PCB (Continued)

Pesticides, 8081, PPL (Continued)

Surrogate Recoveries (Continued)	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Decachlorobiphenyl	8760	µg/Kg dry	SW846 3550C/8081B	70%	1	10-153	07/21/20 18:48

Semivolatiles

SVOA, 8270, PPL

Benzidine	< 3500	µg/Kg	SW846 3550C/8270D	3500	1	07/17/20	KMH	07/20/20 18:08	ESB

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	9970	µg/Kg	SW846 3550C/8270D	50%	1	14-110	07/20/20 18:08
Surrogate: Phenol-d6	12200	µg/Kg	SW846 3550C/8270D	61%	1	24-116	07/20/20 18:08
Surrogate: Nitrobenzene-d5	5270	µg/Kg	SW846 3550C/8270D	53%	1	28-111	07/20/20 18:08
Surrogate: 2-Fluorobiphenyl	6250	µg/Kg	SW846 3550C/8270D	62%	1	30-111	07/20/20 18:08
Surrogate: 2,4,6-Tribromophenol	15400	µg/Kg	SW846 3550C/8270D	77%	1	25-117	07/20/20 18:08
Surrogate: p-Terphenyl-d14	7380	µg/Kg	SW846 3550C/8270D	74%	1	44-116	07/20/20 18:08

Data Qualifiers:

M2 The Matrix Spike associated with this sample is below established acceptance criteria, indicating potential matrix interference. Results of this sample may be biased low.

V3 The surrogate associated with this sample was above established acceeptance criteria. Data may be biased high.

Sample Receipt Conditions:

All samples met the sample receipt requirements for the relevant analyses.

Work Order Memo

SUB: 7196A performed by LAB ID# 68-00522
SUB: EPA 218.6 performed by Lab ID # 36-00037

SUBURBAN TESTING LABS
1037F MacArthur Road, Reading, PA 19605 Phone: 610-375-TEST Fax: 610-375-4090 suburbantestinglabs.com

PA DEP # 06-00208
NJDEP# PA081

The test *pH, Lab* is performed in the Laboratory as soon as possible. These results are not appropriate for compliance with NPDES, SDWA, or other regulatory programs that require analysis within 15 minutes of sample collection and should be considered for informational purposes only.

**pH, Final* for ASTM leachate is performed by method SM 4500-H-B.

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

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Results are considered Preliminary unless report is signed by authorized representative of STL.

Reviewed and Released By:
Alana Kopicz
Sr. Project Manager

SUBURBAN TESTING LABS
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PA DEP # 06-00208
NJDEP# PA081

SUBURBAN TESTING LABS

Chain of Custody Record

1037F MacArthur Road, Reading, PA 19605
Phone: 610-375-8378 - Fax: 610-375-4090 - suburbantestinglabs.com

TAT (Circle One): Standard - 24hr - 48hr - 72hr - Other _____
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply.)

ORDER ID: 0071067

Client Name / Address:
Bristol Township STP
1800 River Road
Croydon, PA 19021

Phone: **717-626-2172**
Fax: **1(215) 788-8355**

Client Project Manager: **Michael Wolgemuth**
Payment / P.O. Info: **94557**

Project Name / Address:
Quarterly Local Limits Analysis
1800 River Road
Croydon, PA 19021

Regulatory ID (SDWA/Permit #):

Project Description:

Order Comments: Added via by LRF 06/22/2020 13:11

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time		Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0071067-01	Effluent		7-14	0820	JC	Non-potable	24 HC	7-13 / 0741

Container Type / Preservation		Preservation Check
500mL P & HNO3 PH <2 cmw	A	
250mL P & Cr6 Buffer - Field Filtered	B	- PH = 10.08 IP ↓ Adjust = 9.36 w/ Rich Ammonium Sulfate ID# - S9E0923
1L GA & Na2S2O3 *	C	
1L GA & Na2S2O3 *	D	
1L GA & Na2S2O3 *	E	
1L GA & Na2S2O3 *	F	

Analysis - Method	Field Results
Inorganics	
Chromium (VI) - EPA 218.6	
Metals	
Arsenic, 200.8 - EPA 200.8	
Beryllium, 200.8 - EPA 200.8	
Cadmium, 200.8 - EPA 200.8	
Chromium, 200.8 - EPA 200.8	
Copper, 200.8 - EPA 200.8	
Lead, 200.8 - EPA 200.8	
Mercury, 3112 - SM 3112-B	
Molybdenum, 200.8 - EPA 200.8	
Nickel, 200.8 - EPA 200.8	
Selenium, 200.8 - EPA 200.8	
Silver, 200.8 - EPA 200.8	
Zinc, 200.8 - EPA 200.8	
Pesticide/PCB	
Pesticides, 608, PPL - EPA 608.3	
Semivolatiles	
SVOA, 625 - EPA 625.1	

0071067-02	Effluent - Grab		7-14	~~0735~~ 0744	BS	Non-potable	Grab	—

Container Type / Preservation		Preservation Check
500mL P & NaOH PH 12 CL ✓ cmw	A	
1L GA & H2SO4 PH <2 cmw	B	

Analysis - Method	Field Results
Inorganics	
Cyanide, Total - ASTM D 7511-12	
Phenolics, Total - EPA 420.1	

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time		Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0071067-03	Influent		7-14	0820	BS	Non-potable	24 HC	7-13 / 0752

Container Type / Preservation		Preservation Check
500mL P & HNO3 pH <2 CMW	A	
250mL P & Cr6 Buffer - Field Filtered	B	= pH = 9.87
1L GA & Na2S2O3 *	C	Adjusted = 9.68
1L GA & Na2S2O3 *	D	-Added pinch
1L GA & Na2S2O3 *	E	Ammonium Sulfate
1L GA & Na2S2O3 *	F	ID # S9E0923

IP

Analysis - Method	Field Results
Inorganics	
Chromium (VI) - EPA 218.6	
Metals	
Arsenic, 200.8 - EPA 200.8	
Beryllium, 200.8 - EPA 200.8	
Cadmium, 200.8 - EPA 200.8	
Chromium, 200.8 - EPA 200.8	
Copper, 200.8 - EPA 200.8	
Lead, 200.8 - EPA 200.8	
Mercury, 3112 - SM 3112-B	
Molybdenum, 200.8 - EPA 200.8	
Nickel, 200.8 - EPA 200.8	
Selenium, 200.8 - EPA 200.8	
Silver, 200.8 - EPA 200.8	
Zinc, 200.8 - EPA 200.8	
Pesticide/PCB	
Pesticides, 608, PPL - EPA 608.3	
Semivolatiles	
SVOA, 625 - EPA 625.1	

0071067-04	Influent - Grab		7-14	0735	BS	Non-potable	Grab	JC ~~7-13~~

Container Type / Preservation		Preservation Check
500mL P & NaOH pH >12 CLV CMW	A	
1L GA & H2SO4 pH <2 CMW	B	

Analysis - Method	Field Results
Inorganics	
Cyanide, Total - ASTM D 7511-12	
Phenolics, Total - EPA 420.1	

ORDER ID: 0071067

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time		Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0071067-05	Digester Sludge		7-14	0727	BS	Solid (Dry Weight)	Grab	—

Container Type / Preservation	Preservation Check
4oz G	A
4oz G (Sub)	B
4oz G	C
4oz G	D

Analysis - Method	Field Results

Inorganics
- Chromium (VI), Solid - SW 846 7196A
- Cyanide, 9014, Total - SW 846 9014
- Phenolics, Total - SW 846 9065
- Total Solids, 2540-G (%) - SM 2540-G

Metals
- Arsenic, 6010 - SW 846 6010D
- Beryllium, 6010 - SW 846 6010D
- Cadmium, 6010 - SW 846 6010D
- Chromium, 6010 - SW 846 6010D
- Copper, 6010 - SW 846 6010D
- Lead, 6010 - SW 846 6010D
- Mercury, 7471 - SW 846 7471B
- Molybdenum, 6010 - SW 846 6010D
- Nickel, 6010 - SW 846 6010D
- Selenium, 6010 - SW 846 6010D
- Silver, 6010 - SW 846 6010D
- Zinc, 6010 - SW 846 6010D

Pesticide/PCB
- Pesticides, 8081, PPL - SW846 3550C/8081B

Semivolatiles
- SVOA, 8270, PPL - SW846 3550C/8270D

* = CL Cmv

WKO TAT = 10

Cool Sample(s) to 6 C

	Count	Date/Time	Temp (°C)
Relinquished By:	20	Date: 7-14 Time: 0945	6.0
Received By: GPT - STL	20	Date: 7.14.20 Time: 0945	9.7
Relinquished By: GPT - STL		Date: 7.14.20 Time: 1415	1.6 Acceptable: ? Y / N
Received in Lab By: Cmv	20	Date: 7.14.20 Time: 1415	1.6 Acceptable: ? Y / N

Sample Conditions
- Number of Containers\Cooler received matches number on COC? Y / N
- Sample labels and COC free of descrepancies? Y / N
- All Containers Intact? Y / N
- VOC vials for VOA analysis free of headspace, if applicable? Y / N

Sample Type Key
- G = Grab
- C = Composite
- 8HC = 8 Hr. Composite
- 24HC = 24 Hr. Composite

SDWA
- D = Distribution
- E = Entry Point
- R = Raw
- C = Check
- S = Special
- M = Maximum

Bottle Type Key
- P = Plastic
- G = Glass
- GA = Glass Amber
- VOA = 40mL G or GA
- PP = Sterile Polypropylene
- PS = Sterile Polystyrene
- HDPE = High Density Poylethylene
- O = Other

Preservative Key
- A = Ascorbic Acid
- C = HCl
- H = HNO3
- N = Sodium Thiosulfate
- OH = NaOH
- S = H2SO4
- O = Other
- NA = None Required

Signing this form indicates your agreement with STL's Standard Terms and Conditions (www.suburbantestinglabs.com\resources\standard-terms-and-conditions.html) unless otherwise specified in writing.

Shaded areas are for STL use only

Results Report

Order ID: 0100136

Bristol Township STP
1800 River Road
Croydon, PA 19021

Project: Quarterly Local Limits Analysis
1800 River Road
Croydon, PA 19021

Attn: Michael Wolgemuth

Regulatory ID:

Sample Number: 0100136-01 | Site: Effluent | Sample ID:
Collector: BS | Collect Date: 10/06/2020 7:24 am | Sample Type: 24 HC

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics										
Chromium (VI)	< 0.10		µg/L	EPA 218.6	0.10	1	10/08/20	DSM	10/08/20 16:36	ZJH
Metals										
Arsenic	< 0.001		mg/L	EPA 200.8	0.001	1	10/13/20	MKR	10/14/20 17:45	MKR
Beryllium	< 0.0004		mg/L	EPA 200.8	0.0004	1	10/13/20	MKR	10/15/20 13:11	MKR
Cadmium	< 0.0004		mg/L	EPA 200.8	0.0004	1	10/13/20	MKR	10/14/20 17:45	MKR
Chromium	< 0.001		mg/L	EPA 200.8	0.001	1	10/13/20	MKR	10/14/20 17:45	MKR
Copper	0.023		mg/L	EPA 200.8	0.002	1	10/13/20	MKR	10/14/20 17:45	MKR
Lead	< 0.001		mg/L	EPA 200.8	0.001	1	10/13/20	MKR	10/14/20 17:45	MKR
Mercury	< 0.0002		mg/L	SM 3112-B	0.0002	1	10/12/20	MKR	10/13/20 11:26	MKR
Molybdenum	0.005		mg/L	EPA 200.8	0.001	1	10/13/20	MKR	10/14/20 17:45	MKR
Nickel	0.002		mg/L	EPA 200.8	0.001	1	10/13/20	MKR	10/14/20 17:45	MKR
Selenium	< 0.002		mg/L	EPA 200.8	0.002	1	10/13/20	MKR	10/14/20 17:45	MKR
Silver	< 0.001		mg/L	EPA 200.8	0.001	1	10/13/20	MKR	10/14/20 17:45	MKR
Zinc	0.032		mg/L	EPA 200.8	0.010	1	10/13/20	MKR	10/14/20 17:45	MKR
Pesticide/PCB										
Pesticides, 608, PPL										
Aldrin	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
alpha-BHC	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
beta-BHC	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
delta-BHC	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
gamma-BHC (Lindane)	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Chlordane	< 0.48		µg/L	EPA 608.3	0.48	1	10/12/20	TBH	10/13/20 16:15	CEK
Alpha Chlordane	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Gamma Chlordane	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
4,4'-DDD	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
4,4'-DDE	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
4,4'-DDT	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Dieldrin	0.03		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Endosulfan I	< 0.02	C4	µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Endosulfan II	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Endosulfan sulfate	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Endrin	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Endrin aldehyde	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Endrin ketone	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Heptachlor	< 0.02		µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK

Report Generated On: 10/20/2020 4:55 pm 0100136
STL_Results Revision #1.9 Effective: 04/16/2020

SUBURBAN TESTING LABS

Sample Number: 0100136-01	Site: Effluent	Sample ID:
Collector: BS	Collect Date: 10/06/2020 7:24 am	Sample Type: 24 HC

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Pesticide/PCB (Continued)									
Pesticides, 608, PPL (Continued)									
Heptachlor epoxide	< 0.02	µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Methoxychlor	< 0.02	µg/L	EPA 608.3	0.02	1	10/12/20	TBH	10/13/20 16:15	CEK
Toxaphene	< 0.48	µg/L	EPA 608.3	0.48	1	10/12/20	TBH	10/13/20 16:15	CEK

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene	0.369	µg/L	EPA 608.3	77%	1	40-104	10/13/20 16:15
Surrogate: Decachlorobiphenyl	0.187	µg/L	EPA 608.3	39%	1	28-130	10/13/20 16:15

Semivolatiles									
SVOA, 625									
Benzidine	< 4.76	µg/L	EPA 625.1	4.76	1	10/12/20	KMH	10/13/20 13:08	ESB

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	74.5	µg/L	EPA 625.1	39%	1	10-79	10/13/20 13:08
Surrogate: Phenol-d6	55.8	µg/L	EPA 625.1	29%	1	10-57	10/13/20 13:08
Surrogate: Nitrobenzene-d5	58.9	µg/L	EPA 625.1	62%	1	24-119	10/13/20 13:08
Surrogate: 2-Fluorobiphenyl	61.1	µg/L	EPA 625.1	64%	1	29-115	10/13/20 13:08
Surrogate: 2,4,6-Tribromophenol	142	µg/L	EPA 625.1	75%	1	10-141	10/13/20 13:08
Surrogate: p-Terphenyl-d14	54.5	µg/L	EPA 625.1	57%	1	44-124	10/13/20 13:08

Sample Number: 0100136-02	Site: Effluent - Grab	Sample ID:
Collector: BS	Collect Date: 10/06/2020 8:05 am	Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics									
Cyanide, Total	< 0.005	mg/L	ASTM D 7511-12	0.005	1	10/09/20	EJJ	10/09/20 19:01	EJJ
Phenolics	< 0.05	mg/L	EPA 420.1	0.05	1	10/08/20	EJJ	10/09/20 19:59	EJJ

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NJDEP# PA081

SUBURBAN TESTING LABS

Sample Number: 0100136-03	Site: Influent	Sample ID:
Collector: BS	Collect Date: 10/06/2020 7:37 am	Sample Type: 24 HC

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics										
Chromium (VI)	< 0.10		µg/L	EPA 218.6	0.10	1	10/08/20	DSM	10/08/20 16:48	ZJH
Metals										
Arsenic	< 0.002		mg/L	EPA 200.8	0.002	1	10/13/20	MKR	10/14/20 17:50	MKR
Beryllium	< 0.0008		mg/L	EPA 200.8	0.0008	1	10/13/20	MKR	10/15/20 13:16	MKR
Cadmium	< 0.0008		mg/L	EPA 200.8	0.0008	1	10/13/20	MKR	10/14/20 17:50	MKR
Chromium	< 0.002		mg/L	EPA 200.8	0.002	1	10/13/20	MKR	10/14/20 17:50	MKR
Copper	0.037		mg/L	EPA 200.8	0.004	1	10/13/20	MKR	10/14/20 17:50	MKR
Lead	0.002		mg/L	EPA 200.8	0.002	1	10/13/20	MKR	10/14/20 17:50	MKR
Mercury	< 0.0005		mg/L	SM 3112-B	0.0005	1	10/12/20	MKR	10/13/20 11:47	MKR
Molybdenum	0.005		mg/L	EPA 200.8	0.002	1	10/13/20	MKR	10/14/20 17:50	MKR
Nickel	< 0.002		mg/L	EPA 200.8	0.002	1	10/13/20	MKR	10/14/20 17:50	MKR
Selenium	< 0.004		mg/L	EPA 200.8	0.004	1	10/13/20	MKR	10/14/20 17:50	MKR
Silver	< 0.002		mg/L	EPA 200.8	0.002	1	10/13/20	MKR	10/14/20 17:50	MKR
Zinc	0.065		mg/L	EPA 200.8	0.020	1	10/13/20	MKR	10/14/20 17:50	MKR
Pesticide/PCB										
Pesticides, 608, PPL										
Aldrin	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
alpha-BHC	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
beta-BHC	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
delta-BHC	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
gamma-BHC (Lindane)	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Chlordane	< 2.38		µg/L	EPA 608.3	2.38	5	10/12/20	TBH	10/13/20 16:00	CEK
Alpha Chlordane	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Gamma Chlordane	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
4,4'-DDD	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
4,4'-DDE	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
4,4'-DDT	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Dieldrin	0.19		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Endosulfan I	< 0.10	C4	µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Endosulfan II	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Endosulfan sulfate	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Endrin	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Endrin aldehyde	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Endrin ketone	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Heptachlor	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Heptachlor epoxide	0.11		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Methoxychlor	< 0.10		µg/L	EPA 608.3	0.10	5	10/12/20	TBH	10/13/20 16:00	CEK
Toxaphene	< 2.38		µg/L	EPA 608.3	2.38	5	10/12/20	TBH	10/13/20 16:00	CEK

Surrogate Recoveries	*Results*		*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene	1.39	V3	µg/L	EPA 608.3	292%	5	40-104	10/13/20 16:00
Surrogate: Decachlorobiphenyl	0.414		µg/L	EPA 608.3	87%	5	28-130	10/13/20 16:00

Semivolatiles

Report Generated On: 10/20/2020 4:55 pm 0100136

STL_Results Revision #1.9 Effective: 04/16/2020

SUBURBAN TESTING LABS

Sample Number: 0100136-03	Site: Influent	Sample ID:
Collector: BS	Collect Date: 10/06/2020 7:37 am	Sample Type: 24 HC

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Semivolatiles (Continued)									
SVOA, 625									
Benzidine	< 24.5	µg/L	EPA 625.1	24.5	5	10/23/20	KMH	10/13/20 18:23	ESB

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	85.7	µg/L	EPA 625.1	44%	5	10-79	10/13/20 18:23
Surrogate: Phenol-d6	63.3	µg/L	EPA 625.1	32%	5	10-57	10/13/20 18:23
Surrogate: Nitrobenzene-d5	68.9	µg/L	EPA 625.1	70%	5	24-119	10/13/20 18:23
Surrogate: 2-Fluorobiphenyl	74.8	µg/L	EPA 625.1	76%	5	29-115	10/13/20 18:23
Surrogate: 2,4,6-Tribromophenol	152	µg/L	EPA 625.1	78%	5	10-141	10/13/20 18:23
Surrogate: p-Terphenyl-d14	70.8	µg/L	EPA 625.1	72%	5	44-124	10/13/20 18:23

Sample Number: 0100136-04	Site: Influent - Grab	Sample ID:
Collector: BS	Collect Date: 10/06/2020 8:00 am	Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Inorganics									
Cyanide, Total	0.014	mg/L	ASTM D 7511-12	0.005	1	10/09/20	EJJ	10/09/20 18:59	EJJ
Phenolics	< 0.05	mg/L	EPA 420.1	0.05	1	10/08/20	EJJ	10/09/20 19:59	EJJ

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PA DEP # 06-00208
NJDEP# PA081

SUBURBAN TESTING LABS

Sample Number: 0100136-05	Site: Digester Sludge	Sample ID:
Collector: BS	Collect Date: 10/06/2020 7:51 am	Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Chromium, Hexavalent										
Cr (VI)	< 54		mg/Kg dry	7196A	54	1	10/15/20		10/16/20 15:29	SUB*
Inorganics										
Cyanide, Total	7.50		mg/kg dry	SW 846 9014	6.25	1	10/09/20	CJ	10/09/20 15:02	CJ
Phenolics	66.0		mg/kg dry	SW 846 9065	32.1	1	10/14/20	ZJH	10/15/20 15:15	ZJH
Total Solids	4.0		%	SM 2540-G		1	10/07/20	DAY	10/07/20 14:45	DAY
Metals										
Arsenic	6.74		mg/kg dry	SW 846 6010D	3.81	1	10/08/20	RJS	10/09/20 19:20	RPV
Beryllium	1.03		mg/kg dry	SW 846 6010D	0.762	1	10/08/20	RJS	10/09/20 19:20	RPV
Cadmium	5.47		mg/kg dry	SW 846 6010D	0.762	1	10/08/20	RJS	10/09/20 19:20	RPV
Chromium	197		mg/kg dry	SW 846 6010D	15.2	1	10/08/20	RJS	10/09/20 19:20	RPV
Copper	1230		mg/kg dry	SW 846 6010D	0.762	1	10/08/20	RJS	10/13/20 17:04	RPV
Lead	77.8		mg/kg dry	SW 846 6010D	3.81	1	10/08/20	RJS	10/09/20 19:20	RPV
Mercury	3.52		mg/kg dry	SW 846 7471B	0.223	1	10/14/20	MKR	10/14/20 15:57	RPV
Molybdenum	22.3		mg/kg dry	SW 846 6010D	15.2	1	10/08/20	RJS	10/09/20 19:20	RPV
Nickel	34.6		mg/kg dry	SW 846 6010D	15.2	1	10/08/20	RJS	10/09/20 19:20	RPV
Selenium	31.0	B	mg/kg dry	SW 846 6010D	3.81	1	10/08/20	RJS	10/09/20 19:20	RPV
Silver	7.09		mg/kg dry	SW 846 6010D	3.81	1	10/08/20	RJS	10/09/20 19:20	RPV
Zinc	2190		mg/kg dry	SW 846 6010D	152	1	10/08/20	RJS	10/13/20 17:04	RPV
Pesticide/PCB										
Pesticides, 8081, PPL										
4,4'-DDE	< 50.0	I	µg/Kg dry	SW846 3550C/8081B	50.0	1	10/09/20	TBH	10/09/20 19:05	CEK
Aldrin	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
alpha-BHC	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
beta-BHC	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
delta-BHC	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
gamma-BHC (Lindane)	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Chlordane	< 6260		µg/Kg dry	SW846 3550C/8081B	6260	5	10/09/20	TBH	10/20/20 8:36	CEK
4,4'-DDD	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
4,4'-DDT	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Dieldrin	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Endosulfan I	< 250	C4, X	µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Endosulfan II	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Endosulfan sulfate	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Endrin	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Endrin aldehyde	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Endrin ketone	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Heptachlor	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Heptachlor epoxide	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Methoxychlor	< 250		µg/Kg dry	SW846 3550C/8081B	250	5	10/09/20	TBH	10/20/20 8:36	CEK
Toxaphene	< 6260		µg/Kg dry	SW846 3550C/8081B	6260	5	10/09/20	TBH	10/20/20 8:36	CEK

Surrogate Recoveries	*Results*		*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene	1020	I	µg/Kg dry	SW846 3550C/8081B	82%	1	35-135	10/09/20 19:05

Report Generated On: 10/20/2020 4:55 pm 0100136

STL_Results Revision #1.9 Effective: 04/16/2020

SUBURBAN TESTING LABS

Sample Number: 0100136-05	Site: Digester Sludge	Sample ID:
Collector: BS	Collect Date: 10/06/2020 7:51 am	Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By

Pesticide/PCB (Continued)

Pesticides, 8081, PPL (Continued)

Surrogate Recoveries (Continued)	*Results*		*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Decachlorobiphenyl	793	I	µg/Kg dry	SW846 3550C/8081B	63%	1	10-153	10/09/20 19:05
Surrogate: Tetrachloro-m-xylene	1060		µg/Kg dry	SW846 3550C/8081B	85%	5	35-135	10/20/20 8:36
Surrogate: Decachlorobiphenyl	969		µg/Kg dry	SW846 3550C/8081B	78%	5	10-153	10/20/20 8:36

Semivolatiles

SVOA, 8270, PPL

Benzidine	< 3500		µg/Kg	SW846 3550C/8270E	3500	1	10/13/20	TBH	10/14/20 15:35	ESB

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	9850	µg/Kg	SW846 3550C/8270E	49%	1	14-110	10/14/20 15:35
Surrogate: Phenol-d6	11900	µg/Kg	SW846 3550C/8270E	59%	1	24-116	10/14/20 15:35
Surrogate: Nitrobenzene-d5	4710	µg/Kg	SW846 3550C/8270E	47%	1	28-111	10/14/20 15:35
Surrogate: 2-Fluorobiphenyl	4700	µg/Kg	SW846 3550C/8270E	47%	1	30-111	10/14/20 15:35
Surrogate: 2,4,6-Tribromophenol	10600	µg/Kg	SW846 3550C/8270E	53%	1	25-117	10/14/20 15:35
Surrogate: p-Terphenyl-d14	4650	µg/Kg	SW846 3550C/8270E	47%	1	44-116	10/14/20 15:35

Data Qualifiers:

B	The target analyte was detected in the Method, Dilution Water, Instrument or Extraction Blank or Sterility Check at or above the method Reporting Limit or applicable method, client, or regulatory requirement.
C4	The CCV for this analyte was above acceptance criteria, however the analyte was not detected in the associated sample. Data may be fully useable under the 2009 TNI Standard.
I	Interference was noted during analysis and is the possible cause of the out of control results for this analyte.
V3	The surrogate associated with this sample was above established acceptance criteria. Data may be biased high.
X	Associated sequence QC failed marginally high.

Sample Receipt Conditions:

All samples met the sample receipt requirements for the relevant analyses.

Work Order Memo

SUB: 7196A performed by LAB ID# 68-00522

SUBURBAN TESTING LABS

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NELAP ACCREDITED TNI LABORATORY

PA DEP # 06-00208

NJDEP# PA081

The test *pH, Lab* is performed in the Laboratory as soon as possible. These results are not appropriate for compliance with NPDES, SDWA, or other regulatory programs that require analysis within 15 minutes of sample collection and should be considered for informational purposes only.

**pH, Final* for ASTM leachate is performed by method SM 4500-H-B.

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

This laboratory report may not be reproduced, except in full, without the written approval of STL.

Results are considered Preliminary unless report is signed by authorized representative of STL.

Reviewed and Released By:
Charles Wanyo
Project Manager I

SUBURBAN TESTING LABS
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PA DEP # 06-00208
NJDEP# PA081

SUBURBAN TESTING LABS

Chain of Custody Record

1037F MacArthur Road, Reading, PA 19605
Phone: 610-375-8378 - Fax: 610-375-4090 - suburbantestinglabs.com

TAT (Circle One): Standard - 24hr - 48hr - 72hr - Other ____
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply.)

ORDER ID: 0100136

Client Name / Address:	Project Name / Address:
Bristol Township STP **1800 River Road** **Croydon, PA 19021** Phone: **717-626-2172** Fax: **1(215) 788-8355**	**Quarterly Local Limits Analysis** **1800 River Road** **Croydon, PA 19021**
Client Project Manager: **Michael Wolgemuth**	Payment / P.O. Info: **106113**
	Regulatory ID (SDWA/Permit #):

Project Description:

Order Comments: Added via by LRF 09/08/2020 14:28

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0100136-01	Effluent		10/6 0724	BS	Non-potable	24 HC	10/5 0723

Container Type / Preservation		Preservation Check
500mL P & HNO3 pH<2	A	
250mL P & Cr6 Buffer - Field Filtered	B	START: 9.86 FINAL: 9.70 ADDED A pinch of Ammonium Sulfate (S9E0923)
1L GA & Na2S2O3 Clr	C	
1L GA & Na2S2O3 Clr	D	
1L GA & Na2S2O3 Clr	E	
1L GA & Na2S2O3 Clr	F	

7-P

Analysis - Method	Field Results
Inorganics	
Chromium (VI) - EPA 218.6	
Metals	
Arsenic, 200.8 - EPA 200.8	
Beryllium, 200.8 - EPA 200.8	
Cadmium, 200.8 - EPA 200.8	
Chromium, 200.8 - EPA 200.8	
Copper, 200.8 - EPA 200.8	
Lead, 200.8 - EPA 200.8	
Mercury, 3112 - SM 3112-B	
Molybdenum, 200.8 - EPA 200.8	
Nickel, 200.8 - EPA 200.8	
Selenium, 200.8 - EPA 200.8	
Silver, 200.8 - EPA 200.8	
Zinc, 200.8 - EPA 200.8	
Pesticide/PCB	
Pesticides, 608, PPL - EPA 608.3	
Semivolatiles	
SVOA, 625 - EPA 625.1	

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0100136-02	Effluent - Grab		10/6 0805	BS	Non-potable	Grab	—

Container Type / Preservation		Preservation Check
500mL P & NaOH pH>12, Clr	A	
1L GA & H2SO4 pH<2	B	

Analysis - Method	Field Results
Inorganics	
Cyanide, Total - ASTM D 7511-12	
Phenolics, Total - EPA 420.1	

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time		Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0100136-03	Influent		10/6	0737	BS	Non-potable	24 HC	10/5 0717

Container Type / Preservation		Preservation Check
500mL P & HNO3 ph<2 3	A	
250mL P & Cr6 Buffer - Field Filtered	B	→ START: 9.77 FINAL: 9.65 ADDED A PINCH OF AMMONIUM SULFATE (S9E0923) 7-P
1L GA & Na2S2O3 Cl 3	C	
1L GA & Na2S2O3 Cl 3	D	
1L GA & Na2S2O3 Cl 3	E	
1L GA & Na2S2O3 Cl 3	F	

Analysis - Method	Field Results
Inorganics	
Chromium (VI) - EPA 218.6	
Metals	
Arsenic, 200.8 - EPA 200.8	
Beryllium, 200.8 - EPA 200.8	
Cadmium, 200.8 - EPA 200.8	
Chromium, 200.8 - EPA 200.8	
Copper, 200.8 - EPA 200.8	
Lead, 200.8 - EPA 200.8	
Mercury, 3112 - SM 3112-B	
Molybdenum, 200.8 - EPA 200.8	
Nickel, 200.8 - EPA 200.8	
Selenium, 200.8 - EPA 200.8	
Silver, 200.8 - EPA 200.8	
Zinc, 200.8 - EPA 200.8	
Pesticide/PCB	
Pesticides, 608, PPL - EPA 608.3	
Semivolatiles	
SVOA, 625 - EPA 625.1	

BS 10/6

0100136-04	Influent - Grab		~~10/5~~	0800	BS	Non-potable	Grab	—

Container Type / Preservation		Preservation Check
500mL P & NaOH Cl ph>12 3	A	
1L GA & H2SO4 ph<2 3	B	

Analysis - Method	Field Results
Inorganics	
Cyanide, Total - ASTM D 7511-12	
Phenolics, Total - EPA 420.1	

ORDER ID: 0100136

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0100136-05	Digester Sludge		10/6 0751	BS	Solid (Dry Weight)	Grab	—

Container Type / Preservation	Preservation Check
4oz G	A
4oz G (Sub)	B
4oz G	C
4oz G	D

Analysis - Method	Field Results

Inorganics
- Chromium (VI), Solid - SW 846 7196A
- Cyanide, 9014, Total - SW 846 9014
- Phenolics, Total - SW 846 9065
- Total Solids, 2540-G (%) - SM 2540-G

Metals
- Arsenic, 6010 - SW 846 6010D
- Beryllium, 6010 - SW 846 6010D
- Cadmium, 6010 - SW 846 6010D
- Chromium, 6010 - SW 846 6010D
- Copper, 6010 - SW 846 6010D
- Lead, 6010 - SW 846 6010D
- Mercury, 7471 - SW 846 7471B
- Molybdenum, 6010 - SW 846 6010D
- Nickel, 6010 - SW 846 6010D
- Selenium, 6010 - SW 846 6010D
- Silver, 6010 - SW 846 6010D
- Zinc, 6010 - SW 846 6010D

Pesticide/PCB
- Pesticides, 8081, PPL - SW846 3550C/8081B

Semivolatiles
- SVOA, 8270, PPL - SW846 3550C/8270E

WKO TAT = 10 Cool Sample(s) to 6 C 5.0 BS

	Count	Date	Time	Temp (°C)
Relinquished By:	20	10/6/20	1150	~~6~~
Received By:	20	10/6/20	1150	9.1 ref
Relinquished By:		10/6/20	1720	0.1 Acceptable: Y / N
Received in Lab By:	20	10/6/20	1720	0.1 Acceptable: Y / N

Sample Conditions
- Number of Containers\Cooler received matches number on COC? Y / N
- Sample labels and COC free of descrepancies? Y / N
- All Containers Intact? Y / N
- VOC vials for VOA analysis free of headspace, if applicable? ~~Y / N~~

Sample Type Key
G = Grab
C = Composite
8HC = 8 Hr. Composite
24HC = 24 Hr. Composite

S D W A
D = Distribution
E = Entry Point
R = Raw
C = Check
S = Special
M = Maximum

Bottle Type Key
P = Plastic
G = Glass
GA = Glass Amber
VOA = 40mL G or GA
PP = Sterile Polypropylene
PS = Sterile Polystyrene
HDPE = High Density Poylethylene
O = Other

Preservative Key
A = Ascorbic Acid
C = HCl
H = HNO3
N = Sodium Thiosulfate
OH = NaOH
S = H2SO4
O = Other
NA = None Required

Signing this form indicates your agreement with STL's Standard Terms and Conditions (www.suburbantestinglabs.com\resources\standard-terms-and-conditions.html) unless otherwise specified in writing.

Shaded areas are for STL use only

Appendix 2 – PCB Reports for SIUs

1720 Walton Road, Blue Bell, PA 19422 610-828-3078 Fax 610-828-7842

April 14, 2020

E-MAIL
Ms. Randee Elton
Township Manager
Bristol Township Pretreatment Coordinator
Bristol Township
2501 Bath Road
Bristol, PA 19007
relton@bristoltownship.org

Subject: Wastewater Discharge Monitoring Report
March 2020
Permit No. IND-05-S-2019
Lower Bucks Hospital
Bristol, Pennsylvania
IES Project No. EV201318.01

Dear Ms. Elton:

On behalf of Lower Bucks Hospital (LBH), IES Engineers (IES) is pleased to submit the enclosed wastewater discharge monitoring report for the month of March 2020. Sampling was conducted on March 13, 2020. Samples were collected at Outfall LBH01 at the LBH facility, which is located at 501 Bath Road, Bristol, Pennsylvania. Laboratory analyses were performed by TestAmerica Laboratories, Inc., of Edison, New Jersey. This sampling event report fulfills the monthly and quarterly sampling requirements of LBH's Industrial Wastewater Discharge Permit that was issued by Bristol Township on January 1, 2019.

All parameters analyzed are in compliance with the permit limits.

As part of the quarterly monitoring requirement, LBH analyzed the wastewater during March 2020, for PCBs, cyanide, phenols, and Total Petroleum Hydrocarbons (TPH) using EPA Methods. A summary of the PCB Laboratory Results is presented in Attachment 2 and the full laboratory report for all other pollutant parameters is presented in Attachment 1. The analytical results clearly indicate that all parameters are in compliance with the permit limits.

LBH is currently estimating wastewater discharge flow to be equivalent to the quantity of water purchased. On this basis, the total discharge flow for the month of March 2020 was 528,700 gallons or an average of 17,656 gallons per day based on water meter billing period.

A copy of water meter data for March 2020 is presented in Attachment 3.

If you have any questions, please contact me or Mr. George Lodish LBH at (215) 785-9014.

Very truly yours,

Michael T. Havard /e/
Michael T. Havard
Project Engineer

Attachments
cc: V. Nedrick, RVE
T. Rivera, InfraMark
G. Lodish, LBH
P. Ryan, LBH
J. Martin, IES
A. Soni, IES

3800-FM-BCW0462 12/2016

PERMITTEE NAME/ADDRESS

DISCHARGE MONITORING REPORT (DMR)

NAME **Lower Bucks Hospital**

ADDRESS **501 Bath Road**

FACILITY

LOCATION

WATERSHED

IND-05-S-2019
PERMIT NUMBER

LBH01
OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
2020	**03**	**01**	TO	**2020**	**03**	**31**

FROM

Reporting Frequency: Monthly

DMR Effective From:

DMR Effective To:

Permit Expires: December 31, 2023

Permit Application Due:

☐ Check here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
BOD5	SAMPLE MEASUREMENT				34.2	34.2	34.2	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					550					
CBOD20	SAMPLE MEASUREMENT				>35.0	>35.0	>35.0	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1200					
COD	SAMPLE MEASUREMENT				92.6	92.6	92.6	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1200					
TSS	SAMPLE MEASUREMENT				14.4	14.4	14.4	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					650					
FOG	SAMPLE MEASUREMENT				6.3	6.3	6.3	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					150					
Ammonia	SAMPLE MEASUREMENT				10.2	10.2	10.2	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					50					
Cadmium (Total)	SAMPLE MEASUREMENT				<0.00089	<0.00089	<0.00089	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.10					
Chromium (Total)	SAMPLE MEASUREMENT				<0.00054	<0.00054	<0.00054	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1.80					

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
Copper (Total)	SAMPLE MEASUREMENT				0.0422	0.0422	0.0422	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.51					
Cyanide (Total)	SAMPLE MEASUREMENT				0.004	0.004	0.004	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT					2.31					
Lead (Total)	SAMPLE MEASUREMENT				0.00034	0.00034	0.00034	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.43					
Mercury (Total)	SAMPLE MEASUREMENT				0.000091	0.000091	0.000091	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.003					
Nickel (Total)	SAMPLE MEASUREMENT				0.0015	0.0015	0.0015	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.51					
Silver (Total)	SAMPLE MEASUREMENT				<0.00059	<0.00059	<0.00059	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.14					
Arsenic (Total)	SAMPLE MEASUREMENT				<0.0022	<0.0022	<0.0022	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					2.30					

		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
Zinc (Total)	SAMPLE MEASUREMENT				0.0453	0.0453	0.0453	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					2.90					
Phenols (Total)	SAMPLE MEASUREMENT				0.082	0.082	0.082	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT					1.83					
Daily Flow, gallons per day	SAMPLE MEASUREMENT					17,656		GPD	0	N/A	N/A
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
pH	SAMPLE MEASUREMENT				6.81	6.81	6.81	S.U	0	1	COMPOSITE
	PERMIT REQUIREMENT				6.0	---	9.0				
Total Petroleum Hydrocarbons (TPH)	SAMPLE MEASUREMENT				1.4	1.4	1.4	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
PCBs	SAMPLE MEASUREMENT					See Attachment 2		mg/l	0	Q	GRAB
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
	SAMPLE MEASUREMENT								0		
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate 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 am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).		TELEPHONE		DATE		
George Lodish / Director of Facilities			215	785-9014			
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

ATTACHMENT 1

LABORATORY ANALYTICAL DATA

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

Laboratory Job ID: 460-204979-1
Client Project/Site: Quarterly #183765

For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Attn: Michael J. Tucci

Authorized for release by:
4/3/2020 1:42:06 PM

Julie Gilmore, Project Manager I
(484)685-0865
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LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
C	The compound co-eluted with other compounds
C108	The compound co-eluted with PCB-108
C110	The compound co-eluted with PCB-110
C12	The compound co-eluted with PCB-12
C128	The compound co-eluted with PCB-128
C129	The compound co-eluted with PCB-129
C134	The compound co-eluted with PCB-134
C135	The compound co-eluted with PCB-135
C139	The compound co-eluted with PCB-139
C147	The compound co-eluted with PCB-147
C153	The compound co-eluted with PCB-153
C156	The compound co-eluted with PCB-156
C171	The compound co-eluted with PCB-171
C18	The compound co-eluted with PCB-18
C180	The compound co-eluted with PCB-180
C183	The compound co-eluted with PCB-183
C198	The compound co-eluted with PCB-198
C20	The compound co-eluted with PCB-20
C21	The compound co-eluted with PCB-21
C26	The compound co-eluted with PCB-26
C40	The compound co-eluted with PCB-40
C43	The compound co-eluted with PCB-43
C44	The compound co-eluted with PCB-44
C45	The compound co-eluted with PCB-45
C49	The compound co-eluted with PCB-49
C50	The compound co-eluted with PCB-50
C59	The compound co-eluted with PCB-59
C61	The compound co-eluted with PCB-61
C83	The compound co-eluted with PCB-83
C85	The compound co-eluted with PCB-85
C86	The compound co-eluted with PCB-86
C88	The compound co-eluted with PCB-88
C90	The compound co-eluted with PCB-90
C93	The compound co-eluted with PCB-93
C98	The compound co-eluted with PCB-98
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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)

Job ID: 460-204979-1

Laboratory: Eurofins TestAmerica, Edison

Narrative

CASE NARRATIVE

Client: IES Engineers

Project: Quarterly #183765

Report Number: 460-204979-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 03/13/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.3 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DIOXINS
Sample Outfall Grab (460-204979-2) was analyzed for dioxins in accordance with EPA Method 1668A. The samples were prepared on 03/24/2020 and analyzed on 03/28/2020.

Several analytes were detected in method blank MB 140-38616/10-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No other difficulties were encountered during the dioxins analysis.

All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS
Sample Outfall Comp (460-204979-1) was analyzed for total recoverable metals in accordance with EPA Method 200.8 (ICP/MS). The samples were prepared on 03/19/2020 and analyzed on 03/20/2020.

As a standard practice all non-potable samples and related QC samples (i.e., MB, LCS, Dup, MS, SD) are diluted 5X prior to analysis. Further dilutions may be required dependent upon analyte levels in the samples. Refer to the analytical results forms for dilutions.

For the duplicate of sample 460-205292-2. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis.

Job ID: 460-204979-1 (Continued)

Laboratory: Eurofins TestAmerica, Edison (Continued)

All other quality control parameters were within the acceptance limits.

TOTAL MERCURY
Sample Outfall Comp (460-204979-1) was analyzed for total mercury in accordance with EPA Method 245.1. The samples were prepared and analyzed on 03/25/2020.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

OIL&GREASE
Samples Outfall Comp (460-204979-1) and Outfall Grab (460-204979-2) were analyzed for Silica Gel Treated (SGT/Petroleum Hydrocarbon) and N-Hexane Extractable Material (HEM/Oil&Grease) in accordance with EPA SW-846 Method 1664A. The samples were analyzed on 03/25/2020 and 03/26/2020.

HEM and SGT-HEM failed the recovery criteria low for the MS of sample 460-205148-1 in batch 460-683478.

Refer to the QC report for details.

No other difficulties were encountered during the SGT-HEM/HEM analysis.

All other quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS
Sample Outfall Comp (460-204979-1) was analyzed for total suspended solids in accordance with SM 2540D. The samples were analyzed on 03/19/2020.

No difficulties were encountered during the TSS analysis.

All quality control parameters were within the acceptance limits.

TOTAL CYANIDE
Sample Outfall Grab (460-204979-2) was analyzed for total cyanide in accordance with EPA Method 335.4. The samples were prepared on 03/20/2020 and analyzed on 03/23/2020.

The laboratory control sample (LCS) for preparation batch 460-682544 and analytical batch 460-683058 recovered outside control limits for the following analytes: Cyanide, Total. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Cyanide, Total failed the recovery criteria high for LCS 460-682544/2-A. Refer to the QC report for details.

Cyanide, Total failed the recovery criteria low for the MS/MSD of sample 460-205376-5 in batch 460-683058.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

No other difficulties were encountered during the cyanide analysis.

All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE PHENOLS
Sample Outfall Grab (460-204979-2) was analyzed for total recoverable phenols in accordance with EPA Method 420.1. The samples were

Job ID: 460-204979-1 (Continued)

Laboratory: Eurofins TestAmerica, Edison (Continued)

prepared and analyzed on 03/17/2020.

Due to the matrix, the initial volume used for the following sample deviated from the standard procedure: Outfall Grab (460-204979-2). The reporting limits (RLs) have been adjusted proportionately.

No difficulties were encountered during the phenol analysis.

All quality control parameters were within the acceptance limits.

BIOCHEMICAL OXYGEN DEMAND 5 DAY
Sample Outfall Comp (460-204979-1) was analyzed for Biochemical Oxygen Demand 5 Day in accordance with SM 5210B. The samples were analyzed on 03/14/2020.

No difficulties were encountered during the BOD5 analysis.

All quality control parameters were within the acceptance limits.

CHEMICAL OXYGEN DEMAND
Sample Outfall Comp (460-204979-1) was analyzed for Chemical Oxygen Demand in accordance with SM 5220D. The samples were analyzed on 03/18/2020.

No difficulties were encountered during the COD analysis.

All quality control parameters were within the acceptance limits.

FIELD PH
Samples Outfall Comp (460-204979-1) and Outfall Grab (460-204979-2) were analyzed for field pH in accordance with SM 4500_H+_F. The samples were analyzed on 03/13/2020.

No difficulties were encountered during the field pH analysis.

All quality control parameters were within the acceptance limits.

AMMONIA
Sample Outfall Comp (460-204979-1) was analyzed for ammonia in accordance with SM4500NH3_G. The samples were analyzed on 03/24/2020.

Ammonia failed the recovery criteria high for the MSD of sample 460-205412-3 in batch 460-683303.

Refer to the QC report for details.

No other difficulties were encountered during the ammonia analysis.

All other quality control parameters were within the acceptance limits.

CARBONACEOUS BIOCHEMICAL OXYGEN DEMAND 20 DAY
Sample Outfall Comp (460-204979-1) was analyzed for Carbonaceous Biochemical Oxygen Demand 20 Day in accordance with SM 5210B. The samples were analyzed on 03/14/2020.

No difficulties were encountered during the CBOD20 analysis.

All quality control parameters were within the acceptance limits.

ORGANIC PREP
Methods 1668_Sep_2L, 3540C, 3550C, 8290, HRMS-Sepf, HRMS-Sox, Split: The following samples went through Gel-Permeation

Job ID: 460-204979-1 (Continued)

Laboratory: Eurofins TestAmerica, Edison (Continued)

Cleanup procedure, based on EPA method 3640A:

Outfall Grab (460-204979-2)

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

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Client Sample ID: Outfall Comp — Lab Sample ID: 460-204979-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	42.2		5.0	2.6	ug/L	5		200.8	Total Recoverable
Lead	0.34	J	1.5	0.17	ug/L	5		200.8	Total Recoverable
Zinc	45.3		20.0	3.4	ug/L	5		200.8	Total Recoverable
HEM	6.3		5.0	1.4	mg/L	1		1664A	Total/NA
Total Suspended Solids	14.4		5.6	5.6	mg/L	1		SM 2540D	Total/NA
Ammonia	10.2		0.10	0.034	mg/L	1		SM 4500 NH3 G	Total/NA
Biochemical Oxygen Demand	34.2		1.0	1.0	mg/L	1		SM 5210B	Total/NA
Chemical Oxygen Demand	92.6		10.0	3.3	mg/L	1		SM 5220D	Total/NA
Carbonaceous Biochemical Oxygen Demand 20	>35.0		1.0	1.0	mg/L	1		SM5210B	Total/NA
Field pH	6.81				SU	1		SM4500 H+	Total/NA

Client Sample ID: Outfall Grab — Lab Sample ID: 460-204979-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1	0.033	J B	0.043	0.00045	ng/L	1		1668A	Total/NA
PCB-2	0.0080	J	0.043	0.00051	ng/L	1		1668A	Total/NA
PCB-3	0.039	J B	0.043	0.00054	ng/L	1		1668A	Total/NA
PCB-4	0.068		0.064	0.0040	ng/L	1		1668A	Total/NA
PCB-5	0.013	J q	0.043	0.0031	ng/L	1		1668A	Total/NA
PCB-6	0.055	q	0.043	0.0027	ng/L	1		1668A	Total/NA
PCB-7	0.033	J q	0.043	0.0028	ng/L	1		1668A	Total/NA
PCB-8	0.22	B	0.064	0.0025	ng/L	1		1668A	Total/NA
PCB-9	0.020	J q	0.043	0.0028	ng/L	1		1668A	Total/NA
PCB-10	0.0041	J q	0.043	0.0030	ng/L	1		1668A	Total/NA
PCB-11	0.13	B	0.064	0.0026	ng/L	1		1668A	Total/NA
PCB-12	0.060	J C	0.086	0.0027	ng/L	1		1668A	Total/NA
PCB-13	0.060	J C12	0.086	0.0027	ng/L	1		1668A	Total/NA
PCB-15	0.14	B	0.043	0.0027	ng/L	1		1668A	Total/NA
PCB-16	0.063	q	0.043	0.0010	ng/L	1		1668A	Total/NA
PCB-17	0.062		0.043	0.00091	ng/L	1		1668A	Total/NA
PCB-18	0.11	q C B	0.086	0.00080	ng/L	1		1668A	Total/NA
PCB-19	0.0067	J q	0.043	0.0011	ng/L	1		1668A	Total/NA
PCB-20	0.22	C B	0.086	0.0012	ng/L	1		1668A	Total/NA
PCB-21	0.15	C B	0.086	0.0012	ng/L	1		1668A	Total/NA
PCB-22	0.098		0.043	0.0012	ng/L	1		1668A	Total/NA
PCB-24	0.0030	J	0.043	0.00077	ng/L	1		1668A	Total/NA
PCB-25	0.017	J	0.043	0.0011	ng/L	1		1668A	Total/NA
PCB-26	0.033	J C	0.086	0.0012	ng/L	1		1668A	Total/NA
PCB-27	0.0082	J	0.043	0.00066	ng/L	1		1668A	Total/NA
PCB-28	0.22	C20 B	0.086	0.0012	ng/L	1		1668A	Total/NA
PCB-29	0.033	J C26	0.086	0.0012	ng/L	1		1668A	Total/NA
PCB-30	0.11	q C18 B	0.086	0.00080	ng/L	1		1668A	Total/NA
PCB-31	0.20	B	0.043	0.0012	ng/L	1		1668A	Total/NA
PCB-32	0.048		0.043	0.00063	ng/L	1		1668A	Total/NA
PCB-33	0.15	C21 B	0.086	0.0012	ng/L	1		1668A	Total/NA
PCB-35	0.0099	J	0.043	0.0012	ng/L	1		1668A	Total/NA
PCB-37	0.10	B	0.043	0.0012	ng/L	1		1668A	Total/NA
PCB-40	0.10	J C	0.13	0.0031	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-204979-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-41	0.10	J C40	0.13	0.0031	ng/L	1		1668A	Total/NA
PCB-42	0.036	J	0.043	0.0031	ng/L	1		1668A	Total/NA
PCB-43	0.0074	J q C	0.086	0.0029	ng/L	1		1668A	Total/NA
PCB-44	0.22	C B	0.13	0.0027	ng/L	1		1668A	Total/NA
PCB-45	0.022	J C	0.086	0.0032	ng/L	1		1668A	Total/NA
PCB-46	0.0066	J	0.043	0.0039	ng/L	1		1668A	Total/NA
PCB-47	0.22	C44 B	0.13	0.0027	ng/L	1		1668A	Total/NA
PCB-48	0.037	J	0.043	0.0031	ng/L	1		1668A	Total/NA
PCB-49	0.11	C	0.086	0.0025	ng/L	1		1668A	Total/NA
PCB-50	0.014	J C	0.086	0.0030	ng/L	1		1668A	Total/NA
PCB-51	0.022	J C45	0.086	0.0032	ng/L	1		1668A	Total/NA
PCB-52	0.38		0.043	0.0030	ng/L	1		1668A	Total/NA
PCB-53	0.014	J C50	0.086	0.0030	ng/L	1		1668A	Total/NA
PCB-55	0.010	J	0.043	0.0022	ng/L	1		1668A	Total/NA
PCB-56	0.091		0.043	0.0022	ng/L	1		1668A	Total/NA
PCB-59	0.012	J C	0.13	0.0022	ng/L	1		1668A	Total/NA
PCB-60	0.059		0.043	0.0023	ng/L	1		1668A	Total/NA
PCB-61	0.47	C B	0.17	0.0021	ng/L	1		1668A	Total/NA
PCB-62	0.012	J C59	0.13	0.0022	ng/L	1		1668A	Total/NA
PCB-63	0.0067	J	0.043	0.0021	ng/L	1		1668A	Total/NA
PCB-64	0.085		0.043	0.0020	ng/L	1		1668A	Total/NA
PCB-65	0.22	C44 B	0.13	0.0027	ng/L	1		1668A	Total/NA
PCB-66	0.19		0.043	0.0021	ng/L	1		1668A	Total/NA
PCB-67	0.0049	J q	0.043	0.0020	ng/L	1		1668A	Total/NA
PCB-68	0.0021	J q	0.043	0.0020	ng/L	1		1668A	Total/NA
PCB-69	0.11	C49	0.086	0.0025	ng/L	1		1668A	Total/NA
PCB-70	0.47	C61 B	0.17	0.0021	ng/L	1		1668A	Total/NA
PCB-71	0.10	J C40	0.13	0.0031	ng/L	1		1668A	Total/NA
PCB-73	0.0074	J q C43	0.086	0.0029	ng/L	1		1668A	Total/NA
PCB-74	0.47	C61 B	0.17	0.0021	ng/L	1		1668A	Total/NA
PCB-75	0.012	J C59	0.13	0.0022	ng/L	1		1668A	Total/NA
PCB-76	0.47	C61 B	0.17	0.0021	ng/L	1		1668A	Total/NA
PCB-77	0.013	J	0.043	0.0022	ng/L	1		1668A	Total/NA
PCB-79	0.0033	J q	0.043	0.0020	ng/L	1		1668A	Total/NA
PCB-82	0.048		0.043	0.00032	ng/L	1		1668A	Total/NA
PCB-83	0.23	C	0.086	0.00029	ng/L	1		1668A	Total/NA
PCB-84	0.14		0.043	0.00033	ng/L	1		1668A	Total/NA
PCB-85	0.068	J C B	0.13	0.00024	ng/L	1		1668A	Total/NA
PCB-86	0.29	C B	0.26	0.00024	ng/L	1		1668A	Total/NA
PCB-87	0.29	C86 B	0.26	0.00024	ng/L	1		1668A	Total/NA
PCB-88	0.059	J q C	0.086	0.00029	ng/L	1		1668A	Total/NA
PCB-89	0.0053	J	0.043	0.00032	ng/L	1		1668A	Total/NA
PCB-90	0.49	C B	0.13	0.00024	ng/L	1		1668A	Total/NA
PCB-91	0.059	J q C88	0.086	0.00029	ng/L	1		1668A	Total/NA
PCB-92	0.064	q	0.043	0.00028	ng/L	1		1668A	Total/NA
PCB-93	0.0048	J C	0.086	0.00028	ng/L	1		1668A	Total/NA
PCB-94	0.0020	J q	0.043	0.00031	ng/L	1		1668A	Total/NA
PCB-95	0.46		0.043	0.00030	ng/L	1		1668A	Total/NA
PCB-96	0.0036	J	0.043	0.00024	ng/L	1		1668A	Total/NA
PCB-97	0.29	C86 B	0.26	0.00024	ng/L	1		1668A	Total/NA
PCB-98	0.013	J q C	0.086	0.00027	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-204979-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-99	0.23	C83	0.086	0.00029	ng/L	1		1668A	Total/NA
PCB-100	0.0048	J C93	0.086	0.00028	ng/L	1		1668A	Total/NA
PCB-101	0.49	C90 B	0.13	0.00024	ng/L	1		1668A	Total/NA
PCB-102	0.013	J q C98	0.086	0.00027	ng/L	1		1668A	Total/NA
PCB-103	0.0025	J	0.043	0.00028	ng/L	1		1668A	Total/NA
PCB-105	0.082	B	0.043	0.0014	ng/L	1		1668A	Total/NA
PCB-107	0.012	J q	0.043	0.0016	ng/L	1		1668A	Total/NA
PCB-108	0.0089	J q C	0.086	0.0015	ng/L	1		1668A	Total/NA
PCB-109	0.29	C86 B	0.26	0.00024	ng/L	1		1668A	Total/NA
PCB-110	0.45	C B	0.086	0.00020	ng/L	1		1668A	Total/NA
PCB-113	0.49	C90 B	0.13	0.00024	ng/L	1		1668A	Total/NA
PCB-114	0.0067	J	0.043	0.0014	ng/L	1		1668A	Total/NA
PCB-115	0.45	C110 B	0.086	0.00020	ng/L	1		1668A	Total/NA
PCB-116	0.068	J C85 B	0.13	0.00024	ng/L	1		1668A	Total/NA
PCB-117	0.068	J C85 B	0.13	0.00024	ng/L	1		1668A	Total/NA
PCB-118	0.23	B	0.043	0.0014	ng/L	1		1668A	Total/NA
PCB-119	0.29	C86 B	0.26	0.00024	ng/L	1		1668A	Total/NA
PCB-122	0.0048	J	0.043	0.0017	ng/L	1		1668A	Total/NA
PCB-123	0.0029	J q	0.043	0.0014	ng/L	1		1668A	Total/NA
PCB-124	0.0089	J q C108	0.086	0.0015	ng/L	1		1668A	Total/NA
PCB-125	0.29	C86 B	0.26	0.00024	ng/L	1		1668A	Total/NA
PCB-128	0.030	J q C	0.086	0.0013	ng/L	1		1668A	Total/NA
PCB-129	0.38	C B	0.17	0.0014	ng/L	1		1668A	Total/NA
PCB-130	0.015	J q	0.043	0.0018	ng/L	1		1668A	Total/NA
PCB-131	0.0052	J	0.043	0.0019	ng/L	1		1668A	Total/NA
PCB-132	0.13		0.043	0.0018	ng/L	1		1668A	Total/NA
PCB-133	0.0047	J q	0.043	0.0017	ng/L	1		1668A	Total/NA
PCB-134	0.016	J q C	0.086	0.0018	ng/L	1		1668A	Total/NA
PCB-135	0.14	C	0.086	0.00020	ng/L	1		1668A	Total/NA
PCB-136	0.050	q	0.043	0.00014	ng/L	1		1668A	Total/NA
PCB-137	0.0070	J q	0.043	0.0015	ng/L	1		1668A	Total/NA
PCB-138	0.38	C129 B	0.17	0.0014	ng/L	1		1668A	Total/NA
PCB-139	0.0026	J q C	0.086	0.0015	ng/L	1		1668A	Total/NA
PCB-140	0.0026	J q C139	0.086	0.0015	ng/L	1		1668A	Total/NA
PCB-141	0.10		0.043	0.0016	ng/L	1		1668A	Total/NA
PCB-143	0.016	J q C134	0.086	0.0018	ng/L	1		1668A	Total/NA
PCB-144	0.020	J	0.043	0.00018	ng/L	1		1668A	Total/NA
PCB-146	0.050		0.043	0.0015	ng/L	1		1668A	Total/NA
PCB-147	0.38	C	0.086	0.0017	ng/L	1		1668A	Total/NA
PCB-149	0.38	C147	0.086	0.0017	ng/L	1		1668A	Total/NA
PCB-151	0.14	C135	0.086	0.00020	ng/L	1		1668A	Total/NA
PCB-153	0.34	C B	0.086	0.0012	ng/L	1		1668A	Total/NA
PCB-154	0.0044	J	0.043	0.00016	ng/L	1		1668A	Total/NA
PCB-156	0.029	J C B	0.086	0.0015	ng/L	1		1668A	Total/NA
PCB-157	0.029	J C156 B	0.086	0.0015	ng/L	1		1668A	Total/NA
PCB-158	0.033	J	0.043	0.0011	ng/L	1		1668A	Total/NA
PCB-159	0.0051	J	0.043	0.0011	ng/L	1		1668A	Total/NA
PCB-160	0.38	C129 B	0.17	0.0014	ng/L	1		1668A	Total/NA
PCB-163	0.38	C129 B	0.17	0.0014	ng/L	1		1668A	Total/NA
PCB-164	0.028	J	0.043	0.0012	ng/L	1		1668A	Total/NA
PCB-166	0.030	J q C128	0.086	0.0013	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-204979-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-167	0.0071	J q	0.043	0.00085	ng/L	1		1668A	Total/NA
PCB-168	0.34	C153 B	0.086	0.0012	ng/L	1		1668A	Total/NA
PCB-169	0.0017	J q B	0.043	0.00087	ng/L	1		1668A	Total/NA
PCB-170	0.19		0.043	0.00019	ng/L	1		1668A	Total/NA
PCB-171	0.054	J q C B	0.086	0.00018	ng/L	1		1668A	Total/NA
PCB-172	0.028	J q	0.043	0.00018	ng/L	1		1668A	Total/NA
PCB-173	0.054	J q C171 B	0.086	0.00018	ng/L	1		1668A	Total/NA
PCB-174	0.18		0.043	0.00017	ng/L	1		1668A	Total/NA
PCB-175	0.0041	J q	0.043	0.00016	ng/L	1		1668A	Total/NA
PCB-176	0.017	J	0.043	0.00012	ng/L	1		1668A	Total/NA
PCB-177	0.10		0.043	0.00017	ng/L	1		1668A	Total/NA
PCB-178	0.033	J	0.043	0.00017	ng/L	1		1668A	Total/NA
PCB-179	0.061	B	0.043	0.00013	ng/L	1		1668A	Total/NA
PCB-180	0.42	C B	0.086	0.00013	ng/L	1		1668A	Total/NA
PCB-183	0.12	C B	0.086	0.00016	ng/L	1		1668A	Total/NA
PCB-185	0.12	C183 B	0.086	0.00016	ng/L	1		1668A	Total/NA
PCB-187	0.20		0.043	0.00015	ng/L	1		1668A	Total/NA
PCB-189	0.0038	J q B	0.043	0.00029	ng/L	1		1668A	Total/NA
PCB-190	0.030	J q B	0.043	0.00012	ng/L	1		1668A	Total/NA
PCB-191	0.0080	J B	0.043	0.00012	ng/L	1		1668A	Total/NA
PCB-193	0.42	C180 B	0.086	0.00013	ng/L	1		1668A	Total/NA
PCB-194	0.086	B	0.043	0.00060	ng/L	1		1668A	Total/NA
PCB-195	0.032	J q B	0.043	0.00066	ng/L	1		1668A	Total/NA
PCB-196	0.037	J q	0.043	0.00017	ng/L	1		1668A	Total/NA
PCB-197	0.0014	J q	0.043	0.00013	ng/L	1		1668A	Total/NA
PCB-198	0.083	J C B	0.086	0.00017	ng/L	1		1668A	Total/NA
PCB-199	0.083	J C198 B	0.086	0.00017	ng/L	1		1668A	Total/NA
PCB-200	0.0062	J q B	0.043	0.00012	ng/L	1		1668A	Total/NA
PCB-201	0.0077	J q	0.043	0.00012	ng/L	1		1668A	Total/NA
PCB-202	0.012	J q B	0.043	0.00013	ng/L	1		1668A	Total/NA
PCB-203	0.047	B	0.043	0.00015	ng/L	1		1668A	Total/NA
PCB-205	0.0045	J B	0.043	0.00051	ng/L	1		1668A	Total/NA
PCB-206	0.013	J B	0.043	0.0023	ng/L	1		1668A	Total/NA
PCB-208	0.0035	J q	0.043	0.0015	ng/L	1		1668A	Total/NA
PCB-209	0.043	B	0.043	0.000062	ng/L	1		1668A	Total/NA
HEM	5.5		5.0	1.4	mg/L	1		1664A	Total/NA
Field pH	6.55				SU	1		SM4500 H+	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Client Sample ID: Outfall Comp

Lab Sample ID: 460-204979-1
Date Collected: 03/13/20 07:30
Matrix: Water
Date Received: 03/13/20 19:30

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2	U	2.5	2.2	ug/L		03/19/20 18:55	03/20/20 11:32	5
Cadmium	0.89	U	2.5	0.89	ug/L		03/19/20 18:55	03/20/20 11:32	5
Chromium	0.54	U	5.0	0.54	ug/L		03/19/20 18:55	03/20/20 11:32	5
Copper	**42.2**		5.0	2.6	ug/L		03/19/20 18:55	03/20/20 11:32	5
Nickel	1.5	U	5.0	1.5	ug/L		03/19/20 18:55	03/20/20 11:32	5
Lead	**0.34**	**J**	1.5	0.17	ug/L		03/19/20 18:55	03/20/20 11:32	5
Zinc	**45.3**		20.0	3.4	ug/L		03/19/20 18:55	03/20/20 11:32	5
Silver	0.59	U	5.0	0.59	ug/L		03/19/20 18:55	03/20/20 11:32	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.091	U	0.20	0.091	ug/L		03/25/20 12:02	03/25/20 13:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	**6.3**		5.0	1.4	mg/L			03/26/20 08:27	1
Total Suspended Solids	**14.4**		5.6	5.6	mg/L			03/19/20 07:48	1
Ammonia	**10.2**		0.10	0.034	mg/L			03/24/20 11:28	1
Biochemical Oxygen Demand	**34.2**		1.0	1.0	mg/L			03/14/20 11:45	1
Chemical Oxygen Demand	**92.6**		10.0	3.3	mg/L			03/18/20 17:05	1
Carbonaceous Biochemical Oxygen Demand 20	**>35.0**		1.0	1.0	mg/L			03/14/20 16:32	1

Method: SM4500 H+ - pH, Field

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.81**				SU			03/13/20 07:35	1

Client Sample ID: Outfall Grab

Lab Sample ID: 460-204979-2
Date Collected: 03/13/20 07:35
Matrix: Water
Date Received: 03/13/20 19:30

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	**0.033**	**J B**	0.043	0.00045	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-2	**0.0080**	**J**	0.043	0.00051	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-3	**0.039**	**J B**	0.043	0.00054	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-4	**0.068**		0.064	0.0040	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-5	**0.013**	**J q**	0.043	0.0031	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-6	**0.055**	**q**	0.043	0.0027	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-7	**0.033**	**J q**	0.043	0.0028	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-8	**0.22**	**B**	0.064	0.0025	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-9	**0.020**	**J q**	0.043	0.0028	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-10	**0.0041**	**J q**	0.043	0.0030	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-11	**0.13**	**B**	0.064	0.0026	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-12	**0.060**	**J C**	0.086	0.0027	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-13	**0.060**	**J C12**	0.086	0.0027	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-14	0.0023	U	0.043	0.0023	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-15	**0.14**	**B**	0.043	0.0027	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-16	**0.063**	**q**	0.043	0.0010	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-17	**0.062**		0.043	0.00091	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-18	**0.11**	**q C B**	0.086	0.00080	ng/L		03/24/20 12:45	03/28/20 21:30	1

Client Sample ID: Outfall Grab

Lab Sample ID: 460-204979-2

Date Collected: 03/13/20 07:35

Matrix: Water

Date Received: 03/13/20 19:30

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-19	0.0067	J q	0.043	0.0011	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-20	0.22	C B	0.086	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-21	0.15	C B	0.086	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-22	0.098		0.043	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-23	0.0012	U	0.043	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-24	0.0030	J	0.043	0.00077	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-25	0.017	J	0.043	0.0011	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-26	0.033	J C	0.086	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-27	0.0082	J	0.043	0.00066	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-28	0.22	C20 B	0.086	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-29	0.033	J C26	0.086	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-30	0.11	q C18 B	0.086	0.00080	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-31	0.20	B	0.043	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-32	0.048		0.043	0.00063	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-33	0.15	C21 B	0.086	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-34	0.0012	U	0.043	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-35	0.0099	J	0.043	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-36	0.0012	U	0.043	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-37	0.10	B	0.043	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-38	0.0013	U	0.043	0.0013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-39	0.0011	U	0.043	0.0011	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-40	0.10	J C	0.13	0.0031	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-41	0.10	J C40	0.13	0.0031	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-42	0.036	J	0.043	0.0031	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-43	0.0074	J q C	0.086	0.0029	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-44	0.22	C B	0.13	0.0027	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-45	0.022	J C	0.086	0.0032	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-46	0.0066	J	0.043	0.0039	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-47	0.22	C44 B	0.13	0.0027	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-48	0.037	J	0.043	0.0031	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-49	0.11	C	0.086	0.0025	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-50	0.014	J C	0.086	0.0030	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-51	0.022	J C45	0.086	0.0032	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-52	0.38		0.043	0.0030	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-53	0.014	J C50	0.086	0.0030	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-54	0.000075	U	0.043	0.000075	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-55	0.010	J	0.043	0.0022	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-56	0.091		0.043	0.0022	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-57	0.0023	U	0.043	0.0023	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-58	0.0023	U	0.043	0.0023	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-59	0.012	J C	0.13	0.0022	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-60	0.059		0.043	0.0023	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-61	0.47	C B	0.17	0.0021	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-62	0.012	J C59	0.13	0.0022	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-63	0.0067	J	0.043	0.0021	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-64	0.085		0.043	0.0020	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-65	0.22	C44 B	0.13	0.0027	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-66	0.19		0.043	0.0021	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-67	0.0049	J q	0.043	0.0020	ng/L		03/24/20 12:45	03/28/20 21:30	1

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Client Sample ID: Outfall Grab

Date Collected: 03/13/20 07:35
Date Received: 03/13/20 19:30

Lab Sample ID: 460-204979-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-68	0.0021	J q	0.043	0.0020	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-69	0.11	C49	0.086	0.0025	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-70	0.47	C61 B	0.17	0.0021	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-71	0.10	J C40	0.13	0.0031	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-72	0.0022	U	0.043	0.0022	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-73	0.0074	J q C43	0.086	0.0029	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-74	0.47	C61 B	0.17	0.0021	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-75	0.012	J C59	0.13	0.0022	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-76	0.47	C61 B	0.17	0.0021	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-77	0.013	J	0.043	0.0022	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-78	0.0023	U	0.043	0.0023	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-79	0.0033	J q	0.043	0.0020	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-80	0.0019	U	0.043	0.0019	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-81	0.0020	U	0.043	0.0020	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-82	0.048		0.043	0.00032	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-83	0.23	C	0.086	0.00029	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-84	0.14		0.043	0.00033	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-85	0.068	J C B	0.13	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-86	0.29	C B	0.26	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-87	0.29	C86 B	0.26	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-88	0.059	J q C	0.086	0.00029	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-89	0.0053	J	0.043	0.00032	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-90	0.49	C B	0.13	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-91	0.059	J q C88	0.086	0.00029	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-92	0.064	q	0.043	0.00028	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-93	0.0048	J C	0.086	0.00028	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-94	0.0020	J q	0.043	0.00031	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-95	0.46		0.043	0.00030	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-96	0.0036	J	0.043	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-97	0.29	C86 B	0.26	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-98	0.013	J q C	0.086	0.00027	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-99	0.23	C83	0.086	0.00029	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-100	0.0048	J C93	0.086	0.00028	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-101	0.49	C90 B	0.13	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-102	0.013	J q C98	0.086	0.00027	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-103	0.0025	J	0.043	0.00028	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-104	0.00021	U	0.043	0.00021	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-105	0.082	B	0.043	0.0014	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-106	0.0015	U	0.043	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-107	0.012	J q	0.043	0.0016	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-108	0.0089	J q C	0.086	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-109	0.29	C86 B	0.26	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-110	0.45	C B	0.086	0.00020	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-111	0.00020	U	0.043	0.00020	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-112	0.00021	U	0.043	0.00021	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-113	0.49	C90 B	0.13	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-114	0.0067	J	0.043	0.0014	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-115	0.45	C110 B	0.086	0.00020	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-116	0.068	J C85 B	0.13	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Client Sample ID: Outfall Grab

Date Collected: 03/13/20 07:35
Date Received: 03/13/20 19:30

Lab Sample ID: 460-204979-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-117	0.068	J C85 B	0.13	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-118	0.23	B	0.043	0.0014	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-119	0.29	C86 B	0.26	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-120	0.00020	U	0.043	0.00020	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-121	0.00020	U	0.043	0.00020	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-122	0.0048	J	0.043	0.0017	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-123	0.0029	J q	0.043	0.0014	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-124	0.0089	J q C108	0.086	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-125	0.29	C86 B	0.26	0.00024	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-126	0.0016	U	0.043	0.0016	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-127	0.0015	U	0.043	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-128	0.030	J q C	0.086	0.0013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-129	0.38	C B	0.17	0.0014	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-130	0.015	J q	0.043	0.0018	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-131	0.0052	J	0.043	0.0019	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-132	0.13		0.043	0.0018	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-133	0.0047	J q	0.043	0.0017	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-134	0.016	J q C	0.086	0.0018	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-135	0.14	C	0.086	0.00020	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-136	0.050	q	0.043	0.00014	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-137	0.0070	J q	0.043	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-138	0.38	C129 B	0.17	0.0014	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-139	0.0026	J q C	0.086	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-140	0.0026	J q C139	0.086	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-141	0.10		0.043	0.0016	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-142	0.0017	U	0.043	0.0017	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-143	0.016	J q C134	0.086	0.0018	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-144	0.020	J	0.043	0.00018	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-145	0.00014	U	0.043	0.00014	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-146	0.050		0.043	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-147	0.38	C	0.086	0.0017	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-148	0.00019	U	0.043	0.00019	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-149	0.38	C147	0.086	0.0017	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-150	0.00013	U	0.043	0.00013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-151	0.14	C135	0.086	0.00020	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-152	0.00014	U	0.043	0.00014	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-153	0.34	C B	0.086	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-154	0.0044	J	0.043	0.00016	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-155	0.00013	U	0.043	0.00013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-156	0.029	J C B	0.086	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-157	0.029	J C156 B	0.086	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-158	0.033	J	0.043	0.0011	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-159	0.0051	J	0.043	0.0011	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-160	0.38	C129 B	0.17	0.0014	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-161	0.0011	U	0.043	0.0011	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-162	0.0011	U	0.043	0.0011	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-163	0.38	C129 B	0.17	0.0014	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-164	0.028	J	0.043	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-165	0.0013	U	0.043	0.0013	ng/L		03/24/20 12:45	03/28/20 21:30	1

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Client Sample ID: Outfall Grab

Date Collected: 03/13/20 07:35
Date Received: 03/13/20 19:30

Lab Sample ID: 460-204979-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-166	0.030	J q C128	0.086	0.0013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-167	0.0071	J q	0.043	0.00085	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-168	0.34	C153 B	0.086	0.0012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-169	0.0017	J q B	0.043	0.00087	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-170	0.19		0.043	0.00019	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-171	0.054	J q C B	0.086	0.00018	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-172	0.028	J q	0.043	0.00018	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-173	0.054	J q C171 B	0.086	0.00018	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-174	0.18		0.043	0.00017	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-175	0.0041	J q	0.043	0.00016	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-176	0.017	J	0.043	0.00012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-177	0.10		0.043	0.00017	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-178	0.033	J	0.043	0.00017	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-179	0.061	B	0.043	0.00013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-180	0.42	C B	0.086	0.00013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-181	0.00016	U	0.043	0.00016	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-182	0.00015	U	0.043	0.00015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-183	0.12	C B	0.086	0.00016	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-184	0.00013	U	0.043	0.00013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-185	0.12	C183 B	0.086	0.00016	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-186	0.00013	U	0.043	0.00013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-187	0.20		0.043	0.00015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-188	0.00011	U	0.043	0.00011	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-189	0.0038	J q B	0.043	0.00029	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-190	0.030	J q B	0.043	0.00012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-191	0.0080	J B	0.043	0.00012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-192	0.00013	U	0.043	0.00013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-193	0.42	C180 B	0.086	0.00013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-194	0.086	B	0.043	0.00060	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-195	0.032	J q B	0.043	0.00066	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-196	0.037	J q	0.043	0.00017	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-197	0.0014	J q	0.043	0.00013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-198	0.083	J C B	0.086	0.00017	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-199	0.083	J C198 B	0.086	0.00017	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-200	0.0062	J q B	0.043	0.00012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-201	0.0077	J q	0.043	0.00012	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-202	0.012	J q B	0.043	0.00013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-203	0.047	B	0.043	0.00015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-204	0.00013	U	0.043	0.00013	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-205	0.0045	J B	0.043	0.00051	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-206	0.013	J B	0.043	0.0023	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-207	0.0015	U	0.043	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-208	0.0035	J q	0.043	0.0015	ng/L		03/24/20 12:45	03/28/20 21:30	1
PCB-209	0.043	B	0.043	0.000062	ng/L		03/24/20 12:45	03/28/20 21:30	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*65*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-3L	*69*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-4L	*63*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-15L	*73*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*

Client Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Client Sample ID: Outfall Grab

Date Collected: 03/13/20 07:35
Date Received: 03/13/20 19:30

Lab Sample ID: 460-204979-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-19L	*75*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-37L	*86*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-54L	*87*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-77L	*81*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-81L	*81*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-104L	*73*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-105L	*86*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-114L	*86*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-118L	*85*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-123L	*84*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-126L	*82*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-155L	*76*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-156L	*85*	*C*	*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-157L	*85*	*C156*	*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-167L	*86*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-169L	*88*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-170L	*80*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-188L	*86*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-189L	*86*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-202L	*92*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-205L	*74*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-206L	*74*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-208L	*81*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-209L	*73*		*30 - 140*	*03/24/20 12:45*	*03/28/20 21:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-28L	*96*		*40 - 125*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-111L	*93*		*40 - 125*	*03/24/20 12:45*	*03/28/20 21:30*	*1*
PCB-178L	*100*		*40 - 125*	*03/24/20 12:45*	*03/28/20 21:30*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	**5.5**		5.0	1.4	mg/L			03/25/20 08:10	1
SGT-HEM	1.4	U	5.0	1.4	mg/L			03/25/20 08:10	1
Cyanide, Total	0.0040	U *	0.010	0.0040	mg/L		03/20/20 16:49	03/23/20 13:44	1
Phenols, Total	0.082	U	0.10	0.082	mg/L		03/17/20 11:31	03/17/20 11:51	1

Method: SM4500 H+ - pH, Field

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.55**				SU			03/13/20 07:30	1

Surrogate Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**PCB28L (40-125)**	**PCB111L (40-125)**	**PCB178L (40-125)**					
460-204979-2	Outfall Grab	96	93	100					
LCS 140-38616/9-A	Lab Control Sample	96	93	98					
MB 140-38616/10-A	Method Blank	96	89	95					

Surrogate Legend

PCB28L = PCB-28L
PCB111L = PCB-111L
PCB178L = PCB-178L

Isotope Dilution Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PCB1L (30-140)	PCB3L (30-140)	PCB4L (30-140)	PCB15L (30-140)	PCB19L (30-140)	PCB37L (30-140)	PCB54L (30-140)	PCB77L (30-140)
460-204979-2	Outfall Grab	65	69	63	73	75	86	87	81
LCS 140-38616/9-A	Lab Control Sample	79	78	83	78	90	90	103	90
MB 140-38616/10-A	Method Blank	74	73	77	73	80	85	89	87

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PCB81L (30-140)	PCB104L (30-140)	PCB105L (30-140)	P114L (30-140)	PCB118L (30-140)	PCB123L (30-140)	PCB126L (30-140)	PCB155L (30-140)
460-204979-2	Outfall Grab	81	73	86	86	85	84	82	76
LCS 140-38616/9-A	Lab Control Sample	91	76	94	90	89	88	89	77
MB 140-38616/10-A	Method Blank	85	63	87	83	83	81	81	63

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PCB156L (30-140)	PCB157L (30-140)	PCB167L (30-140)	PCB169L (30-140)	PCB170L (30-140)	PCB188L (30-140)	PCB189L (30-140)	PCB202L (30-140)
460-204979-2	Outfall Grab	85 C	85 C156	86	88	80	86	86	92
LCS 140-38616/9-A	Lab Control Sample	91 C	91 C156	93	97	84	89	88	99
MB 140-38616/10-A	Method Blank	84 C	84 C156	85	89	80	76	80	88

		Percent Isotope Dilution Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	PCB205L (30-140)	PCB206L (30-140)	PCB208L (30-140)	PCB209L (30-140)
460-204979-2	Outfall Grab	74	74	81	73
LCS 140-38616/9-A	Lab Control Sample	79	82	83	87
MB 140-38616/10-A	Method Blank	72	77	75	80

Surrogate Legend

PCB1L = PCB-1L
PCB3L = PCB-3L
PCB4L = PCB-4L
PCB15L = PCB-15L
PCB19L = PCB-19L
PCB37L = PCB-37L
PCB54L = PCB-54L
PCB77L = PCB-77L
PCB81L = PCB-81L
PCB104L = PCB-104L
PCB105L = PCB-105L
P114L = PCB-114L
PCB118L = PCB-118L
PCB123L = PCB-123L
PCB126L = PCB-126L
PCB155L = PCB-155L
PCB156L = PCB-156L
PCB157L = PCB-157L
PCB167L = PCB-167L
PCB169L = PCB-169L
PCB170L = PCB-170L
PCB188L = PCB-188L
PCB189L = PCB-189L
PCB202L = PCB-202L
PCB205L = PCB-205L
PCB206L = PCB-206L

Isotope Dilution Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

PCB208L = PCB-208L
PCB209L = PCB-209L

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Lab Sample ID: MB 140-38616/10-A
Matrix: Water
Analysis Batch: 38740

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38616

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.00103	J q	0.040	0.00019	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-2	0.00022	U	0.040	0.00022	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-3	0.00102	J q	0.040	0.00025	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-4	0.0025	U	0.060	0.0025	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-5	0.0023	U	0.040	0.0023	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-6	0.0020	U	0.040	0.0020	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-7	0.0020	U	0.040	0.0020	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-8	0.00345	J q	0.060	0.0018	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-9	0.0021	U	0.040	0.0021	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-10	0.0022	U	0.040	0.0022	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-11	0.00845	J q	0.060	0.0019	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-12	0.0020	U C	0.080	0.0020	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-13	0.0020	U C12	0.080	0.0020	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-14	0.0017	U	0.040	0.0017	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-15	0.00367	J q	0.040	0.0023	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-16	0.00071	U	0.040	0.00071	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-17	0.00063	U	0.040	0.00063	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-18	0.00256	J q C	0.080	0.00056	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-19	0.00078	U	0.040	0.00078	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-20	0.00394	J C	0.080	0.00066	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-21	0.00185	J q C	0.080	0.00065	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-22	0.00068	U	0.040	0.00068	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-23	0.00067	U	0.040	0.00067	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-24	0.00053	U	0.040	0.00053	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-25	0.00061	U	0.040	0.00061	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-26	0.00065	U C	0.080	0.00065	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-27	0.00046	U	0.040	0.00046	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-28	0.00394	J C20	0.080	0.00066	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-29	0.00065	U C26	0.080	0.00065	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-30	0.00256	J q C18	0.080	0.00056	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-31	0.00252	J	0.040	0.00065	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-32	0.00044	U	0.040	0.00044	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-33	0.00185	J q C21	0.080	0.00065	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-34	0.00070	U	0.040	0.00070	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-35	0.00068	U	0.040	0.00068	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-36	0.00065	U	0.040	0.00065	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-37	0.00124	J q	0.040	0.00067	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-38	0.00070	U	0.040	0.00070	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-39	0.00063	U	0.040	0.00063	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-40	0.0013	U C	0.12	0.0013	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-41	0.0013	U C40	0.12	0.0013	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-42	0.0013	U	0.040	0.0013	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-43	0.0012	U C	0.080	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-44	0.00462	J q C	0.12	0.0011	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-45	0.0014	U C	0.080	0.0014	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-46	0.0016	U	0.040	0.0016	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-47	0.00462	J q C44	0.12	0.0011	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-48	0.0013	U	0.040	0.0013	ng/L		03/24/20 12:45	03/28/20 15:21	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-38616/10-A
Matrix: Water
Analysis Batch: 38740

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38616

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	0.0011	U C	0.080	0.0011	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-50	0.0012	U C	0.080	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-51	0.0014	U C45	0.080	0.0014	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-52	0.0013	U	0.040	0.0013	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-53	0.0012	U C50	0.080	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-54	0.000097	U	0.040	0.000097	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-55	0.00094	U	0.040	0.00094	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-56	0.00094	U	0.040	0.00094	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-57	0.00095	U	0.040	0.00095	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-58	0.00097	U	0.040	0.00097	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-59	0.00091	U C	0.12	0.00091	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-60	0.00096	U	0.040	0.00096	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-61	0.00431	J C	0.16	0.00090	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-62	0.00091	U C59	0.12	0.00091	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-63	0.00087	U	0.040	0.00087	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-64	0.00086	U	0.040	0.00086	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-65	0.00462	J q C44	0.12	0.0011	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-66	0.00089	U	0.040	0.00089	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-67	0.00082	U	0.040	0.00082	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-68	0.00084	U	0.040	0.00084	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-69	0.0011	U C49	0.080	0.0011	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-70	0.00431	J C61	0.16	0.00090	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-71	0.0013	U C40	0.12	0.0013	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-72	0.00093	U	0.040	0.00093	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-73	0.0012	U C43	0.080	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-74	0.00431	J C61	0.16	0.00090	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-75	0.00091	U C59	0.12	0.00091	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-76	0.00431	J C61	0.16	0.00090	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-77	0.00096	U	0.040	0.00096	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-78	0.00096	U	0.040	0.00096	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-79	0.00084	U	0.040	0.00084	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-80	0.00082	U	0.040	0.00082	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-81	0.00084	U	0.040	0.00084	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-82	0.00071	U	0.040	0.00071	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-83	0.00065	U C	0.080	0.00065	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-84	0.00072	U	0.040	0.00072	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-85	0.00259	J C	0.12	0.00052	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-86	0.00488	J C	0.24	0.00053	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-87	0.00488	J C86	0.24	0.00053	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-88	0.00064	U C	0.080	0.00064	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-89	0.00070	U	0.040	0.00070	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-90	0.00428	J C	0.12	0.00054	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-91	0.00064	U C88	0.080	0.00064	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-92	0.00061	U	0.040	0.00061	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-93	0.00061	U C	0.080	0.00061	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-94	0.00069	U	0.040	0.00069	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-95	0.00067	U	0.040	0.00067	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-96	0.00052	U	0.040	0.00052	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-97	0.00488	J C86	0.24	0.00053	ng/L		03/24/20 12:45	03/28/20 15:21	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-38616/10-A
Matrix: Water
Analysis Batch: 38740

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38616

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-98	0.00060	U C	0.080	0.00060	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-99	0.00065	U C83	0.080	0.00065	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-100	0.00061	U C93	0.080	0.00061	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-101	0.00428	J C90	0.12	0.00054	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-102	0.00060	U C98	0.080	0.00060	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-103	0.00061	U	0.040	0.00061	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-104	0.00047	U	0.040	0.00047	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-105	0.00220	J	0.040	0.00041	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-106	0.00042	U	0.040	0.00042	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-107	0.00045	U	0.040	0.00045	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-108	0.00043	U C	0.080	0.00043	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-109	0.00488	J C86	0.24	0.00053	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-110	0.00408	J C	0.080	0.00045	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-111	0.00043	U	0.040	0.00043	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-112	0.00046	U	0.040	0.00046	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-113	0.00428	J C90	0.12	0.00054	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-114	0.00039	U	0.040	0.00039	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-115	0.00408	J C110	0.080	0.00045	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-116	0.00259	J C85	0.12	0.00052	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-117	0.00259	J C85	0.12	0.00052	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-118	0.00210	J q	0.040	0.00039	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-119	0.00488	J C86	0.24	0.00053	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-120	0.00044	U	0.040	0.00044	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-121	0.00045	U	0.040	0.00045	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-122	0.00048	U	0.040	0.00048	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-123	0.00041	U	0.040	0.00041	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-124	0.00043	U C108	0.080	0.00043	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-125	0.00488	J C86	0.24	0.00053	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-126	0.00120	J	0.040	0.00046	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-127	0.00042	U	0.040	0.00042	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-128	0.00090	U C	0.080	0.00090	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-129	0.00625	J C	0.16	0.00093	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-130	0.0012	U	0.040	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-131	0.0013	U	0.040	0.0013	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-132	0.0012	U	0.040	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-133	0.0012	U	0.040	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-134	0.0012	U C	0.080	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-135	0.00037	U C	0.080	0.00037	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-136	0.00026	U	0.040	0.00026	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-137	0.0010	U	0.040	0.0010	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-138	0.00625	J C129	0.16	0.00093	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-139	0.0010	U C	0.080	0.0010	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-140	0.0010	U C139	0.080	0.0010	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-141	0.0011	U	0.040	0.0011	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-142	0.0012	U	0.040	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-143	0.0012	U C134	0.080	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-144	0.00033	U	0.040	0.00033	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-145	0.000619	J q	0.040	0.00025	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-146	0.0010	U	0.040	0.0010	ng/L		03/24/20 12:45	03/28/20 15:21	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-38616/10-A
Matrix: Water
Analysis Batch: 38740

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38616

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-147	0.0012	U C	0.080	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-148	0.00036	U	0.040	0.00036	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-149	0.0012	U C147	0.080	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-150	0.00103	J	0.040	0.00024	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-151	0.00037	U C135	0.080	0.00037	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-152	0.00026	U	0.040	0.00026	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-153	0.00388	J q C	0.080	0.00081	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-154	0.00029	U	0.040	0.00029	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-155	0.00024	U	0.040	0.00024	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-156	0.00323	J C	0.080	0.0010	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-157	0.00323	J C156	0.080	0.0010	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-158	0.00073	U	0.040	0.00073	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-159	0.00077	U	0.040	0.00077	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-160	0.00625	J C129	0.16	0.00093	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-161	0.00077	U	0.040	0.00077	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-162	0.00076	U	0.040	0.00076	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-163	0.00625	J C129	0.16	0.00093	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-164	0.00081	U	0.040	0.00081	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-165	0.00087	U	0.040	0.00087	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-166	0.00090	U C128	0.080	0.00090	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-167	0.00056	U	0.040	0.00056	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-168	0.00388	J q C153	0.080	0.00081	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-169	0.00355	J	0.040	0.00060	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-170	0.00054	U	0.040	0.00054	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-171	0.00326	J q C	0.080	0.00054	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-172	0.00053	U	0.040	0.00053	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-173	0.00326	J q C171	0.080	0.00054	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-174	0.00050	U	0.040	0.00050	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-175	0.00049	U	0.040	0.00049	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-176	0.00037	U	0.040	0.00037	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-177	0.00052	U	0.040	0.00052	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-178	0.00053	U	0.040	0.00053	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-179	0.00179	J	0.040	0.00039	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-180	0.00282	J C	0.080	0.00041	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-181	0.00048	U	0.040	0.00048	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-182	0.00047	U	0.040	0.00047	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-183	0.00215	J q C	0.080	0.00047	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-184	0.00040	U	0.040	0.00040	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-185	0.00215	J q C183	0.080	0.00047	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-186	0.00039	U	0.040	0.00039	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-187	0.00045	U	0.040	0.00045	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-188	0.00035	U	0.040	0.00035	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-189	0.00282	J q	0.040	0.00028	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-190	0.00135	J q	0.040	0.00035	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-191	0.00105	J	0.040	0.00037	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-192	0.00041	U	0.040	0.00041	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-193	0.00282	J C180	0.080	0.00041	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-194	0.00255	J q	0.040	0.00025	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-195	0.000961	J q	0.040	0.00027	ng/L		03/24/20 12:45	03/28/20 15:21	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-38616/10-A
Matrix: Water
Analysis Batch: 38740

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38616

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-196	0.00011	U	0.040	0.00011	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-197	0.000087	U	0.040	0.000087	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-198	0.00258	J C	0.080	0.00012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-199	0.00258	J C198	0.080	0.00012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-200	0.000935	J	0.040	0.000077	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-201	0.000079	U	0.040	0.000079	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-202	0.000885	J	0.040	0.000089	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-203	0.00112	J q	0.040	0.00010	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-204	0.000087	U	0.040	0.000087	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-205	0.00500	J	0.040	0.00021	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-206	0.00399	J	0.040	0.0016	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-207	0.0012	U	0.040	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-208	0.0012	U	0.040	0.0012	ng/L		03/24/20 12:45	03/28/20 15:21	1
PCB-209	0.00576	J	0.040	0.000071	ng/L		03/24/20 12:45	03/28/20 15:21	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*74*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-3L	*73*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-4L	*77*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-15L	*73*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-19L	*80*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-37L	*85*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-54L	*89*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-77L	*87*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-81L	*85*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-104L	*63*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-105L	*87*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-114L	*83*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-118L	*83*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-123L	*81*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-126L	*81*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-155L	*63*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-156L	*84*	*C*	*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-157L	*84*	*C156*	*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-167L	*85*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-169L	*89*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-170L	*80*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-188L	*76*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-189L	*80*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-202L	*88*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-205L	*72*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-206L	*77*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-208L	*75*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-209L	*80*		*30 - 140*	*03/24/20 12:45*	*03/28/20 15:21*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-28L	*96*		*40 - 125*	*03/24/20 12:45*	*03/28/20 15:21*	*1*
PCB-111L	*89*		*40 - 125*	*03/24/20 12:45*	*03/28/20 15:21*	*1*

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-38616/10-A
Matrix: Water
Analysis Batch: 38740

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38616

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-178L	95		40 - 125	03/24/20 12:45	03/28/20 15:21	1

Lab Sample ID: LCS 140-38616/9-A
Matrix: Water
Analysis Batch: 38740

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38616

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	1.00	0.780		ng/L		78	50 - 150
PCB-3	1.00	0.806		ng/L		81	50 - 150
PCB-4	1.00	0.907		ng/L		91	50 - 150
PCB-15	1.00	1.056		ng/L		106	50 - 150
PCB-19	1.00	1.018		ng/L		102	50 - 150
PCB-37	1.00	0.977		ng/L		98	50 - 150
PCB-54	1.00	0.937		ng/L		94	50 - 150
PCB-77	1.00	0.957		ng/L		96	50 - 150
PCB-81	1.00	0.972		ng/L		97	50 - 150
PCB-104	1.00	1.062		ng/L		106	50 - 150
PCB-105	1.00	0.997		ng/L		100	50 - 150
PCB-114	1.00	1.070		ng/L		107	50 - 150
PCB-118	1.00	1.029		ng/L		103	50 - 150
PCB-123	1.00	1.115		ng/L		112	50 - 150
PCB-126	1.00	1.065		ng/L		106	50 - 150
PCB-155	1.00	0.969		ng/L		97	50 - 150
PCB-156	2.00	2.047	C	ng/L		102	50 - 150
PCB-157	2.00	2.047	C156	ng/L		102	50 - 150
PCB-167	1.00	1.041		ng/L		104	50 - 150
PCB-169	1.00	0.925		ng/L		93	50 - 150
PCB-188	1.00	0.965		ng/L		96	50 - 150
PCB-189	1.00	1.033		ng/L		103	50 - 150
PCB-202	1.00	0.933		ng/L		93	50 - 150
PCB-205	1.00	1.076		ng/L		108	50 - 150
PCB-206	1.00	0.927		ng/L		93	50 - 150
PCB-208	1.00	0.996		ng/L		100	50 - 150
PCB-209	1.00	0.962		ng/L		96	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	79		30 - 140
PCB-3L	78		30 - 140
PCB-4L	83		30 - 140
PCB-15L	78		30 - 140
PCB-19L	90		30 - 140
PCB-37L	90		30 - 140
PCB-54L	103		30 - 140
PCB-77L	90		30 - 140
PCB-81L	91		30 - 140
PCB-104L	76		30 - 140
PCB-105L	94		30 - 140
PCB-114L	90		30 - 140

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 140-38616/9-A
Matrix: Water
Analysis Batch: 38740

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38616

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
PCB-118L	*89*		*30 - 140*
PCB-123L	*88*		*30 - 140*
PCB-126L	*89*		*30 - 140*
PCB-155L	*77*		*30 - 140*
PCB-156L	*91*	*C*	*30 - 140*
PCB-157L	*91*	*C156*	*30 - 140*
PCB-167L	*93*		*30 - 140*
PCB-169L	*97*		*30 - 140*
PCB-170L	*84*		*30 - 140*
PCB-188L	*89*		*30 - 140*
PCB-189L	*88*		*30 - 140*
PCB-202L	*99*		*30 - 140*
PCB-205L	*79*		*30 - 140*
PCB-206L	*82*		*30 - 140*
PCB-208L	*83*		*30 - 140*
PCB-209L	*87*		*30 - 140*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
PCB-28L	*96*		*40 - 125*
PCB-111L	*93*		*40 - 125*
PCB-178L	*98*		*40 - 125*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 460-682313/1-A ^5
Matrix: Water
Analysis Batch: 682463

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 682313

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2	U	2.5	2.2	ug/L		03/19/20 18:55	03/20/20 10:31	5
Cadmium	0.89	U	2.5	0.89	ug/L		03/19/20 18:55	03/20/20 10:31	5
Chromium	0.54	U	5.0	0.54	ug/L		03/19/20 18:55	03/20/20 10:31	5
Copper	2.6	U	5.0	2.6	ug/L		03/19/20 18:55	03/20/20 10:31	5
Nickel	1.5	U	5.0	1.5	ug/L		03/19/20 18:55	03/20/20 10:31	5
Lead	0.17	U	1.5	0.17	ug/L		03/19/20 18:55	03/20/20 10:31	5
Zinc	3.4	U	20.0	3.4	ug/L		03/19/20 18:55	03/20/20 10:31	5
Silver	0.59	U	5.0	0.59	ug/L		03/19/20 18:55	03/20/20 10:31	5

Lab Sample ID: LCS 460-682313/2-A ^5
Matrix: Water
Analysis Batch: 682463

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 682313

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	49.31		ug/L		99	85 - 115
Cadmium	25.0	23.67		ug/L		95	85 - 115
Chromium	50.0	49.20		ug/L		98	85 - 115
Copper	50.0	50.98		ug/L		102	85 - 115
Nickel	50.0	49.49		ug/L		99	85 - 115
Lead	25.0	25.54		ug/L		102	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 460-682313/2-A ^5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 682463 — **Prep Batch: 682313**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	250	259.5		ug/L		104	85 - 115
Silver	25.0	25.44		ug/L		102	85 - 115

Lab Sample ID: 460-205292-C-2-C MS ^5 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 682463 — **Prep Batch: 682313**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.2	U	50.0	52.40		ug/L		105	70 - 130
Cadmium	0.89	U	25.0	25.76		ug/L		103	70 - 130
Chromium	3.4	J	50.0	55.73		ug/L		105	70 - 130
Copper	3.0	J	50.0	53.82		ug/L		102	70 - 130
Nickel	4.1	J	50.0	56.53		ug/L		105	70 - 130
Lead	0.37	J	25.0	27.11		ug/L		107	70 - 130
Zinc	9.4	J	250	280.4		ug/L		108	70 - 130
Silver	0.59	U	25.0	24.71		ug/L		99	70 - 130

Lab Sample ID: 460-205292-C-2-B DU ^5 — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 682463 — **Prep Batch: 682313**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	2.2	U	2.2	U	ug/L		NC	20
Cadmium	0.89	U	0.89	U	ug/L		NC	20
Chromium	3.4	J	3.30	J	ug/L		4	20
Copper	3.0	J	3.23	J	ug/L		6	20
Nickel	4.1	J	4.23	J	ug/L		4	20
Lead	0.37	J	0.395	J	ug/L		8	20
Zinc	9.4	J	10.80	J	ug/L		13	20
Silver	0.59	U	0.59	U	ug/L		NC	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 460-683553/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683650 — **Prep Batch: 683553**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.091	U	0.20	0.091	ug/L		03/25/20 12:02	03/25/20 13:36	1

Lab Sample ID: LCS 460-683553/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683650 — **Prep Batch: 683553**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	1.00	1.00		ug/L		100	85 - 115

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 460-205464-E-2-E MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683650 — **Prep Batch: 683553**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.091	U	1.00	0.958		ug/L		96	70 - 130

Lab Sample ID: 460-205464-E-2-D DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683650 — **Prep Batch: 683553**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.091	U	0.091	U	ug/L		NC	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 460-683478/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.4	U	5.0	1.4	mg/L			03/25/20 08:10	1
SGT-HEM	1.4	U	5.0	1.4	mg/L			03/25/20 08:10	1

Lab Sample ID: LCS 460-683478/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	36.20		mg/L		91	78 - 114
SGT-HEM	20.0	14.60		mg/L		73	64 - 132

Lab Sample ID: LCSD 460-683478/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683478

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	40.0	36.30		mg/L		91	78 - 114	0	18
SGT-HEM	20.0	15.00		mg/L		75	64 - 132	3	34

Lab Sample ID: 460-205148-B-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683478

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	1.4	U F1	40.0	29.80	F1	mg/L		74	78 - 114
SGT-HEM	1.4	U F1	20.0	12.20	F1	mg/L		61	64 - 132

Lab Sample ID: MB 460-683782/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683782

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.4	U	5.0	1.4	mg/L			03/26/20 08:14	1

Method: 1664A - HEM and SGT-HEM (Continued)

Lab Sample ID: LCS 460-683782/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683782

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
HEM			40.0	36.70		mg/L		92	78 - 114		

Lab Sample ID: LCSD 460-683782/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683782

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM			40.0	35.90		mg/L		90	78 - 114	2	18

Lab Sample ID: 180-103599-C-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683782

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
HEM	1.4	U	40.0	35.20		mg/L		88	78 - 114		

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 460-682544/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683058 — **Prep Batch: 682544**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0040	U	0.010	0.0040	mg/L		03/20/20 16:49	03/23/20 13:27	1

Lab Sample ID: LCS 460-682544/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683058 — **Prep Batch: 682544**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.100	0.111	*	mg/L		111	90 - 110		

Lab Sample ID: 460-205376-E-5-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683058 — **Prep Batch: 682544**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	0.0084	J F1 *	0.200	0.136	F1	mg/L		64	90 - 110		

Lab Sample ID: 460-205376-E-5-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683058 — **Prep Batch: 682544**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.0084	J F1 *	0.200	0.153	F1	mg/L		72	90 - 110	12	35

QC Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Method: 420.1 - Phenolics, Total Recoverable

Lab Sample ID: MB 460-681610/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 681639 — **Prep Batch: 681610**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total	0.041	U	0.050	0.041	mg/L		03/17/20 11:31	03/17/20 11:48	1

Lab Sample ID: LCS 460-681610/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 681639 — **Prep Batch: 681610**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.400	0.413		mg/L		103	86 - 118

Lab Sample ID: 460-204896-J-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 681639 — **Prep Batch: 681610**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.041	U	0.400	0.406		mg/L		102	86 - 118

Lab Sample ID: 460-204896-J-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 681639 — **Prep Batch: 681610**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenols, Total	0.041	U	0.400	0.407		mg/L		102	86 - 118	0	30

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 460-682084/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 682084

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	2.5	U	2.5	2.5	mg/L			03/19/20 07:48	1

Lab Sample ID: LCSSRM 460-682084/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 682084

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	59.2	58.00		mg/L		98.0	79.2 - 113.2

Lab Sample ID: 460-204884-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 682084

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	70.0		68.00		mg/L		3	5

Method: SM 4500 NH3 G - Ammonia

Lab Sample ID: MB 460-683303/44 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683303

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.034	U	0.10	0.034	mg/L			03/24/20 10:36	1

Lab Sample ID: LCS 460-683303/45 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683303

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	2.00	2.02		mg/L		101	89 - 113

Lab Sample ID: 460-205412-C-3 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683303

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	17.0		2.00	19.10	4	mg/L		105	89 - 113

Lab Sample ID: 460-205412-C-3 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 683303

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	17.0		2.00	19.30	4	mg/L		115	89 - 113	1	10

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 460-681077/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 681077

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	1.0	U	1.0	1.0	mg/L			03/14/20 10:40	1

Lab Sample ID: LCS 460-681077/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 681077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biochemical Oxygen Demand	131	130.0		mg/L		99	84.6 - 115.4

Lab Sample ID: 460-204976-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 681077

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Biochemical Oxygen Demand	5860		5725		mg/L		2	30

QC Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Method: SM 5220D - COD

Lab Sample ID: MB 460-681987/3
Matrix: Water
Analysis Batch: 681987

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.3	U	10.0	3.3	mg/L			03/18/20 17:05	1

Lab Sample ID: LCSSRM 460-681987/4
Matrix: Water
Analysis Batch: 681987

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	107	101.5		mg/L		94.9	76.8 - 119.6

Lab Sample ID: 460-205161-A-2 MS
Matrix: Water
Analysis Batch: 681987

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	19.6		50.0	66.14		mg/L		93	90 - 110

Lab Sample ID: 460-205161-A-2 MSD
Matrix: Water
Analysis Batch: 681987

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	19.6		50.0	65.15		mg/L		91	90 - 110	2	10

Method: SM5210B - Carbonaceous BOD, 20 day

Lab Sample ID: USB 460-681101/1
Matrix: Water
Analysis Batch: 681101

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand 20	1.0	U	1.0	1.0	mg/L			03/14/20 18:55	1

Lab Sample ID: 460-204979-1 DU
Matrix: Water
Analysis Batch: 681101

Client Sample ID: Outfall Comp
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Carbonaceous Biochemical Oxygen Demand 20	>35.0		>29.2		mg/L		NC	30

QC Association Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Specialty Organics

Prep Batch: 38616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-2	Outfall Grab	Total/NA	Water	HRMS-Sepf	
MB 140-38616/10-A	Method Blank	Total/NA	Water	HRMS-Sepf	
LCS 140-38616/9-A	Lab Control Sample	Total/NA	Water	HRMS-Sepf	

Analysis Batch: 38740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-2	Outfall Grab	Total/NA	Water	1668A	38616
MB 140-38616/10-A	Method Blank	Total/NA	Water	1668A	38616
LCS 140-38616/9-A	Lab Control Sample	Total/NA	Water	1668A	38616

Metals

Prep Batch: 682313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-1	Outfall Comp	Total Recoverable	Water	200.8	
MB 460-682313/1-A ^5	Method Blank	Total Recoverable	Water	200.8	
LCS 460-682313/2-A ^5	Lab Control Sample	Total Recoverable	Water	200.8	
460-205292-C-2-C MS ^5	Matrix Spike	Total Recoverable	Water	200.8	
460-205292-C-2-B DU ^5	Duplicate	Total Recoverable	Water	200.8	

Analysis Batch: 682463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-1	Outfall Comp	Total Recoverable	Water	200.8	682313
MB 460-682313/1-A ^5	Method Blank	Total Recoverable	Water	200.8	682313
LCS 460-682313/2-A ^5	Lab Control Sample	Total Recoverable	Water	200.8	682313
460-205292-C-2-C MS ^5	Matrix Spike	Total Recoverable	Water	200.8	682313
460-205292-C-2-B DU ^5	Duplicate	Total Recoverable	Water	200.8	682313

Prep Batch: 683553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-1	Outfall Comp	Total/NA	Water	245.1	
MB 460-683553/1-A	Method Blank	Total/NA	Water	245.1	
LCS 460-683553/2-A	Lab Control Sample	Total/NA	Water	245.1	
460-205464-E-2-E MS	Matrix Spike	Total/NA	Water	245.1	
460-205464-E-2-D DU	Duplicate	Total/NA	Water	245.1	

Analysis Batch: 683650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-1	Outfall Comp	Total/NA	Water	245.1	683553
MB 460-683553/1-A	Method Blank	Total/NA	Water	245.1	683553
LCS 460-683553/2-A	Lab Control Sample	Total/NA	Water	245.1	683553
460-205464-E-2-E MS	Matrix Spike	Total/NA	Water	245.1	683553
460-205464-E-2-D DU	Duplicate	Total/NA	Water	245.1	683553

General Chemistry

Analysis Batch: 681077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-1	Outfall Comp	Total/NA	Water	SM 5210B	
USB 460-681077/5	Method Blank	Total/NA	Water	SM 5210B	
LCS 460-681077/2	Lab Control Sample	Total/NA	Water	SM 5210B	
460-204976-A-1 DU	Duplicate	Total/NA	Water	SM 5210B	

QC Association Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

General Chemistry

Analysis Batch: 681101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-1	Outfall Comp	Total/NA	Water	SM5210B	
USB 460-681101/1	Method Blank	Total/NA	Water	SM5210B	
460-204979-1 DU	Outfall Comp	Total/NA	Water	SM5210B	

Prep Batch: 681610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-2	Outfall Grab	Total/NA	Water	Distill/Phenol	
MB 460-681610/1-A	Method Blank	Total/NA	Water	Distill/Phenol	
LCS 460-681610/2-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	
460-204896-J-1-B MS	Matrix Spike	Total/NA	Water	Distill/Phenol	
460-204896-J-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/Phenol	

Analysis Batch: 681639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-2	Outfall Grab	Total/NA	Water	420.1	681610
MB 460-681610/1-A	Method Blank	Total/NA	Water	420.1	681610
LCS 460-681610/2-A	Lab Control Sample	Total/NA	Water	420.1	681610
460-204896-J-1-B MS	Matrix Spike	Total/NA	Water	420.1	681610
460-204896-J-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	420.1	681610

Analysis Batch: 681987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-1	Outfall Comp	Total/NA	Water	SM 5220D	
MB 460-681987/3	Method Blank	Total/NA	Water	SM 5220D	
LCSSRM 460-681987/4	Lab Control Sample	Total/NA	Water	SM 5220D	
460-205161-A-2 MS	Matrix Spike	Total/NA	Water	SM 5220D	
460-205161-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5220D	

Analysis Batch: 682084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-1	Outfall Comp	Total/NA	Water	SM 2540D	
MB 460-682084/1	Method Blank	Total/NA	Water	SM 2540D	
LCSSRM 460-682084/2	Lab Control Sample	Total/NA	Water	SM 2540D	
460-204884-A-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Prep Batch: 682544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-2	Outfall Grab	Total/NA	Water	Distill/CN	
MB 460-682544/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 460-682544/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
460-205376-E-5-B MS	Matrix Spike	Total/NA	Water	Distill/CN	
460-205376-E-5-D MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/CN	

Analysis Batch: 683058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-2	Outfall Grab	Total/NA	Water	335.4	682544
MB 460-682544/1-A	Method Blank	Total/NA	Water	335.4	682544
LCS 460-682544/2-A	Lab Control Sample	Total/NA	Water	335.4	682544
460-205376-E-5-B MS	Matrix Spike	Total/NA	Water	335.4	682544
460-205376-E-5-D MSD	Matrix Spike Duplicate	Total/NA	Water	335.4	682544

QC Association Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

General Chemistry

Analysis Batch: 683303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-1	Outfall Comp	Total/NA	Water	SM 4500 NH3 G	
MB 460-683303/44	Method Blank	Total/NA	Water	SM 4500 NH3 G	
LCS 460-683303/45	Lab Control Sample	Total/NA	Water	SM 4500 NH3 G	
460-205412-C-3 MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 G	
460-205412-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 G	

Analysis Batch: 683478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-2	Outfall Grab	Total/NA	Water	1664A	
MB 460-683478/1	Method Blank	Total/NA	Water	1664A	
LCS 460-683478/2	Lab Control Sample	Total/NA	Water	1664A	
LCSD 460-683478/3	Lab Control Sample Dup	Total/NA	Water	1664A	
460-205148-B-1 MS	Matrix Spike	Total/NA	Water	1664A	

Analysis Batch: 683782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-1	Outfall Comp	Total/NA	Water	1664A	
MB 460-683782/1	Method Blank	Total/NA	Water	1664A	
LCS 460-683782/2	Lab Control Sample	Total/NA	Water	1664A	
LCSD 460-683782/3	Lab Control Sample Dup	Total/NA	Water	1664A	
180-103599-C-1 MS	Matrix Spike	Total/NA	Water	1664A	

Field Service / Mobile Lab

Analysis Batch: 681643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-204979-1	Outfall Comp	Total/NA	Water	SM4500 H+	
460-204979-2	Outfall Grab	Total/NA	Water	SM4500 H+	

Lab Chronicle

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Client Sample ID: Outfall Comp

Lab Sample ID: 460-204979-1
Date Collected: 03/13/20 07:30
Matrix: Water
Date Received: 03/13/20 19:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			682313	03/19/20 18:55	GAE	TAL EDI
Total Recoverable	Analysis	200.8		5	682463	03/20/20 11:32	MDC	TAL EDI
Total/NA	Prep	245.1			683553	03/25/20 12:02	RBS	TAL EDI
Total/NA	Analysis	245.1		1	683650	03/25/20 13:48	RBS	TAL EDI
Total/NA	Analysis	1664A		1	683782	03/26/20 08:27	AAA	TAL EDI
Total/NA	Analysis	SM 2540D		1	682084	03/19/20 07:48	AAP	TAL EDI
Total/NA	Analysis	SM 4500 NH3 G		1	683303	03/24/20 11:28	AJP	TAL EDI
Total/NA	Analysis	SM 5210B		1	681077	03/14/20 11:45	MBE	TAL EDI
Total/NA	Analysis	SM 5220D		1	681987	03/18/20 17:05	HTV	TAL EDI
Total/NA	Analysis	SM5210B		1	681101	03/14/20 16:32	MBE	TAL EDI
Total/NA	Analysis	SM4500 H+		1	681643	03/13/20 07:35	JHB	TAL EDI

Client Sample ID: Outfall Grab

Lab Sample ID: 460-204979-2
Date Collected: 03/13/20 07:35
Matrix: Water
Date Received: 03/13/20 19:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sepf			38616	03/24/20 12:45	SSS	TAL KNX
Total/NA	Analysis	1668A		1	38740	03/28/20 21:30	JMN	TAL KNX
Total/NA	Analysis	1664A		1	683478	03/25/20 08:10	AAA	TAL EDI
Total/NA	Prep	Distill/CN			682544	03/20/20 16:49	MBE	TAL EDI
Total/NA	Analysis	335.4		1	683058	03/23/20 13:44	AJP	TAL EDI
Total/NA	Prep	Distill/Phenol			681610	03/17/20 11:31	IAA	TAL EDI
Total/NA	Analysis	420.1		1	681639	03/17/20 11:51	HTV	TAL EDI
Total/NA	Analysis	SM4500 H+		1	681643	03/13/20 07:30	JHB	TAL EDI

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Laboratory: Eurofins TestAmerica, Edison

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

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0200	09-30-20
DE Haz. Subst. Cleanup Act (HSCA)	State	<cert No.>	12-31-21
Georgia	State	12028 (NJ)	06-30-20
Massachusetts	State	M-NJ312	06-30-20
New Jersey	NELAP	12028	06-30-20
New York	NELAP	11452	04-01-20
Pennsylvania	NELAP	68-00522	02-28-21
Rhode Island	State	LAO00132	12-31-20
USDA	US Federal Programs	P330-18-00135	05-03-21

Laboratory: Eurofins TestAmerica, Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
ANAB	Dept. of Energy	L2311.01	02-13-22
ANAB	ISO/IEC 17025	L2311	02-13-22
ANAB	ISO/IEC 17025	L2311	02-14-22
Arkansas DEQ	State	88-0688	06-16-20
California	State	2423	06-30-20
Colorado	State	TN00009	02-28-21
Connecticut	State	PH-0223	09-30-21
Florida	NELAP	E87177	06-30-20
Georgia (DW)	State	906	04-13-20
Hawaii	State	NA	04-13-20
Kansas	NELAP	E-10349	11-01-20
Kentucky (DW)	State	90101	01-01-21
Louisiana	NELAP	83979	06-30-20
Louisiana (DW)	State	LA019	12-31-20
Maryland	State	277	03-31-20
Michigan	State	9933	04-13-20
Nevada	State	TN00009	07-31-20
New Hampshire	NELAP	299919	01-17-21
New Jersey	NELAP	TN001	06-30-20
New York	NELAP	10781	03-31-20
North Carolina (DW)	State	21705	07-31-20
North Carolina (WW/SW)	State	64	12-31-20
Ohio VAP	State	CL0059	08-28-20
Oklahoma	State	9415	09-01-20
Oregon	NELAP	TNI0189	01-02-21
Pennsylvania	NELAP	68-00576	12-31-20
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-20
Virginia	NELAP	460176	09-15-20
Washington	State	C593	01-19-21
West Virginia (DW)	State	9955C	01-01-21

Accreditation/Certification Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Laboratory: Eurofins TestAmerica, Knoxville (Continued)

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

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	345	04-30-20
Wisconsin	State	998044300	08-31-20

Method Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Method	Method Description	Protocol	Laboratory
1668A	Chlorinated Biphenyl Congeners (HRGC/HRMS)	EPA	TAL KNX
200.8	Metals (ICP/MS)	EPA	TAL EDI
245.1	Mercury (CVAA)	EPA	TAL EDI
1664A	HEM and SGT-HEM	1664A	TAL EDI
335.4	Cyanide, Total	MCAWW	TAL EDI
420.1	Phenolics, Total Recoverable	MCAWW	TAL EDI
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL EDI
SM 4500 NH3 G	Ammonia	SM	TAL EDI
SM 5210B	BOD, 5-Day	SM	TAL EDI
SM 5220D	COD	SM	TAL EDI
SM5210B	Carbonaceous BOD, 20 day	SM	TAL EDI
SM4500 H+	pH, Field	SM	TAL EDI
200.8	Preparation, Total Recoverable Metals	EPA	TAL EDI
245.1	Preparation, Mercury	EPA	TAL EDI
Distill/CN	Distillation, Cyanide	None	TAL EDI
Distill/Phenol	Distillation, Phenolics	None	TAL EDI
HRMS-Sepf	Separatory Funnel (Liquid-Liquid) Extraction	EPA	TAL KNX

Protocol References:

1664A = EPA-821-98-002
EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900
TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: IES Engineers
Project/Site: Quarterly #183765

Job ID: 460-204979-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
460-204979-1	Outfall Comp	Water	03/13/20 07:30	03/13/20 19:30	
460-204979-2	Outfall Grab	Water	03/13/20 07:35	03/13/20 19:30	

TestAmerica South Jersey
3000 Lincoln Drive East Suite A
Marlton, NJ 08053
Phone (856) 334-1030 Fax (856) 222-1984

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Field Services SJO

SHORT HOLD

Client Information	Sampler: JB	Lab PM: Bennett, Allison L	Carrier Tracking No(s):	COC No: 460-109420-70098.1
Client Contact: Michael Tucci	Phone:	E-Mail: allison.bennett@testamericainc.com		Page: Page 1 of 1
Company: IES Engineers				Job #: 204979
Address: 1720 Walton Road	Due Date Requested:			
City: Blue Bell	TAT Requested (days):			
State, Zip: PA, 19422				
Phone:	PO #: Purchase Order Requested			
Email: MTucci@iesengineers.com	WO #:			
Project Name: Quarterly #183765;	Project #: 46028651			
Site:	SSOW#:			

Analysis

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500_NH3_H - Ammonia (Comp)	200.8, 245.1 - Cd, Cr, Cu, Pb, Ni, Ag, As, Zn, Hg (comp)	SM5210B_CBOD_20 - CBOD, 20-day (comp)	1664A_NP - Oil & Grease (Comp)	2540D - TSS (comp)	5210B - BOD, 5-day (comp)	5220D - COD (Comp)		420.1 - Phenolics, Total Recoverable (grab)	335.4 - Cyanide, Total (Grab)	1664A_NP - Oil & Grease/TPH (Grab)	1668A - 209 PCBs (grab)	SM4500_H+_F - pH, Field (price included in field servi	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	D	N	A	N	N	S		S	B	A	N	N		
Outfall Comp	3/13/2020	730	C	W			X	X	X	X	X	X	X						X		1
Outfall Grab	3/13/2020	735	G	W											X	X	X	X	X		2
pH 6.81																					
Temp 13.7																					
pH 6.55																					
Temp 15.4																					

460-204979 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:	
Relinquished by:	Date/Time: 3/13/2020	Company: TA	Received by:	Date/Time: 3-13-20 1830	Company: TA
Relinquished by:	Date/Time: 3/13/20 1930	Company: TA	Received by:	Date/Time: 3/13/20 1930	Company: TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.3/4.3 °C FED

Ver: 08/04/2016

4/3/2020

Eurofins TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 202979

Number of Coolers: 1 IR Gun # 11

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	4.3 °C	4.3 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1	<2	<2		<2											
2								<2				>12			

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

EDS-WI-038, Rev 4.1
10/22/2019

Initials: [signature] Date: 3-13-20

TestAmerica South Jersey
3000 Lincoln Drive East Suite A
Marlton, NJ 08053
Phone (856) 334-1030 Fax (856) 222-1984

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Field Services SJO

SHORT HOLD

Client Information	Sampler: JB	Lab PM: Bennett, Allison L	Carrier Tracking No(s):	COC No: 460-109420-70098.1
Client Contact: Michael Tucci	Phone:	E-Mail: allison.bennett@testamericainc.com		Page: Page 1 of 1
Company: IES Engineers				Job #: 204979
Address: 1720 Walton Road	Due Date Requested:			
City: Blue Bell	TAT Requested (days):			
State, Zip: PA, 19422				
Phone:	PO #: Purchase Order Requested			
Email: MTucci@iesengineers.com	WO #:			
Project Name: Quarterly #183765;	Project #: 46028651			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Analysis

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500_NH3_H - Ammonia (Comp)	200.8, 245.1 - Cd, Cr, Cu, Pb, Ni, Ag, As, Zn, Hg (comp)	SM5210B_CBOD_20 - CBOD, 20-day (comp)	1664A_NP - Oil & Grease (Comp)	2540D - TSS (comp)	5210B - BOD, 5-day (comp)	5220D - COD (Comp)		420.1 - Phenolics, Total Recoverable (grab)	335.4 - Cyanide, Total (Grab)	1664A_NP - Oil & Grease/TPH (Grab)	1668A - 209 PCBs (grab)	SM4500_H+_F - pH, Field (price included in field servi	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	D	N	A	N	N	S		S	B	A	N	N		
Outfall Comp	3/13/2020	730	C	W			X	X	X	X	X	X	X						X		1
Outfall Grab	3/13/2020	735	G	W											X	X	X	X	X		2
pH 6.81																					
Temp 13.7																					
pH 6.55																					
Temp 15.4																					

460-204979 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: [signature]	Date/Time: 3/13/2020	Company: TA	Received by: [signature]	Date/Time: 3-13-20 1830	Company: TA
Relinquished by: [signature]	Date/Time: 3/13/20 1930	Company: TA	Received by: [signature]	Date/Time: 3/13/20 1930	Company: TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 4.3/4.3 °C FRT		

Ver: 08/04/2016

Eurofins TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 202979

Number of Coolers: 1 **IR Gun #** 1

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	4.3 °C	4.3	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1	<2	<2		<2											
2								<2				>12			

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: _____ **Date:** 3-13-20

EDS-WI-038, Rev 4.1
10/22/2019

Eurofins TestAmerica, Edison
777 New Durham Road
Edison, NJ 08817
Phone: 732-549-3900 Fax: 732-549-3679

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Gilmore, Julie L	Carrier Tracking No(s):	COC No: 460-57704.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: julie.gilmore@testamericainc.com	State of Origin: Pennsylvania	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Pennsylvania		Job #: 460-204979-1
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 4/8/2020			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37921				
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:			
Email:	WD #:			
Project Name: Lower Bucks County Hospital #183765	Project #: 46028651			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1668A/1668_P_Sep 209 PCBs	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall Grab (460-204979-2)	3/13/20	07:35 Eastern		Water			X	1	RG/ND

CUSTODY SEALS INTACT
RECEIVED AT RT 0.2/CT 0.2°C
BKD 3-17-20
COOLER FED-X # 1161 6400 3244 PO

460-204979 Chain of Custody

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 3/16/20 1800	Company: EA	Received by:	Date/Time: 3-17-20 10:15	Company: EA-TNA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

Ver: 01/16/2019

Loc: 460
204979

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓		✓	☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	✓			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____	✓ ✓			☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓ ✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?			✓	☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓ ✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓ ✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: 817820321/04	✓			☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number: HC995364

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: _____ PM Instructions: _____

Sample Receiving Associate: [signature] Date: 3-17-20

QA026R32.doc, 062719

Login Sample Receipt Checklist

Client: IES Engineers

Job Number: 460-204979-1

Login Number: 204979
List Number: 1
Creator: DiGuardia, Joseph L

List Source: Eurofins TestAmerica, Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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 containers received 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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT 2

SUMMARY OF THE PCB LABORATORY RESULTS

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-204979-1

Job Description: Quarterly #183765

For:

IES Engineers

1720 Walton Road

Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-204979-2
Sampling Date	TDS<2500	TDS<2500			03/13/2020 07:35:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
WATER BY 1668A					
PCB-1	NA	NA	0.033	J B	0.043
PCB-10	NA	NA	0.0041	J q	0.043
PCB-100	NA	NA	0.0048	C93	0.086
PCB-101	NA	NA	0.49	90 B	0.13
PCB-102	NA	NA	0.013	C98	0.086
PCB-103	NA	NA	0.0025	J	0.043
PCB-104	NA	NA	0.00021	U	0.043
PCB-105	NA	NA	0.082	B	0.043
PCB-106	NA	NA	0.0015	U	0.043
PCB-107	NA	NA	0.012	J q	0.043
PCB-108	NA	NA	0.0089	J q C	0.086
PCB-109	NA	NA	0.29	86 B	0.26
PCB-11	NA	NA	0.13	B	0.064
PCB-110	NA	NA	0.45	C B	0.086
PCB-111	NA	NA	0.00020	U	0.043
PCB-112	NA	NA	0.00021	U	0.043
PCB-113	NA	NA	0.49	90 B	0.13
PCB-114	NA	NA	0.0067	J	0.043
PCB-115	NA	NA	0.45	10 B	0.086
PCB-116	NA	NA	0.068	85 B	0.13
PCB-117	NA	NA	0.068	85 B	0.13
PCB-118	NA	NA	0.23	B	0.043
PCB-119	NA	NA	0.29	86 B	0.26
PCB-12	NA	NA	0.060	J C	0.086
PCB-120	NA	NA	0.00020	U	0.043
PCB-121	NA	NA	0.00020	U	0.043
PCB-122	NA	NA	0.0048	J	0.043
PCB-123	NA	NA	0.0029	J q	0.043
PCB-124	NA	NA	0.0089	C108	0.086
PCB-125	NA	NA	0.29	86 B	0.26
PCB-126	NA	NA	0.0016	U	0.043
PCB-127	NA	NA	0.0015	U	0.043
PCB-128	NA	NA	0.030	J q C	0.086
PCB-129	NA	NA	0.38	C B	0.17
PCB-13	NA	NA	0.060	C12	0.086
PCB-130	NA	NA	0.015	J q	0.043
PCB-131	NA	NA	0.0052	J	0.043
PCB-132	NA	NA	0.13		0.043
PCB-133	NA	NA	0.0047	J q	0.043
PCB-134	NA	NA	0.016	J q C	0.086
PCB-135	NA	NA	0.14	C	0.086

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-204979-1
Job Description: Quarterly #183765
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-204979-2
Sampling Date	TDS<2500	TDS<2500			03/13/2020 07:35:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-136	NA	NA	0.050	q	0.043
PCB-137	NA	NA	0.0070	J q	0.043
PCB-138	NA	NA	0.38	29 B	0.17
PCB-139	NA	NA	0.0026	J q C	0.086
PCB-14	NA	NA	0.0023	U	0.043
PCB-140	NA	NA	0.0026	C139	0.086
PCB-141	NA	NA	0.10		0.043
PCB-142	NA	NA	0.0017	U	0.043
PCB-143	NA	NA	0.016	C134	0.086
PCB-144	NA	NA	0.020	J	0.043
PCB-145	NA	NA	0.00014	U	0.043
PCB-146	NA	NA	0.050		0.043
PCB-147	NA	NA	0.38	C	0.086
PCB-148	NA	NA	0.00019	U	0.043
PCB-149	NA	NA	0.38	C147	0.086
PCB-15	NA	NA	0.14	B	0.043
PCB-150	NA	NA	0.00013	U	0.043
PCB-151	NA	NA	0.14	C135	0.086
PCB-152	NA	NA	0.00014	U	0.043
PCB-153	NA	NA	0.34	C B	0.086
PCB-154	NA	NA	0.0044	J	0.043
PCB-155	NA	NA	0.00013	U	0.043
PCB-156	NA	NA	0.029	J C B	0.086
PCB-157	NA	NA	0.029	56 B	0.086
PCB-158	NA	NA	0.033	J	0.043
PCB-159	NA	NA	0.0051	J	0.043
PCB-16	NA	NA	0.063	q	0.043
PCB-160	NA	NA	0.38	29 B	0.17
PCB-161	NA	NA	0.0011	U	0.043
PCB-162	NA	NA	0.0011	U	0.043
PCB-163	NA	NA	0.38	29 B	0.17
PCB-164	NA	NA	0.028	J	0.043
PCB-165	NA	NA	0.0013	U	0.043
PCB-166	NA	NA	0.030	C128	0.086
PCB-167	NA	NA	0.0071	J q	0.043
PCB-168	NA	NA	0.34	53 B	0.086
PCB-169	NA	NA	0.0017	J q B	0.043
PCB-17	NA	NA	0.062		0.043
PCB-170	NA	NA	0.19		0.043
PCB-171	NA	NA	0.054	q C B	0.086
PCB-172	NA	NA	0.028	J q	0.043
PCB-173	NA	NA	0.054	71 B	0.086

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-204979-1

Job Description: Quarterly #183765

For:

IES Engineers

1720 Walton Road

Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-204979-2
Sampling Date	TDS<2500	TDS<2500			03/13/2020 07:35:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-174	NA	NA	0.18		0.043
PCB-175	NA	NA	0.0041	J q	0.043
PCB-176	NA	NA	0.017	J	0.043
PCB-177	NA	NA	0.10		0.043
PCB-178	NA	NA	0.033	J	0.043
PCB-179	NA	NA	0.061	B	0.043
PCB-18	NA	NA	0.11	q C B	0.086
PCB-180	NA	NA	0.42	C B	0.086
PCB-181	NA	NA	0.00016	U	0.043
PCB-182	NA	NA	0.00015	U	0.043
PCB-183	NA	NA	0.12	C B	0.086
PCB-184	NA	NA	0.00013	U	0.043
PCB-185	NA	NA	0.12	83 B	0.086
PCB-186	NA	NA	0.00013	U	0.043
PCB-187	NA	NA	0.20		0.043
PCB-188	NA	NA	0.00011	U	0.043
PCB-189	NA	NA	0.0038	J q B	0.043
PCB-19	NA	NA	0.0067	J q	0.043
PCB-190	NA	NA	0.030	J q B	0.043
PCB-191	NA	NA	0.0080	J B	0.043
PCB-192	NA	NA	0.00013	U	0.043
PCB-193	NA	NA	0.42	80 B	0.086
PCB-194	NA	NA	0.086	B	0.043
PCB-195	NA	NA	0.032	J q B	0.043
PCB-196	NA	NA	0.037	J q	0.043
PCB-197	NA	NA	0.0014	J q	0.043
PCB-198	NA	NA	0.083	J C B	0.086
PCB-199	NA	NA	0.083	98 B	0.086
PCB-2	NA	NA	0.0080	J	0.043
PCB-20	NA	NA	0.22	C B	0.086
PCB-200	NA	NA	0.0062	J q B	0.043
PCB-201	NA	NA	0.0077	J q	0.043
PCB-202	NA	NA	0.012	J q B	0.043
PCB-203	NA	NA	0.047	B	0.043
PCB-204	NA	NA	0.00013	U	0.043
PCB-205	NA	NA	0.0045	J B	0.043
PCB-206	NA	NA	0.013	J B	0.043
PCB-207	NA	NA	0.0015	U	0.043
PCB-208	NA	NA	0.0035	J q	0.043
PCB-209	NA	NA	0.043	B	0.043
PCB-21	NA	NA	0.15	C B	0.086
PCB-22	NA	NA	0.098		0.043

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-204979-1

Job Description: Quarterly #183765

For:

IES Engineers

1720 Walton Road

Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-204979-2
Sampling Date	TDS<2500	TDS<2500			03/13/2020 07:35:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-23	NA	NA	0.0012	U	0.043
PCB-24	NA	NA	0.0030	J	0.043
PCB-25	NA	NA	0.017	J	0.043
PCB-26	NA	NA	0.033	J C	0.086
PCB-27	NA	NA	0.0082	J	0.043
PCB-28	NA	NA	0.22	20 B	0.086
PCB-29	NA	NA	0.033	C26	0.086
PCB-3	NA	NA	0.039	J B	0.043
PCB-30	NA	NA	0.11	18 B	0.086
PCB-31	NA	NA	0.20	B	0.043
PCB-32	NA	NA	0.048		0.043
PCB-33	NA	NA	0.15	21 B	0.086
PCB-34	NA	NA	0.0012	U	0.043
PCB-35	NA	NA	0.0099	J	0.043
PCB-36	NA	NA	0.0012	U	0.043
PCB-37	NA	NA	0.10	B	0.043
PCB-38	NA	NA	0.0013	U	0.043
PCB-39	NA	NA	0.0011	U	0.043
PCB-4	NA	NA	0.068		0.064
PCB-40	NA	NA	0.10	J C	0.13
PCB-41	NA	NA	0.10	C40	0.13
PCB-42	NA	NA	0.036	J	0.043
PCB-43	NA	NA	0.0074	J q C	0.086
PCB-44	NA	NA	0.22	C B	0.13
PCB-45	NA	NA	0.022	J C	0.086
PCB-46	NA	NA	0.0066	J	0.043
PCB-47	NA	NA	0.22	44 B	0.13
PCB-48	NA	NA	0.037	J	0.043
PCB-49	NA	NA	0.11	C	0.086
PCB-5	NA	NA	0.013	J q	0.043
PCB-50	NA	NA	0.014	J C	0.086
PCB-51	NA	NA	0.022	C45	0.086
PCB-52	NA	NA	0.38		0.043
PCB-53	NA	NA	0.014	C50	0.086
PCB-54	NA	NA	0.000075	U	0.043
PCB-55	NA	NA	0.010	J	0.043
PCB-56	NA	NA	0.091		0.043
PCB-57	NA	NA	0.0023	U	0.043
PCB-58	NA	NA	0.0023	U	0.043
PCB-59	NA	NA	0.012	J C	0.13
PCB-6	NA	NA	0.055	q	0.043
PCB-60	NA	NA	0.059		0.043

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-204979-1

Job Description: Quarterly #183765

For:

IES Engineers

1720 Walton Road

Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-204979-2
Sampling Date	TDS<2500	TDS<2500			03/13/2020 07:35:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-61	NA	NA	0.47	C B	0.17
PCB-62	NA	NA	0.012	C59	0.13
PCB-63	NA	NA	0.0067	J	0.043
PCB-64	NA	NA	0.085		0.043
PCB-65	NA	NA	0.22	44 B	0.13
PCB-66	NA	NA	0.19		0.043
PCB-67	NA	NA	0.0049	J q	0.043
PCB-68	NA	NA	0.0021	J q	0.043
PCB-69	NA	NA	0.11	C49	0.086
PCB-7	NA	NA	0.033	J q	0.043
PCB-70	NA	NA	0.47	61 B	0.17
PCB-71	NA	NA	0.10	C40	0.13
PCB-72	NA	NA	0.0022	U	0.043
PCB-73	NA	NA	0.0074	C43	0.086
PCB-74	NA	NA	0.47	61 B	0.17
PCB-75	NA	NA	0.012	C59	0.13
PCB-76	NA	NA	0.47	61 B	0.17
PCB-77	NA	NA	0.013	J	0.043
PCB-78	NA	NA	0.0023	U	0.043
PCB-79	NA	NA	0.0033	J q	0.043
PCB-8	NA	NA	0.22	B	0.064
PCB-80	NA	NA	0.0019	U	0.043
PCB-81	NA	NA	0.0020	U	0.043
PCB-82	NA	NA	0.048		0.043
PCB-83	NA	NA	0.23	C	0.086
PCB-84	NA	NA	0.14		0.043
PCB-85	NA	NA	0.068	J C B	0.13
PCB-86	NA	NA	0.29	C B	0.26
PCB-87	NA	NA	0.29	86 B	0.26
PCB-88	NA	NA	0.059	J q C	0.086
PCB-89	NA	NA	0.0053	J	0.043
PCB-9	NA	NA	0.020	J q	0.043
PCB-90	NA	NA	0.49	C B	0.13
PCB-91	NA	NA	0.059	C88	0.086
PCB-92	NA	NA	0.064	q	0.043
PCB-93	NA	NA	0.0048	J C	0.086
PCB-94	NA	NA	0.0020	J q	0.043
PCB-95	NA	NA	0.46		0.043
PCB-96	NA	NA	0.0036	J	0.043
PCB-97	NA	NA	0.29	86 B	0.26
PCB-98	NA	NA	0.013	J q C	0.086
PCB-99	NA	NA	0.23	C83	0.086

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-204979-1
Job Description: Quarterly #183765
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-204979-2
Sampling Date	TDS<2500	TDS<2500			03/13/2020 07:35:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL

B : Compound was found in the blank and sample.
C : The compound co-eluted with other compounds
C108 : The compound co-eluted with PCB-108
C110 : The compound co-eluted with PCB-110
C12 : The compound co-eluted with PCB-12
C128 : The compound co-eluted with PCB-128
C129 : The compound co-eluted with PCB-129
C134 : The compound co-eluted with PCB-134
C135 : The compound co-eluted with PCB-135
C139 : The compound co-eluted with PCB-139
C147 : The compound co-eluted with PCB-147
C153 : The compound co-eluted with PCB-153
C156 : The compound co-eluted with PCB-156
C171 : The compound co-eluted with PCB-171
C18 : The compound co-eluted with PCB-18
C180 : The compound co-eluted with PCB-180
C183 : The compound co-eluted with PCB-183
C198 : The compound co-eluted with PCB-198
C20 : The compound co-eluted with PCB-20
C21 : The compound co-eluted with PCB-21
C26 : The compound co-eluted with PCB-26
C40 : The compound co-eluted with PCB-40
C43 : The compound co-eluted with PCB-43
C44 : The compound co-eluted with PCB-44
C45 : The compound co-eluted with PCB-45
C49 : The compound co-eluted with PCB-49
C50 : The compound co-eluted with PCB-50
C59 : The compound co-eluted with PCB-59
C61 : The compound co-eluted with PCB-61
C83 : The compound co-eluted with PCB-83
C85 : The compound co-eluted with PCB-85
C86 : The compound co-eluted with PCB-86
C88 : The compound co-eluted with PCB-88
C90 : The compound co-eluted with PCB-90
C93 : The compound co-eluted with PCB-93
C98 : The compound co-eluted with PCB-98
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
U : Indicates the analyte was analyzed for but not detected.

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-204979-1
Job Description: Quarterly #183765
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-204979-2
Sampling Date	TDS<2500	TDS<2500			03/13/2020 07:35:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL

Lab Contact:
Julie Gilmore
Project Manager I
(484)685-0865

ATTACHMENT 3

WATER METER DATA

Attachment 3				
Lower Bucks Hospital - 501 Bath Road, Bristol, PA				
Water Meter Data				
March 2020				
2" Meter			4" Meter	
Billing Start Date	3/2/2020		Billing Start Date	3/2/2020
Billing End Date	3/31/2020		Billing End Date	4/1/2020
No. Of Days (*Billing Period*)	29		No. Of Days (*Billing Period*)	30
	Gallons			**Gallons**
2" Meter	28,600		4" Meter	500,100
Total Water Usage for Both Meters is 528,700 gallons				
Average GPD 2"	986		Average GPD 4"	16,670
Average Total Flow	17,656	Gallons Per Day		

Notes:

1. The facility currently estimates wastewater discharge flow to be equivalent to the quantity of water purchased, based on the facility water bill.

1720 Walton Road, Blue Bell, PA 19422 610-828-3078 Fax 610-828-7842

July 17, 2020

E-MAIL
Ms. Randee Elton
Township Manager
Bristol Township Pretreatment Coordinator
Bristol Township
2501 Bath Road
Bristol, PA 19007
relton@bristoltownship.org

Subject: Wastewater Discharge Monitoring Report
June 2020
Permit No. IND-05-S-2019
Lower Bucks Hospital
Bristol, Pennsylvania
IES Project No. EV201318.01

Dear Ms. Elton:

On behalf of Lower Bucks Hospital (LBH), IES Engineers (IES) is pleased to submit the enclosed wastewater discharge monitoring report for the month of June 2020. Sampling was conducted on June 5, 2020. Samples were collected at Outfall LBH01 at the LBH facility, which is located at 501 Bath Road, Bristol, Pennsylvania. Laboratory analyses were performed by TestAmerica Laboratories, Inc., of Edison, New Jersey. This sampling event report fulfills the monthly and quarterly sampling requirements of LBH's Industrial Wastewater Discharge Permit that was issued by Bristol Township on January 1, 2019.

All parameters analyzed are in compliance with the permit limits.

As part of the quarterly monitoring requirement, LBH analyzed the wastewater during June 2020, for PCBs, cyanide, phenols, and Total Petroleum Hydrocarbons (TPH) using EPA Methods. A summary of the PCB Laboratory Results is presented in Attachment 2 and the full laboratory report for all other pollutant parameters is presented in Attachment 1. The analytical results clearly indicate that all parameters are in compliance with the permit limits.

LBH is currently estimating wastewater discharge flow to be equivalent to the quantity of water purchased. On this basis, the total discharge flow for the month of June 2020 was 755,900 gallons or an average of 25,197 gallons per day based on water meter billing period. A copy of water meter data for June 2020 is presented in Attachment 3.

If you have any questions, please contact me or Mr. George Lodish LBH at (215) 785-9014.

Very truly yours,

Michael T. Havard /e/
Michael T. Havard
Project Engineer

Attachments
cc: V. Nedrick, RVE
T. Rivera, InfraMark
G. Lodish, LBH
P. Ryan, LBH
J. Martin, IES
A. Soni, IES

3800-FM-BCW0462 12/2016

PERMITTEE NAME/ADDRESS

DISCHARGE MONITORING REPORT (DMR)

NAME **Lower Bucks Hospital**

ADDRESS **501 Bath Road**

FACILITY

LOCATION

WATERSHED

IND-05-S-2019
PERMIT NUMBER

LBH01
OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
2020	**06**	**01**	TO	**2020**	**06**	**31**

Reporting Frequency: Monthly

DMR Effective From:

DMR Effective To:

Permit Expires: December 31, 2023

Permit Application Due:

☐ Check here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
BOD5	SAMPLE MEASUREMENT				70.8	70.8	70.8	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					550					
CBOD20	SAMPLE MEASUREMENT				116	116	116	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1200					
COD	SAMPLE MEASUREMENT				390	390	390	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1200					
TSS	SAMPLE MEASUREMENT				57.5	57.5	57.5	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					650					
FOG	SAMPLE MEASUREMENT				2.1	2.1	2.1	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					150					
Ammonia	SAMPLE MEASUREMENT				5.2	5.2	5.2	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					50					
Cadmium (Total)	SAMPLE MEASUREMENT				<0.00089	<0.00089	<0.00089	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.10					
Chromium (Total)	SAMPLE MEASUREMENT				0.00076	0.00076	0.00076	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1.80					

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
Copper (Total)	SAMPLE MEASUREMENT				0.0504	0.0504	0.0504	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.51					
Cyanide (Total)	SAMPLE MEASUREMENT				0.004	0.004	0.004	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT					2.31					
Lead (Total)	SAMPLE MEASUREMENT				0.0011	0.0011	0.0011	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.43					
Mercury (Total)	SAMPLE MEASUREMENT				0.00012	0.00012	0.00012	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.003					
Nickel (Total)	SAMPLE MEASUREMENT				0.0024	0.0024	0.0024	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.51					
Silver (Total)	SAMPLE MEASUREMENT				<0.00059	<0.00059	<0.00059	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.14					
Arsenic (Total)	SAMPLE MEASUREMENT				<0.0022	<0.0022	<0.0022	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					2.30					

		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
Zinc (Total)	SAMPLE MEASUREMENT				0.075	0.075	0.075	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					2.90					
Phenols (Total)	SAMPLE MEASUREMENT				0.82	0.82	0.82	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT					1.83					
Daily Flow, gallons per day	SAMPLE MEASUREMENT							GPD	0	N/A	N/A
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
pH	SAMPLE MEASUREMENT				7.2	7.2	7.2	S.U	0	1	COMPOSITE
	PERMIT REQUIREMENT				6.0	---	9.0				
Total Petroleum Hydrocarbons (TPH)	SAMPLE MEASUREMENT				4.5	4.5	4.5	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
PCBs	SAMPLE MEASUREMENT					See Attachment 2		mg/l	0	Q	GRAB
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
	SAMPLE MEASUREMENT								0		
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate 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 am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE		DATE		
George Lodish / Director of Facilities			215	785-9014			
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

ATTACHMENT 1

LABORATORY ANALYTICAL DATA

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

Laboratory Job ID: 460-210435-1
Client Project/Site: Quarterly #183765;

For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Attn: Michael J. Tucci

Authorized for release by:
6/29/2020 10:00:01 AM

Julie Gilmore, Project Manager I
(484)685-0865
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LINKS

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Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
C	The compound co-eluted with other compounds
C108	The compound co-eluted with PCB-108
C110	The compound co-eluted with PCB-110
C12	The compound co-eluted with PCB-12
C128	The compound co-eluted with PCB-128
C129	The compound co-eluted with PCB-129
C134	The compound co-eluted with PCB-134
C135	The compound co-eluted with PCB-135
C139	The compound co-eluted with PCB-139
C147	The compound co-eluted with PCB-147
C153	The compound co-eluted with PCB-153
C156	The compound co-eluted with PCB-156
C171	The compound co-eluted with PCB-171
C18	The compound co-eluted with PCB-18
C180	The compound co-eluted with PCB-180
C183	The compound co-eluted with PCB-183
C198	The compound co-eluted with PCB-198
C20	The compound co-eluted with PCB-20
C21	The compound co-eluted with PCB-21
C26	The compound co-eluted with PCB-26
C40	The compound co-eluted with PCB-40
C43	The compound co-eluted with PCB-43
C44	The compound co-eluted with PCB-44
C45	The compound co-eluted with PCB-45
C49	The compound co-eluted with PCB-49
C50	The compound co-eluted with PCB-50
C59	The compound co-eluted with PCB-59
C61	The compound co-eluted with PCB-61
C83	The compound co-eluted with PCB-83
C85	The compound co-eluted with PCB-85
C86	The compound co-eluted with PCB-86
C88	The compound co-eluted with PCB-88
C90	The compound co-eluted with PCB-90
C93	The compound co-eluted with PCB-93
C98	The compound co-eluted with PCB-98
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Job ID: 460-210435-1

Laboratory: Eurofins TestAmerica, Edison

Narrative

CASE NARRATIVE

Client: IES Engineers

Project: Quarterly #183765;

Report Number: 460-210435-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 06/05/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.8 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DIOXINS
Sample Outfall Grab (460-210435-2) was analyzed for dioxins in accordance with EPA Method 1668A. The samples were prepared on 06/10/2020 and analyzed on 06/16/2020.

An ion abundance ratio is outside criteria for the Isotope Dilution Analyte (IDA) associated with the following sample: Outfall Grab (460-210435-2).

Several analytes were detected in method blank MB 140-40240/4-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No other difficulties were encountered during the dioxins analysis.

All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS
Sample Outfall Comp (460-210435-1) was analyzed for total recoverable metals in accordance with EPA Method 200.8 (ICP/MS). The samples were prepared on 06/11/2020 and analyzed on 06/14/2020.

As a standard practice all non-potable samples and related QC samples (i.e., MB, LCS, Dup, MS, SD) are diluted 5X prior to analysis. Further dilutions may be required dependent upon analyte levels in the samples. Refer to the analytical results forms for dilutions.

Job ID: 460-210435-1 (Continued)

Laboratory: Eurofins TestAmerica, Edison (Continued)

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

TOTAL MERCURY
Sample Outfall Comp (460-210435-1) was analyzed for total mercury in accordance with EPA Method 245.1. The samples were prepared and analyzed on 06/16/2020.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

OIL&GREASE
Samples Outfall Comp (460-210435-1) and Outfall Grab (460-210435-2) were analyzed for Silica Gel Treated (SGT/Petroleum Hydrocarbon) and N-Hexane Extractable Material (HEM/Oil&Grease) in accordance with EPA SW-846 Method 1664A. The samples were analyzed on 06/16/2020.

HEM failed the recovery criteria low for the MS of sample 460-210938-4 in batch 460-701718.

Refer to the QC report for details.

No other difficulties were encountered during the SGT-HEM/HEM analysis.

All other quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS
Sample Outfall Comp (460-210435-1) was analyzed for total suspended solids in accordance with SM 2540D. The samples were analyzed on 06/12/2020.

No difficulties were encountered during the TSS analysis.

All quality control parameters were within the acceptance limits.

TOTAL CYANIDE
Sample Outfall Grab (460-210435-2) was analyzed for total cyanide in accordance with EPA Method 335.4. The samples were prepared on 06/14/2020 and analyzed on 06/15/2020.

No difficulties were encountered during the cyanide analysis.

All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE PHENOLS
Sample Outfall Grab (460-210435-2) was analyzed for total recoverable phenols in accordance with EPA Method 420.1. The samples were prepared and analyzed on 06/11/2020.

Due to the matrix, the initial volume used for the following sample deviated from the standard procedure: Outfall Grab (460-210435-2). The reporting limits (RLs) have been adjusted proportionately.

No difficulties were encountered during the phenol analysis.

All quality control parameters were within the acceptance limits.

BIOCHEMICAL OXYGEN DEMAND 5 DAY
Sample Outfall Comp (460-210435-1) was analyzed for Biochemical Oxygen Demand 5 Day in accordance with SM 5210B. The samples were analyzed on 06/06/2020.

Job ID: 460-210435-1 (Continued)

Laboratory: Eurofins TestAmerica, Edison (Continued)

Biochemical Oxygen Demand exceeded the RPD limit for the duplicate of sample 460-210437-1. Refer to the QC report for details.

No other difficulties were encountered during the BOD5 analysis.

All other quality control parameters were within the acceptance limits.

CHEMICAL OXYGEN DEMAND
Sample Outfall Comp (460-210435-1) was analyzed for Chemical Oxygen Demand in accordance with SM 5220D. The samples were analyzed on 06/17/2020.

Sample Outfall Comp (460-210435-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the COD analysis.

All quality control parameters were within the acceptance limits.

FIELD PH
Sample Outfall Grab (460-210435-2) was analyzed for field pH in accordance with SM 4500_H+_F. The samples were analyzed on 06/05/2020.

No difficulties were encountered during the field pH analysis.

All quality control parameters were within the acceptance limits.

AMMONIA
Sample Outfall Comp (460-210435-1) was analyzed for ammonia in accordance with SM4500NH3_G. The samples were analyzed on 06/08/2020.

No difficulties were encountered during the ammonia analysis.

All quality control parameters were within the acceptance limits.

CARBONACEOUS BIOCHEMICAL OXYGEN DEMAND 20 DAY
Sample Outfall Comp (460-210435-1) was analyzed for Carbonaceous Biochemical Oxygen Demand 20 Day in accordance with SM 5210B. The samples were analyzed on 06/06/2020.

No difficulties were encountered during the CBOD20 analysis.

All quality control parameters were within the acceptance limits.

ORGANIC PREP
Methods 1668_Sep_2L, 3540C, 8290, HRMS-Sepf, HRMS-Sox, Split: The following samples went through Gel-Permeation Cleanup procedure, based on EPA method 3640A:

Outfall Grab (460-210435-2)

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Client Sample ID: Outfall Comp — Lab Sample ID: 460-210435-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.76	J	5.0	0.54	ug/L	5		200.8	Total Recoverable
Copper	50.4		5.0	2.6	ug/L	5		200.8	Total Recoverable
Nickel	2.4	J	5.0	1.5	ug/L	5		200.8	Total Recoverable
Lead	1.1	J	1.5	0.17	ug/L	5		200.8	Total Recoverable
Zinc	75.0		20.0	3.4	ug/L	5		200.8	Total Recoverable
Mercury	0.12	J	0.20	0.091	ug/L	1		245.1	Total/NA
HEM	4.7	J	5.0	1.4	mg/L	1		1664A	Total/NA
Total Suspended Solids	57.5		12.5	12.5	mg/L	1		SM 2540D	Total/NA
Ammonia	5.2		0.10	0.034	mg/L	1		SM 4500 NH3 G	Total/NA
Biochemical Oxygen Demand	70.8		1.0	1.0	mg/L	1		SM 5210B	Total/NA
Chemical Oxygen Demand	390		50.0	16.5	mg/L	5		SM 5220D	Total/NA
Carbonaceous Biochemical Oxygen Demand 20	116		1.0	1.0	mg/L	1		SM5210B	Total/NA

Client Sample ID: Outfall Grab — Lab Sample ID: 460-210435-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1	0.094	B	0.045	0.00045	ng/L	1		1668A	Total/NA
PCB-2	0.019	J B	0.045	0.00051	ng/L	1		1668A	Total/NA
PCB-3	0.089	B	0.045	0.00054	ng/L	1		1668A	Total/NA
PCB-4	0.12		0.068	0.0037	ng/L	1		1668A	Total/NA
PCB-5	0.019	J q	0.045	0.0028	ng/L	1		1668A	Total/NA
PCB-6	0.088		0.045	0.0025	ng/L	1		1668A	Total/NA
PCB-7	0.029	J	0.045	0.0025	ng/L	1		1668A	Total/NA
PCB-8	0.31		0.068	0.0023	ng/L	1		1668A	Total/NA
PCB-9	0.030	J q	0.045	0.0026	ng/L	1		1668A	Total/NA
PCB-10	0.0094	J q	0.045	0.0028	ng/L	1		1668A	Total/NA
PCB-11	0.10	B	0.068	0.0024	ng/L	1		1668A	Total/NA
PCB-12	0.092	C	0.090	0.0025	ng/L	1		1668A	Total/NA
PCB-13	0.092	C12	0.090	0.0025	ng/L	1		1668A	Total/NA
PCB-15	0.22		0.045	0.0025	ng/L	1		1668A	Total/NA
PCB-16	0.098		0.045	0.00086	ng/L	1		1668A	Total/NA
PCB-17	0.082		0.045	0.00077	ng/L	1		1668A	Total/NA
PCB-18	0.18	C B	0.090	0.00068	ng/L	1		1668A	Total/NA
PCB-19	0.018	J q	0.045	0.00095	ng/L	1		1668A	Total/NA
PCB-20	0.26	C B	0.090	0.0015	ng/L	1		1668A	Total/NA
PCB-21	0.17	C B	0.090	0.0014	ng/L	1		1668A	Total/NA
PCB-22	0.11	B	0.045	0.0015	ng/L	1		1668A	Total/NA
PCB-24	0.0045	J q	0.045	0.00065	ng/L	1		1668A	Total/NA
PCB-25	0.022	J	0.045	0.0013	ng/L	1		1668A	Total/NA
PCB-26	0.046	J C B	0.090	0.0014	ng/L	1		1668A	Total/NA
PCB-27	0.014	J q	0.045	0.00056	ng/L	1		1668A	Total/NA
PCB-28	0.26	C20 B	0.090	0.0015	ng/L	1		1668A	Total/NA
PCB-29	0.046	J C26 B	0.090	0.0014	ng/L	1		1668A	Total/NA
PCB-30	0.18	C18 B	0.090	0.00068	ng/L	1		1668A	Total/NA
PCB-31	0.24	B	0.045	0.0014	ng/L	1		1668A	Total/NA
PCB-32	0.057		0.045	0.00054	ng/L	1		1668A	Total/NA
PCB-33	0.17	C21 B	0.090	0.0014	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-210435-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-35	0.014	J	0.045	0.0015	ng/L	1		1668A	Total/NA
PCB-37	0.12		0.045	0.0015	ng/L	1		1668A	Total/NA
PCB-40	0.11	J C B	0.14	0.0032	ng/L	1		1668A	Total/NA
PCB-41	0.11	J C40 B	0.14	0.0032	ng/L	1		1668A	Total/NA
PCB-42	0.047		0.045	0.0032	ng/L	1		1668A	Total/NA
PCB-43	0.0082	J q C	0.090	0.0030	ng/L	1		1668A	Total/NA
PCB-44	0.26	C B	0.14	0.0028	ng/L	1		1668A	Total/NA
PCB-45	0.029	J C B	0.090	0.0034	ng/L	1		1668A	Total/NA
PCB-46	0.011	J	0.045	0.0041	ng/L	1		1668A	Total/NA
PCB-47	0.26	C44 B	0.14	0.0028	ng/L	1		1668A	Total/NA
PCB-48	0.033	J	0.045	0.0032	ng/L	1		1668A	Total/NA
PCB-49	0.13	C B	0.090	0.0026	ng/L	1		1668A	Total/NA
PCB-50	0.024	J C	0.090	0.0031	ng/L	1		1668A	Total/NA
PCB-51	0.029	J C45 B	0.090	0.0034	ng/L	1		1668A	Total/NA
PCB-52	0.49	B	0.045	0.0032	ng/L	1		1668A	Total/NA
PCB-53	0.024	J C50	0.090	0.0031	ng/L	1		1668A	Total/NA
PCB-56	0.098	B	0.045	0.0023	ng/L	1		1668A	Total/NA
PCB-59	0.012	J q C B	0.14	0.0023	ng/L	1		1668A	Total/NA
PCB-60	0.063	B	0.045	0.0024	ng/L	1		1668A	Total/NA
PCB-61	0.51	C B	0.18	0.0022	ng/L	1		1668A	Total/NA
PCB-62	0.012	J q C59 B	0.14	0.0023	ng/L	1		1668A	Total/NA
PCB-63	0.0083	J	0.045	0.0022	ng/L	1		1668A	Total/NA
PCB-64	0.097		0.045	0.0022	ng/L	1		1668A	Total/NA
PCB-65	0.26	C44 B	0.14	0.0028	ng/L	1		1668A	Total/NA
PCB-66	0.19	B	0.045	0.0022	ng/L	1		1668A	Total/NA
PCB-67	0.0059	J	0.045	0.0021	ng/L	1		1668A	Total/NA
PCB-69	0.13	C49 B	0.090	0.0026	ng/L	1		1668A	Total/NA
PCB-70	0.51	C61 B	0.18	0.0022	ng/L	1		1668A	Total/NA
PCB-71	0.11	J C40 B	0.14	0.0032	ng/L	1		1668A	Total/NA
PCB-73	0.0082	J q C43	0.090	0.0030	ng/L	1		1668A	Total/NA
PCB-74	0.51	C61 B	0.18	0.0022	ng/L	1		1668A	Total/NA
PCB-75	0.012	J q C59 B	0.14	0.0023	ng/L	1		1668A	Total/NA
PCB-76	0.51	C61 B	0.18	0.0022	ng/L	1		1668A	Total/NA
PCB-77	0.029	J B	0.045	0.0023	ng/L	1		1668A	Total/NA
PCB-79	0.0043	J q	0.045	0.0021	ng/L	1		1668A	Total/NA
PCB-82	0.058		0.045	0.00044	ng/L	1		1668A	Total/NA
PCB-83	0.25	C B	0.090	0.00041	ng/L	1		1668A	Total/NA
PCB-84	0.17		0.045	0.00045	ng/L	1		1668A	Total/NA
PCB-85	0.071	J C	0.14	0.00033	ng/L	1		1668A	Total/NA
PCB-86	0.37	C B	0.27	0.00033	ng/L	1		1668A	Total/NA
PCB-87	0.37	C86 B	0.27	0.00033	ng/L	1		1668A	Total/NA
PCB-88	0.068	J q C	0.090	0.00040	ng/L	1		1668A	Total/NA
PCB-90	0.65	C B	0.14	0.00034	ng/L	1		1668A	Total/NA
PCB-91	0.068	J q C88	0.090	0.00040	ng/L	1		1668A	Total/NA
PCB-92	0.099		0.045	0.00038	ng/L	1		1668A	Total/NA
PCB-94	0.0027	J q	0.045	0.00044	ng/L	1		1668A	Total/NA
PCB-95	0.63	B	0.045	0.00042	ng/L	1		1668A	Total/NA
PCB-96	0.0034	J q	0.045	0.00033	ng/L	1		1668A	Total/NA
PCB-97	0.37	C86 B	0.27	0.00033	ng/L	1		1668A	Total/NA
PCB-98	0.015	J C	0.090	0.00037	ng/L	1		1668A	Total/NA
PCB-99	0.25	C83 B	0.090	0.00041	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-210435-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-101	0.65	C90 B	0.14	0.00034	ng/L	1		1668A	Total/NA
PCB-102	0.015	J C98	0.090	0.00037	ng/L	1		1668A	Total/NA
PCB-103	0.0022	J q	0.045	0.00038	ng/L	1		1668A	Total/NA
PCB-105	0.12	B	0.045	0.0023	ng/L	1		1668A	Total/NA
PCB-107	0.023	J q	0.045	0.0026	ng/L	1		1668A	Total/NA
PCB-108	0.018	J C	0.090	0.0024	ng/L	1		1668A	Total/NA
PCB-109	0.37	C86 B	0.27	0.00033	ng/L	1		1668A	Total/NA
PCB-110	0.58	C B	0.090	0.00028	ng/L	1		1668A	Total/NA
PCB-113	0.65	C90 B	0.14	0.00034	ng/L	1		1668A	Total/NA
PCB-114	0.0074	J q	0.045	0.0022	ng/L	1		1668A	Total/NA
PCB-115	0.58	C110 B	0.090	0.00028	ng/L	1		1668A	Total/NA
PCB-116	0.071	J C85	0.14	0.00033	ng/L	1		1668A	Total/NA
PCB-117	0.071	J C85	0.14	0.00033	ng/L	1		1668A	Total/NA
PCB-118	0.34	B	0.045	0.0023	ng/L	1		1668A	Total/NA
PCB-119	0.37	C86 B	0.27	0.00033	ng/L	1		1668A	Total/NA
PCB-122	0.0059	J	0.045	0.0028	ng/L	1		1668A	Total/NA
PCB-124	0.018	J C108	0.090	0.0024	ng/L	1		1668A	Total/NA
PCB-125	0.37	C86 B	0.27	0.00033	ng/L	1		1668A	Total/NA
PCB-128	0.064	J C	0.090	0.0020	ng/L	1		1668A	Total/NA
PCB-129	0.68	C B	0.18	0.0021	ng/L	1		1668A	Total/NA
PCB-130	0.023	J q	0.045	0.0027	ng/L	1		1668A	Total/NA
PCB-132	0.27	B	0.045	0.0027	ng/L	1		1668A	Total/NA
PCB-133	0.0079	J	0.045	0.0026	ng/L	1		1668A	Total/NA
PCB-134	0.039	J C	0.090	0.0027	ng/L	1		1668A	Total/NA
PCB-135	0.38	C B	0.090	0.00065	ng/L	1		1668A	Total/NA
PCB-136	0.15		0.045	0.00047	ng/L	1		1668A	Total/NA
PCB-137	0.012	J q	0.045	0.0023	ng/L	1		1668A	Total/NA
PCB-138	0.68	C129 B	0.18	0.0021	ng/L	1		1668A	Total/NA
PCB-139	0.0087	J q C	0.090	0.0023	ng/L	1		1668A	Total/NA
PCB-140	0.0087	J q C139	0.090	0.0023	ng/L	1		1668A	Total/NA
PCB-141	0.20	B	0.045	0.0024	ng/L	1		1668A	Total/NA
PCB-143	0.039	J C134	0.090	0.0027	ng/L	1		1668A	Total/NA
PCB-144	0.049		0.045	0.00059	ng/L	1		1668A	Total/NA
PCB-146	0.10	B	0.045	0.0023	ng/L	1		1668A	Total/NA
PCB-147	0.90	C B	0.090	0.0026	ng/L	1		1668A	Total/NA
PCB-149	0.90	C147 B	0.090	0.0026	ng/L	1		1668A	Total/NA
PCB-151	0.38	C135 B	0.090	0.00065	ng/L	1		1668A	Total/NA
PCB-153	0.70	C B	0.090	0.0018	ng/L	1		1668A	Total/NA
PCB-156	0.041	J C	0.090	0.0020	ng/L	1		1668A	Total/NA
PCB-157	0.041	J C156	0.090	0.0020	ng/L	1		1668A	Total/NA
PCB-158	0.062		0.045	0.0016	ng/L	1		1668A	Total/NA
PCB-159	0.010	J	0.045	0.0017	ng/L	1		1668A	Total/NA
PCB-160	0.68	C129 B	0.18	0.0021	ng/L	1		1668A	Total/NA
PCB-163	0.68	C129 B	0.18	0.0021	ng/L	1		1668A	Total/NA
PCB-164	0.054		0.045	0.0018	ng/L	1		1668A	Total/NA
PCB-166	0.064	J C128	0.090	0.0020	ng/L	1		1668A	Total/NA
PCB-167	0.014	J	0.045	0.0014	ng/L	1		1668A	Total/NA
PCB-168	0.70	C153 B	0.090	0.0018	ng/L	1		1668A	Total/NA
PCB-170	0.20		0.045	0.00084	ng/L	1		1668A	Total/NA
PCB-171	0.074	J C	0.090	0.00080	ng/L	1		1668A	Total/NA
PCB-172	0.040	J q	0.045	0.00080	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-210435-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-173	0.074	J C171	0.090	0.00080	ng/L	1		1668A	Total/NA
PCB-174	0.33		0.045	0.00075	ng/L	1		1668A	Total/NA
PCB-175	0.013	J q	0.045	0.00073	ng/L	1		1668A	Total/NA
PCB-176	0.040	J q	0.045	0.00055	ng/L	1		1668A	Total/NA
PCB-177	0.16		0.045	0.00077	ng/L	1		1668A	Total/NA
PCB-178	0.060		0.045	0.00079	ng/L	1		1668A	Total/NA
PCB-179	0.18		0.045	0.00058	ng/L	1		1668A	Total/NA
PCB-180	0.51	C	0.090	0.00061	ng/L	1		1668A	Total/NA
PCB-183	0.21	C	0.090	0.00071	ng/L	1		1668A	Total/NA
PCB-185	0.21	C183	0.090	0.00071	ng/L	1		1668A	Total/NA
PCB-187	0.36	B	0.045	0.00067	ng/L	1		1668A	Total/NA
PCB-189	0.0039	J q	0.045	0.00076	ng/L	1		1668A	Total/NA
PCB-190	0.035	J	0.045	0.00052	ng/L	1		1668A	Total/NA
PCB-191	0.0078	J q	0.045	0.00055	ng/L	1		1668A	Total/NA
PCB-193	0.51	C180	0.090	0.00061	ng/L	1		1668A	Total/NA
PCB-194	0.069	q	0.045	0.00086	ng/L	1		1668A	Total/NA
PCB-195	0.035	J	0.045	0.00094	ng/L	1		1668A	Total/NA
PCB-196	0.036	J	0.045	0.00024	ng/L	1		1668A	Total/NA
PCB-197	0.0043	J q	0.045	0.00019	ng/L	1		1668A	Total/NA
PCB-198	0.072	J q C	0.090	0.00025	ng/L	1		1668A	Total/NA
PCB-199	0.072	J q C198	0.090	0.00025	ng/L	1		1668A	Total/NA
PCB-200	0.011	J q	0.045	0.00017	ng/L	1		1668A	Total/NA
PCB-201	0.012	J q	0.045	0.00017	ng/L	1		1668A	Total/NA
PCB-202	0.021	J	0.045	0.00019	ng/L	1		1668A	Total/NA
PCB-203	0.045		0.045	0.00022	ng/L	1		1668A	Total/NA
PCB-205	0.0030	J q	0.045	0.00073	ng/L	1		1668A	Total/NA
PCB-206	0.018	J	0.045	0.0044	ng/L	1		1668A	Total/NA
HEM	4.5	J	5.0	1.4	mg/L	1		1664A	Total/NA
SGT-HEM	2.1	J	5.0	1.4	mg/L	1		1664A	Total/NA
Field pH	7.20				SU	1		SM4500 H+	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Client Sample ID: Outfall Comp

Lab Sample ID: 460-210435-1
Date Collected: 06/05/20 09:00
Matrix: Water
Date Received: 06/05/20 20:35

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2	U	2.5	2.2	ug/L		06/11/20 20:40	06/14/20 11:05	5
Cadmium	0.89	U	2.5	0.89	ug/L		06/11/20 20:40	06/14/20 11:05	5
Chromium	**0.76**	**J**	5.0	0.54	ug/L		06/11/20 20:40	06/14/20 11:05	5
Copper	**50.4**		5.0	2.6	ug/L		06/11/20 20:40	06/14/20 11:05	5
Nickel	**2.4**	**J**	5.0	1.5	ug/L		06/11/20 20:40	06/14/20 11:05	5
Lead	**1.1**	**J**	1.5	0.17	ug/L		06/11/20 20:40	06/14/20 11:05	5
Zinc	**75.0**		20.0	3.4	ug/L		06/11/20 20:40	06/14/20 11:05	5
Silver	0.59	U	5.0	0.59	ug/L		06/11/20 20:40	06/14/20 11:05	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.12**	**J**	0.20	0.091	ug/L		06/16/20 10:48	06/16/20 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	**4.7**	**J**	5.0	1.4	mg/L			06/16/20 15:31	1
Total Suspended Solids	**57.5**		12.5	12.5	mg/L			06/12/20 11:32	1
Ammonia	**5.2**		0.10	0.034	mg/L			06/08/20 14:26	1
Biochemical Oxygen Demand	**70.8**		1.0	1.0	mg/L			06/06/20 14:02	1
Chemical Oxygen Demand	**390**		50.0	16.5	mg/L			06/17/20 13:37	5
Carbonaceous Biochemical Oxygen Demand 20	**116**		1.0	1.0	mg/L			06/06/20 17:54	1

Client Sample ID: Outfall Grab

Lab Sample ID: 460-210435-2
Date Collected: 06/05/20 09:05
Matrix: Water
Date Received: 06/05/20 20:35

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	**0.094**	**B**	0.045	0.00045	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-2	**0.019**	**J B**	0.045	0.00051	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-3	**0.089**	**B**	0.045	0.00054	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-4	**0.12**		0.068	0.0037	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-5	**0.019**	**J q**	0.045	0.0028	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-6	**0.088**		0.045	0.0025	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-7	**0.029**	**J**	0.045	0.0025	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-8	**0.31**		0.068	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-9	**0.030**	**J q**	0.045	0.0026	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-10	**0.0094**	**J q**	0.045	0.0028	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-11	**0.10**	**B**	0.068	0.0024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-12	**0.092**	**C**	0.090	0.0025	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-13	**0.092**	**C12**	0.090	0.0025	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-14	0.0021	U	0.045	0.0021	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-15	**0.22**		0.045	0.0025	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-16	**0.098**		0.045	0.00086	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-17	**0.082**		0.045	0.00077	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-18	**0.18**	**C B**	0.090	0.00068	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-19	**0.018**	**J q**	0.045	0.00095	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-20	**0.26**	**C B**	0.090	0.0015	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-21	**0.17**	**C B**	0.090	0.0014	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-22	**0.11**	**B**	0.045	0.0015	ng/L		06/10/20 14:13	06/16/20 05:28	1

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Client Sample ID: Outfall Grab

Date Collected: 06/05/20 09:05
Date Received: 06/05/20 20:35

Lab Sample ID: 460-210435-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-23	0.0015	U	0.045	0.0015	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-24	**0.0045**	**J q**	0.045	0.00065	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-25	**0.022**	**J**	0.045	0.0013	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-26	**0.046**	**J C B**	0.090	0.0014	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-27	**0.014**	**J q**	0.045	0.00056	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-28	**0.26**	**C20 B**	0.090	0.0015	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-29	**0.046**	**J C26 B**	0.090	0.0014	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-30	**0.18**	**C18 B**	0.090	0.00068	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-31	**0.24**	**B**	0.045	0.0014	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-32	**0.057**		0.045	0.00054	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-33	**0.17**	**C21 B**	0.090	0.0014	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-34	0.0015	U	0.045	0.0015	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-35	**0.014**	**J**	0.045	0.0015	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-36	0.0014	U	0.045	0.0014	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-37	**0.12**		0.045	0.0015	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-38	0.0016	U	0.045	0.0016	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-39	0.0014	U	0.045	0.0014	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-40	**0.11**	**J C B**	0.14	0.0032	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-41	**0.11**	**J C40 B**	0.14	0.0032	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-42	**0.047**		0.045	0.0032	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-43	**0.0082**	**J q C**	0.090	0.0030	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-44	**0.26**	**C B**	0.14	0.0028	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-45	**0.029**	**J C B**	0.090	0.0034	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-46	**0.011**	**J**	0.045	0.0041	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-47	**0.26**	**C44 B**	0.14	0.0028	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-48	**0.033**	**J**	0.045	0.0032	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-49	**0.13**	**C B**	0.090	0.0026	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-50	**0.024**	**J C**	0.090	0.0031	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-51	**0.029**	**J C45 B**	0.090	0.0034	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-52	**0.49**	**B**	0.045	0.0032	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-53	**0.024**	**J C50**	0.090	0.0031	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-54	0.000049	U	0.045	0.000049	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-55	0.0023	U	0.045	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-56	**0.098**	**B**	0.045	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-57	0.0024	U	0.045	0.0024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-58	0.0024	U	0.045	0.0024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-59	**0.012**	**J q C B**	0.14	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-60	**0.063**	**B**	0.045	0.0024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-61	**0.51**	**C B**	0.18	0.0022	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-62	**0.012**	**J q C59 B**	0.14	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-63	**0.0083**	**J**	0.045	0.0022	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-64	**0.097**		0.045	0.0022	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-65	**0.26**	**C44 B**	0.14	0.0028	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-66	**0.19**	**B**	0.045	0.0022	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-67	**0.0059**	**J**	0.045	0.0021	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-68	0.0021	U	0.045	0.0021	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-69	**0.13**	**C49 B**	0.090	0.0026	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-70	**0.51**	**C61 B**	0.18	0.0022	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-71	**0.11**	**J C40 B**	0.14	0.0032	ng/L		06/10/20 14:13	06/16/20 05:28	1

Client Sample ID: Outfall Grab

Date Collected: 06/05/20 09:05
Date Received: 06/05/20 20:35

Lab Sample ID: 460-210435-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-72	0.0023	U	0.045	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-73	**0.0082**	**J q C43**	0.090	0.0030	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-74	**0.51**	**C61 B**	0.18	0.0022	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-75	**0.012**	**J q C59 B**	0.14	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-76	**0.51**	**C61 B**	0.18	0.0022	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-77	**0.029**	**J B**	0.045	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-78	0.0024	U	0.045	0.0024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-79	**0.0043**	**J q**	0.045	0.0021	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-80	0.0020	U	0.045	0.0020	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-81	0.0022	U	0.045	0.0022	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-82	**0.058**		0.045	0.00044	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-83	**0.25**	**C B**	0.090	0.00041	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-84	**0.17**		0.045	0.00045	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-85	**0.071**	**J C**	0.14	0.00033	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-86	**0.37**	**C B**	0.27	0.00033	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-87	**0.37**	**C86 B**	0.27	0.00033	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-88	**0.068**	**J q C**	0.090	0.00040	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-89	0.00044	U	0.045	0.00044	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-90	**0.65**	**C B**	0.14	0.00034	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-91	**0.068**	**J q C88**	0.090	0.00040	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-92	**0.099**		0.045	0.00038	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-93	0.00039	U C	0.090	0.00039	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-94	**0.0027**	**J q**	0.045	0.00044	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-95	**0.63**	**B**	0.045	0.00042	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-96	**0.0034**	**J q**	0.045	0.00033	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-97	**0.37**	**C86 B**	0.27	0.00033	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-98	**0.015**	**J C**	0.090	0.00037	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-99	**0.25**	**C83 B**	0.090	0.00041	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-100	0.00039	U C93	0.090	0.00039	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-101	**0.65**	**C90 B**	0.14	0.00034	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-102	**0.015**	**J C98**	0.090	0.00037	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-103	**0.0022**	**J q**	0.045	0.00038	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-104	0.00029	U	0.045	0.00029	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-105	**0.12**	**B**	0.045	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-106	0.0024	U	0.045	0.0024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-107	**0.023**	**J q**	0.045	0.0026	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-108	**0.018**	**J C**	0.090	0.0024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-109	**0.37**	**C86 B**	0.27	0.00033	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-110	**0.58**	**C B**	0.090	0.00028	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-111	0.00027	U	0.045	0.00027	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-112	0.00029	U	0.045	0.00029	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-113	**0.65**	**C90 B**	0.14	0.00034	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-114	**0.0074**	**J q**	0.045	0.0022	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-115	**0.58**	**C110 B**	0.090	0.00028	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-116	**0.071**	**J C85**	0.14	0.00033	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-117	**0.071**	**J C85**	0.14	0.00033	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-118	**0.34**	**B**	0.045	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-119	**0.37**	**C86 B**	0.27	0.00033	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-120	0.00028	U	0.045	0.00028	ng/L		06/10/20 14:13	06/16/20 05:28	1

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Client Sample ID: Outfall Grab

Date Collected: 06/05/20 09:05
Date Received: 06/05/20 20:35

Lab Sample ID: 460-210435-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-121	0.00028	U	0.045	0.00028	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-122	**0.0059**	**J**	0.045	0.0028	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-123	0.0023	U	0.045	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-124	**0.018**	**J C108**	0.090	0.0024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-125	**0.37**	**C86 B**	0.27	0.00033	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-126	0.0024	U	0.045	0.0024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-127	0.0024	U	0.045	0.0024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-128	**0.064**	**J C**	0.090	0.0020	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-129	**0.68**	**C B**	0.18	0.0021	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-130	**0.023**	**J q**	0.045	0.0027	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-131	0.0028	U	0.045	0.0028	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-132	**0.27**	**B**	0.045	0.0027	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-133	**0.0079**	**J**	0.045	0.0026	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-134	**0.039**	**J C**	0.090	0.0027	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-135	**0.38**	**C B**	0.090	0.00065	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-136	**0.15**		0.045	0.00047	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-137	**0.012**	**J q**	0.045	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-138	**0.68**	**C129 B**	0.18	0.0021	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-139	**0.0087**	**J q C**	0.090	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-140	**0.0087**	**J q C139**	0.090	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-141	**0.20**	**B**	0.045	0.0024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-142	0.0026	U	0.045	0.0026	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-143	**0.039**	**J C134**	0.090	0.0027	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-144	**0.049**		0.045	0.00059	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-145	0.00044	U	0.045	0.00044	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-146	**0.10**	**B**	0.045	0.0023	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-147	**0.90**	**C B**	0.090	0.0026	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-148	0.00063	U	0.045	0.00063	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-149	**0.90**	**C147 B**	0.090	0.0026	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-150	0.00043	U	0.045	0.00043	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-151	**0.38**	**C135 B**	0.090	0.00065	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-152	0.00046	U	0.045	0.00046	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-153	**0.70**	**C B**	0.090	0.0018	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-154	0.00051	U	0.045	0.00051	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-155	0.00043	U	0.045	0.00043	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-156	**0.041**	**J C**	0.090	0.0020	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-157	**0.041**	**J C156**	0.090	0.0020	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-158	**0.062**		0.045	0.0016	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-159	**0.010**	**J**	0.045	0.0017	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-160	**0.68**	**C129 B**	0.18	0.0021	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-161	0.0017	U	0.045	0.0017	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-162	0.0017	U	0.045	0.0017	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-163	**0.68**	**C129 B**	0.18	0.0021	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-164	**0.054**		0.045	0.0018	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-165	0.0019	U	0.045	0.0019	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-166	**0.064**	**J C128**	0.090	0.0020	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-167	**0.014**	**J**	0.045	0.0014	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-168	**0.70**	**C153 B**	0.090	0.0018	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-169	0.0014	U	0.045	0.0014	ng/L		06/10/20 14:13	06/16/20 05:28	1

Client Sample ID: Outfall Grab

Lab Sample ID: 460-210435-2

Date Collected: 06/05/20 09:05
Matrix: Water
Date Received: 06/05/20 20:35

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-170	0.20		0.045	0.00084	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-171	0.074	J C	0.090	0.00080	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-172	0.040	J q	0.045	0.00080	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-173	0.074	J C171	0.090	0.00080	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-174	0.33		0.045	0.00075	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-175	0.013	J q	0.045	0.00073	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-176	0.040	J q	0.045	0.00055	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-177	0.16		0.045	0.00077	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-178	0.060		0.045	0.00079	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-179	0.18		0.045	0.00058	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-180	0.51	C	0.090	0.00061	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-181	0.00072	U	0.045	0.00072	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-182	0.00070	U	0.045	0.00070	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-183	0.21	C	0.090	0.00071	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-184	0.00059	U	0.045	0.00059	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-185	0.21	C183	0.090	0.00071	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-186	0.00058	U	0.045	0.00058	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-187	0.36	B	0.045	0.00067	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-188	0.00051	U	0.045	0.00051	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-189	0.0039	J q	0.045	0.00076	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-190	0.035	J	0.045	0.00052	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-191	0.0078	J q	0.045	0.00055	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-192	0.00061	U	0.045	0.00061	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-193	0.51	C180	0.090	0.00061	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-194	0.069	q	0.045	0.00086	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-195	0.035	J	0.045	0.00094	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-196	0.036	J	0.045	0.00024	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-197	0.0043	J q	0.045	0.00019	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-198	0.072	J q C	0.090	0.00025	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-199	0.072	J q C198	0.090	0.00025	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-200	0.011	J q	0.045	0.00017	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-201	0.012	J q	0.045	0.00017	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-202	0.021	J	0.045	0.00019	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-203	0.045		0.045	0.00022	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-204	0.00019	U	0.045	0.00019	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-205	0.0030	J q	0.045	0.00073	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-206	0.018	J	0.045	0.0044	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-207	0.0027	U	0.045	0.0027	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-208	0.0025	U	0.045	0.0025	ng/L		06/10/20 14:13	06/16/20 05:28	1
PCB-209	0.000073	U	0.045	0.000073	ng/L		06/10/20 14:13	06/16/20 05:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*65*		*30 - 140*	*06/10/20 14:13*	*06/16/20 05:28*	*1*
PCB-3L	*68*		*30 - 140*	*06/10/20 14:13*	*06/16/20 05:28*	*1*
PCB-4L	*71*		*30 - 140*	*06/10/20 14:13*	*06/16/20 05:28*	*1*
PCB-15L	*75*		*30 - 140*	*06/10/20 14:13*	*06/16/20 05:28*	*1*
PCB-19L	*71*	*q*	*30 - 140*	*06/10/20 14:13*	*06/16/20 05:28*	*1*
PCB-37L	*79*		*30 - 140*	*06/10/20 14:13*	*06/16/20 05:28*	*1*
PCB-54L	*102*		*30 - 140*	*06/10/20 14:13*	*06/16/20 05:28*	*1*
PCB-77L	*72*		*30 - 140*	*06/10/20 14:13*	*06/16/20 05:28*	*1*

Client Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Client Sample ID: Outfall Grab

Date Collected: 06/05/20 09:05
Date Received: 06/05/20 20:35

Lab Sample ID: 460-210435-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-81L	71		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-104L	63		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-105L	74		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-114L	73		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-118L	72		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-123L	73		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-126L	72		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-155L	75		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-156L	76	C	30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-157L	76	C156	30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-167L	77		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-169L	78		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-170L	73		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-188L	79		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-189L	84		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-202L	100		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-205L	69		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-206L	73		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-208L	89		30 - 140	06/10/20 14:13	06/16/20 05:28	1
PCB-209L	70		30 - 140	06/10/20 14:13	06/16/20 05:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	94		40 - 125	06/10/20 14:13	06/16/20 05:28	1
PCB-111L	91		40 - 125	06/10/20 14:13	06/16/20 05:28	1
PCB-178L	98		40 - 125	06/10/20 14:13	06/16/20 05:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	**4.5**	**J**	5.0	1.4	mg/L			06/16/20 15:31	1
SGT-HEM	**2.1**	**J**	5.0	1.4	mg/L			06/16/20 15:31	1
Cyanide, Total	0.0040	U	0.010	0.0040	mg/L		06/14/20 12:38	06/15/20 11:14	1
Phenols, Total	0.82	U	1.0	0.82	mg/L		06/11/20 09:47	06/11/20 16:35	1

Method: SM4500 H+ - pH, Field

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.20**				SU			06/05/20 09:05	1

Surrogate Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**PCB28L (40-125)**	**PCB111L (40-125)**	**PCB178L (40-125)**					
460-210435-2	Outfall Grab	94	91	98					
LCS 140-40240/3-A	Lab Control Sample	89	90	92					
MB 140-40240/4-A	Method Blank	89	91	96					

Surrogate Legend

PCB28L = PCB-28L
PCB111L = PCB-111L
PCB178L = PCB-178L

Isotope Dilution Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB1L	PCB3L	PCB4L	PCB15L	PCB19L	PCB37L	PCB54L	PCB77L
Lab Sample ID	**Client Sample ID**	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
460-210435-2	Outfall Grab	65	68	71	75	71 q	79	102	72
LCS 140-40240/3-A	Lab Control Sample	62	64	68	72	71	84	87	81
MB 140-40240/4-A	Method Blank	64	66	69	76	72	84	92	86

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB81L	PCB104L	PCB105L	P114L	PCB118L	PCB123L	PCB126L	PCB155L
Lab Sample ID	**Client Sample ID**	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
460-210435-2	Outfall Grab	71	63	74	73	72	73	72	75
LCS 140-40240/3-A	Lab Control Sample	79	59	82	79	79	77	82	59
MB 140-40240/4-A	Method Blank	84	66	85	84	85	82	85	70

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB156L	PCB157L	PCB167L	PCB169L	PCB170L	PCB188L	PCB189L	PCB202L
Lab Sample ID	**Client Sample ID**	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
460-210435-2	Outfall Grab	76 C	76 C156	77	78	73	79	84	100
LCS 140-40240/3-A	Lab Control Sample	84 C	84 C156	84	91	77	72	82	96
MB 140-40240/4-A	Method Blank	88 C	88 C156	88	95	80	78	85	103

		Percent Isotope Dilution Recovery (Acceptance Limits)			
		PCB205L	PCB206L	PCB208L	PCB209L
Lab Sample ID	**Client Sample ID**	(30-140)	(30-140)	(30-140)	(30-140)
460-210435-2	Outfall Grab	69	73	89	70
LCS 140-40240/3-A	Lab Control Sample	70	75	78	72
MB 140-40240/4-A	Method Blank	74	79	84	77

Surrogate Legend

PCB1L = PCB-1L
PCB3L = PCB-3L
PCB4L = PCB-4L
PCB15L = PCB-15L
PCB19L = PCB-19L
PCB37L = PCB-37L
PCB54L = PCB-54L
PCB77L = PCB-77L
PCB81L = PCB-81L
PCB104L = PCB-104L
PCB105L = PCB-105L
P114L = PCB-114L
PCB118L = PCB-118L
PCB123L = PCB-123L
PCB126L = PCB-126L
PCB155L = PCB-155L
PCB156L = PCB-156L
PCB157L = PCB-157L
PCB167L = PCB-167L
PCB169L = PCB-169L
PCB170L = PCB-170L
PCB188L = PCB-188L
PCB189L = PCB-189L
PCB202L = PCB-202L
PCB205L = PCB-205L
PCB206L = PCB-206L

Isotope Dilution Summary

Client: IES Engineers
Job ID: 460-210435-1
Project/Site: Quarterly #183765;

PCB208L = PCB-208L
PCB209L = PCB-209L

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Lab Sample ID: MB 140-40240/4-A
Matrix: Water
Analysis Batch: 40356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40240

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.00104	J q	0.040	0.00020	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-2	0.00133	J	0.040	0.00023	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-3	0.00127	J	0.040	0.00025	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-4	0.0034	U	0.060	0.0034	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-5	0.0026	U	0.040	0.0026	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-6	0.0023	U	0.040	0.0023	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-7	0.0024	U	0.040	0.0024	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-8	0.0021	U	0.060	0.0021	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-9	0.0024	U	0.040	0.0024	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-10	0.0026	U	0.040	0.0026	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-11	0.0167	J q	0.060	0.0022	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-12	0.0023	U C	0.080	0.0023	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-13	0.0023	U C12	0.080	0.0023	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-14	0.0020	U	0.040	0.0020	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-15	0.0024	U	0.040	0.0024	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-16	0.00042	U	0.040	0.00042	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-17	0.00037	U	0.040	0.00037	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-18	0.00191	J C q	0.080	0.00033	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-19	0.00046	U	0.040	0.00046	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-20	0.00328	J C q	0.080	0.00051	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-21	0.00309	J C	0.080	0.00050	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-22	0.00143	J q	0.040	0.00052	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-23	0.00051	U	0.040	0.00051	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-24	0.00031	U	0.040	0.00031	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-25	0.00047	U	0.040	0.00047	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-26	0.00112	J C q	0.080	0.00050	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-27	0.00027	U	0.040	0.00027	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-28	0.00328	J C20 q	0.080	0.00051	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-29	0.00112	J C26 q	0.080	0.00050	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-30	0.00191	J C18 q	0.080	0.00033	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-31	0.00460	J	0.040	0.00049	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-32	0.00026	U	0.040	0.00026	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-33	0.00309	J C21	0.080	0.00050	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-34	0.00053	U	0.040	0.00053	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-35	0.00052	U	0.040	0.00052	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-36	0.00050	U	0.040	0.00050	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-37	0.00052	U	0.040	0.00052	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-38	0.00054	U	0.040	0.00054	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-39	0.00048	U	0.040	0.00048	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-40	0.00143	J C q	0.12	0.0012	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-41	0.00143	J q C40	0.12	0.0012	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-42	0.0013	U	0.040	0.0013	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-43	0.0012	U C	0.080	0.0012	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-44	0.00963	J C	0.12	0.0011	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-45	0.00219	J C	0.080	0.0013	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-46	0.0016	U	0.040	0.0016	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-47	0.00963	J C44	0.12	0.0011	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-48	0.0012	U	0.040	0.0012	ng/L		06/10/20 14:13	06/16/20 04:27	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-40240/4-A
Matrix: Water
Analysis Batch: 40356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40240

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	0.00135	J C	0.080	0.0010	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-50	0.0012	U C	0.080	0.0012	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-51	0.00219	J C45	0.080	0.0013	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-52	0.00215	J	0.040	0.0012	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-53	0.0012	U C50	0.080	0.0012	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-54	0.000631	J q	0.040	0.000077	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-55	0.00091	U	0.040	0.00091	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-56	0.00147	J	0.040	0.00091	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-57	0.00092	U	0.040	0.00092	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-58	0.00094	U	0.040	0.00094	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-59	0.00177	J C	0.12	0.00088	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-60	0.00147	J q	0.040	0.00093	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-61	0.00296	J C q	0.16	0.00087	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-62	0.00177	J C59	0.12	0.00088	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-63	0.00085	U	0.040	0.00085	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-64	0.00084	U	0.040	0.00084	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-65	0.00963	J C44	0.12	0.0011	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-66	0.00141	J q	0.040	0.00087	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-67	0.00080	U	0.040	0.00080	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-68	0.00192	J q	0.040	0.00082	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-69	0.00135	J C49	0.080	0.0010	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-70	0.00296	J C61 q	0.16	0.00087	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-71	0.00143	J q C40	0.12	0.0012	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-72	0.00091	U	0.040	0.00091	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-73	0.0012	U C43	0.080	0.0012	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-74	0.00296	J C61 q	0.16	0.00087	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-75	0.00177	J C59	0.12	0.00088	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-76	0.00296	J C61 q	0.16	0.00087	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-77	0.00168	J q	0.040	0.00087	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-78	0.00094	U	0.040	0.00094	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-79	0.00081	U	0.040	0.00081	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-80	0.00080	U	0.040	0.00080	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-81	0.00086	U	0.040	0.00086	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-82	0.00036	U	0.040	0.00036	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-83	0.000932	J C q	0.080	0.00033	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-84	0.00037	U	0.040	0.00037	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-85	0.00027	U C	0.12	0.00027	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-86	0.00215	J C q	0.24	0.00027	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-87	0.00215	J C86 q	0.24	0.00027	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-88	0.00033	U C	0.080	0.00033	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-89	0.00036	U	0.040	0.00036	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-90	0.00239	J C q	0.12	0.00028	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-91	0.00033	U C88	0.080	0.00033	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-92	0.00031	U	0.040	0.00031	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-93	0.00031	U C	0.080	0.00031	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-94	0.00036	U	0.040	0.00036	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-95	0.00230	J	0.040	0.00034	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-96	0.00027	U	0.040	0.00027	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-97	0.00215	J C86 q	0.24	0.00027	ng/L		06/10/20 14:13	06/16/20 04:27	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-40240/4-A
Matrix: Water
Analysis Batch: 40356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40240

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-98	0.00031	U C	0.080	0.00031	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-99	0.000932	J C83 q	0.080	0.00033	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-100	0.00031	U C93	0.080	0.00031	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-101	0.00239	J C90 q	0.12	0.00028	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-102	0.00031	U C98	0.080	0.00031	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-103	0.00031	U	0.040	0.00031	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-104	0.00024	U	0.040	0.00024	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-105	0.00174	J	0.040	0.00046	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-106	0.00047	U	0.040	0.00047	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-107	0.00050	U	0.040	0.00050	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-108	0.00048	U C	0.080	0.00048	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-109	0.00215	J C86 q	0.24	0.00027	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-110	0.00260	J C q	0.080	0.00023	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-111	0.00022	U	0.040	0.00022	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-112	0.00023	U	0.040	0.00023	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-113	0.00239	J C90 q	0.12	0.00028	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-114	0.00044	U	0.040	0.00044	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-115	0.00260	J C110 q	0.080	0.00023	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-116	0.00027	U C85	0.12	0.00027	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-117	0.00027	U C85	0.12	0.00027	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-118	0.00239	J q	0.040	0.00044	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-119	0.00215	J C86 q	0.24	0.00027	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-120	0.00022	U	0.040	0.00022	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-121	0.00023	U	0.040	0.00023	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-122	0.00054	U	0.040	0.00054	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-123	0.00047	U	0.040	0.00047	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-124	0.00048	U C108	0.080	0.00048	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-125	0.00215	J C86 q	0.24	0.00027	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-126	0.00047	U	0.040	0.00047	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-127	0.00046	U	0.040	0.00046	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-128	0.00011	U C	0.080	0.00011	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-129	0.00252	J C q	0.16	0.00011	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-130	0.00014	U	0.040	0.00014	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-131	0.00015	U	0.040	0.00015	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-132	0.00115	J q	0.040	0.00014	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-133	0.00014	U	0.040	0.00014	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-134	0.00014	U C	0.080	0.00014	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-135	0.00138	J C q	0.080	0.000076	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-136	0.000054	U	0.040	0.000054	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-137	0.00012	U	0.040	0.00012	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-138	0.00252	J C129 q	0.16	0.00011	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-139	0.00012	U C	0.080	0.00012	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-140	0.00012	U C139	0.080	0.00012	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-141	0.000681	J	0.040	0.00013	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-142	0.00014	U	0.040	0.00014	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-143	0.00014	U C134	0.080	0.00014	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-144	0.000069	U	0.040	0.000069	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-145	0.000052	U	0.040	0.000052	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-146	0.000747	J q	0.040	0.00012	ng/L		06/10/20 14:13	06/16/20 04:27	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-40240/4-A
Matrix: Water
Analysis Batch: 40356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40240

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-147	0.00236	J C q	0.080	0.00014	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-148	0.000073	U	0.040	0.000073	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-149	0.00236	J C147 q	0.080	0.00014	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-150	0.000050	U	0.040	0.000050	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-151	0.00138	J C135 q	0.080	0.000076	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-152	0.000053	U	0.040	0.000053	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-153	0.00193	J C q	0.080	0.000095	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-154	0.000059	U	0.040	0.000059	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-155	0.000050	U	0.040	0.000050	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-156	0.00011	U C	0.080	0.00011	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-157	0.00011	U C156	0.080	0.00011	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-158	0.000086	U	0.040	0.000086	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-159	0.000091	U	0.040	0.000091	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-160	0.00252	J C129 q	0.16	0.00011	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-161	0.000090	U	0.040	0.000090	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-162	0.000089	U	0.040	0.000089	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-163	0.00252	J C129 q	0.16	0.00011	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-164	0.000096	U	0.040	0.000096	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-165	0.00010	U	0.040	0.00010	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-166	0.00011	U C128	0.080	0.00011	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-167	0.000076	U	0.040	0.000076	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-168	0.00193	J C153 q	0.080	0.000095	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-169	0.000072	U	0.040	0.000072	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-170	0.000087	U	0.040	0.000087	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-171	0.000088	U C	0.080	0.000088	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-172	0.000087	U	0.040	0.000087	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-173	0.000088	U C171	0.080	0.000088	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-174	0.000082	U	0.040	0.000082	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-175	0.000079	U	0.040	0.000079	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-176	0.000060	U	0.040	0.000060	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-177	0.000084	U	0.040	0.000084	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-178	0.000086	U	0.040	0.000086	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-179	0.000063	U	0.040	0.000063	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-180	0.000066	U C	0.080	0.000066	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-181	0.000079	U	0.040	0.000079	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-182	0.000076	U	0.040	0.000076	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-183	0.000077	U C	0.080	0.000077	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-184	0.000065	U	0.040	0.000065	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-185	0.000077	U C183	0.080	0.000077	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-186	0.000063	U	0.040	0.000063	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-187	0.000962	J q	0.040	0.000073	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-188	0.000057	U	0.040	0.000057	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-189	0.00032	U	0.040	0.00032	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-190	0.000057	U	0.040	0.000057	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-191	0.000060	U	0.040	0.000060	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-192	0.000067	U	0.040	0.000067	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-193	0.000066	U C180	0.080	0.000066	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-194	0.00016	U	0.040	0.00016	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-195	0.00017	U	0.040	0.00017	ng/L		06/10/20 14:13	06/16/20 04:27	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-40240/4-A
Matrix: Water
Analysis Batch: 40356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40240

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-196	0.000042	U	0.040	0.000042	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-197	0.000032	U	0.040	0.000032	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-198	0.000042	U C	0.080	0.000042	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-199	0.000042	U C198	0.080	0.000042	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-200	0.000028	U	0.040	0.000028	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-201	0.000029	U	0.040	0.000029	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-202	0.000033	U	0.040	0.000033	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-203	0.000038	U	0.040	0.000038	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-204	0.000032	U	0.040	0.000032	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-205	0.00013	U	0.040	0.00013	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-206	0.0041	U	0.040	0.0041	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-207	0.0028	U	0.040	0.0028	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-208	0.0029	U	0.040	0.0029	ng/L		06/10/20 14:13	06/16/20 04:27	1
PCB-209	0.000882	J q	0.040	0.000053	ng/L		06/10/20 14:13	06/16/20 04:27	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*64*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-3L	*66*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-4L	*69*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-15L	*76*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-19L	*72*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-37L	*84*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-54L	*92*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-77L	*86*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-81L	*84*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-104L	*66*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-105L	*85*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-114L	*84*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-118L	*85*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-123L	*82*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-126L	*85*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-155L	*70*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-156L	*88*	*C*	*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-157L	*88*	*C156*	*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-167L	*88*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-169L	*95*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-170L	*80*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-188L	*78*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-189L	*85*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-202L	*103*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-205L	*74*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-206L	*79*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-208L	*84*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-209L	*77*		*30 - 140*	*06/10/20 14:13*	*06/16/20 04:27*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-28L	*89*		*40 - 125*	*06/10/20 14:13*	*06/16/20 04:27*	*1*
PCB-111L	*91*		*40 - 125*	*06/10/20 14:13*	*06/16/20 04:27*	*1*

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-40240/4-A
Matrix: Water
Analysis Batch: 40356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40240

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-178L	96		40 - 125	06/10/20 14:13	06/16/20 04:27	1

Lab Sample ID: LCS 140-40240/3-A
Matrix: Water
Analysis Batch: 40347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40240

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	1.00	0.910		ng/L		91	50 - 150
PCB-3	1.00	0.919		ng/L		92	50 - 150
PCB-4	1.00	1.017		ng/L		102	50 - 150
PCB-15	1.00	1.060		ng/L		106	50 - 150
PCB-19	1.00	1.220		ng/L		122	50 - 150
PCB-37	1.00	1.054		ng/L		105	50 - 150
PCB-54	1.00	1.051		ng/L		105	50 - 150
PCB-77	1.00	0.981		ng/L		98	50 - 150
PCB-81	1.00	0.959		ng/L		96	50 - 150
PCB-104	1.00	1.224		ng/L		122	50 - 150
PCB-105	1.00	1.054		ng/L		105	50 - 150
PCB-114	1.00	1.160		ng/L		116	50 - 150
PCB-118	1.00	1.131		ng/L		113	50 - 150
PCB-123	1.00	1.234		ng/L		123	50 - 150
PCB-126	1.00	1.182		ng/L		118	50 - 150
PCB-155	1.00	1.290		ng/L		129	50 - 150
PCB-156	2.00	2.056	C	ng/L		103	50 - 150
PCB-157	2.00	2.056	C156	ng/L		103	50 - 150
PCB-167	1.00	1.080		ng/L		108	50 - 150
PCB-169	1.00	0.972		ng/L		97	50 - 150
PCB-188	1.00	1.128		ng/L		113	50 - 150
PCB-189	1.00	1.094		ng/L		109	50 - 150
PCB-202	1.00	0.924		ng/L		92	50 - 150
PCB-205	1.00	1.131		ng/L		113	50 - 150
PCB-206	1.00	0.902		ng/L		90	50 - 150
PCB-208	1.00	0.931		ng/L		93	50 - 150
PCB-209	1.00	0.803		ng/L		80	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	62		30 - 140
PCB-3L	64		30 - 140
PCB-4L	68		30 - 140
PCB-15L	72		30 - 140
PCB-19L	71		30 - 140
PCB-37L	84		30 - 140
PCB-54L	87		30 - 140
PCB-77L	81		30 - 140
PCB-81L	79		30 - 140
PCB-104L	59		30 - 140
PCB-105L	82		30 - 140
PCB-114L	79		30 - 140

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 140-40240/3-A
Matrix: Water
Analysis Batch: 40347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40240

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
PCB-118L	*79*		*30 - 140*
PCB-123L	*77*		*30 - 140*
PCB-126L	*82*		*30 - 140*
PCB-155L	*59*		*30 - 140*
PCB-156L	*84*	*C*	*30 - 140*
PCB-157L	*84*	*C156*	*30 - 140*
PCB-167L	*84*		*30 - 140*
PCB-169L	*91*		*30 - 140*
PCB-170L	*77*		*30 - 140*
PCB-188L	*72*		*30 - 140*
PCB-189L	*82*		*30 - 140*
PCB-202L	*96*		*30 - 140*
PCB-205L	*70*		*30 - 140*
PCB-206L	*75*		*30 - 140*
PCB-208L	*78*		*30 - 140*
PCB-209L	*72*		*30 - 140*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
PCB-28L	*89*		*40 - 125*
PCB-111L	*90*		*40 - 125*
PCB-178L	*92*		*40 - 125*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 460-700759/1-A ^5
Matrix: Water
Analysis Batch: 701222

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 700759

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.54	U	5.0	0.54	ug/L		06/11/20 20:40	06/14/20 13:37	5

Lab Sample ID: LCS 460-700759/2-A ^5
Matrix: Water
Analysis Batch: 700909

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 700759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	54.36		ug/L		109	85 - 115
Cadmium	25.0	24.45		ug/L		98	85 - 115
Chromium	50.0	52.32		ug/L		105	85 - 115
Copper	50.0	47.82		ug/L		96	85 - 115
Nickel	50.0	52.90		ug/L		106	85 - 115
Lead	25.0	25.95		ug/L		104	85 - 115
Zinc	250	267.1		ug/L		107	85 - 115
Silver	25.0	26.28		ug/L		105	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 460-210802-C-2-B MS ^5
Matrix: Water
Analysis Batch: 701222

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 700759

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.2	U	50.0	59.13		ug/L		118	70 - 130
Cadmium	0.89	U	25.0	26.93		ug/L		108	70 - 130
Chromium	18.5		50.0	73.32		ug/L		110	70 - 130
Copper	106		50.0	166.5		ug/L		121	70 - 130
Nickel	46.0		50.0	101.2		ug/L		110	70 - 130
Lead	2.8		25.0	30.04		ug/L		109	70 - 130
Zinc	102		250	378.1		ug/L		110	70 - 130
Silver	0.59	U	25.0	26.51		ug/L		106	70 - 130

Lab Sample ID: 460-210802-A-2-A DU ^5
Matrix: Water
Analysis Batch: 700909

Client Sample ID: Duplicate
Prep Type: Total Recoverable
Prep Batch: 700759

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	2.2	U	2.2	U	ug/L		NC	20
Cadmium	0.89	U	0.89	U	ug/L		NC	20
Chromium	18.5		18.34		ug/L		1	20
Copper	106		107.2		ug/L		1	20
Nickel	46.0		45.77		ug/L		0.5	20
Lead	2.8		2.84		ug/L		3	20
Zinc	102		103.2		ug/L		1	20
Silver	0.59	U	0.59	U	ug/L		NC	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 460-701665/1-A
Matrix: Water
Analysis Batch: 701724

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 701665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.091	U	0.20	0.091	ug/L		06/16/20 10:48	06/16/20 13:13	1

Lab Sample ID: LCS 460-701665/2-A
Matrix: Water
Analysis Batch: 701724

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 701665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	1.00	1.03		ug/L		103	85 - 115

Lab Sample ID: 460-210380-B-1-D MS
Matrix: Water
Analysis Batch: 701724

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 701665

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.091	U	1.00	1.05		ug/L		105	70 - 130

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 460-210380-B-1-C DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 701724 — **Prep Batch: 701665**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Mercury	0.091	U		0.091	U	ug/L				NC	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 460-701718/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 701718

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.4	U	5.0	1.4	mg/L			06/16/20 15:31	1
SGT-HEM	1.4	U	5.0	1.4	mg/L			06/16/20 15:31	1

Lab Sample ID: LCS 460-701718/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 701718

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
HEM			40.0	35.80		mg/L		90	78 - 114		
SGT-HEM			20.0	15.50		mg/L		78	64 - 132		

Lab Sample ID: LCSD 460-701718/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 701718

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM			40.0	33.80		mg/L		85	78 - 114	6	18
SGT-HEM			20.0	14.70		mg/L		74	64 - 132	5	34

Lab Sample ID: 460-210938-B-4 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 701718

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
HEM	1.4	U F1	40.0	29.50	F1	mg/L		74	78 - 114		
SGT-HEM	1.4	U	20.0	13.00		mg/L		65	64 - 132		

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 460-701233/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 701407 — **Prep Batch: 701233**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0040	U	0.010	0.0040	mg/L		06/14/20 12:38	06/15/20 10:43	1

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: LCS 460-701233/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 701407 — **Prep Batch: 701233**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.0957		mg/L		96	90 - 110

Lab Sample ID: 460-210227-H-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 701407 — **Prep Batch: 701233**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0040	U	0.200	0.212		mg/L		106	90 - 110

Lab Sample ID: 460-210227-H-2-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 701407 — **Prep Batch: 701233**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.0040	U	0.200	0.207		mg/L		104	90 - 110	2	35

Method: 420.1 - Phenolics, Total Recoverable

Lab Sample ID: MB 460-700585/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 700693 — **Prep Batch: 700585**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total	0.041	U	0.050	0.041	mg/L		06/11/20 09:47	06/11/20 16:29	1

Lab Sample ID: LCS 460-700585/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 700693 — **Prep Batch: 700585**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.400	0.410		mg/L		102	86 - 118

Lab Sample ID: 460-210408-D-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 700693 — **Prep Batch: 700585**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.082	U	0.800	0.824		mg/L		103	86 - 118

Lab Sample ID: 460-210408-D-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 700693 — **Prep Batch: 700585**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenols, Total	0.082	U	0.800	0.823		mg/L		103	86 - 118	0	30

QC Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 460-700719/1
Matrix: Water
Analysis Batch: 700719

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	2.5	U	2.5	2.5	mg/L			06/12/20 11:32	1

Lab Sample ID: LCSSRM 460-700719/2
Matrix: Water
Analysis Batch: 700719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	84.7	84.00		mg/L		99.2	81.9 - 111.1

Lab Sample ID: 460-210435-1 DU
Matrix: Water
Analysis Batch: 700719

Client Sample ID: Outfall Comp
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	57.5		54.50		mg/L		5	5

Method: SM 4500 NH3 G - Ammonia

Lab Sample ID: MB 460-699867/51
Matrix: Water
Analysis Batch: 699867

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.034	U	0.10	0.034	mg/L			06/08/20 13:39	1

Lab Sample ID: LCS 460-699867/52
Matrix: Water
Analysis Batch: 699867

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	2.00	2.09		mg/L		105	89 - 113

Lab Sample ID: 460-210435-1 MS
Matrix: Water
Analysis Batch: 699867

Client Sample ID: Outfall Comp
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	5.2		2.00	7.16		mg/L		100	89 - 113

Lab Sample ID: 460-210435-1 MSD
Matrix: Water
Analysis Batch: 699867

Client Sample ID: Outfall Comp
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	5.2		2.00	7.30		mg/L		107	89 - 113	2	10

QC Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 460-699623/5
Matrix: Water
Analysis Batch: 699623

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	1.0	U	1.0	1.0	mg/L			06/06/20 12:28	1

Lab Sample ID: LCS 460-699623/2
Matrix: Water
Analysis Batch: 699623

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Biochemical Oxygen Demand			131	119.0		mg/L		91	84.6 - 115.4		

Lab Sample ID: 460-210437-A-1 DU
Matrix: Water
Analysis Batch: 699623

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Biochemical Oxygen Demand	60.6			116.6	F3	mg/L				63	30

Method: SM 5220D - COD

Lab Sample ID: MB 460-701949/3
Matrix: Water
Analysis Batch: 701949

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.3	U	10.0	3.3	mg/L			06/17/20 13:37	1

Lab Sample ID: LCSSRM 460-701949/4
Matrix: Water
Analysis Batch: 701949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand			117	115.3		mg/L		98.6	77.2 - 118.8		

Lab Sample ID: 460-210449-A-1 MS ^2
Matrix: Water
Analysis Batch: 701949

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand	137		100	237.8		mg/L		101	90 - 110		

Lab Sample ID: 460-210449-A-1 MSD ^2
Matrix: Water
Analysis Batch: 701949

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	137		100	230.6		mg/L		94	90 - 110	3	10

QC Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Method: SM5210B - Carbonaceous BOD, 20 day

Lab Sample ID: USB 460-699625/1
Matrix: Water
Analysis Batch: 699625

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand 20	1.0	U	1.0	1.0	mg/L			06/06/20 17:43	1

Lab Sample ID: 460-210435-1 DU
Matrix: Water
Analysis Batch: 699625

Client Sample ID: Outfall Comp
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Carbonaceous Biochemical Oxygen Demand 20	116			125.0		mg/L				7	30

QC Association Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Specialty Organics

Prep Batch: 40240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-2	Outfall Grab	Total/NA	Water	HRMS-Sepf	
MB 140-40240/4-A	Method Blank	Total/NA	Water	HRMS-Sepf	
LCS 140-40240/3-A	Lab Control Sample	Total/NA	Water	HRMS-Sepf	

Analysis Batch: 40347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 140-40240/3-A	Lab Control Sample	Total/NA	Water	1668A	40240

Analysis Batch: 40356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-2	Outfall Grab	Total/NA	Water	1668A	40240
MB 140-40240/4-A	Method Blank	Total/NA	Water	1668A	40240

Metals

Prep Batch: 700759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-1	Outfall Comp	Total Recoverable	Water	200.8	
MB 460-700759/1-A ^5	Method Blank	Total Recoverable	Water	200.8	
LCS 460-700759/2-A ^5	Lab Control Sample	Total Recoverable	Water	200.8	
460-210802-C-2-B MS ^5	Matrix Spike	Total Recoverable	Water	200.8	
460-210802-A-2-A DU ^5	Duplicate	Total Recoverable	Water	200.8	

Analysis Batch: 700909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 460-700759/2-A ^5	Lab Control Sample	Total Recoverable	Water	200.8	700759
460-210802-A-2-A DU ^5	Duplicate	Total Recoverable	Water	200.8	700759

Analysis Batch: 701222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-1	Outfall Comp	Total Recoverable	Water	200.8	700759
MB 460-700759/1-A ^5	Method Blank	Total Recoverable	Water	200.8	700759
460-210802-C-2-B MS ^5	Matrix Spike	Total Recoverable	Water	200.8	700759

Prep Batch: 701665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-1	Outfall Comp	Total/NA	Water	245.1	
MB 460-701665/1-A	Method Blank	Total/NA	Water	245.1	
LCS 460-701665/2-A	Lab Control Sample	Total/NA	Water	245.1	
460-210380-B-1-D MS	Matrix Spike	Total/NA	Water	245.1	
460-210380-B-1-C DU	Duplicate	Total/NA	Water	245.1	

Analysis Batch: 701724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-1	Outfall Comp	Total/NA	Water	245.1	701665
MB 460-701665/1-A	Method Blank	Total/NA	Water	245.1	701665
LCS 460-701665/2-A	Lab Control Sample	Total/NA	Water	245.1	701665
460-210380-B-1-D MS	Matrix Spike	Total/NA	Water	245.1	701665
460-210380-B-1-C DU	Duplicate	Total/NA	Water	245.1	701665

QC Association Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

General Chemistry

Analysis Batch: 699623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-1	Outfall Comp	Total/NA	Water	SM 5210B	
USB 460-699623/5	Method Blank	Total/NA	Water	SM 5210B	
LCS 460-699623/2	Lab Control Sample	Total/NA	Water	SM 5210B	
460-210437-A-1 DU	Duplicate	Total/NA	Water	SM 5210B	

Analysis Batch: 699625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-1	Outfall Comp	Total/NA	Water	SM5210B	
USB 460-699625/1	Method Blank	Total/NA	Water	SM5210B	
460-210435-1 DU	Outfall Comp	Total/NA	Water	SM5210B	

Analysis Batch: 699867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-1	Outfall Comp	Total/NA	Water	SM 4500 NH3 G	
MB 460-699867/51	Method Blank	Total/NA	Water	SM 4500 NH3 G	
LCS 460-699867/52	Lab Control Sample	Total/NA	Water	SM 4500 NH3 G	
MRL 460-699867/12	Lab Control Sample	Total/NA	Water	SM 4500 NH3 G	
460-210435-1 MS	Outfall Comp	Total/NA	Water	SM 4500 NH3 G	
460-210435-1 MSD	Outfall Comp	Total/NA	Water	SM 4500 NH3 G	

Prep Batch: 700585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-2	Outfall Grab	Total/NA	Water	Distill/Phenol	
MB 460-700585/1-A	Method Blank	Total/NA	Water	Distill/Phenol	
LCS 460-700585/2-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	
460-210408-D-1-B MS	Matrix Spike	Total/NA	Water	Distill/Phenol	
460-210408-D-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/Phenol	

Analysis Batch: 700693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-2	Outfall Grab	Total/NA	Water	420.1	700585
MB 460-700585/1-A	Method Blank	Total/NA	Water	420.1	700585
LCS 460-700585/2-A	Lab Control Sample	Total/NA	Water	420.1	700585
460-210408-D-1-B MS	Matrix Spike	Total/NA	Water	420.1	700585
460-210408-D-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	420.1	700585

Analysis Batch: 700719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-1	Outfall Comp	Total/NA	Water	SM 2540D	
MB 460-700719/1	Method Blank	Total/NA	Water	SM 2540D	
LCSSRM 460-700719/2	Lab Control Sample	Total/NA	Water	SM 2540D	
460-210435-1 DU	Outfall Comp	Total/NA	Water	SM 2540D	

Prep Batch: 701233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-2	Outfall Grab	Total/NA	Water	Distill/CN	
MB 460-701233/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 460-701233/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
460-210227-H-2-B MS	Matrix Spike	Total/NA	Water	Distill/CN	
460-210227-H-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/CN	

QC Association Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

General Chemistry

Analysis Batch: 701407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-2	Outfall Grab	Total/NA	Water	335.4	701233
MB 460-701233/1-A	Method Blank	Total/NA	Water	335.4	701233
LCS 460-701233/2-A	Lab Control Sample	Total/NA	Water	335.4	701233
460-210227-H-2-B MS	Matrix Spike	Total/NA	Water	335.4	701233
460-210227-H-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	335.4	701233

Analysis Batch: 701718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-1	Outfall Comp	Total/NA	Water	1664A	
460-210435-2	Outfall Grab	Total/NA	Water	1664A	
MB 460-701718/1	Method Blank	Total/NA	Water	1664A	
LCS 460-701718/2	Lab Control Sample	Total/NA	Water	1664A	
LCSD 460-701718/3	Lab Control Sample Dup	Total/NA	Water	1664A	
460-210938-B-4 MS	Matrix Spike	Total/NA	Water	1664A	

Analysis Batch: 701949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-1	Outfall Comp	Total/NA	Water	SM 5220D	
MB 460-701949/3	Method Blank	Total/NA	Water	SM 5220D	
LCSSRM 460-701949/4	Lab Control Sample	Total/NA	Water	SM 5220D	
460-210449-A-1 MS ^2	Matrix Spike	Total/NA	Water	SM 5220D	
460-210449-A-1 MSD ^2	Matrix Spike Duplicate	Total/NA	Water	SM 5220D	

Field Service / Mobile Lab

Analysis Batch: 700361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-210435-2	Outfall Grab	Total/NA	Water	SM4500 H+	

Lab Chronicle

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Client Sample ID: Outfall Comp

Lab Sample ID: 460-210435-1
Date Collected: 06/05/20 09:00
Matrix: Water
Date Received: 06/05/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			700759	06/11/20 20:40	GAE	TAL EDI
Total Recoverable	Analysis	200.8		5	701222	06/14/20 11:05	MDC	TAL EDI
Total/NA	Prep	245.1			701665	06/16/20 10:48	RBS	TAL EDI
Total/NA	Analysis	245.1		1	701724	06/16/20 13:27	RBS	TAL EDI
Total/NA	Analysis	1664A		1	701718	06/16/20 15:31	AAA	TAL EDI
Total/NA	Analysis	SM 2540D		1	700719	06/12/20 11:32	AAP	TAL EDI
Total/NA	Analysis	SM 4500 NH3 G		1	699867	06/08/20 14:26	AJP	TAL EDI
Total/NA	Analysis	SM 5210B		1	699623	06/06/20 14:02	EMS	TAL EDI
Total/NA	Analysis	SM 5220D		5	701949	06/17/20 13:37	HTV	TAL EDI
Total/NA	Analysis	SM5210B		1	699625	06/06/20 17:54	EMS	TAL EDI

Client Sample ID: Outfall Grab

Lab Sample ID: 460-210435-2
Date Collected: 06/05/20 09:05
Matrix: Water
Date Received: 06/05/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sepf			40240	06/10/20 14:13	SMA	TAL KNX
Total/NA	Analysis	1668A		1	40356	06/16/20 05:28	LKM	TAL KNX
Total/NA	Analysis	1664A		1	701718	06/16/20 15:31	AAA	TAL EDI
Total/NA	Prep	Distill/CN			701233	06/14/20 12:38	EMS	TAL EDI
Total/NA	Analysis	335.4		1	701407	06/15/20 11:14	AJP	TAL EDI
Total/NA	Prep	Distill/Phenol			700585	06/11/20 09:47	IAA	TAL EDI
Total/NA	Analysis	420.1		1	700693	06/11/20 16:35	HTV	TAL EDI
Total/NA	Analysis	SM4500 H+		1	700361	06/05/20 09:05	JHB	TAL EDI

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Laboratory: Eurofins TestAmerica, Edison

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

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0200	09-30-20
DE Haz. Subst. Cleanup Act (HSCA)	State	<cert No.>	12-31-21
Georgia	State	12028 (NJ)	06-30-20
Massachusetts	State	M-NJ312	06-30-20
New Jersey	NELAP	12028	06-30-20
New York	NELAP	11452	04-01-21
Pennsylvania	NELAP	68-00522	02-28-21
Rhode Island	State	LAO00132	12-31-20
USDA	US Federal Programs	P330-18-00135	05-03-21

Laboratory: Eurofins TestAmerica, Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
ANAB	Dept. of Energy	L2311.01	02-13-22
ANAB	ISO/IEC 17025	L2311	02-13-22
ANAB	ISO/IEC 17025	L2311	02-14-22
Arkansas DEQ	State	88-0688	06-16-20
California	State	2423	06-30-20
Colorado	State	TN00009	02-28-21
Connecticut	State	PH-0223	09-30-21
Florida	NELAP	E87177	06-30-20
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-21
Kansas	NELAP	E-10349	11-01-20
Kentucky (DW)	State	90101	01-01-21
Louisiana	NELAP	83979	06-30-20
Louisiana (DW)	State	LA019	12-31-20
Maryland	State	277	03-31-21
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-20
New Hampshire	NELAP	299919	01-17-21
New Jersey	NELAP	TN001	06-30-20
New York	NELAP	10781	03-31-21
North Carolina (DW)	State	21705	07-31-20
North Carolina (WW/SW)	State	64	12-31-20
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	09-01-20
Oregon	NELAP	TNI0189	01-02-21
Pennsylvania	NELAP	68-00576	12-31-20
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-20
Virginia	NELAP	460176	09-15-20
Washington	State	C593	01-19-21
West Virginia (DW)	State	9955C	01-01-21

Accreditation/Certification Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Laboratory: Eurofins TestAmerica, Knoxville (Continued)

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

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	345	05-01-21
Wisconsin	State	998044300	08-31-20

Method Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Method	Method Description	Protocol	Laboratory
1668A	Chlorinated Biphenyl Congeners (HRGC/HRMS)	EPA	TAL KNX
200.8	Metals (ICP/MS)	EPA	TAL EDI
245.1	Mercury (CVAA)	EPA	TAL EDI
1664A	HEM and SGT-HEM	1664A	TAL EDI
335.4	Cyanide, Total	MCAWW	TAL EDI
420.1	Phenolics, Total Recoverable	MCAWW	TAL EDI
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL EDI
SM 4500 NH3 G	Ammonia	SM	TAL EDI
SM 5210B	BOD, 5-Day	SM	TAL EDI
SM 5220D	COD	SM	TAL EDI
SM5210B	Carbonaceous BOD, 20 day	SM	TAL EDI
SM4500 H+	pH, Field	SM	TAL EDI
200.8	Preparation, Total Recoverable Metals	EPA	TAL EDI
245.1	Preparation, Mercury	EPA	TAL EDI
Distill/CN	Distillation, Cyanide	None	TAL EDI
Distill/Phenol	Distillation, Phenolics	None	TAL EDI
HRMS-Sepf	Separatory Funnel (Liquid-Liquid) Extraction	EPA	TAL KNX

Protocol References:

1664A = EPA-821-98-002
EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900
TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-210435-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
460-210435-1	Outfall Comp	Water	06/05/20 09:00	06/05/20 20:35	
460-210435-2	Outfall Grab	Water	06/05/20 09:05	06/05/20 20:35	

TestAmerica South Jersey
3000 Lincoln Drive East Suite A
Marlton, NJ 08053
Phone (856) 334-1030 Fax (856) 222-1984

Chain of Custody Record

Field Services SJO

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JB	Lab PM: Bennett, Allison L	Carrier Tracking No(s):	COC No: 460-109420-70098.1
Client Contact: Michael Tucci	Phone:	E-Mail: allison.bennett@testamericainc.com		Page: Page 1 of 1
Company: IES Engineers				Job #: 210435
Address: 1720 Walton Road	Due Date Requested:			
City: Blue Bell	TAT Requested (days):			
State, Zip: PA, 19422				
Phone:	PO #: Purchase Order Requested			
Email: MTucci@iesengineers.com	WO #:			
Project Name: Quarterly #183765;	Project #: 46028651			
Site:	SSOW#:			

SHORT HOLD

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

2.8 ATLR

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500_NH3_H - Ammonia (Comp)	200.8, 245.1 - Cd, Cr, Cu, Pb, Ni, Ag, As, Zn, Hg (comp)	SM5210B_CBOD_20 - CBOD, 20-day (comp)	1664A_NP - Oil & Grease (Comp)	2540D - TSS (comp)	5210B - BOD, 5-day (comp)	5220D - COD (Comp)		420.1 - Phenolics, Total Recoverable (grab)	335.4 - Cyanide, Total (Grab)	1664A_NP - Oil & Grease/TPH (Grab)	1668A - 209 PCBs (grab)	SM4500_H+_F - pH, Field (price included in field servi	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	D	N	A	N	N	S		S	B	A	N	N		
Outfall Comp	6/5/20	0900	C	W			X	X	X	X	X	X	X								1
Outfall Grab	6/5/20	0905	G	↓											X	X	X	X	X		2
pH 7.20																					
Temp 23.8																					

460-210435 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
[signature]	6/5/20	ETA	[signature] 1700	6/5/20	ETA
[signature]	6/5/20	ETA	[signature]	6/5/20	ETA
[signature]	6/5/20	ETA	2035 [signature]	6/5/20 2035	TAJ

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 08/04/2016

Eurofins TestAmerica Edison
Receipt Temperature and pH Log

Page ____ of ____

Job Number: 210435

Number of Coolers: 1 IR Gun # HZ4

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	2.8 °C	2.8 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1	<2	<2		<2											
2								<2				>12			

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

**Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: DM Date: 6/5/20

EDS-WI-038, Rev 4.1
10/22/2019

Eurofins TestAmerica, Edison
777 New Durham Road
Edison, NJ 08817
Phone: 732-549-3900 Fax: 732-549-3679

Chain of Custody Record

460-210435 Chain of Custody

ofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Gilmore, Julie L		460-58358.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: julie.gilmore@testamericainc.com	State of Origin: Pennsylvania	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 460-210435-1
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 7/1/2020			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37921				
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:			
Email:	WO #:			
Project Name: Quarterly #183765;	Project #: 46028651			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1668A/1668_P_Sep 209 PCBs	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall Grab (460-210435-2)	6/5/20	09:05 Eastern		Water			X	2	

RT: 1.8°c CT: 1.8°c, 1 cooler
trK# 1161 6401 0176
Custody seal intact
Fedex Po, RC-ND
KW 6/9/20

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: [signature]	Date/Time: 6/8/20 1800	Company: EtAEd.	Received by: [signature]	Date/Time: 6/9/20 1000	Company: ETA
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number: Loc: 460 210435

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : SC68 Correction factor: 0.0	/			☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?			/	☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: STB 2021/04	/			☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: _____ PM Instructions: _____

Sample Receiving Associate: [signature] Date: 6/9/20

QA026R32.doc, 062719

Login Sample Receipt Checklist

Client: IES Engineers

Job Number: 460-210435-1

Login Number: 210435
List Number: 1
Creator: Jara, Kelly D

List Source: Eurofins TestAmerica, Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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 containers received 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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT 2

SUMMARY OF THE PCB LABORATORY RESULTS

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-210435-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-210435-2
Sampling Date	TDS<2500	TDS<2500			06/05/2020 09:05:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
WATER BY 1668A					
PCB-1	NA	NA	0.094	B	0.045
PCB-10	NA	NA	0.0094	J q	0.045
PCB-100	NA	NA	0.00039	C93	0.090
PCB-101	NA	NA	0.65	90 B	0.14
PCB-102	NA	NA	0.015	C98	0.090
PCB-103	NA	NA	0.0022	J q	0.045
PCB-104	NA	NA	0.00029	U	0.045
PCB-105	NA	NA	0.12	B	0.045
PCB-106	NA	NA	0.0024	U	0.045
PCB-107	NA	NA	0.023	J q	0.045
PCB-108	NA	NA	0.018	J C	0.090
PCB-109	NA	NA	0.37	86 B	0.27
PCB-11	NA	NA	0.10	B	0.068
PCB-110	NA	NA	0.58	C B	0.090
PCB-111	NA	NA	0.00027	U	0.045
PCB-112	NA	NA	0.00029	U	0.045
PCB-113	NA	NA	0.65	90 B	0.14
PCB-114	NA	NA	0.0074	J q	0.045
PCB-115	NA	NA	0.58	10 B	0.090
PCB-116	NA	NA	0.071	C85	0.14
PCB-117	NA	NA	0.071	C85	0.14
PCB-118	NA	NA	0.34	B	0.045
PCB-119	NA	NA	0.37	86 B	0.27
PCB-12	NA	NA	0.092	C	0.090
PCB-120	NA	NA	0.00028	U	0.045
PCB-121	NA	NA	0.00028	U	0.045
PCB-122	NA	NA	0.0059	J	0.045
PCB-123	NA	NA	0.0023	U	0.045
PCB-124	NA	NA	0.018	C108	0.090
PCB-125	NA	NA	0.37	86 B	0.27
PCB-126	NA	NA	0.0024	U	0.045
PCB-127	NA	NA	0.0024	U	0.045
PCB-128	NA	NA	0.064	J C	0.090
PCB-129	NA	NA	0.68	C B	0.18
PCB-13	NA	NA	0.092	C12	0.090
PCB-130	NA	NA	0.023	J q	0.045
PCB-131	NA	NA	0.0028	U	0.045
PCB-132	NA	NA	0.27	B	0.045
PCB-133	NA	NA	0.0079	J	0.045
PCB-134	NA	NA	0.039	J C	0.090
PCB-135	NA	NA	0.38	C B	0.090
PCB-136	NA	NA	0.15		0.045
PCB-137	NA	NA	0.012	J q	0.045
PCB-138	NA	NA	0.68	29 B	0.18
PCB-139	NA	NA	0.0087	J q C	0.090
PCB-14	NA	NA	0.0021	U	0.045
PCB-140	NA	NA	0.0087	C139	0.090
PCB-141	NA	NA	0.20	B	0.045
PCB-142	NA	NA	0.0026	U	0.045
PCB-143	NA	NA	0.039	C134	0.090
PCB-144	NA	NA	0.049		0.045
PCB-145	NA	NA	0.00044	U	0.045
PCB-146	NA	NA	0.10	B	0.045
PCB-147	NA	NA	0.90	C B	0.090
PCB-148	NA	NA	0.00063	U	0.045
PCB-149	NA	NA	0.90	47 B	0.090
PCB-15	NA	NA	0.22		0.045
PCB-150	NA	NA	0.00043	U	0.045
PCB-151	NA	NA	0.38	35 B	0.090
PCB-152	NA	NA	0.00046	U	0.045
PCB-153	NA	NA	0.70	C B	0.090

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-210435-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-210435-2
Sampling Date	TDS<2500	TDS<2500			06/05/2020 09:05:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-154	NA	NA	0.00051	U	0.045
PCB-155	NA	NA	0.00043	U	0.045
PCB-156	NA	NA	0.041	J C	0.090
PCB-157	NA	NA	0.041	C156	0.090
PCB-158	NA	NA	0.062		0.045
PCB-159	NA	NA	0.010	J	0.045
PCB-16	NA	NA	0.098		0.045
PCB-160	NA	NA	0.68	29 B	0.18
PCB-161	NA	NA	0.0017	U	0.045
PCB-162	NA	NA	0.0017	U	0.045
PCB-163	NA	NA	0.68	29 B	0.18
PCB-164	NA	NA	0.054		0.045
PCB-165	NA	NA	0.0019	U	0.045
PCB-166	NA	NA	0.064	C128	0.090
PCB-167	NA	NA	0.014	J	0.045
PCB-168	NA	NA	0.70	53 B	0.090
PCB-169	NA	NA	0.0014	U	0.045
PCB-17	NA	NA	0.082		0.045
PCB-170	NA	NA	0.20		0.045
PCB-171	NA	NA	0.074	J C	0.090
PCB-172	NA	NA	0.040	J q	0.045
PCB-173	NA	NA	0.074	C171	0.090
PCB-174	NA	NA	0.33		0.045
PCB-175	NA	NA	0.013	J q	0.045
PCB-176	NA	NA	0.040	J q	0.045
PCB-177	NA	NA	0.16		0.045
PCB-178	NA	NA	0.060		0.045
PCB-179	NA	NA	0.18		0.045
PCB-18	NA	NA	0.18	C B	0.090
PCB-180	NA	NA	0.51	C	0.090
PCB-181	NA	NA	0.00072	U	0.045
PCB-182	NA	NA	0.00070	U	0.045
PCB-183	NA	NA	0.21	C	0.090
PCB-184	NA	NA	0.00059	U	0.045
PCB-185	NA	NA	0.21	C183	0.090
PCB-186	NA	NA	0.00058	U	0.045
PCB-187	NA	NA	0.36	B	0.045
PCB-188	NA	NA	0.00051	U	0.045
PCB-189	NA	NA	0.0039	J q	0.045
PCB-19	NA	NA	0.018	J q	0.045
PCB-190	NA	NA	0.035	J	0.045
PCB-191	NA	NA	0.0078	J q	0.045
PCB-192	NA	NA	0.00061	U	0.045
PCB-193	NA	NA	0.51	C180	0.090
PCB-194	NA	NA	0.069	q	0.045
PCB-195	NA	NA	0.035	J	0.045
PCB-196	NA	NA	0.036	J	0.045
PCB-197	NA	NA	0.0043	J q	0.045
PCB-198	NA	NA	0.072	J q C	0.090
PCB-199	NA	NA	0.072	C198	0.090
PCB-2	NA	NA	0.019	J B	0.045
PCB-20	NA	NA	0.26	C B	0.090
PCB-200	NA	NA	0.011	J q	0.045
PCB-201	NA	NA	0.012	J q	0.045
PCB-202	NA	NA	0.021	J	0.045
PCB-203	NA	NA	0.045		0.045
PCB-204	NA	NA	0.00019	U	0.045
PCB-205	NA	NA	0.0030	J q	0.045
PCB-206	NA	NA	0.018	J	0.045
PCB-207	NA	NA	0.0027	U	0.045
PCB-208	NA	NA	0.0025	U	0.045
PCB-209	NA	NA	0.000073	U	0.045

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-210435-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-210435-2
Sampling Date	TDS<2500	TDS<2500			06/05/2020 09:05:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-21	NA	NA	0.17	C B	0.090
PCB-22	NA	NA	0.11	B	0.045
PCB-23	NA	NA	0.0015	U	0.045
PCB-24	NA	NA	0.0045	J q	0.045
PCB-25	NA	NA	0.022	J	0.045
PCB-26	NA	NA	0.046	J C B	0.090
PCB-27	NA	NA	0.014	J q	0.045
PCB-28	NA	NA	0.26	20 B	0.090
PCB-29	NA	NA	0.046	26 B	0.090
PCB-3	NA	NA	0.089	B	0.045
PCB-30	NA	NA	0.18	18 B	0.090
PCB-31	NA	NA	0.24	B	0.045
PCB-32	NA	NA	0.057		0.045
PCB-33	NA	NA	0.17	21 B	0.090
PCB-34	NA	NA	0.0015	U	0.045
PCB-35	NA	NA	0.014	J	0.045
PCB-36	NA	NA	0.0014	U	0.045
PCB-37	NA	NA	0.12		0.045
PCB-38	NA	NA	0.0016	U	0.045
PCB-39	NA	NA	0.0014	U	0.045
PCB-4	NA	NA	0.12		0.068
PCB-40	NA	NA	0.11	J C B	0.14
PCB-41	NA	NA	0.11	40 B	0.14
PCB-42	NA	NA	0.047		0.045
PCB-43	NA	NA	0.0082	J q C	0.090
PCB-44	NA	NA	0.26	C B	0.14
PCB-45	NA	NA	0.029	J C B	0.090
PCB-46	NA	NA	0.011	J	0.045
PCB-47	NA	NA	0.26	44 B	0.14
PCB-48	NA	NA	0.033	J	0.045
PCB-49	NA	NA	0.13	C B	0.090
PCB-5	NA	NA	0.019	J q	0.045
PCB-50	NA	NA	0.024	J C	0.090
PCB-51	NA	NA	0.029	45 B	0.090
PCB-52	NA	NA	0.49	B	0.045
PCB-53	NA	NA	0.024	C50	0.090
PCB-54	NA	NA	0.000049	U	0.045
PCB-55	NA	NA	0.0023	U	0.045
PCB-56	NA	NA	0.098	B	0.045
PCB-57	NA	NA	0.0024	U	0.045
PCB-58	NA	NA	0.0024	U	0.045
PCB-59	NA	NA	0.012	q C B	0.14
PCB-6	NA	NA	0.088		0.045
PCB-60	NA	NA	0.063	B	0.045
PCB-61	NA	NA	0.51	C B	0.18
PCB-62	NA	NA	0.012	59 B	0.14
PCB-63	NA	NA	0.0083	J	0.045
PCB-64	NA	NA	0.097		0.045
PCB-65	NA	NA	0.26	44 B	0.14
PCB-66	NA	NA	0.19	B	0.045
PCB-67	NA	NA	0.0059	J	0.045
PCB-68	NA	NA	0.0021	U	0.045
PCB-69	NA	NA	0.13	49 B	0.090
PCB-7	NA	NA	0.029	J	0.045
PCB-70	NA	NA	0.51	61 B	0.18
PCB-71	NA	NA	0.11	40 B	0.14
PCB-72	NA	NA	0.0023	U	0.045
PCB-73	NA	NA	0.0082	C43	0.090
PCB-74	NA	NA	0.51	61 B	0.18
PCB-75	NA	NA	0.012	59 B	0.14
PCB-76	NA	NA	0.51	61 B	0.18
PCB-77	NA	NA	0.029	J B	0.045

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-210435-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-210435-2
Sampling Date	TDS<2500	TDS<2500			06/05/2020 09:05:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-78	NA	NA	0.0024	U	0.045
PCB-79	NA	NA	0.0043	J q	0.045
PCB-8	NA	NA	0.31		0.068
PCB-80	NA	NA	0.0020	U	0.045
PCB-81	NA	NA	0.0022	U	0.045
PCB-82	NA	NA	0.058		0.045
PCB-83	NA	NA	0.25	C B	0.090
PCB-84	NA	NA	0.17		0.045
PCB-85	NA	NA	0.071	J C	0.14
PCB-86	NA	NA	0.37	C B	0.27
PCB-87	NA	NA	0.37	86 B	0.27
PCB-88	NA	NA	0.068	J q C	0.090
PCB-89	NA	NA	0.00044	U	0.045
PCB-9	NA	NA	0.030	J q	0.045
PCB-90	NA	NA	0.65	C B	0.14
PCB-91	NA	NA	0.068	C88	0.090
PCB-92	NA	NA	0.099		0.045
PCB-93	NA	NA	0.00039	U C	0.090
PCB-94	NA	NA	0.0027	J q	0.045
PCB-95	NA	NA	0.63	B	0.045
PCB-96	NA	NA	0.0034	J q	0.045
PCB-97	NA	NA	0.37	86 B	0.27
PCB-98	NA	NA	0.015	J C	0.090
PCB-99	NA	NA	0.25	83 B	0.090

B : Compound was found in the blank and sample.
C : The compound co-eluted with other compounds
C108 : The compound co-eluted with PCB-108
C110 : The compound co-eluted with PCB-110
C12 : The compound co-eluted with PCB-12
C128 : The compound co-eluted with PCB-128
C129 : The compound co-eluted with PCB-129
C134 : The compound co-eluted with PCB-134
C135 : The compound co-eluted with PCB-135
C139 : The compound co-eluted with PCB-139
C147 : The compound co-eluted with PCB-147
C153 : The compound co-eluted with PCB-153
C156 : The compound co-eluted with PCB-156
C171 : The compound co-eluted with PCB-171
C18 : The compound co-eluted with PCB-18
C180 : The compound co-eluted with PCB-180
C183 : The compound co-eluted with PCB-183
C198 : The compound co-eluted with PCB-198
C20 : The compound co-eluted with PCB-20
C21 : The compound co-eluted with PCB-21
C26 : The compound co-eluted with PCB-26
C40 : The compound co-eluted with PCB-40
C43 : The compound co-eluted with PCB-43
C44 : The compound co-eluted with PCB-44
C45 : The compound co-eluted with PCB-45
C49 : The compound co-eluted with PCB-49
C50 : The compound co-eluted with PCB-50
C59 : The compound co-eluted with PCB-59
C61 : The compound co-eluted with PCB-61
C83 : The compound co-eluted with PCB-83
C85 : The compound co-eluted with PCB-85
C86 : The compound co-eluted with PCB-86
C88 : The compound co-eluted with PCB-88
C90 : The compound co-eluted with PCB-90
C93 : The compound co-eluted with PCB-93
C98 : The compound co-eluted with PCB-98
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

SUMMARY OF ANALYTICAL RESULTS: 460-210435-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-210435-2
Sampling Date	TDS<2500	TDS<2500			06/05/2020 09:05:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification crit
U : Indicates the analyte was analyzed for but not detected.

Lab Contact:
Julie Gilmore
Project Manager I
(484)685-0865

TestAmerica Laboratories,
Eurofins TestAmerica, Edis
SUMMARY OF ANALYTICAL RESULTS:
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
WATER BY 1668A
PCB-1
PCB-10
PCB-100
PCB-101
PCB-102
PCB-103
PCB-104
PCB-105
PCB-106
PCB-107
PCB-108
PCB-109
PCB-11
PCB-110
PCB-111
PCB-112
PCB-113
PCB-114
PCB-115
PCB-116
PCB-117
PCB-118
PCB-119
PCB-12
PCB-120
PCB-121
PCB-122
PCB-123
PCB-124
PCB-125
PCB-126
PCB-127
PCB-128
PCB-129
PCB-13
PCB-130
PCB-131
PCB-132
PCB-133
PCB-134
PCB-135
PCB-136
PCB-137
PCB-138
PCB-139
PCB-14
PCB-140
PCB-141
PCB-142
PCB-143
PCB-144
PCB-145
PCB-146
PCB-147
PCB-148
PCB-149
PCB-15
PCB-150
PCB-151
PCB-152
PCB-153

TestAmerica Laboratories,
Eurofins TestAmerica, Edis
SUMMARY OF ANALYTICAL RESULTS:
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
PCB-154
PCB-155
PCB-156
PCB-157
PCB-158
PCB-159
PCB-16
PCB-160
PCB-161
PCB-162
PCB-163
PCB-164
PCB-165
PCB-166
PCB-167
PCB-168
PCB-169
PCB-17
PCB-170
PCB-171
PCB-172
PCB-173
PCB-174
PCB-175
PCB-176
PCB-177
PCB-178
PCB-179
PCB-18
PCB-180
PCB-181
PCB-182
PCB-183
PCB-184
PCB-185
PCB-186
PCB-187
PCB-188
PCB-189
PCB-19
PCB-190
PCB-191
PCB-192
PCB-193
PCB-194
PCB-195
PCB-196
PCB-197
PCB-198
PCB-199
PCB-2
PCB-20
PCB-200
PCB-201
PCB-202
PCB-203
PCB-204
PCB-205
PCB-206
PCB-207
PCB-208
PCB-209

TestAmerica Laboratories,
Eurofins TestAmerica, Edis
SUMMARY OF ANALYTICAL RESULTS:
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
PCB-21
PCB-22
PCB-23
PCB-24
PCB-25
PCB-26
PCB-27
PCB-28
PCB-29
PCB-3
PCB-30
PCB-31
PCB-32
PCB-33
PCB-34
PCB-35
PCB-36
PCB-37
PCB-38
PCB-39
PCB-4
PCB-40
PCB-41
PCB-42
PCB-43
PCB-44
PCB-45
PCB-46
PCB-47
PCB-48
PCB-49
PCB-5
PCB-50
PCB-51
PCB-52
PCB-53
PCB-54
PCB-55
PCB-56
PCB-57
PCB-58
PCB-59
PCB-6
PCB-60
PCB-61
PCB-62
PCB-63
PCB-64
PCB-65
PCB-66
PCB-67
PCB-68
PCB-69
PCB-7
PCB-70
PCB-71
PCB-72
PCB-73
PCB-74
PCB-75
PCB-76
PCB-77

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
SUMMARY OF ANALYTICAL RESULTS: (
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
PCB-78
PCB-79
PCB-8
PCB-80
PCB-81
PCB-82
PCB-83
PCB-84
PCB-85
PCB-86
PCB-87
PCB-88
PCB-89
PCB-9
PCB-90
PCB-91
PCB-92
PCB-93
PCB-94
PCB-95
PCB-96
PCB-97
PCB-98
PCB-99

B : Compound was found in the blank and sa
C : The compound co-eluted with other com
C108 : The compound co-eluted with PCB-1
C110 : The compound co-eluted with PCB-1
C12 : The compound co-eluted with PCB-12
C128 : The compound co-eluted with PCB-1
C129 : The compound co-eluted with PCB-1
C134 : The compound co-eluted with PCB-1
C135 : The compound co-eluted with PCB-1
C139 : The compound co-eluted with PCB-1
C147 : The compound co-eluted with PCB-1
C153 : The compound co-eluted with PCB-1
C156 : The compound co-eluted with PCB-1
C171 : The compound co-eluted with PCB-1
C18 : The compound co-eluted with PCB-18
C180 : The compound co-eluted with PCB-1
C183 : The compound co-eluted with PCB-1
C198 : The compound co-eluted with PCB-1
C20 : The compound co-eluted with PCB-20
C21 : The compound co-eluted with PCB-21
C26 : The compound co-eluted with PCB-26
C40 : The compound co-eluted with PCB-40
C43 : The compound co-eluted with PCB-43
C44 : The compound co-eluted with PCB-44
C45 : The compound co-eluted with PCB-45
C49 : The compound co-eluted with PCB-49
C50 : The compound co-eluted with PCB-50
C59 : The compound co-eluted with PCB-59
C61 : The compound co-eluted with PCB-61
C83 : The compound co-eluted with PCB-83
C85 : The compound co-eluted with PCB-85
C86 : The compound co-eluted with PCB-86
C88 : The compound co-eluted with PCB-88
C90 : The compound co-eluted with PCB-90
C93 : The compound co-eluted with PCB-93
C98 : The compound co-eluted with PCB-98
J : Result is less than the RL but greater than

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
SUMMARY OF ANALYTICAL RESULTS: (
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit

q : The reported result is the estimated maxeria and indicates a possible interference.
U : Indicates the analyte was analyzed for b

Lab Contact:
Julie Gilmore
Project Manager I
(484)685-0865

ATTACHMENT 3

WATER METER DATA

Attachment 3				
Lower Bucks Hospital - 501 Bath Road, Bristol, PA				
Water Meter Data				
June 2020				
2" Meter			4" Meter	
Billing Start Date	6/1/2020		Billing Start Date	6/1/2020
Billing End Date	7/1/2020		Billing End Date	7/1/2020
No. Of Days (*Billing Period*)	30		No. Of Days (*Billing Period*)	30
	Gallons			**Gallons**
2" Meter	32,400		4" Meter	723,500
Total Water Usage for Both Meters is 755,900 gallons				
Average GPD 2"	1,080		Average GPD 4"	24,117
Average Total Flow	25,197	Gallons Per Day		

Notes:

1. The facility currently estimates wastewater discharge flow to be equivalent to the quantity of water purchased, based on the facility water bill.

1720 Walton Road, Blue Bell, PA 19422 610-828-3078 Fax 610-828-7842

October 15, 2020

E-MAIL
Ms. Randee Elton
Township Manager
Bristol Township Pretreatment Coordinator
Bristol Township
2501 Bath Road
Bristol, PA 19007
relton@bristoltownship.org

Subject: Wastewater Discharge Monitoring Report - September 2020
Permit No. IND-05-S-2019
Lower Bucks Hospital
Bristol, Pennsylvania
IES Project No. EV201318.01

Dear Ms. Elton:

On behalf of Lower Bucks Hospital (LBH), IES Engineers (IES) is pleased to submit the enclosed wastewater discharge monitoring report for the month of September 2020. Sampling was conducted on September 11, 2020. Samples were collected at Outfall LBH01 at the LBH facility, which is located at 501 Bath Road, Bristol, Pennsylvania. Laboratory analyses were performed by TestAmerica Laboratories, Inc., of Edison, New Jersey. This sampling event report fulfills the monthly and quarterly sampling requirements of LBH's Industrial Wastewater Discharge Permit that was issued by Bristol Township on January 1, 2019.

All parameters analyzed are in compliance with the permit limits.

As part of the quarterly monitoring requirement, LBH analyzed the wastewater during September 2020, for PCBs, cyanide, phenols, and Total Petroleum Hydrocarbons (TPH) using EPA Methods. A summary of the PCB Laboratory Results is presented in Attachment 2 and the full laboratory report for all other pollutant parameters is presented in Attachment 1. The analytical results clearly indicate that all parameters are in compliance with the permit limits.

LBH is currently estimating wastewater discharge flow to be equivalent to the quantity of water purchased. On this basis, the total discharge flow for the month of September 2020 was 821,200 gallons or an average of 24,345 gallons per day based on water meter billing period. A copy of water meter data for September 2020 is presented in Attachment 3.

If you have any questions, please contact me or Mr. George Lodish LBH at (215) 785-9014.

Very truly yours,

Michael T. Havard /e/
Michael T. Havard
Project Engineer

Attachments
cc: V. Nedrick, RVE
T. Rivera, InfraMark
G. Lodish, LBH
P. Ryan, LBH
M. Fitzpatrick, IES
A. Soni, IES

3800-FM-BCW0462 12/2016

PERMITTEE NAME/ADDRESS

DISCHARGE MONITORING REPORT (DMR)

NAME **Lower Bucks Hospital**

ADDRESS **501 Bath Road**

FACILITY

LOCATION

WATERSHED

IND-05-S-2019
PERMIT NUMBER

LBH01
OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
2020	**09**	**01**	TO	**2020**	**09**	**30**

Reporting Frequency: Monthly

DMR Effective From:

DMR Effective To:

Permit Expires: December 31, 2023

Permit Application Due:

☐ Check here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
BOD5	SAMPLE MEASUREMENT				49.6	49.6	49.6	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					550					
CBOD20	SAMPLE MEASUREMENT				157	157	157	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1200					
COD	SAMPLE MEASUREMENT				177	177	177	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1200					
TSS	SAMPLE MEASUREMENT				24.5	24.5	24.5	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					650					
FOG	SAMPLE MEASUREMENT				1.9	1.9	1.9	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					150					
Ammonia	SAMPLE MEASUREMENT				13.0	13.0	13.0	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					50					
Cadmium (Total)	SAMPLE MEASUREMENT				<0.00043	<0.00043	<0.00043	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.10					
Chromium (Total)	SAMPLE MEASUREMENT				<0.00045	<0.00045	<0.00045	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1.80					

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
Copper (Total)	SAMPLE MEASUREMENT				0.0503	0.0503	0.0503	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.51					
Cyanide (Total)	SAMPLE MEASUREMENT				0.004	0.004	0.004	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT					2.31					
Lead (Total)	SAMPLE MEASUREMENT				0.00041	0.00041	0.00041	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.43					
Mercury (Total)	SAMPLE MEASUREMENT				<0.000091	<0.000091	<0.000091	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.003					
Nickel (Total)	SAMPLE MEASUREMENT				0.0016	0.0016	0.0016	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.51					
Silver (Total)	SAMPLE MEASUREMENT				<0.00012	<0.00012	<0.00012	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.14					
Arsenic (Total)	SAMPLE MEASUREMENT				<0.00061	<0.00061	<0.00061	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					2.30					

		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
Zinc (Total)	SAMPLE MEASUREMENT				0.0667	0.0667	0.0667	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					2.90					
Phenols (Total)	SAMPLE MEASUREMENT				0.041	0.041	0.041	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT					1.83					
Daily Flow, gallons per day	SAMPLE MEASUREMENT					24,345		GPD	0	N/A	N/A
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
pH	SAMPLE MEASUREMENT				7.28	7.28	7.28	S.U	0	1	COMPOSITE
	PERMIT REQUIREMENT				6.0	---	9.0				
Total Petroleum Hydrocarbons (TPH)	SAMPLE MEASUREMENT				2.7	2.7	2.7	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
PCBs	SAMPLE MEASUREMENT					See Attachment 2		mg/l	0	Q	GRAB
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
	SAMPLE MEASUREMENT								0		
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate 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 am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE		DATE		
George Lodish / Director of Facilities			215	785-9014			
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

ATTACHMENT 1

LABORATORY ANALYTICAL DATA

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

Laboratory Job ID: 460-218113-1
Client Project/Site: Quarterly #183765;

For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Attn: Michael J. Tucci

Authorized for release by:
10/13/2020 9:47:09 AM

Julie Gilmore, Project Manager I
(484)685-0865
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LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
C	The compound co-eluted with other compounds
C108	The compound co-eluted with PCB-108
C110	The compound co-eluted with PCB-110
C12	The compound co-eluted with PCB-12
C128	The compound co-eluted with PCB-128
C129	The compound co-eluted with PCB-129
C134	The compound co-eluted with PCB-134
C135	The compound co-eluted with PCB-135
C139	The compound co-eluted with PCB-139
C147	The compound co-eluted with PCB-147
C153	The compound co-eluted with PCB-153
C156	The compound co-eluted with PCB-156
C171	The compound co-eluted with PCB-171
C18	The compound co-eluted with PCB-18
C180	The compound co-eluted with PCB-180
C183	The compound co-eluted with PCB-183
C198	The compound co-eluted with PCB-198
C20	The compound co-eluted with PCB-20
C21	The compound co-eluted with PCB-21
C26	The compound co-eluted with PCB-26
C40	The compound co-eluted with PCB-40
C43	The compound co-eluted with PCB-43
C44	The compound co-eluted with PCB-44
C45	The compound co-eluted with PCB-45
C49	The compound co-eluted with PCB-49
C50	The compound co-eluted with PCB-50
C59	The compound co-eluted with PCB-59
C61	The compound co-eluted with PCB-61
C83	The compound co-eluted with PCB-83
C85	The compound co-eluted with PCB-85
C86	The compound co-eluted with PCB-86
C88	The compound co-eluted with PCB-88
C90	The compound co-eluted with PCB-90
C93	The compound co-eluted with PCB-93
C98	The compound co-eluted with PCB-98
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate recovery exceeds control limits

Metals

Qualifier	Qualifier Description
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Job ID: 460-218113-1

Laboratory: Eurofins TestAmerica, Edison

Narrative

CASE NARRATIVE

Client: IES Engineers

Project: Quarterly #183765;

Report Number: 460-218113-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 09/11/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.8 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DIOXINS
Sample Outfall Grab (460-218113-2) was analyzed for dioxins in accordance with EPA Method 1668A. The samples were prepared on 09/28/2020 and analyzed on 10/12/2020.

Several analytes were detected in method blank MB 140-43109/18-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

One or more surrogate standrd recoveries are above the method recommended limit for the following samples: (LCS 140-43109/17-A) and (MB 140-43109/18-A).

PCB-111L failed the surrogate recovery criteria high for MB 140-43109/18-A. PCB-111L and PCB-178L failed the surrogate recovery criteria high for LCS 140-43109/17-A. Refer to the QC report for details.

No other difficulties were encountered during the dioxins analysis.

All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS
Sample Outfall Comp (460-218113-1) was analyzed for total recoverable metals in accordance with EPA Method 200.8 (ICP/MS). The samples were prepared on 09/14/2020 and analyzed on 09/15/2020.

Job ID: 460-218113-1 (Continued)

Laboratory: Eurofins TestAmerica, Edison (Continued)

Chromium exceeded the RPD limit for the duplicate of sample 460-218070-1. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis.

All other quality control parameters were within the acceptance limits.

TOTAL MERCURY
Sample Outfall Comp (460-218113-1) was analyzed for total mercury in accordance with EPA Method 245.1. The samples were prepared and analyzed on 09/17/2020.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

OIL&GREASE
Samples Outfall Comp (460-218113-1) and Outfall Grab (460-218113-2) were analyzed for Silica Gel Treated (SGT/Petroleum Hydrocarbon) and N-Hexane Extractable Material (HEM/Oil&Grease) in accordance with EPA SW-846 Method 1664A. The samples were analyzed on 09/21/2020.

No difficulties were encountered during the SGT-HEM/HEM analysis.

All quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS
Sample Outfall Comp (460-218113-1) was analyzed for total suspended solids in accordance with SM 2540D. The samples were analyzed on 09/18/2020.

No difficulties were encountered during the TSS analysis.

All quality control parameters were within the acceptance limits.

TOTAL CYANIDE
Sample Outfall Grab (460-218113-2) was analyzed for total cyanide in accordance with EPA Method 335.4. The samples were prepared and analyzed on 09/24/2020.

Cyanide, Total failed the recovery criteria high for the MS/MSD of sample 460-218915-1 in batch 460-726455.

Refer to the QC report for details.

No other difficulties were encountered during the cyanide analysis.

All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE PHENOLS
Sample Outfall Grab (460-218113-2) was analyzed for total recoverable phenols in accordance with EPA Method 420.1. The samples were prepared and analyzed on 09/21/2020.

No difficulties were encountered during the phenol analysis.

All quality control parameters were within the acceptance limits.

BIOCHEMICAL OXYGEN DEMAND 5 DAY
Sample Outfall Comp (460-218113-1) was analyzed for Biochemical Oxygen Demand 5 Day in accordance with SM 5210B. The samples were analyzed on 09/12/2020.

Job ID: 460-218113-1 (Continued)

Laboratory: Eurofins TestAmerica, Edison (Continued)

No difficulties were encountered during the BOD5 analysis.

All quality control parameters were within the acceptance limits.

CHEMICAL OXYGEN DEMAND
Sample Outfall Comp (460-218113-1) was analyzed for Chemical Oxygen Demand in accordance with SM 5220D. The samples were analyzed on 09/16/2020.

Sample Outfall Comp (460-218113-1)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the COD analysis.

All quality control parameters were within the acceptance limits.

FIELD PH
Sample Outfall Grab (460-218113-2) was analyzed for field pH in accordance with SM 4500_H+_F. The samples were analyzed on 09/11/2020.

No difficulties were encountered during the field pH analysis.

All quality control parameters were within the acceptance limits.

AMMONIA
Sample Outfall Comp (460-218113-1) was analyzed for ammonia in accordance with SM4500NH3_G. The samples were analyzed on 09/15/2020.

No difficulties were encountered during the ammonia analysis.

All quality control parameters were within the acceptance limits.

CARBONACEOUS BIOCHEMICAL OXYGEN DEMAND 20 DAY
Sample Outfall Comp (460-218113-1) was analyzed for Carbonaceous Biochemical Oxygen Demand 20 Day in accordance with SM 5210B. The samples were analyzed on 09/12/2020.

No difficulties were encountered during the CBOD20 analysis.

All quality control parameters were within the acceptance limits.

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Client Sample ID: Outfall Comp — Lab Sample ID: 460-218113-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	50.3		4.0	1.1	ug/L	1		200.8	Total Recoverable
Nickel	1.6	J	4.0	0.84	ug/L	1		200.8	Total Recoverable
Lead	0.41	J	1.2	0.071	ug/L	1		200.8	Total Recoverable
Zinc	66.7		16.0	2.6	ug/L	1		200.8	Total Recoverable
HEM	2.7	J	5.0	1.4	mg/L	1		1664A	Total/NA
Total Suspended Solids	24.5		12.5	12.5	mg/L	1		SM 2540D	Total/NA
Ammonia	13.0		0.10	0.034	mg/L	1		SM 4500 NH3 G	Total/NA
Biochemical Oxygen Demand	49.6		1.0	1.0	mg/L	1		SM 5210B	Total/NA
Chemical Oxygen Demand	177		20.0	6.6	mg/L	2		SM 5220D	Total/NA
Carbonaceous Biochemical Oxygen Demand 20	157		1.0	1.0	mg/L	1		SM5210B	Total/NA

Client Sample ID: Outfall Grab — Lab Sample ID: 460-218113-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1	0.16	B	0.041	0.0011	ng/L	1		1668A	Total/NA
PCB-2	0.025	J B	0.041	0.0012	ng/L	1		1668A	Total/NA
PCB-3	0.14	B	0.041	0.0012	ng/L	1		1668A	Total/NA
PCB-4	0.13	B	0.062	0.0010	ng/L	1		1668A	Total/NA
PCB-5	0.021	J	0.041	0.00075	ng/L	1		1668A	Total/NA
PCB-6	0.089	B	0.041	0.00075	ng/L	1		1668A	Total/NA
PCB-7	0.029	J	0.041	0.00072	ng/L	1		1668A	Total/NA
PCB-8	0.32	B	0.062	0.00074	ng/L	1		1668A	Total/NA
PCB-9	0.038	J	0.041	0.00082	ng/L	1		1668A	Total/NA
PCB-10	0.0097	J	0.041	0.00079	ng/L	1		1668A	Total/NA
PCB-11	0.070	B	0.062	0.00071	ng/L	1		1668A	Total/NA
PCB-12	0.071	J C	0.083	0.00071	ng/L	1		1668A	Total/NA
PCB-13	0.071	J C12	0.083	0.00071	ng/L	1		1668A	Total/NA
PCB-15	0.16	B	0.041	0.00076	ng/L	1		1668A	Total/NA
PCB-16	0.061	B	0.041	0.00062	ng/L	1		1668A	Total/NA
PCB-17	0.050	B	0.041	0.00049	ng/L	1		1668A	Total/NA
PCB-18	0.10	C B	0.083	0.00042	ng/L	1		1668A	Total/NA
PCB-19	0.013	J B	0.041	0.00059	ng/L	1		1668A	Total/NA
PCB-20	0.17	C B	0.083	0.00070	ng/L	1		1668A	Total/NA
PCB-21	0.11	C B	0.083	0.00066	ng/L	1		1668A	Total/NA
PCB-22	0.076	B	0.041	0.00073	ng/L	1		1668A	Total/NA
PCB-24	0.0025	J q	0.041	0.00036	ng/L	1		1668A	Total/NA
PCB-25	0.016	J B	0.041	0.00067	ng/L	1		1668A	Total/NA
PCB-26	0.032	J C B	0.083	0.00069	ng/L	1		1668A	Total/NA
PCB-27	0.0090	J	0.041	0.00035	ng/L	1		1668A	Total/NA
PCB-28	0.17	C20 B	0.083	0.00070	ng/L	1		1668A	Total/NA
PCB-29	0.032	J C26 B	0.083	0.00069	ng/L	1		1668A	Total/NA
PCB-30	0.10	C18 B	0.083	0.00042	ng/L	1		1668A	Total/NA
PCB-31	0.14	B	0.041	0.00066	ng/L	1		1668A	Total/NA
PCB-32	0.031	J B	0.041	0.00033	ng/L	1		1668A	Total/NA
PCB-33	0.11	C21 B	0.083	0.00066	ng/L	1		1668A	Total/NA
PCB-35	0.0081	J	0.041	0.00075	ng/L	1		1668A	Total/NA
PCB-37	0.064	B	0.041	0.00071	ng/L	1		1668A	Total/NA
PCB-40	0.062	J C B	0.12	0.0011	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-218113-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-41	0.062	J C40 B	0.12	0.0011	ng/L	1		1668A	Total/NA
PCB-42	0.027	J B	0.041	0.0012	ng/L	1		1668A	Total/NA
PCB-43	0.0048	J q C	0.083	0.0010	ng/L	1		1668A	Total/NA
PCB-44	0.19	C B	0.12	0.00098	ng/L	1		1668A	Total/NA
PCB-45	0.027	J C B	0.083	0.0011	ng/L	1		1668A	Total/NA
PCB-46	0.0068	J	0.041	0.0013	ng/L	1		1668A	Total/NA
PCB-47	0.19	C44 B	0.12	0.00098	ng/L	1		1668A	Total/NA
PCB-48	0.022	J	0.041	0.0011	ng/L	1		1668A	Total/NA
PCB-49	0.069	J C B	0.083	0.00089	ng/L	1		1668A	Total/NA
PCB-50	0.015	J C	0.083	0.0011	ng/L	1		1668A	Total/NA
PCB-51	0.027	J C45 B	0.083	0.0011	ng/L	1		1668A	Total/NA
PCB-52	0.24	B	0.041	0.0011	ng/L	1		1668A	Total/NA
PCB-53	0.015	J C50	0.083	0.0011	ng/L	1		1668A	Total/NA
PCB-55	0.0029	J q	0.041	0.00078	ng/L	1		1668A	Total/NA
PCB-56	0.046	B	0.041	0.00080	ng/L	1		1668A	Total/NA
PCB-59	0.0091	J C	0.12	0.00074	ng/L	1		1668A	Total/NA
PCB-60	0.027	J B	0.041	0.00076	ng/L	1		1668A	Total/NA
PCB-61	0.22	C B	0.17	0.00075	ng/L	1		1668A	Total/NA
PCB-62	0.0091	J C59	0.12	0.00074	ng/L	1		1668A	Total/NA
PCB-63	0.0038	J	0.041	0.00069	ng/L	1		1668A	Total/NA
PCB-64	0.046	B	0.041	0.00072	ng/L	1		1668A	Total/NA
PCB-65	0.19	C44 B	0.12	0.00098	ng/L	1		1668A	Total/NA
PCB-66	0.092	B	0.041	0.00079	ng/L	1		1668A	Total/NA
PCB-67	0.0032	J	0.041	0.00073	ng/L	1		1668A	Total/NA
PCB-68	0.0076	J q B	0.041	0.00069	ng/L	1		1668A	Total/NA
PCB-69	0.069	J C49 B	0.083	0.00089	ng/L	1		1668A	Total/NA
PCB-70	0.22	C61 B	0.17	0.00075	ng/L	1		1668A	Total/NA
PCB-71	0.062	J C40 B	0.12	0.0011	ng/L	1		1668A	Total/NA
PCB-73	0.0048	J q C43	0.083	0.0010	ng/L	1		1668A	Total/NA
PCB-74	0.22	C61 B	0.17	0.00075	ng/L	1		1668A	Total/NA
PCB-75	0.0091	J C59	0.12	0.00074	ng/L	1		1668A	Total/NA
PCB-76	0.22	C61 B	0.17	0.00075	ng/L	1		1668A	Total/NA
PCB-77	0.013	J B	0.041	0.00075	ng/L	1		1668A	Total/NA
PCB-79	0.0018	J q	0.041	0.00066	ng/L	1		1668A	Total/NA
PCB-82	0.023	J B	0.041	0.0011	ng/L	1		1668A	Total/NA
PCB-83	0.096	C B	0.083	0.0010	ng/L	1		1668A	Total/NA
PCB-84	0.064		0.041	0.0011	ng/L	1		1668A	Total/NA
PCB-85	0.030	J C	0.12	0.00077	ng/L	1		1668A	Total/NA
PCB-86	0.13	J C B	0.25	0.00079	ng/L	1		1668A	Total/NA
PCB-87	0.13	J C86 B	0.25	0.00079	ng/L	1		1668A	Total/NA
PCB-88	0.023	J q C	0.083	0.00093	ng/L	1		1668A	Total/NA
PCB-89	0.0024	J	0.041	0.0011	ng/L	1		1668A	Total/NA
PCB-90	0.20	C B	0.12	0.00083	ng/L	1		1668A	Total/NA
PCB-91	0.023	J q C88	0.083	0.00093	ng/L	1		1668A	Total/NA
PCB-92	0.036	J B	0.041	0.00099	ng/L	1		1668A	Total/NA
PCB-93	0.0032	J q C	0.083	0.00096	ng/L	1		1668A	Total/NA
PCB-95	0.19	B	0.041	0.00098	ng/L	1		1668A	Total/NA
PCB-96	0.0021	J	0.041	0.00077	ng/L	1		1668A	Total/NA
PCB-97	0.13	J C86 B	0.25	0.00079	ng/L	1		1668A	Total/NA
PCB-98	0.0056	J C	0.083	0.00095	ng/L	1		1668A	Total/NA
PCB-99	0.096	C83 B	0.083	0.0010	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-218113-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-100	0.0032	J q C93	0.083	0.00096	ng/L	1		1668A	Total/NA
PCB-101	0.20	C90 B	0.12	0.00083	ng/L	1		1668A	Total/NA
PCB-102	0.0056	J C98	0.083	0.00095	ng/L	1		1668A	Total/NA
PCB-105	0.034	J B	0.041	0.00080	ng/L	1		1668A	Total/NA
PCB-107	0.0070	J	0.041	0.00074	ng/L	1		1668A	Total/NA
PCB-108	0.0050	J q C	0.083	0.00080	ng/L	1		1668A	Total/NA
PCB-109	0.13	J C86 B	0.25	0.00079	ng/L	1		1668A	Total/NA
PCB-110	0.20	C B	0.083	0.00070	ng/L	1		1668A	Total/NA
PCB-113	0.20	C90 B	0.12	0.00083	ng/L	1		1668A	Total/NA
PCB-114	0.0028	J q	0.041	0.00070	ng/L	1		1668A	Total/NA
PCB-115	0.20	C110 B	0.083	0.00070	ng/L	1		1668A	Total/NA
PCB-116	0.030	J C85	0.12	0.00077	ng/L	1		1668A	Total/NA
PCB-117	0.030	J C85	0.12	0.00077	ng/L	1		1668A	Total/NA
PCB-118	0.10	B	0.041	0.00075	ng/L	1		1668A	Total/NA
PCB-119	0.13	J C86 B	0.25	0.00079	ng/L	1		1668A	Total/NA
PCB-122	0.0012	J q	0.041	0.00086	ng/L	1		1668A	Total/NA
PCB-123	0.0021	J q	0.041	0.00072	ng/L	1		1668A	Total/NA
PCB-124	0.0050	J q C108	0.083	0.00080	ng/L	1		1668A	Total/NA
PCB-125	0.13	J C86 B	0.25	0.00079	ng/L	1		1668A	Total/NA
PCB-128	0.014	J C B	0.083	0.00064	ng/L	1		1668A	Total/NA
PCB-129	0.13	J C B	0.17	0.00066	ng/L	1		1668A	Total/NA
PCB-130	0.0064	J	0.041	0.00086	ng/L	1		1668A	Total/NA
PCB-131	0.0023	J	0.041	0.00083	ng/L	1		1668A	Total/NA
PCB-132	0.045	B	0.041	0.00081	ng/L	1		1668A	Total/NA
PCB-133	0.0019	J q	0.041	0.00078	ng/L	1		1668A	Total/NA
PCB-134	0.0084	J q C B	0.083	0.00083	ng/L	1		1668A	Total/NA
PCB-135	0.049	J C B	0.083	0.0010	ng/L	1		1668A	Total/NA
PCB-136	0.022	J	0.041	0.00076	ng/L	1		1668A	Total/NA
PCB-137	0.0044	J B	0.041	0.00067	ng/L	1		1668A	Total/NA
PCB-138	0.13	J C129 B	0.17	0.00066	ng/L	1		1668A	Total/NA
PCB-139	0.0021	J q C	0.083	0.00071	ng/L	1		1668A	Total/NA
PCB-140	0.0021	J q C139	0.083	0.00071	ng/L	1		1668A	Total/NA
PCB-141	0.028	J B	0.041	0.00074	ng/L	1		1668A	Total/NA
PCB-143	0.0084	J q C134 B	0.083	0.00083	ng/L	1		1668A	Total/NA
PCB-144	0.0066	J q	0.041	0.00096	ng/L	1		1668A	Total/NA
PCB-146	0.019	J	0.041	0.00071	ng/L	1		1668A	Total/NA
PCB-147	0.11	C B	0.083	0.00073	ng/L	1		1668A	Total/NA
PCB-149	0.11	C147 B	0.083	0.00073	ng/L	1		1668A	Total/NA
PCB-151	0.049	J C135 B	0.083	0.0010	ng/L	1		1668A	Total/NA
PCB-153	0.12	C B	0.083	0.00058	ng/L	1		1668A	Total/NA
PCB-156	0.013	J C B	0.083	0.00063	ng/L	1		1668A	Total/NA
PCB-157	0.013	J C156 B	0.083	0.00063	ng/L	1		1668A	Total/NA
PCB-158	0.014	J B	0.041	0.00051	ng/L	1		1668A	Total/NA
PCB-159	0.00073	J q	0.041	0.00054	ng/L	1		1668A	Total/NA
PCB-160	0.13	J C129 B	0.17	0.00066	ng/L	1		1668A	Total/NA
PCB-163	0.13	J C129 B	0.17	0.00066	ng/L	1		1668A	Total/NA
PCB-164	0.0084	J q B	0.041	0.00057	ng/L	1		1668A	Total/NA
PCB-166	0.014	J C128 B	0.083	0.00064	ng/L	1		1668A	Total/NA
PCB-167	0.0042	J B	0.041	0.00047	ng/L	1		1668A	Total/NA
PCB-168	0.12	C153 B	0.083	0.00058	ng/L	1		1668A	Total/NA
PCB-170	0.037	J B	0.041	0.000087	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-218113-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-171	0.011	J q C B	0.083	0.000088	ng/L	1		1668A	Total/NA
PCB-172	0.0067	J B	0.041	0.000085	ng/L	1		1668A	Total/NA
PCB-173	0.011	J q C171 B	0.083	0.000088	ng/L	1		1668A	Total/NA
PCB-174	0.044	B	0.041	0.000088	ng/L	1		1668A	Total/NA
PCB-175	0.0010	J q	0.041	0.000079	ng/L	1		1668A	Total/NA
PCB-176	0.0050	J	0.041	0.000055	ng/L	1		1668A	Total/NA
PCB-177	0.025	J B	0.041	0.000089	ng/L	1		1668A	Total/NA
PCB-178	0.0071	J q	0.041	0.000082	ng/L	1		1668A	Total/NA
PCB-179	0.016	J B	0.041	0.000060	ng/L	1		1668A	Total/NA
PCB-180	0.087	C B	0.083	0.000069	ng/L	1		1668A	Total/NA
PCB-181	0.00014	J q	0.041	0.000076	ng/L	1		1668A	Total/NA
PCB-182	0.00045	J	0.041	0.000073	ng/L	1		1668A	Total/NA
PCB-183	0.025	J C B	0.083	0.000074	ng/L	1		1668A	Total/NA
PCB-184	0.00067	J q	0.041	0.000059	ng/L	1		1668A	Total/NA
PCB-185	0.025	J C183 B	0.083	0.000074	ng/L	1		1668A	Total/NA
PCB-187	0.046	B	0.041	0.000076	ng/L	1		1668A	Total/NA
PCB-189	0.00098	J q	0.041	0.00016	ng/L	1		1668A	Total/NA
PCB-190	0.0064	J q B	0.041	0.000061	ng/L	1		1668A	Total/NA
PCB-191	0.0024	J	0.041	0.000061	ng/L	1		1668A	Total/NA
PCB-193	0.087	C180 B	0.083	0.000069	ng/L	1		1668A	Total/NA
PCB-194	0.017	J	0.041	0.00026	ng/L	1		1668A	Total/NA
PCB-195	0.0075	J	0.041	0.00031	ng/L	1		1668A	Total/NA
PCB-196	0.0088	J	0.041	0.00011	ng/L	1		1668A	Total/NA
PCB-197	0.00082	J q	0.041	0.000083	ng/L	1		1668A	Total/NA
PCB-198	0.018	J C	0.083	0.00012	ng/L	1		1668A	Total/NA
PCB-199	0.018	J C198	0.083	0.00012	ng/L	1		1668A	Total/NA
PCB-200	0.0016	J q	0.041	0.000089	ng/L	1		1668A	Total/NA
PCB-201	0.0017	J q	0.041	0.000085	ng/L	1		1668A	Total/NA
PCB-202	0.0035	J	0.041	0.000095	ng/L	1		1668A	Total/NA
PCB-203	0.0095	J	0.041	0.00011	ng/L	1		1668A	Total/NA
PCB-205	0.00059	J q	0.041	0.00020	ng/L	1		1668A	Total/NA
PCB-206	0.043	q	0.041	0.0020	ng/L	1		1668A	Total/NA
PCB-209	0.0072	J B	0.041	0.000046	ng/L	1		1668A	Total/NA
HEM	4.3	J	5.0	1.4	mg/L	1		1664A	Total/NA
SGT-HEM	1.9	J	5.0	1.4	mg/L	1		1664A	Total/NA
Field pH	7.28				SU	1		SM4500 H+	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Client Sample ID: Outfall Comp

Lab Sample ID: 460-218113-1
Date Collected: 09/11/20 11:10
Matrix: Water
Date Received: 09/11/20 20:00

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.61	U	2.0	0.61	ug/L		09/14/20 04:10	09/15/20 11:03	1
Cadmium	0.43	U	2.0	0.43	ug/L		09/14/20 04:10	09/15/20 11:03	1
Chromium	0.45	U	4.0	0.45	ug/L		09/14/20 04:10	09/15/20 11:03	1
Copper	**50.3**		4.0	1.1	ug/L		09/14/20 04:10	09/15/20 11:03	1
Nickel	**1.6**	**J**	4.0	0.84	ug/L		09/14/20 04:10	09/15/20 11:03	1
Lead	**0.41**	**J**	1.2	0.071	ug/L		09/14/20 04:10	09/15/20 11:03	1
Zinc	**66.7**		16.0	2.6	ug/L		09/14/20 04:10	09/15/20 11:03	1
Silver	0.12	U	2.0	0.12	ug/L		09/14/20 04:10	09/15/20 11:03	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.091	U	0.20	0.091	ug/L		09/17/20 03:01	09/17/20 07:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	**2.7**	**J**	5.0	1.4	mg/L			09/21/20 19:46	1
Total Suspended Solids	**24.5**		12.5	12.5	mg/L			09/18/20 08:31	1
Ammonia	**13.0**		0.10	0.034	mg/L			09/15/20 12:46	1
Biochemical Oxygen Demand	**49.6**		1.0	1.0	mg/L			09/12/20 14:05	1
Chemical Oxygen Demand	**177**		20.0	6.6	mg/L			09/16/20 17:39	2
Carbonaceous Biochemical Oxygen Demand 20	**157**		1.0	1.0	mg/L			09/12/20 16:30	1

Client Sample ID: Outfall Grab

Lab Sample ID: 460-218113-2
Date Collected: 09/11/20 11:15
Matrix: Water
Date Received: 09/11/20 20:00

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	**0.16**	**B**	0.041	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-2	**0.025**	**J B**	0.041	0.0012	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-3	**0.14**	**B**	0.041	0.0012	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-4	**0.13**	**B**	0.062	0.0010	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-5	**0.021**	**J**	0.041	0.00075	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-6	**0.089**	**B**	0.041	0.00075	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-7	**0.029**	**J**	0.041	0.00072	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-8	**0.32**	**B**	0.062	0.00074	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-9	**0.038**	**J**	0.041	0.00082	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-10	**0.0097**	**J**	0.041	0.00079	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-11	**0.070**	**B**	0.062	0.00071	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-12	**0.071**	**J C**	0.083	0.00071	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-13	**0.071**	**J C12**	0.083	0.00071	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-14	0.00062	U	0.041	0.00062	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-15	**0.16**	**B**	0.041	0.00076	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-16	**0.061**	**B**	0.041	0.00062	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-17	**0.050**	**B**	0.041	0.00049	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-18	**0.10**	**C B**	0.083	0.00042	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-19	**0.013**	**J B**	0.041	0.00059	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-20	**0.17**	**C B**	0.083	0.00070	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-21	**0.11**	**C B**	0.083	0.00066	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-22	**0.076**	**B**	0.041	0.00073	ng/L		09/28/20 10:42	10/12/20 03:34	1

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Client Sample ID: Outfall Grab

Date Collected: 09/11/20 11:15
Date Received: 09/11/20 20:00

Lab Sample ID: 460-218113-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-23	0.00072	U	0.041	0.00072	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-24	**0.0025**	**J q**	0.041	0.00036	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-25	**0.016**	**J B**	0.041	0.00067	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-26	**0.032**	**J C B**	0.083	0.00069	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-27	**0.0090**	**J**	0.041	0.00035	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-28	**0.17**	**C20 B**	0.083	0.00070	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-29	**0.032**	**J C26 B**	0.083	0.00069	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-30	**0.10**	**C18 B**	0.083	0.00042	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-31	**0.14**	**B**	0.041	0.00066	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-32	**0.031**	**J B**	0.041	0.00033	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-33	**0.11**	**C21 B**	0.083	0.00066	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-34	0.00075	U	0.041	0.00075	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-35	**0.0081**	**J**	0.041	0.00075	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-36	0.00068	U	0.041	0.00068	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-37	**0.064**	**B**	0.041	0.00071	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-38	0.00069	U	0.041	0.00069	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-39	0.00065	U	0.041	0.00065	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-40	**0.062**	**J C B**	0.12	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-41	**0.062**	**J C40 B**	0.12	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-42	**0.027**	**J B**	0.041	0.0012	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-43	**0.0048**	**J q C**	0.083	0.0010	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-44	**0.19**	**C B**	0.12	0.00098	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-45	**0.027**	**J C B**	0.083	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-46	**0.0068**	**J**	0.041	0.0013	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-47	**0.19**	**C44 B**	0.12	0.00098	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-48	**0.022**	**J**	0.041	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-49	**0.069**	**J C B**	0.083	0.00089	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-50	**0.015**	**J C**	0.083	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-51	**0.027**	**J C45 B**	0.083	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-52	**0.24**	**B**	0.041	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-53	**0.015**	**J C50**	0.083	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-54	0.00011	U	0.041	0.00011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-55	**0.0029**	**J q**	0.041	0.00078	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-56	**0.046**	**B**	0.041	0.00080	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-57	0.00079	U	0.041	0.00079	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-58	0.00077	U	0.041	0.00077	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-59	**0.0091**	**J C**	0.12	0.00074	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-60	**0.027**	**J B**	0.041	0.00076	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-61	**0.22**	**C B**	0.17	0.00075	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-62	**0.0091**	**J C59**	0.12	0.00074	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-63	**0.0038**	**J**	0.041	0.00069	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-64	**0.046**	**B**	0.041	0.00072	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-65	**0.19**	**C44 B**	0.12	0.00098	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-66	**0.092**	**B**	0.041	0.00079	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-67	**0.0032**	**J**	0.041	0.00073	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-68	**0.0076**	**J q B**	0.041	0.00069	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-69	**0.069**	**J C49 B**	0.083	0.00089	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-70	**0.22**	**C61 B**	0.17	0.00075	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-71	**0.062**	**J C40 B**	0.12	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Client Sample ID: Outfall Grab

Date Collected: 09/11/20 11:15
Date Received: 09/11/20 20:00

Lab Sample ID: 460-218113-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-72	0.00077	U	0.041	0.00077	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-73	**0.0048**	**J q C43**	0.083	0.0010	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-74	**0.22**	**C61 B**	0.17	0.00075	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-75	**0.0091**	**J C59**	0.12	0.00074	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-76	**0.22**	**C61 B**	0.17	0.00075	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-77	**0.013**	**J B**	0.041	0.00075	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-78	0.00077	U	0.041	0.00077	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-79	**0.0018**	**J q**	0.041	0.00066	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-80	0.00069	U	0.041	0.00069	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-81	0.00078	U	0.041	0.00078	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-82	**0.023**	**J B**	0.041	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-83	**0.096**	**C B**	0.083	0.0010	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-84	**0.064**		0.041	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-85	**0.030**	**J C**	0.12	0.00077	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-86	**0.13**	**J C B**	0.25	0.00079	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-87	**0.13**	**J C86 B**	0.25	0.00079	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-88	**0.023**	**J q C**	0.083	0.00093	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-89	**0.0024**	**J**	0.041	0.0011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-90	**0.20**	**C B**	0.12	0.00083	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-91	**0.023**	**J q C88**	0.083	0.00093	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-92	**0.036**	**J B**	0.041	0.00099	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-93	**0.0032**	**J q C**	0.083	0.00096	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-94	0.0010	U	0.041	0.0010	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-95	**0.19**	**B**	0.041	0.00098	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-96	**0.0021**	**J**	0.041	0.00077	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-97	**0.13**	**J C86 B**	0.25	0.00079	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-98	**0.0056**	**J C**	0.083	0.00095	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-99	**0.096**	**C83 B**	0.083	0.0010	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-100	**0.0032**	**J q C93**	0.083	0.00096	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-101	**0.20**	**C90 B**	0.12	0.00083	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-102	**0.0056**	**J C98**	0.083	0.00095	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-103	0.00091	U	0.041	0.00091	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-104	0.00067	U	0.041	0.00067	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-105	**0.034**	**J B**	0.041	0.00080	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-106	0.00079	U	0.041	0.00079	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-107	**0.0070**	**J**	0.041	0.00074	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-108	**0.0050**	**J q C**	0.083	0.00080	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-109	**0.13**	**J C86 B**	0.25	0.00079	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-110	**0.20**	**C B**	0.083	0.00070	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-111	0.00066	U	0.041	0.00066	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-112	0.00069	U	0.041	0.00069	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-113	**0.20**	**C90 B**	0.12	0.00083	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-114	**0.0028**	**J q**	0.041	0.00070	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-115	**0.20**	**C110 B**	0.083	0.00070	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-116	**0.030**	**J C85**	0.12	0.00077	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-117	**0.030**	**J C85**	0.12	0.00077	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-118	**0.10**	**B**	0.041	0.00075	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-119	**0.13**	**J C86 B**	0.25	0.00079	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-120	0.00063	U	0.041	0.00063	ng/L		09/28/20 10:42	10/12/20 03:34	1

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Client Sample ID: Outfall Grab

Date Collected: 09/11/20 11:15
Date Received: 09/11/20 20:00

Lab Sample ID: 460-218113-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-121	0.00067	U	0.041	0.00067	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-122	**0.0012**	**J q**	0.041	0.00086	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-123	**0.0021**	**J q**	0.041	0.00072	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-124	**0.0050**	**J q C108**	0.083	0.00080	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-125	**0.13**	**J C86 B**	0.25	0.00079	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-126	0.00080	U	0.041	0.00080	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-127	0.00078	U	0.041	0.00078	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-128	**0.014**	**J C B**	0.083	0.00064	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-129	**0.13**	**J C B**	0.17	0.00066	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-130	**0.0064**	**J**	0.041	0.00086	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-131	**0.0023**	**J**	0.041	0.00083	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-132	**0.045**	**B**	0.041	0.00081	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-133	**0.0019**	**J q**	0.041	0.00078	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-134	**0.0084**	**J q C B**	0.083	0.00083	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-135	**0.049**	**J C B**	0.083	0.0010	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-136	**0.022**	**J**	0.041	0.00076	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-137	**0.0044**	**J B**	0.041	0.00067	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-138	**0.13**	**J C129 B**	0.17	0.00066	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-139	**0.0021**	**J q C**	0.083	0.00071	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-140	**0.0021**	**J q C139**	0.083	0.00071	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-141	**0.028**	**J B**	0.041	0.00074	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-142	0.00083	U	0.041	0.00083	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-143	**0.0084**	**J q C134 B**	0.083	0.00083	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-144	**0.0066**	**J q**	0.041	0.00096	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-145	0.00074	U	0.041	0.00074	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-146	**0.019**	**J**	0.041	0.00071	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-147	**0.11**	**C B**	0.083	0.00073	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-148	0.00098	U	0.041	0.00098	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-149	**0.11**	**C147 B**	0.083	0.00073	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-150	0.00071	U	0.041	0.00071	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-151	**0.049**	**J C135 B**	0.083	0.0010	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-152	0.00070	U	0.041	0.00070	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-153	**0.12**	**C B**	0.083	0.00058	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-154	0.00087	U	0.041	0.00087	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-155	0.00068	U	0.041	0.00068	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-156	**0.013**	**J C B**	0.083	0.00063	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-157	**0.013**	**J C156 B**	0.083	0.00063	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-158	**0.014**	**J B**	0.041	0.00051	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-159	**0.00073**	**J q**	0.041	0.00054	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-160	**0.13**	**J C129 B**	0.17	0.00066	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-161	0.00053	U	0.041	0.00053	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-162	0.00052	U	0.041	0.00052	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-163	**0.13**	**J C129 B**	0.17	0.00066	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-164	**0.0084**	**J q B**	0.041	0.00057	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-165	0.00063	U	0.041	0.00063	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-166	**0.014**	**J C128 B**	0.083	0.00064	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-167	**0.0042**	**J B**	0.041	0.00047	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-168	**0.12**	**C153 B**	0.083	0.00058	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-169	0.00050	U	0.041	0.00050	ng/L		09/28/20 10:42	10/12/20 03:34	1

Client Sample ID: Outfall Grab

Date Collected: 09/11/20 11:15
Date Received: 09/11/20 20:00

Lab Sample ID: 460-218113-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-170	0.037	J B	0.041	0.000087	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-171	0.011	J q C B	0.083	0.000088	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-172	0.0067	J B	0.041	0.000085	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-173	0.011	J q C171 B	0.083	0.000088	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-174	0.044	B	0.041	0.000088	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-175	0.0010	J q	0.041	0.000079	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-176	0.0050	J	0.041	0.000055	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-177	0.025	J B	0.041	0.000089	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-178	0.0071	J q	0.041	0.000082	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-179	0.016	J B	0.041	0.000060	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-180	0.087	C B	0.083	0.000069	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-181	0.00014	J q	0.041	0.000076	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-182	0.00045	J	0.041	0.000073	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-183	0.025	J C B	0.083	0.000074	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-184	0.00067	J q	0.041	0.000059	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-185	0.025	J C183 B	0.083	0.000074	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-186	0.000059	U	0.041	0.000059	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-187	0.046	B	0.041	0.000076	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-188	0.000054	U	0.041	0.000054	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-189	0.00098	J q	0.041	0.00016	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-190	0.0064	J q B	0.041	0.000061	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-191	0.0024	J	0.041	0.000061	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-192	0.000065	U	0.041	0.000065	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-193	0.087	C180 B	0.083	0.000069	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-194	0.017	J	0.041	0.00026	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-195	0.0075	J	0.041	0.00031	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-196	0.0088	J	0.041	0.00011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-197	0.00082	J q	0.041	0.000083	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-198	0.018	J C	0.083	0.00012	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-199	0.018	J C198	0.083	0.00012	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-200	0.0016	J q	0.041	0.000089	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-201	0.0017	J q	0.041	0.000085	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-202	0.0035	J	0.041	0.000095	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-203	0.0095	J	0.041	0.00011	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-204	0.000091	U	0.041	0.000091	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-205	0.00059	J q	0.041	0.00020	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-206	0.043	q	0.041	0.0020	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-207	0.0014	U	0.041	0.0014	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-208	0.0015	U	0.041	0.0015	ng/L		09/28/20 10:42	10/12/20 03:34	1
PCB-209	0.0072	J B	0.041	0.000046	ng/L		09/28/20 10:42	10/12/20 03:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*101*		*30 - 140*	*09/28/20 10:42*	*10/12/20 03:34*	*1*
PCB-3L	*103*		*30 - 140*	*09/28/20 10:42*	*10/12/20 03:34*	*1*
PCB-4L	*95*		*30 - 140*	*09/28/20 10:42*	*10/12/20 03:34*	*1*
PCB-15L	*96*		*30 - 140*	*09/28/20 10:42*	*10/12/20 03:34*	*1*
PCB-19L	*86*		*30 - 140*	*09/28/20 10:42*	*10/12/20 03:34*	*1*
PCB-37L	*87*		*30 - 140*	*09/28/20 10:42*	*10/12/20 03:34*	*1*
PCB-54L	*91*		*30 - 140*	*09/28/20 10:42*	*10/12/20 03:34*	*1*
PCB-77L	*94*		*30 - 140*	*09/28/20 10:42*	*10/12/20 03:34*	*1*

Client Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Client Sample ID: Outfall Grab

Date Collected: 09/11/20 11:15
Date Received: 09/11/20 20:00

Lab Sample ID: 460-218113-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-81L	92		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-104L	87		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-105L	89		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-114L	90		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-118L	91		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-123L	92		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-126L	96		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-155L	101		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-156L	92	C	30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-157L	92	C156	30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-167L	92		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-169L	105		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-170L	95		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-188L	94		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-189L	88		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-202L	109		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-205L	87		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-206L	82		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-208L	91		30 - 140	09/28/20 10:42	10/12/20 03:34	1
PCB-209L	73		30 - 140	09/28/20 10:42	10/12/20 03:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	103		40 - 125	09/28/20 10:42	10/12/20 03:34	1
PCB-111L	125		40 - 125	09/28/20 10:42	10/12/20 03:34	1
PCB-178L	125		40 - 125	09/28/20 10:42	10/12/20 03:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	**4.3**	**J**	5.0	1.4	mg/L			09/21/20 15:06	1
SGT-HEM	**1.9**	**J**	5.0	1.4	mg/L			09/21/20 15:06	1
Cyanide, Total	0.0040	U	0.010	0.0040	mg/L		09/24/20 09:36	09/24/20 10:48	1
Phenols, Total	0.041	U	0.050	0.041	mg/L		09/21/20 11:16	09/21/20 14:15	1

Method: SM4500 H+ - pH, Field

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.28**				SU			09/11/20 11:15	1

Surrogate Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**PCB28L (40-125)**	**PCB111L (40-125)**	**PCB178L (40-125)**					
460-218113-2	Outfall Grab	103	125	125					
LCS 140-43109/17-A	Lab Control Sample	99	126 X	126 X					
MB 140-43109/18-A	Method Blank	104	126 X	125					

Surrogate Legend

PCB28L = PCB-28L
PCB111L = PCB-111L
PCB178L = PCB-178L

Isotope Dilution Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB1L	PCB3L	PCB4L	PCB15L	PCB19L	PCB37L	PCB54L	PCB77L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
460-218113-2	Outfall Grab	101	103	95	96	86	87	91	94
LCS 140-43109/17-A	Lab Control Sample	95	101	116	113	100	100	122	118
MB 140-43109/18-A	Method Blank	94	93	108	99	101	105	118	114

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB81L	PCB104L	PCB105L	P114L	PCB118L	PCB123L	PCB126L	PCB155L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
460-218113-2	Outfall Grab	92	87	89	90	91	92	96	101
LCS 140-43109/17-A	Lab Control Sample	113	119	105	101	107	104	111	132
MB 140-43109/18-A	Method Blank	110	117	107	103	110	107	120	131

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB156L	PCB157L	PCB167L	PCB169L	PCB170L	PCB188L	PCB189L	PCB202L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
460-218113-2	Outfall Grab	92 C	92 C156	92	105	95	94	88	109
LCS 140-43109/17-A	Lab Control Sample	110 C	110 C156	105	127	109	103	105	129
MB 140-43109/18-A	Method Blank	110 C	110 C156	110	127	109	104	110	130

		Percent Isotope Dilution Recovery (Acceptance Limits)			
		PCB205L	PCB206L	PCB208L	PCB209L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)
460-218113-2	Outfall Grab	87	82	91	73
LCS 140-43109/17-A	Lab Control Sample	96	92	108	93
MB 140-43109/18-A	Method Blank	106	109	117	103

Surrogate Legend

PCB1L = PCB-1L
PCB3L = PCB-3L
PCB4L = PCB-4L
PCB15L = PCB-15L
PCB19L = PCB-19L
PCB37L = PCB-37L
PCB54L = PCB-54L
PCB77L = PCB-77L
PCB81L = PCB-81L
PCB104L = PCB-104L
PCB105L = PCB-105L
P114L = PCB-114L
PCB118L = PCB-118L
PCB123L = PCB-123L
PCB126L = PCB-126L
PCB155L = PCB-155L
PCB156L = PCB-156L
PCB157L = PCB-157L
PCB167L = PCB-167L
PCB169L = PCB-169L
PCB170L = PCB-170L
PCB188L = PCB-188L
PCB189L = PCB-189L
PCB202L = PCB-202L
PCB205L = PCB-205L
PCB206L = PCB-206L

Isotope Dilution Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

PCB208L = PCB-208L
PCB209L = PCB-209L

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Lab Sample ID: MB 140-43109/18-A
Matrix: Water
Analysis Batch: 43367

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43109

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.00119	J	0.040	0.00019	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-2	0.000953	J q	0.040	0.00021	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-3	0.00101	J	0.040	0.00023	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-4	0.00458	J q	0.060	0.00069	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-5	0.00052	U	0.040	0.00052	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-6	0.00176	J q	0.040	0.00053	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-7	0.00050	U	0.040	0.00050	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-8	0.00754	J	0.060	0.00051	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-9	0.00058	U	0.040	0.00058	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-10	0.00055	U	0.040	0.00055	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-11	0.0195	J	0.060	0.00050	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-12	0.00050	U C	0.080	0.00050	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-13	0.00050	U C12	0.080	0.00050	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-14	0.00044	U	0.040	0.00044	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-15	0.00169	J q	0.040	0.00055	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-16	0.000943	J q	0.040	0.00015	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-17	0.00210	J	0.040	0.00012	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-18	0.00262	J q C	0.080	0.00010	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-19	0.000253	J q	0.040	0.00014	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-20	0.00680	J C	0.080	0.00029	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-21	0.00299	J C	0.080	0.00028	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-22	0.00174	J q	0.040	0.00031	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-23	0.00030	U	0.040	0.00030	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-24	0.000088	U	0.040	0.000088	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-25	0.000400	J q	0.040	0.00028	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-26	0.000412	J q C	0.080	0.00029	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-27	0.000086	U	0.040	0.000086	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-28	0.00680	J C20	0.080	0.00029	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-29	0.000412	J q C26	0.080	0.00029	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-30	0.00262	J q C18	0.080	0.00010	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-31	0.00401	J q	0.040	0.00028	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-32	0.00108	J q	0.040	0.000079	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-33	0.00299	J C21	0.080	0.00028	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-34	0.00031	U	0.040	0.00031	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-35	0.00031	U	0.040	0.00031	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-36	0.00028	U	0.040	0.00028	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-37	0.00195	J q	0.040	0.00030	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-38	0.00029	U	0.040	0.00029	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-39	0.00027	U	0.040	0.00027	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-40	0.00179	J q C	0.12	0.00032	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-41	0.00179	J q C40	0.12	0.00032	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-42	0.000457	J q	0.040	0.00034	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-43	0.00029	U C	0.080	0.00029	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-44	0.0423	J C	0.12	0.00028	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-45	0.00489	J q C	0.080	0.00033	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-46	0.00039	U	0.040	0.00039	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-47	0.0423	J C44	0.12	0.00028	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-48	0.00031	U	0.040	0.00031	ng/L		09/28/20 10:42	10/08/20 14:23	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-43109/18-A
Matrix: Water
Analysis Batch: 43367

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43109

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	0.00250	J q C	0.080	0.00026	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-50	0.00031	U C	0.080	0.00031	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-51	0.00489	J q C45	0.080	0.00033	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-52	0.00365	J	0.040	0.00033	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-53	0.00031	U C50	0.080	0.00031	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-54	0.00011	U	0.040	0.00011	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-55	0.00023	U	0.040	0.00023	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-56	0.000426	J q	0.040	0.00023	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-57	0.00023	U	0.040	0.00023	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-58	0.00022	U	0.040	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-59	0.00022	U C	0.12	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-60	0.00107	J q	0.040	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-61	0.00355	J q C	0.16	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-62	0.00022	U C59	0.12	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-63	0.00020	U	0.040	0.00020	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-64	0.000772	J q	0.040	0.00021	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-65	0.0423	J C44	0.12	0.00028	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-66	0.00152	J q	0.040	0.00023	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-67	0.00021	U	0.040	0.00021	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-68	0.00543	J	0.040	0.00020	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-69	0.00250	J q C49	0.080	0.00026	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-70	0.00355	J q C61	0.16	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-71	0.00179	J q C40	0.12	0.00032	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-72	0.00022	U	0.040	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-73	0.00029	U C43	0.080	0.00029	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-74	0.00355	J q C61	0.16	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-75	0.00022	U C59	0.12	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-76	0.00355	J q C61	0.16	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-77	0.00124	J q	0.040	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-78	0.00022	U	0.040	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-79	0.00019	U	0.040	0.00019	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-80	0.00020	U	0.040	0.00020	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-81	0.00022	U	0.040	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-82	0.000827	J q	0.040	0.00034	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-83	0.00143	J q C	0.080	0.00031	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-84	0.00034	U	0.040	0.00034	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-85	0.00024	U C	0.12	0.00024	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-86	0.00308	J q C	0.24	0.00025	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-87	0.00308	J q C86	0.24	0.00025	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-88	0.00029	U C	0.080	0.00029	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-89	0.00033	U	0.040	0.00033	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-90	0.00336	J q C	0.12	0.00026	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-91	0.00029	U C88	0.080	0.00029	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-92	0.00131	J	0.040	0.00031	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-93	0.00030	U C	0.080	0.00030	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-94	0.00033	U	0.040	0.00033	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-95	0.00181	J q	0.040	0.00031	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-96	0.00024	U	0.040	0.00024	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-97	0.00308	J q C86	0.24	0.00025	ng/L		09/28/20 10:42	10/08/20 14:23	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-43109/18-A
Matrix: Water
Analysis Batch: 43367

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43109

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-98	0.00030	U C	0.080	0.00030	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-99	0.00143	J q C83	0.080	0.00031	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-100	0.00030	U C93	0.080	0.00030	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-101	0.00336	J q C90	0.12	0.00026	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-102	0.00030	U C98	0.080	0.00030	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-103	0.00029	U	0.040	0.00029	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-104	0.00021	U	0.040	0.00021	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-105	0.00462	J	0.040	0.00061	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-106	0.00062	U	0.040	0.00062	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-107	0.00058	U	0.040	0.00058	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-108	0.00063	U C	0.080	0.00063	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-109	0.00308	J q C86	0.24	0.00025	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-110	0.00573	J C	0.080	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-111	0.00021	U	0.040	0.00021	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-112	0.00022	U	0.040	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-113	0.00336	J q C90	0.12	0.00026	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-114	0.00059	U	0.040	0.00059	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-115	0.00573	J C110	0.080	0.00022	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-116	0.00024	U C85	0.12	0.00024	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-117	0.00024	U C85	0.12	0.00024	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-118	0.00688	J	0.040	0.00060	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-119	0.00308	J q C86	0.24	0.00025	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-120	0.00020	U	0.040	0.00020	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-121	0.00021	U	0.040	0.00021	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-122	0.00068	U	0.040	0.00068	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-123	0.00056	U	0.040	0.00056	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-124	0.00063	U C108	0.080	0.00063	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-125	0.00308	J q C86	0.24	0.00025	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-126	0.00061	U	0.040	0.00061	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-127	0.00061	U	0.040	0.00061	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-128	0.00187	J q C	0.080	0.00032	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-129	0.0110	J C	0.16	0.00033	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-130	0.00044	U	0.040	0.00044	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-131	0.00042	U	0.040	0.00042	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-132	0.00304	J q	0.040	0.00041	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-133	0.00040	U	0.040	0.00040	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-134	0.000609	J C	0.080	0.00042	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-135	0.00105	J q C	0.080	0.00016	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-136	0.00012	U	0.040	0.00012	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-137	0.00112	J	0.040	0.00034	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-138	0.0110	J C129	0.16	0.00033	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-139	0.00036	U C	0.080	0.00036	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-140	0.00036	U C139	0.080	0.00036	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-141	0.00125	J q	0.040	0.00038	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-142	0.00042	U	0.040	0.00042	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-143	0.000609	J C134	0.080	0.00042	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-144	0.00015	U	0.040	0.00015	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-145	0.00012	U	0.040	0.00012	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-146	0.00036	U	0.040	0.00036	ng/L		09/28/20 10:42	10/08/20 14:23	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-43109/18-A
Matrix: Water
Analysis Batch: 43367

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43109

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-147	0.00465	J C	0.080	0.00037	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-148	0.00016	U	0.040	0.00016	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-149	0.00465	J C147	0.080	0.00037	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-150	0.00011	U	0.040	0.00011	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-151	0.00105	J q C135	0.080	0.00016	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-152	0.00011	U	0.040	0.00011	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-153	0.00654	J C	0.080	0.00030	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-154	0.00014	U	0.040	0.00014	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-155	0.00011	U	0.040	0.00011	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-156	0.000891	J q C	0.080	0.00033	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-157	0.000891	J q C156	0.080	0.00033	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-158	0.00126	J q	0.040	0.00026	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-159	0.00027	U	0.040	0.00027	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-160	0.0110	J C129	0.16	0.00033	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-161	0.00027	U	0.040	0.00027	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-162	0.00026	U	0.040	0.00026	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-163	0.0110	J C129	0.16	0.00033	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-164	0.000390	J q	0.040	0.00029	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-165	0.00032	U	0.040	0.00032	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-166	0.00187	J q C128	0.080	0.00032	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-167	0.000365	J	0.040	0.00024	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-168	0.00654	J C153	0.080	0.00030	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-169	0.00025	U	0.040	0.00025	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-170	0.00104	J q	0.040	0.00015	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-171	0.000844	J q C	0.080	0.00015	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-172	0.000264	J q	0.040	0.00015	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-173	0.000844	J q C171	0.080	0.00015	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-174	0.00355	J q	0.040	0.00016	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-175	0.00014	U	0.040	0.00014	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-176	0.000097	U	0.040	0.000097	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-177	0.00146	J q	0.040	0.00016	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-178	0.00014	U	0.040	0.00014	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-179	0.000475	J q	0.040	0.00010	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-180	0.00508	J C	0.080	0.00012	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-181	0.00013	U	0.040	0.00013	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-182	0.00013	U	0.040	0.00013	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-183	0.00235	J q C	0.080	0.00013	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-184	0.00010	U	0.040	0.00010	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-185	0.00235	J q C183	0.080	0.00013	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-186	0.00010	U	0.040	0.00010	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-187	0.00158	J q	0.040	0.00013	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-188	0.000097	U	0.040	0.000097	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-189	0.00019	U	0.040	0.00019	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-190	0.000908	J q	0.040	0.00011	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-191	0.00011	U	0.040	0.00011	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-192	0.00011	U	0.040	0.00011	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-193	0.00508	J C180	0.080	0.00012	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-194	0.00027	U	0.040	0.00027	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-195	0.00032	U	0.040	0.00032	ng/L		09/28/20 10:42	10/08/20 14:23	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-43109/18-A
Matrix: Water
Analysis Batch: 43367

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43109

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-196	0.00015	U	0.040	0.00015	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-197	0.00011	U	0.040	0.00011	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-198	0.00016	U C	0.080	0.00016	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-199	0.00016	U C198	0.080	0.00016	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-200	0.00012	U	0.040	0.00012	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-201	0.00011	U	0.040	0.00011	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-202	0.00012	U	0.040	0.00012	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-203	0.00014	U	0.040	0.00014	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-204	0.00012	U	0.040	0.00012	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-205	0.00021	U	0.040	0.00021	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-206	0.00084	U	0.040	0.00084	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-207	0.00059	U	0.040	0.00059	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-208	0.00061	U	0.040	0.00061	ng/L		09/28/20 10:42	10/08/20 14:23	1
PCB-209	0.00161	J q	0.040	0.00014	ng/L		09/28/20 10:42	10/08/20 14:23	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*94*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-3L	*93*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-4L	*108*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-15L	*99*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-19L	*101*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-37L	*105*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-54L	*118*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-77L	*114*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-81L	*110*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-104L	*117*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-105L	*107*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-114L	*103*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-118L	*110*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-123L	*107*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-126L	*120*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-155L	*131*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-156L	*110*	*C*	*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-157L	*110*	*C156*	*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-167L	*110*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-169L	*127*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-170L	*109*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-188L	*104*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-189L	*110*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-202L	*130*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-205L	*106*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-206L	*109*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-208L	*117*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-209L	*103*		*30 - 140*	*09/28/20 10:42*	*10/08/20 14:23*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-28L	*104*		*40 - 125*	*09/28/20 10:42*	*10/08/20 14:23*	*1*
PCB-111L	*126*	*X*	*40 - 125*	*09/28/20 10:42*	*10/08/20 14:23*	*1*

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-43109/18-A
Matrix: Water
Analysis Batch: 43367

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43109

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-178L	125		40 - 125	09/28/20 10:42	10/08/20 14:23	1

Lab Sample ID: LCS 140-43109/17-A
Matrix: Water
Analysis Batch: 43367

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43109

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	1.00	0.878		ng/L		88	50 - 150
PCB-3	1.00	0.869		ng/L		87	50 - 150
PCB-4	1.00	0.865		ng/L		87	50 - 150
PCB-15	1.00	0.859		ng/L		86	50 - 150
PCB-19	1.00	0.828		ng/L		83	50 - 150
PCB-37	1.00	0.965		ng/L		97	50 - 150
PCB-54	1.00	0.987		ng/L		99	50 - 150
PCB-77	1.00	0.883		ng/L		88	50 - 150
PCB-81	1.00	0.865		ng/L		87	50 - 150
PCB-104	1.00	0.868		ng/L		87	50 - 150
PCB-105	1.00	0.899		ng/L		90	50 - 150
PCB-114	1.00	0.918		ng/L		92	50 - 150
PCB-118	1.00	0.932		ng/L		93	50 - 150
PCB-123	1.00	0.896		ng/L		90	50 - 150
PCB-126	1.00	0.899		ng/L		90	50 - 150
PCB-155	1.00	0.894		ng/L		89	50 - 150
PCB-156	2.00	1.778	C	ng/L		89	50 - 150
PCB-157	2.00	1.778	C156	ng/L		89	50 - 150
PCB-167	1.00	0.891		ng/L		89	50 - 150
PCB-169	1.00	0.880		ng/L		88	50 - 150
PCB-188	1.00	0.898		ng/L		90	50 - 150
PCB-189	1.00	0.944		ng/L		94	50 - 150
PCB-202	1.00	0.872		ng/L		87	50 - 150
PCB-205	1.00	0.880		ng/L		88	50 - 150
PCB-206	1.00	0.940		ng/L		94	50 - 150
PCB-208	1.00	0.880		ng/L		88	50 - 150
PCB-209	1.00	0.893		ng/L		89	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	95		30 - 140
PCB-3L	101		30 - 140
PCB-4L	116		30 - 140
PCB-15L	113		30 - 140
PCB-19L	100		30 - 140
PCB-37L	100		30 - 140
PCB-54L	122		30 - 140
PCB-77L	118		30 - 140
PCB-81L	113		30 - 140
PCB-104L	119		30 - 140
PCB-105L	105		30 - 140
PCB-114L	101		30 - 140

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 140-43109/17-A
Matrix: Water
Analysis Batch: 43367

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43109

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
PCB-118L	*107*		*30 - 140*
PCB-123L	*104*		*30 - 140*
PCB-126L	*111*		*30 - 140*
PCB-155L	*132*		*30 - 140*
PCB-156L	*110*	*C*	*30 - 140*
PCB-157L	*110*	*C156*	*30 - 140*
PCB-167L	*105*		*30 - 140*
PCB-169L	*127*		*30 - 140*
PCB-170L	*109*		*30 - 140*
PCB-188L	*103*		*30 - 140*
PCB-189L	*105*		*30 - 140*
PCB-202L	*129*		*30 - 140*
PCB-205L	*96*		*30 - 140*
PCB-206L	*92*		*30 - 140*
PCB-208L	*108*		*30 - 140*
PCB-209L	*93*		*30 - 140*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
PCB-28L	*99*		*40 - 125*
PCB-111L	*126*	*X*	*40 - 125*
PCB-178L	*126*	*X*	*40 - 125*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 460-723762/1-A
Matrix: Water
Analysis Batch: 724104

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 723762

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.61	U	2.0	0.61	ug/L		09/14/20 04:10	09/15/20 09:44	1
Cadmium	0.43	U	2.0	0.43	ug/L		09/14/20 04:10	09/15/20 09:44	1
Chromium	0.45	U	4.0	0.45	ug/L		09/14/20 04:10	09/15/20 09:44	1
Copper	1.1	U	4.0	1.1	ug/L		09/14/20 04:10	09/15/20 09:44	1
Nickel	0.84	U	4.0	0.84	ug/L		09/14/20 04:10	09/15/20 09:44	1
Lead	0.071	U	1.2	0.071	ug/L		09/14/20 04:10	09/15/20 09:44	1
Zinc	2.6	U	16.0	2.6	ug/L		09/14/20 04:10	09/15/20 09:44	1
Silver	0.12	U	2.0	0.12	ug/L		09/14/20 04:10	09/15/20 09:44	1

Lab Sample ID: LCS 460-723762/2-A
Matrix: Water
Analysis Batch: 724104

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 723762

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	49.57		ug/L		99	85 - 115
Cadmium	25.0	25.86		ug/L		103	85 - 115
Chromium	50.0	52.45		ug/L		105	85 - 115
Copper	50.0	51.91		ug/L		104	85 - 115
Nickel	50.0	52.07		ug/L		104	85 - 115
Lead	25.0	25.36		ug/L		101	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 460-723762/2-A
Matrix: Water
Analysis Batch: 724104

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 723762

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	250	252.3		ug/L		101	85 - 115
Silver	25.0	25.44		ug/L		102	85 - 115

Lab Sample ID: 460-218070-A-2-C MS
Matrix: Water
Analysis Batch: 724104

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 723762

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.61	U	50.0	57.16		ug/L		114	70 - 130
Cadmium	0.43	U	25.0	29.65		ug/L		119	70 - 130
Chromium	0.68	J	50.0	57.02		ug/L		113	70 - 130
Copper	47.0		50.0	104.0		ug/L		114	70 - 130
Nickel	2.9	J	50.0	57.96		ug/L		110	70 - 130
Lead	38.7		25.0	66.34		ug/L		111	70 - 130
Zinc	134		250	424.6		ug/L		116	70 - 130
Silver	0.12	U	25.0	26.78		ug/L		107	70 - 130

Lab Sample ID: 460-218070-A-1-D DU
Matrix: Water
Analysis Batch: 724104

Client Sample ID: Duplicate
Prep Type: Total Recoverable
Prep Batch: 723762

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.61	U	0.61	U	ug/L		NC	20
Cadmium	0.43	U	0.43	U	ug/L		NC	20
Chromium	0.73	J	0.569	J F5	ug/L		24	20
Copper	37.0		36.56		ug/L		1	20
Nickel	2.3	J	1.94	J	ug/L		16	20
Lead	6.8		6.76		ug/L		1	20
Zinc	22.1		21.74		ug/L		2	20
Silver	0.12	U	0.12	U	ug/L		NC	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 460-724618/1-A
Matrix: Water
Analysis Batch: 724488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 724618

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.091	U	0.20	0.091	ug/L		09/17/20 03:01	09/17/20 06:57	1

Lab Sample ID: LCS 460-724618/2-A
Matrix: Water
Analysis Batch: 724488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 724618

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	1.00	1.00		ug/L		100	85 - 115

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 460-218332-I-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 724488 — **Prep Batch: 724618**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.091	U	1.00	1.01		ug/L		101	70 - 130

Lab Sample ID: 460-218332-I-1-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 724488 — **Prep Batch: 724618**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.091	U	0.091	U	ug/L		NC	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 460-725647/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725647

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.4	U	5.0	1.4	mg/L			09/21/20 15:06	1
SGT-HEM	1.4	U	5.0	1.4	mg/L			09/21/20 15:06	1

Lab Sample ID: LCS 460-725647/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725647

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	34.20		mg/L		86	78 - 114
SGT-HEM	20.0	14.30		mg/L		72	64 - 132

Lab Sample ID: LCSD 460-725647/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725647

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	40.0	35.00		mg/L		87	78 - 114	2	18
SGT-HEM	20.0	14.30		mg/L		72	64 - 132	0	34

Lab Sample ID: 460-218166-G-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725647

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	1.4	U	40.0	33.00		mg/L		82	78 - 114
SGT-HEM	1.4	U	20.0	13.40		mg/L		67	64 - 132

Lab Sample ID: MB 460-725729/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725729

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.4	U	5.0	1.4	mg/L			09/21/20 19:46	1

Method: 1664A - HEM and SGT-HEM (Continued)

Lab Sample ID: LCS 460-725729/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725729

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	35.20		mg/L		88	78 - 114

Lab Sample ID: LCSD 460-725729/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725729

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	40.0	33.80		mg/L		85	78 - 114	4	18

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 460-726397/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 726455 — **Prep Batch: 726397**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0040	U	0.010	0.0040	mg/L		09/24/20 09:00	09/24/20 10:43	1

Lab Sample ID: LCS 460-726397/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 726455 — **Prep Batch: 726397**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.100		mg/L		100	90 - 110

Lab Sample ID: 460-218915-E-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 726455 — **Prep Batch: 726397**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0075	J F1	0.200	0.245	F1	mg/L		119	90 - 110

Lab Sample ID: 460-218915-E-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 726455 — **Prep Batch: 726397**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.0075	J F1	0.200	0.252	F1	mg/L		122	90 - 110	3	35

Method: 420.1 - Phenolics, Total Recoverable

Lab Sample ID: MB 460-725601/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725638 — **Prep Batch: 725601**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total	0.041	U	0.050	0.041	mg/L		09/21/20 11:16	09/21/20 14:15	1

Method: 420.1 - Phenolics, Total Recoverable (Continued)

Lab Sample ID: LCS 460-725601/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725638 — **Prep Batch: 725601**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.400	0.395		mg/L		99	86 - 118

Lab Sample ID: 460-218113-2 MS — **Client Sample ID: Outfall Grab**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725638 — **Prep Batch: 725601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.041	U	0.400	0.411		mg/L		103	86 - 118

Lab Sample ID: 460-218113-2 MSD — **Client Sample ID: Outfall Grab**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725638 — **Prep Batch: 725601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenols, Total	0.041	U	0.400	0.413		mg/L		103	86 - 118	0	30

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 460-725039/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725039

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	2.5	U	2.5	2.5	mg/L			09/18/20 08:31	1

Lab Sample ID: LCSSRM 460-725039/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725039

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	78.7	82.00		mg/L		104.2	81.4 - 111.6

Lab Sample ID: 460-218513-I-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 725039

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	214		220.0		mg/L		3	5

Method: SM 4500 NH3 G - Ammonia

Lab Sample ID: MB 460-724132/13 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 724132

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.034	U	0.10	0.034	mg/L			09/15/20 11:41	1

Method: SM 4500 NH3 G - Ammonia (Continued)

Lab Sample ID: LCS 460-724132/14 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 724132

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia			2.00	2.11		mg/L		106	89 - 113		

Lab Sample ID: MRL 460-724132/12 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 724132

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia			0.100	0.136		mg/L		136	50 - 150		

Lab Sample ID: 460-218004-C-6 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 724132

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia	3.4		2.00	5.45		mg/L		103	89 - 113		

Lab Sample ID: 460-218004-C-6 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 724132

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	3.4		2.00	5.45		mg/L		103	89 - 113	0	10

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 460-723612/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 723612

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	1.0	U	1.0	1.0	mg/L			09/12/20 11:30	1

Lab Sample ID: LCS 460-723612/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 723612

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Biochemical Oxygen Demand			131	129.0		mg/L		98	84.6 - 115.4		

Lab Sample ID: 460-218111-A-2 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 723612

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Biochemical Oxygen Demand	7.4			9.20		mg/L				22	30

Method: SM 5220D - COD

Lab Sample ID: LB 460-723885/1-A
Matrix: Water
Analysis Batch: 724517

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.3	U	10.0	3.3	mg/L			09/16/20 17:39	1

Lab Sample ID: LB 460-724203/1-A
Matrix: Water
Analysis Batch: 724517

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.3	U	10.0	3.3	mg/L			09/16/20 17:39	1

Lab Sample ID: MB 460-724517/3
Matrix: Water
Analysis Batch: 724517

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.3	U	10.0	3.3	mg/L			09/16/20 17:39	1

Lab Sample ID: LCSSRM 460-724517/4
Matrix: Water
Analysis Batch: 724517

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand			117	115.5		mg/L		98.8	77.2 - 118.8		

Lab Sample ID: 460-218152-A-2 MS
Matrix: Water
Analysis Batch: 724517

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand	16.0		50.0	61.39		mg/L		91	90 - 110		

Lab Sample ID: 460-218152-A-2 MSD
Matrix: Water
Analysis Batch: 724517

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	16.0		50.0	62.06		mg/L		92	90 - 110	1	10

Method: SM5210B - Carbonaceous BOD, 20 day

Lab Sample ID: USB 460-723638/1
Matrix: Water
Analysis Batch: 723638

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand 20	1.0	U	1.0	1.0	mg/L			09/12/20 16:20	1

Method: SM5210B - Carbonaceous BOD, 20 day (Continued)

Lab Sample ID: 460-218113-1 DU
Matrix: Water
Analysis Batch: 723638

Client Sample ID: Outfall Comp
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Carbonaceous Biochemical Oxygen Demand 20	157			166.0		mg/L				6	30

QC Association Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Specialty Organics

Prep Batch: 43109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-2	Outfall Grab	Total/NA	Water	HRMS-Sepf	
MB 140-43109/18-A	Method Blank	Total/NA	Water	HRMS-Sepf	
LCS 140-43109/17-A	Lab Control Sample	Total/NA	Water	HRMS-Sepf	

Analysis Batch: 43367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-43109/18-A	Method Blank	Total/NA	Water	1668A	43109
LCS 140-43109/17-A	Lab Control Sample	Total/NA	Water	1668A	43109

Analysis Batch: 43437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-2	Outfall Grab	Total/NA	Water	1668A	43109

Metals

Prep Batch: 723762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-1	Outfall Comp	Total Recoverable	Water	200.8	
MB 460-723762/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 460-723762/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
460-218070-A-2-C MS	Matrix Spike	Total Recoverable	Water	200.8	
460-218070-A-1-D DU	Duplicate	Total Recoverable	Water	200.8	

Analysis Batch: 724104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-1	Outfall Comp	Total Recoverable	Water	200.8	723762
MB 460-723762/1-A	Method Blank	Total Recoverable	Water	200.8	723762
LCS 460-723762/2-A	Lab Control Sample	Total Recoverable	Water	200.8	723762
460-218070-A-2-C MS	Matrix Spike	Total Recoverable	Water	200.8	723762
460-218070-A-1-D DU	Duplicate	Total Recoverable	Water	200.8	723762

Analysis Batch: 724488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-1	Outfall Comp	Total/NA	Water	245.1	724618
MB 460-724618/1-A	Method Blank	Total/NA	Water	245.1	724618
LCS 460-724618/2-A	Lab Control Sample	Total/NA	Water	245.1	724618
460-218332-I-1-C MS	Matrix Spike	Total/NA	Water	245.1	724618
460-218332-I-1-B DU	Duplicate	Total/NA	Water	245.1	724618

Prep Batch: 724618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-1	Outfall Comp	Total/NA	Water	245.1	
MB 460-724618/1-A	Method Blank	Total/NA	Water	245.1	
LCS 460-724618/2-A	Lab Control Sample	Total/NA	Water	245.1	
460-218332-I-1-C MS	Matrix Spike	Total/NA	Water	245.1	
460-218332-I-1-B DU	Duplicate	Total/NA	Water	245.1	

General Chemistry

Analysis Batch: 723612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-1	Outfall Comp	Total/NA	Water	SM 5210B	

General Chemistry (Continued)

Analysis Batch: 723612 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
USB 460-723612/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 460-723612/2	Lab Control Sample	Total/NA	Water	SM 5210B	
460-218111-A-2 DU	Duplicate	Total/NA	Water	SM 5210B	

Analysis Batch: 723638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-1	Outfall Comp	Total/NA	Water	SM5210B	
USB 460-723638/1	Method Blank	Total/NA	Water	SM5210B	
460-218113-1 DU	Outfall Comp	Total/NA	Water	SM5210B	

Leach Batch: 723885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 460-723885/1-A	Method Blank	Total/NA	Water	D3987-85	

Analysis Batch: 724132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-1	Outfall Comp	Total/NA	Water	SM 4500 NH3 G	
MB 460-724132/13	Method Blank	Total/NA	Water	SM 4500 NH3 G	
LCS 460-724132/14	Lab Control Sample	Total/NA	Water	SM 4500 NH3 G	
MRL 460-724132/12	Lab Control Sample	Total/NA	Water	SM 4500 NH3 G	
460-218004-C-6 MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 G	
460-218004-C-6 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 G	

Leach Batch: 724203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 460-724203/1-A	Method Blank	Total/NA	Water	D3987-85	

Analysis Batch: 724517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-1	Outfall Comp	Total/NA	Water	SM 5220D	
LB 460-723885/1-A	Method Blank	Total/NA	Water	SM 5220D	723885
LB 460-724203/1-A	Method Blank	Total/NA	Water	SM 5220D	724203
MB 460-724517/3	Method Blank	Total/NA	Water	SM 5220D	
LCSSRM 460-724517/4	Lab Control Sample	Total/NA	Water	SM 5220D	
460-218152-A-2 MS	Matrix Spike	Total/NA	Water	SM 5220D	
460-218152-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5220D	

Analysis Batch: 725039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-1	Outfall Comp	Total/NA	Water	SM 2540D	
MB 460-725039/1	Method Blank	Total/NA	Water	SM 2540D	
LCSSRM 460-725039/2	Lab Control Sample	Total/NA	Water	SM 2540D	
460-218513-I-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Prep Batch: 725601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-2	Outfall Grab	Total/NA	Water	Distill/Phenol	
MB 460-725601/1-A	Method Blank	Total/NA	Water	Distill/Phenol	
LCS 460-725601/2-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	
460-218113-2 MS	Outfall Grab	Total/NA	Water	Distill/Phenol	
460-218113-2 MSD	Outfall Grab	Total/NA	Water	Distill/Phenol	

QC Association Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

General Chemistry

Analysis Batch: 725638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-2	Outfall Grab	Total/NA	Water	420.1	725601
MB 460-725601/1-A	Method Blank	Total/NA	Water	420.1	725601
LCS 460-725601/2-A	Lab Control Sample	Total/NA	Water	420.1	725601
MRL 460-725638/11	Lab Control Sample	Total/NA	Water	420.1	
460-218113-2 MS	Outfall Grab	Total/NA	Water	420.1	725601
460-218113-2 MSD	Outfall Grab	Total/NA	Water	420.1	725601

Analysis Batch: 725647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-2	Outfall Grab	Total/NA	Water	1664A	
MB 460-725647/1	Method Blank	Total/NA	Water	1664A	
LCS 460-725647/2	Lab Control Sample	Total/NA	Water	1664A	
LCSD 460-725647/3	Lab Control Sample Dup	Total/NA	Water	1664A	
460-218166-G-1 MS	Matrix Spike	Total/NA	Water	1664A	

Analysis Batch: 725729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-1	Outfall Comp	Total/NA	Water	1664A	
MB 460-725729/1	Method Blank	Total/NA	Water	1664A	
LCS 460-725729/2	Lab Control Sample	Total/NA	Water	1664A	
LCSD 460-725729/3	Lab Control Sample Dup	Total/NA	Water	1664A	

Prep Batch: 726397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-2	Outfall Grab	Total/NA	Water	Distill/CN	
MB 460-726397/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 460-726397/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
460-218915-E-1-B MS	Matrix Spike	Total/NA	Water	Distill/CN	
460-218915-E-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/CN	

Analysis Batch: 726455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-2	Outfall Grab	Total/NA	Water	335.4	726397
MB 460-726397/1-A	Method Blank	Total/NA	Water	335.4	726397
LCS 460-726397/2-A	Lab Control Sample	Total/NA	Water	335.4	726397
460-218915-E-1-B MS	Matrix Spike	Total/NA	Water	335.4	726397
460-218915-E-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	335.4	726397

Field Service / Mobile Lab

Analysis Batch: 725111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-218113-2	Outfall Grab	Total/NA	Water	SM4500 H+	

Lab Chronicle

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Client Sample ID: Outfall Comp

Lab Sample ID: 460-218113-1
Date Collected: 09/11/20 11:10
Matrix: Water
Date Received: 09/11/20 20:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			723762	09/14/20 04:10	GMC	TAL EDI
Total Recoverable	Analysis	200.8		1	724104	09/15/20 11:03	MDC	TAL EDI
Total/NA	Prep	245.1			724618	09/17/20 03:01	TJS	TAL EDI
Total/NA	Analysis	245.1		1	724488	09/17/20 07:11	TJS	TAL EDI
Total/NA	Analysis	1664A		1	725729	09/21/20 19:46	AAA	TAL EDI
Total/NA	Analysis	SM 2540D		1	725039	09/18/20 08:31	AAP	TAL EDI
Total/NA	Analysis	SM 4500 NH3 G		1	724132	09/15/20 12:46	AJP	TAL EDI
Total/NA	Analysis	SM 5210B		1	723612	09/12/20 14:05	MBE	TAL EDI
Total/NA	Analysis	SM 5220D		2	724517	09/16/20 17:39	HTV	TAL EDI
Total/NA	Analysis	SM5210B		1	723638	09/12/20 16:30	MBE	TAL EDI

Client Sample ID: Outfall Grab

Lab Sample ID: 460-218113-2
Date Collected: 09/11/20 11:15
Matrix: Water
Date Received: 09/11/20 20:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sepf			43109	09/28/20 10:42	SSS	TAL KNX
Total/NA	Analysis	1668A		1	43437	10/12/20 03:34	JMN	TAL KNX
Total/NA	Analysis	1664A		1	725647	09/21/20 15:06	AAA	TAL EDI
Total/NA	Prep	Distill/CN			726397	09/24/20 09:36	IAA	TAL EDI
Total/NA	Analysis	335.4		1	726455	09/24/20 10:48	HTV	TAL EDI
Total/NA	Prep	Distill/Phenol			725601	09/21/20 11:16	RAK	TAL EDI
Total/NA	Analysis	420.1		1	725638	09/21/20 14:15	RAK	TAL EDI
Total/NA	Analysis	SM4500 H+		1	725111	09/11/20 11:15	DMM	TAL EDI

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Laboratory: Eurofins TestAmerica, Edison

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

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0200	09-30-20
DE Haz. Subst. Cleanup Act (HSCA)	State	<cert No.>	12-31-21
Georgia	State	12028 (NJ)	07-01-21
Massachusetts	State	M-NJ312	06-30-21
New Jersey	NELAP	12028	06-30-21
New York	NELAP	11452	04-01-21
Pennsylvania	NELAP	68-00522	02-28-21
Rhode Island	State	LAO00132	12-31-20
USDA	US Federal Programs	P330-18-00135	05-03-21

Laboratory: Eurofins TestAmerica, Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
ANAB	Dept. of Energy	L2311.01	02-13-22
ANAB	ISO/IEC 17025	L2311	02-13-22
ANAB	ISO/IEC 17025	L2311	02-14-22
Arkansas DEQ	State	88-0688	06-17-21
California	State	2423	06-30-21
Colorado	State	TN00009	02-28-21
Connecticut	State	PH-0223	09-30-21
Florida	NELAP	E87177	07-01-21
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-21
Kansas	NELAP	E-10349	11-01-20
Kentucky (DW)	State	90101	01-01-21
Louisiana	NELAP	LA110001	12-31-12 *
Louisiana	NELAP	83979	06-30-21
Louisiana (DW)	State	LA019	12-31-20
Maryland	State	277	03-31-21
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-21
New Hampshire	NELAP	299919	01-17-21
New Jersey	NELAP	TN001	07-01-21
New York	NELAP	10781	03-31-21
North Carolina (DW)	State	21705	07-31-21
North Carolina (WW/SW)	State	64	12-31-20
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-21
Oregon	NELAP	TNI0189	01-02-21
Pennsylvania	NELAP	68-00576	12-31-20
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-21
Virginia	NELAP	460176	09-14-21
Washington	State	C593	01-19-21

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

Accreditation/Certification Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Laboratory: Eurofins TestAmerica, Knoxville (Continued)

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

Authority	Program	Identification Number	Expiration Date
West Virginia (DW)	State	9955C	01-01-21
West Virginia DEP	State	345	05-01-21
Wisconsin	State	998044300	08-31-21

Method Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Method	Method Description	Protocol	Laboratory
1668A	Chlorinated Biphenyl Congeners (HRGC/HRMS)	EPA	TAL KNX
200.8	Metals (ICP/MS)	EPA	TAL EDI
245.1	Mercury (CVAA)	EPA	TAL EDI
1664A	HEM and SGT-HEM	1664A	TAL EDI
335.4	Cyanide, Total	MCAWW	TAL EDI
420.1	Phenolics, Total Recoverable	MCAWW	TAL EDI
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL EDI
SM 4500 NH3 G	Ammonia	SM	TAL EDI
SM 5210B	BOD, 5-Day	SM	TAL EDI
SM 5220D	COD	SM	TAL EDI
SM5210B	Carbonaceous BOD, 20 day	SM	TAL EDI
SM4500 H+	pH, Field	SM	TAL EDI
200.8	Preparation, Total Recoverable Metals	EPA	TAL EDI
245.1	Preparation, Mercury	EPA	TAL EDI
Distill/CN	Distillation, Cyanide	None	TAL EDI
Distill/Phenol	Distillation, Phenolics	None	TAL EDI
HRMS-Sepf	Separatory Funnel (Liquid-Liquid) Extraction	EPA	TAL KNX

Protocol References:

1664A = EPA-821-98-002
EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900
TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-218113-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
460-218113-1	Outfall Comp	Water	09/11/20 11:10	09/11/20 20:00	
460-218113-2	Outfall Grab	Water	09/11/20 11:15	09/11/20 20:00	

TestAmerica South Jersey
3000 Lincoln Drive East Suite A
Marlton, NJ 08053
Phone (856) 334-1030 Fax (856) 222-1984

4-8 c #1 [illegible]

Chain of Custody Record

Field Services SJO

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: D. McCarty	Lab PM: Bennett, Allison L	Carrier Tracking No(s):	COC No: 460-109420-70098.1
Client Contact: Michael Tucci	Phone:	E-Mail: allison.bennett@testamericainc.com		Page: Page 1 of 1
Company: IES Engineers				Job #: 218113
Address: 1720 Walton Road	Due Date Requested:			
City: Blue Bell	TAT Requested (days):			
State, Zip: PA, 19422				
Phone:	PO #: Purchase Order Requested			
Email: MTucci@iesengineers.com	WO #:			
Project Name: Quarterly #183765;	Project #: 46028651			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500_NH3_H - Ammonia (Comp)	200.8, 245.1 - Cd, Cr, Cu, Pb, Ni, Ag, As, Zn, Hg (comp)	SM5210B_CBOD_20 - CBOD, 20-day (comp)	1664A_NP - Oil & Grease (Comp)	2540D - TSS (comp)	5210B - BOD, 5-day (comp)	5220D - COD (Comp)		420.1 - Phenolics, Total Recoverable (grab)	335.4 - Cyanide, Total (Grab)	1664A_NP - Oil & Grease/TPH (Grab)	1668A - 209 PCBs (grab)	SM4500_H+_F - pH, Field (price included in field servi	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	D	N	A	N	N	S		S	B	A	N	N		
Outfall Comp	9-11-20	1110	C	W			X	X	X	X	X	X	X							8	1
Outfall Grab	9-11-20	1115	G	W											X	X	X	X	X	6	2

pH (S.U.): 7.28

Temp (°C): 29.0

460-218113 Chain of Custody

SHORT HOLD

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9-11-20 1500	TA	[signature]	9/11/20	TA
[signature]	9/11/20	TA	[signature]	9/11/20 2000	TABELL

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 08/04/2016

Job Number: 218113

TestAmerica Edison
Receipt Temperature and pH Log

Page ____ of ____

Number of Coolers: 1

IR Gun # #104

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	4.8 °C	°C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1	<2	<2		<2											
2								<2				>12			

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: DM Date: 9/11/20

EDS-WI-038, Rev 4, 06/09/2014

Eurofins TestAmerica, Edison
777 New Durham Road
Edison, NJ 08817
Phone: 732-549-3900 Fax: 732-549-3679

Chain of Custody Record

460-218113 Chain of Custody

rofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Gilmore, Julie L		: 9422.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Julie.Gilmore@Eurofinset.com	State of Origin: Pennsylvania	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 460-218113-1
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 10/7/2020			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37921				
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:			
Email:	WO #:			
Project Name: Quarterly #183765;	Project #: 46028651			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1668A/1668_P_Sep 206 PCBs	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall Grab (460-218113-2)	9/11/20	11:15 Eastern		Water			X	2	

RT: 1.0°c CT: 1.0°c / Cooler
Custody seal intact, RC-ND
trK#1161 6401 9514
KW 9/15/20

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*			***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*		
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 1		Special Instructions/QC Requirements:		
Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by:	Date/Time: 9/14/20 1900	Company: ETA	Received by:	Date/Time: 9/15/20 1020	Company: ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number: Loc: 460 **218113**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ Containers, Broken
2. Were ambient air containers received intact?			/	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : SC68 Correction factor: 0.0	/			☐ Cooler Out of Temp, Client Contacted, Proceed/Cancel ☐ Cooler Out of Temp, Same Day Receipt
5. Were all of the sample containers received intact?	/			☐ Containers, Broken
6. Were samples received in appropriate containers?	/			☐ Containers, Improper; Client Contacted; Proceed/Cancel
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ COC & Samples Do Not Match ☐ COC Incorrect/Incomplete ☐ COC Not Received
8. Were all of the samples listed on the COC received?	/			☐ Sample Received, Not on COC ☐ Sample on COC, Not Received
9. Is the date/time of sample collection noted?	/			☐ COC; No Date/Time; Client Contacted
10. Was the sampler identified on the COC?			/	☐ Sampler Not Listed on COC
11. Is the client and project name/# identified?	/			☐ COC Incorrect/Incomplete
12. Are tests/parameters listed for each sample?	/			~~☐ COC No tests on COC~~
13. Is the matrix of the samples noted?	/			☐ COC Incorrect/Incomplete
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ COC Incorrect/Incomplete
15. Were samples received within holding time?	/			☐ Holding Time - Receipt
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ pH Adjusted, pH Included (See box 16A) ☐ Incorrect Preservative
17. Were VOA samples received without headspace?			/	☐ Headspace (VOA only)
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: 8178 202V04	/			☐ Residual Chlorine
19. For 1613B water samples is pH<9?			/	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

Project #: _____ PM Instructions: _____

Sample Receiving Associate: Ke Ln Date: 9/15/20

QA026R32.doc, 062719

Login Sample Receipt Checklist

Client: IES Engineers

Job Number: 460-218113-1

Login Number: 218113
List Number: 1
Creator: Rivera, Kenneth

List Source: Eurofins TestAmerica, Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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 containers received 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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT 2

SUMMARY OF THE PCB LABORATORY RESULTS

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison

Lab Job ID: 460-218113-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-218113-2
Sampling Date	TDS<2500	TDS<2500			09/11/2020 11:15:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
WATER BY 1668A					
PCB-1	NA	NA	0.16	B	0.041
PCB-10	NA	NA	0.0097	J	0.041
PCB-100	NA	NA	0.0032	C93	0.083
PCB-101	NA	NA	0.20	90 B	0.12
PCB-102	NA	NA	0.0056	C98	0.083
PCB-103	NA	NA	0.00091	U	0.041
PCB-104	NA	NA	0.00067	U	0.041
PCB-105	NA	NA	0.034	J B	0.041
PCB-106	NA	NA	0.00079	U	0.041
PCB-107	NA	NA	0.0070	J	0.041
PCB-108	NA	NA	0.0050	J q C	0.083
PCB-109	NA	NA	0.13	86 B	0.25
PCB-11	NA	NA	0.070	B	0.062
PCB-110	NA	NA	0.20	C B	0.083
PCB-111	NA	NA	0.00066	U	0.041
PCB-112	NA	NA	0.00069	U	0.041
PCB-113	NA	NA	0.20	90 B	0.12
PCB-114	NA	NA	0.0028	J q	0.041
PCB-115	NA	NA	0.20	10 B	0.083
PCB-116	NA	NA	0.030	C85	0.12
PCB-117	NA	NA	0.030	C85	0.12
PCB-118	NA	NA	0.10	B	0.041
PCB-119	NA	NA	0.13	86 B	0.25
PCB-12	NA	NA	0.071	J C	0.083
PCB-120	NA	NA	0.00063	U	0.041
PCB-121	NA	NA	0.00067	U	0.041
PCB-122	NA	NA	0.0012	J q	0.041
PCB-123	NA	NA	0.0021	J q	0.041
PCB-124	NA	NA	0.0050	C108	0.083
PCB-125	NA	NA	0.13	86 B	0.25
PCB-126	NA	NA	0.00080	U	0.041
PCB-127	NA	NA	0.00078	U	0.041
PCB-128	NA	NA	0.014	J C B	0.083
PCB-129	NA	NA	0.13	J C B	0.17
PCB-13	NA	NA	0.071	C12	0.083
PCB-130	NA	NA	0.0064	J	0.041
PCB-131	NA	NA	0.0023	J	0.041
PCB-132	NA	NA	0.045	B	0.041
PCB-133	NA	NA	0.0019	J q	0.041
PCB-134	NA	NA	0.0084	q C B	0.083
PCB-135	NA	NA	0.049	J C B	0.083
PCB-136	NA	NA	0.022	J	0.041
PCB-137	NA	NA	0.0044	J B	0.041
PCB-138	NA	NA	0.13	29 B	0.17
PCB-139	NA	NA	0.0021	J q C	0.083
PCB-14	NA	NA	0.00062	U	0.041
PCB-140	NA	NA	0.0021	C139	0.083
PCB-141	NA	NA	0.028	J B	0.041
PCB-142	NA	NA	0.00083	U	0.041
PCB-143	NA	NA	0.0084	34 B	0.083
PCB-144	NA	NA	0.0066	J q	0.041
PCB-145	NA	NA	0.00074	U	0.041
PCB-146	NA	NA	0.019	J	0.041
PCB-147	NA	NA	0.11	C B	0.083
PCB-148	NA	NA	0.00098	U	0.041
PCB-149	NA	NA	0.11	47 B	0.083
PCB-15	NA	NA	0.16	B	0.041
PCB-150	NA	NA	0.00071	U	0.041
PCB-151	NA	NA	0.049	35 B	0.083
PCB-152	NA	NA	0.00070	U	0.041
PCB-153	NA	NA	0.12	C B	0.083

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison
Lab Job ID: 460-218113-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-218113-2
Sampling Date	TDS<2500	TDS<2500			09/11/2020 11:15:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-154	NA	NA	0.00087	U	0.041
PCB-155	NA	NA	0.00068	U	0.041
PCB-156	NA	NA	0.013	J C B	0.083
PCB-157	NA	NA	0.013	56 B	0.083
PCB-158	NA	NA	0.014	J B	0.041
PCB-159	NA	NA	0.00073	J q	0.041
PCB-16	NA	NA	0.061	B	0.041
PCB-160	NA	NA	0.13	29 B	0.17
PCB-161	NA	NA	0.00053	U	0.041
PCB-162	NA	NA	0.00052	U	0.041
PCB-163	NA	NA	0.13	29 B	0.17
PCB-164	NA	NA	0.0084	J q B	0.041
PCB-165	NA	NA	0.00063	U	0.041
PCB-166	NA	NA	0.014	28 B	0.083
PCB-167	NA	NA	0.0042	J B	0.041
PCB-168	NA	NA	0.12	53 B	0.083
PCB-169	NA	NA	0.00050	U	0.041
PCB-17	NA	NA	0.050	B	0.041
PCB-170	NA	NA	0.037	J B	0.041
PCB-171	NA	NA	0.011	q C B	0.083
PCB-172	NA	NA	0.0067	J B	0.041
PCB-173	NA	NA	0.011	71 B	0.083
PCB-174	NA	NA	0.044	B	0.041
PCB-175	NA	NA	0.0010	J q	0.041
PCB-176	NA	NA	0.0050	J	0.041
PCB-177	NA	NA	0.025	J B	0.041
PCB-178	NA	NA	0.0071	J q	0.041
PCB-179	NA	NA	0.016	J B	0.041
PCB-18	NA	NA	0.10	C B	0.083
PCB-180	NA	NA	0.087	C B	0.083
PCB-181	NA	NA	0.00014	J q	0.041
PCB-182	NA	NA	0.00045	J	0.041
PCB-183	NA	NA	0.025	J C B	0.083
PCB-184	NA	NA	0.00067	J q	0.041
PCB-185	NA	NA	0.025	83 B	0.083
PCB-186	NA	NA	0.000059	U	0.041
PCB-187	NA	NA	0.046	B	0.041
PCB-188	NA	NA	0.000054	U	0.041
PCB-189	NA	NA	0.00098	J q	0.041
PCB-19	NA	NA	0.013	J B	0.041
PCB-190	NA	NA	0.0064	J q B	0.041
PCB-191	NA	NA	0.0024	J	0.041
PCB-192	NA	NA	0.000065	U	0.041
PCB-193	NA	NA	0.087	80 B	0.083
PCB-194	NA	NA	0.017	J	0.041
PCB-195	NA	NA	0.0075	J	0.041
PCB-196	NA	NA	0.0088	J	0.041
PCB-197	NA	NA	0.00082	J q	0.041
PCB-198	NA	NA	0.018	J C	0.083
PCB-199	NA	NA	0.018	C198	0.083
PCB-2	NA	NA	0.025	J B	0.041
PCB-20	NA	NA	0.17	C B	0.083
PCB-200	NA	NA	0.0016	J q	0.041
PCB-201	NA	NA	0.0017	J q	0.041
PCB-202	NA	NA	0.0035	J	0.041
PCB-203	NA	NA	0.0095	J	0.041
PCB-204	NA	NA	0.000091	U	0.041
PCB-205	NA	NA	0.00059	J q	0.041
PCB-206	NA	NA	0.043	q	0.041
PCB-207	NA	NA	0.0014	U	0.041
PCB-208	NA	NA	0.0015	U	0.041
PCB-209	NA	NA	0.0072	J B	0.041

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison
Lab Job ID: 460-218113-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-218113-2
Sampling Date	TDS<2500	TDS<2500			09/11/2020 11:15:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-21	NA	NA	0.11	C B	0.083
PCB-22	NA	NA	0.076	B	0.041
PCB-23	NA	NA	0.00072	U	0.041
PCB-24	NA	NA	0.0025	J q	0.041
PCB-25	NA	NA	0.016	J B	0.041
PCB-26	NA	NA	0.032	J C B	0.083
PCB-27	NA	NA	0.0090	J	0.041
PCB-28	NA	NA	0.17	20 B	0.083
PCB-29	NA	NA	0.032	26 B	0.083
PCB-3	NA	NA	0.14	B	0.041
PCB-30	NA	NA	0.10	18 B	0.083
PCB-31	NA	NA	0.14	B	0.041
PCB-32	NA	NA	0.031	J B	0.041
PCB-33	NA	NA	0.11	21 B	0.083
PCB-34	NA	NA	0.00075	U	0.041
PCB-35	NA	NA	0.0081	J	0.041
PCB-36	NA	NA	0.00068	U	0.041
PCB-37	NA	NA	0.064	B	0.041
PCB-38	NA	NA	0.00069	U	0.041
PCB-39	NA	NA	0.00065	U	0.041
PCB-4	NA	NA	0.13	B	0.062
PCB-40	NA	NA	0.062	J C B	0.12
PCB-41	NA	NA	0.062	40 B	0.12
PCB-42	NA	NA	0.027	J B	0.041
PCB-43	NA	NA	0.0048	J q C	0.083
PCB-44	NA	NA	0.19	C B	0.12
PCB-45	NA	NA	0.027	J C B	0.083
PCB-46	NA	NA	0.0068	J	0.041
PCB-47	NA	NA	0.19	44 B	0.12
PCB-48	NA	NA	0.022	J	0.041
PCB-49	NA	NA	0.069	J C B	0.083
PCB-5	NA	NA	0.021	J	0.041
PCB-50	NA	NA	0.015	J C	0.083
PCB-51	NA	NA	0.027	45 B	0.083
PCB-52	NA	NA	0.24	B	0.041
PCB-53	NA	NA	0.015	C50	0.083
PCB-54	NA	NA	0.00011	U	0.041
PCB-55	NA	NA	0.0029	J q	0.041
PCB-56	NA	NA	0.046	B	0.041
PCB-57	NA	NA	0.00079	U	0.041
PCB-58	NA	NA	0.00077	U	0.041
PCB-59	NA	NA	0.0091	J C	0.12
PCB-6	NA	NA	0.089	B	0.041
PCB-60	NA	NA	0.027	J B	0.041
PCB-61	NA	NA	0.22	C B	0.17
PCB-62	NA	NA	0.0091	C59	0.12
PCB-63	NA	NA	0.0038	J	0.041
PCB-64	NA	NA	0.046	B	0.041
PCB-65	NA	NA	0.19	44 B	0.12
PCB-66	NA	NA	0.092	B	0.041
PCB-67	NA	NA	0.0032	J	0.041
PCB-68	NA	NA	0.0076	J q B	0.041
PCB-69	NA	NA	0.069	49 B	0.083
PCB-7	NA	NA	0.029	J	0.041
PCB-70	NA	NA	0.22	61 B	0.17
PCB-71	NA	NA	0.062	40 B	0.12
PCB-72	NA	NA	0.00077	U	0.041
PCB-73	NA	NA	0.0048	C43	0.083
PCB-74	NA	NA	0.22	61 B	0.17
PCB-75	NA	NA	0.0091	C59	0.12
PCB-76	NA	NA	0.22	61 B	0.17
PCB-77	NA	NA	0.013	J B	0.041

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison
Lab Job ID: 460-218113-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-218113-2
Sampling Date	TDS<2500	TDS<2500			09/11/2020 11:15:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-78	NA	NA	0.00077	U	0.041
PCB-79	NA	NA	0.0018	J q	0.041
PCB-8	NA	NA	0.32	B	0.062
PCB-80	NA	NA	0.00069	U	0.041
PCB-81	NA	NA	0.00078	U	0.041
PCB-82	NA	NA	0.023	J B	0.041
PCB-83	NA	NA	0.096	C B	0.083
PCB-84	NA	NA	0.064		0.041
PCB-85	NA	NA	0.030	J C	0.12
PCB-86	NA	NA	0.13	J C B	0.25
PCB-87	NA	NA	0.13	86 B	0.25
PCB-88	NA	NA	0.023	J q C	0.083
PCB-89	NA	NA	0.0024	J	0.041
PCB-9	NA	NA	0.038	J	0.041
PCB-90	NA	NA	0.20	C B	0.12
PCB-91	NA	NA	0.023	C88	0.083
PCB-92	NA	NA	0.036	J B	0.041
PCB-93	NA	NA	0.0032	J q C	0.083
PCB-94	NA	NA	0.0010	U	0.041
PCB-95	NA	NA	0.19	B	0.041
PCB-96	NA	NA	0.0021	J	0.041
PCB-97	NA	NA	0.13	86 B	0.25
PCB-98	NA	NA	0.0056	J C	0.083
PCB-99	NA	NA	0.096	83 B	0.083

B : Compound was found in the blank and sample.
C : The compound co-eluted with other compounds
C108 : The compound co-eluted with PCB-108
C110 : The compound co-eluted with PCB-110
C12 : The compound co-eluted with PCB-12
C128 : The compound co-eluted with PCB-128
C129 : The compound co-eluted with PCB-129
C134 : The compound co-eluted with PCB-134
C135 : The compound co-eluted with PCB-135
C139 : The compound co-eluted with PCB-139
C147 : The compound co-eluted with PCB-147
C153 : The compound co-eluted with PCB-153
C156 : The compound co-eluted with PCB-156
C171 : The compound co-eluted with PCB-171
C18 : The compound co-eluted with PCB-18
C180 : The compound co-eluted with PCB-180
C183 : The compound co-eluted with PCB-183
C198 : The compound co-eluted with PCB-198
C20 : The compound co-eluted with PCB-20
C21 : The compound co-eluted with PCB-21
C26 : The compound co-eluted with PCB-26
C40 : The compound co-eluted with PCB-40
C43 : The compound co-eluted with PCB-43
C44 : The compound co-eluted with PCB-44
C45 : The compound co-eluted with PCB-45
C49 : The compound co-eluted with PCB-49
C50 : The compound co-eluted with PCB-50
C59 : The compound co-eluted with PCB-59
C61 : The compound co-eluted with PCB-61
C83 : The compound co-eluted with PCB-83
C85 : The compound co-eluted with PCB-85
C86 : The compound co-eluted with PCB-86
C88 : The compound co-eluted with PCB-88
C90 : The compound co-eluted with PCB-90
C93 : The compound co-eluted with PCB-93
C98 : The compound co-eluted with PCB-98
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

Lab Job ID: 460-218113-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential	**Outfall Grab**		
Lab Sample ID	Used Aquifers	Used Aquifers	460-218113-2		
Sampling Date	TDS<2500	TDS<2500	09/11/2020 11:15:00		
Matrix			Water		
Dilution Factor			1		
Unit	ng/l	ng/l	ng/l		
			Result	Q	RL

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification crit
U : Indicates the analyte was analyzed for but not detected.

Lab Contact:
Julie Gilmore
Project Manager I
(484)685-0865

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
Lab Job ID: 460-218113-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
WATER BY 1668A
PCB-1
PCB-10
PCB-100
PCB-101
PCB-102
PCB-103
PCB-104
PCB-105
PCB-106
PCB-107
PCB-108
PCB-109
PCB-11
PCB-110
PCB-111
PCB-112
PCB-113
PCB-114
PCB-115
PCB-116
PCB-117
PCB-118
PCB-119
PCB-12
PCB-120
PCB-121
PCB-122
PCB-123
PCB-124
PCB-125
PCB-126
PCB-127
PCB-128
PCB-129
PCB-13
PCB-130
PCB-131
PCB-132
PCB-133
PCB-134
PCB-135
PCB-136
PCB-137
PCB-138
PCB-139
PCB-14
PCB-140
PCB-141
PCB-142
PCB-143
PCB-144
PCB-145
PCB-146
PCB-147
PCB-148
PCB-149
PCB-15
PCB-150
PCB-151
PCB-152
PCB-153

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
Lab Job ID: 460-218113-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
PCB-154
PCB-155
PCB-156
PCB-157
PCB-158
PCB-159
PCB-16
PCB-160
PCB-161
PCB-162
PCB-163
PCB-164
PCB-165
PCB-166
PCB-167
PCB-168
PCB-169
PCB-17
PCB-170
PCB-171
PCB-172
PCB-173
PCB-174
PCB-175
PCB-176
PCB-177
PCB-178
PCB-179
PCB-18
PCB-180
PCB-181
PCB-182
PCB-183
PCB-184
PCB-185
PCB-186
PCB-187
PCB-188
PCB-189
PCB-19
PCB-190
PCB-191
PCB-192
PCB-193
PCB-194
PCB-195
PCB-196
PCB-197
PCB-198
PCB-199
PCB-2
PCB-20
PCB-200
PCB-201
PCB-202
PCB-203
PCB-204
PCB-205
PCB-206
PCB-207
PCB-208
PCB-209

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
Lab Job ID: 460-218113-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
PCB-21
PCB-22
PCB-23
PCB-24
PCB-25
PCB-26
PCB-27
PCB-28
PCB-29
PCB-3
PCB-30
PCB-31
PCB-32
PCB-33
PCB-34
PCB-35
PCB-36
PCB-37
PCB-38
PCB-39
PCB-4
PCB-40
PCB-41
PCB-42
PCB-43
PCB-44
PCB-45
PCB-46
PCB-47
PCB-48
PCB-49
PCB-5
PCB-50
PCB-51
PCB-52
PCB-53
PCB-54
PCB-55
PCB-56
PCB-57
PCB-58
PCB-59
PCB-6
PCB-60
PCB-61
PCB-62
PCB-63
PCB-64
PCB-65
PCB-66
PCB-67
PCB-68
PCB-69
PCB-7
PCB-70
PCB-71
PCB-72
PCB-73
PCB-74
PCB-75
PCB-76
PCB-77

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
Lab Job ID: 460-218113-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
PCB-78
PCB-79
PCB-8
PCB-80
PCB-81
PCB-82
PCB-83
PCB-84
PCB-85
PCB-86
PCB-87
PCB-88
PCB-89
PCB-9
PCB-90
PCB-91
PCB-92
PCB-93
PCB-94
PCB-95
PCB-96
PCB-97
PCB-98
PCB-99

B : Compound was found in the blank and sa
C : The compound co-eluted with other com
C108 : The compound co-eluted with PCB-1
C110 : The compound co-eluted with PCB-1
C12 : The compound co-eluted with PCB-12
C128 : The compound co-eluted with PCB-1
C129 : The compound co-eluted with PCB-1
C134 : The compound co-eluted with PCB-1
C135 : The compound co-eluted with PCB-1
C139 : The compound co-eluted with PCB-1
C147 : The compound co-eluted with PCB-1
C153 : The compound co-eluted with PCB-1
C156 : The compound co-eluted with PCB-1
C171 : The compound co-eluted with PCB-1
C18 : The compound co-eluted with PCB-18
C180 : The compound co-eluted with PCB-1
C183 : The compound co-eluted with PCB-1
C198 : The compound co-eluted with PCB-1
C20 : The compound co-eluted with PCB-20
C21 : The compound co-eluted with PCB-21
C26 : The compound co-eluted with PCB-26
C40 : The compound co-eluted with PCB-40
C43 : The compound co-eluted with PCB-43
C44 : The compound co-eluted with PCB-44
C45 : The compound co-eluted with PCB-45
C49 : The compound co-eluted with PCB-49
C50 : The compound co-eluted with PCB-50
C59 : The compound co-eluted with PCB-59
C61 : The compound co-eluted with PCB-61
C83 : The compound co-eluted with PCB-83
C85 : The compound co-eluted with PCB-85
C86 : The compound co-eluted with PCB-86
C88 : The compound co-eluted with PCB-88
C90 : The compound co-eluted with PCB-90
C93 : The compound co-eluted with PCB-93
C98 : The compound co-eluted with PCB-98
J : Result is less than the RL but greater than

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
Lab Job ID: 460-218113-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit

q : The reported result is the estimated maxeria and indicates a possible interference.
U : Indicates the analyte was analyzed for b

Lab Contact:
Julie Gilmore
Project Manager I
(484)685-0865

ATTACHMENT 3

WATER METER DATA

Attachment 3				
Lower Bucks Hospital - 501 Bath Road, Bristol, PA				
Water Meter Data				
September 2020				
2" Meter			4" Meter	
Billing Start Date	9/1/2020		Billing Start Date	9/1/2020
Billing End Date	10/1/2020		Billing End Date	10/5/2020
No. Of Days (*Billing Period*)	30		No. Of Days (*Billing Period*)	34
	Gallons			**Gallons**
2" Meter	49,000		4" Meter	772,200
Total Water Usage for Both Meters is 821,200 gallons				
Average GPD 2"	1,633		Average GPD 4"	22,712
Average Total Flow	24,345	Gallons Per Day		

Notes:

1. The facility currently estimates wastewater discharge flow to be equivalent to the quantity of water purchased, based on the facility water bill.

1720 Walton Road, Blue Bell, PA 19422 610-828-3078 Fax 610-828-7842

January 20, 2021

E-MAIL
Ms. Randee Elton
Township Manager
Bristol Township Pretreatment Coordinator
Bristol Township
2501 Bath Road
Bristol, PA 19007
relton@bristoltownship.org

Subject: Wastewater Discharge Monitoring Report
December 2020
Permit No. IND-05-S-2019
Lower Bucks Hospital
Bristol, Pennsylvania
IES Project No. EV201318.01

Dear Ms. Elton:

On behalf of Lower Bucks Hospital (LBH), IES Engineers (IES) is pleased to submit the enclosed wastewater discharge monitoring report for the month of December 2020. Sampling was conducted on December 18, 2020. Samples were collected at Outfall LBH01 at the LBH facility, which is located at 501 Bath Road, Bristol, Pennsylvania. Laboratory analyses were performed by TestAmerica Laboratories, Inc., of Edison, New Jersey. This sampling event report fulfills the monthly and quarterly sampling requirements of LBH's Industrial Wastewater Discharge Permit that was issued by Bristol Township on January 1, 2019.

All parameters analyzed are in compliance with the permit limits.

As part of the quarterly monitoring requirement, LBH analyzed the wastewater during December 2020, for PCBs, cyanide, phenols, and Total Petroleum Hydrocarbons (TPH) using EPA Methods. A summary of the PCB Laboratory Results is presented in Attachment 2 and the full laboratory report for all other pollutant parameters is presented in Attachment 1. The analytical results clearly indicate that all parameters are in compliance with the permit limits.

LBH is currently estimating wastewater discharge flow to be equivalent to the quantity of water purchased. On this basis, the total discharge flow for the month of December 2020 was 568,700 gallons or an average of 16,726 gallons per day based on water meter billing period. A copy of water meter data for December 2020 is presented in Attachment 3.

If you have any questions, please contact me or Mr. Patrick Ryan of LBH at (215) 785-9414.

Very truly yours,

Michael T. Havard /e/
Michael T. Havard
Project Engineer

Attachments
cc: V. Nedrick, RVE
T. Rivera, InfraMark
P. Ryan, LBH
M. Fitzpatrick, IES
A. Soni, IES

3800-FM-BCW0462 12/2016

PERMITTEE NAME/ADDRESS

DISCHARGE MONITORING REPORT (DMR)

NAME **Lower Bucks Hospital**

ADDRESS **501 Bath Road**

FACILITY

LOCATION

WATERSHED

IND-05-S-2019
PERMIT NUMBER

LBH01
OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
2020	**12**	**01**	TO	**2020**	**12**	**31**

Reporting Frequency: Monthly

DMR Effective From:

DMR Effective To:

Permit Expires: December 31, 2023

Permit Application Due:

☐ Check here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
BOD5	SAMPLE MEASUREMENT				60.2	60.2	60.2	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					550					
CBOD20	SAMPLE MEASUREMENT				149	149	149	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1200					
COD	SAMPLE MEASUREMENT				160	160	160	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1200					
TSS	SAMPLE MEASUREMENT				52.0	52.0	52.0	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					650					
FOG	SAMPLE MEASUREMENT				5.0	5.0	5.0	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					150					
Ammonia	SAMPLE MEASUREMENT				7.0	7.0	7.0	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					50					
Cadmium (Total)	SAMPLE MEASUREMENT				<0.00043	<0.00043	<0.00043	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.10					
Chromium (Total)	SAMPLE MEASUREMENT				0.00045	0.00045	0.00045	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					1.80					

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
Copper (Total)	SAMPLE MEASUREMENT				0.0446	0.0446	0.0446	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.51					
Cyanide (Total)	SAMPLE MEASUREMENT				0.0092	0.0092	0.0092	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT					2.31					
Lead (Total)	SAMPLE MEASUREMENT				0.00072	0.00072	0.00072	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.43					
Mercury (Total)	SAMPLE MEASUREMENT				0.00026	0.00026	0.00026	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.003					
Nickel (Total)	SAMPLE MEASUREMENT				0.0017	0.0017	0.0017	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.51					
Silver (Total)	SAMPLE MEASUREMENT				<0.00012	<0.00012	<0.00012	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					0.14					
Arsenic (Total)	SAMPLE MEASUREMENT				<0.00061	<0.00061	<0.00061	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					2.30					

		VALUE	VALUE	UNITS	MIN VALUE	AVG VALUE	MAX VALUE	UNITS			
Zinc (Total)	SAMPLE MEASUREMENT				0.0583	0.0583	0.0583	mg/L	0	1	COMPOSITE
	PERMIT REQUIREMENT					2.90					
Phenols (Total)	SAMPLE MEASUREMENT				0.21	0.21	0.21	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT					1.83					
Daily Flow, gallons per day	SAMPLE MEASUREMENT					16,726		GPD	0	N/A	N/A
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
pH	SAMPLE MEASUREMENT				6.08	6.08	6.08	S.U	0	1	COMPOSITE
	PERMIT REQUIREMENT				6.0	---	9.0				
Total Petroleum Hydrocarbons (TPH)	SAMPLE MEASUREMENT				15.3	15.3	15.3	mg/L	0	Q	GRAB
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
PCBs	SAMPLE MEASUREMENT					See Attachment 2		mg/l	0	Q	GRAB
	PERMIT REQUIREMENT				REPORT	REPORT	REPORT				
	SAMPLE MEASUREMENT								0		
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate 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 am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).	Patrick Ryan	TELEPHONE		DATE		
Patrick Ryan / Plant Operation Manager		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	215	785-9414			
Patrick Ryan Sr.			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

ATTACHMENT 1

LABORATORY ANALYTICAL DATA

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

Laboratory Job ID: 460-225164-1
Client Project/Site: Quarterly #183765;

For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Attn: Michael J. Tucci

Authorized for release by:
1/19/2021 11:56:57 AM

Julie Gilmore, Project Manager I
(484)685-0865
Julie.Gilmore@Eurofinset.com

LINKS

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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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Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
C	The compound co-eluted with other compounds
C108	The compound co-eluted with PCB-108
C110	The compound co-eluted with PCB-110
C12	The compound co-eluted with PCB-12
C128	The compound co-eluted with PCB-128
C129	The compound co-eluted with PCB-129
C134	The compound co-eluted with PCB-134
C135	The compound co-eluted with PCB-135
C139	The compound co-eluted with PCB-139
C147	The compound co-eluted with PCB-147
C153	The compound co-eluted with PCB-153
C156	The compound co-eluted with PCB-156
C171	The compound co-eluted with PCB-171
C18	The compound co-eluted with PCB-18
C180	The compound co-eluted with PCB-180
C183	The compound co-eluted with PCB-183
C198	The compound co-eluted with PCB-198
C20	The compound co-eluted with PCB-20
C21	The compound co-eluted with PCB-21
C26	The compound co-eluted with PCB-26
C40	The compound co-eluted with PCB-40
C43	The compound co-eluted with PCB-43
C44	The compound co-eluted with PCB-44
C45	The compound co-eluted with PCB-45
C49	The compound co-eluted with PCB-49
C50	The compound co-eluted with PCB-50
C59	The compound co-eluted with PCB-59
C61	The compound co-eluted with PCB-61
C83	The compound co-eluted with PCB-83
C85	The compound co-eluted with PCB-85
C86	The compound co-eluted with PCB-86
C88	The compound co-eluted with PCB-88
C90	The compound co-eluted with PCB-90
C93	The compound co-eluted with PCB-93
C98	The compound co-eluted with PCB-98
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
S	Ion suppression
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Job ID: 460-225164-1

Laboratory: Eurofins TestAmerica, Edison

Narrative

CASE NARRATIVE

Client: IES Engineers

Project: Quarterly #183765;

Report Number: 460-225164-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 12/18/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.8 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DIOXINS
Sample Outfall Grab (460-225164-2) was analyzed for dioxins in accordance with EPA Method 1668A. The samples were prepared on 01/05/2021 and analyzed on 01/14/2021.

Several analytes were detected in method blank MB 140-45806/7-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No other difficulties were encountered during the dioxins analysis.

All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS
Sample Outfall Comp (460-225164-1) was analyzed for total recoverable metals in accordance with EPA Method 200.8 (ICP/MS). The samples were prepared and analyzed on 12/22/2020.

No other difficulties were encountered during the metals analysis.

All other quality control parameters were within the acceptance limits.

TOTAL MERCURY
Sample Outfall Comp (460-225164-1) was analyzed for total mercury in accordance with EPA Method 245.1. The samples were prepared

Job ID: 460-225164-1 (Continued)

Laboratory: Eurofins TestAmerica, Edison (Continued)

and analyzed on 12/29/2020.

No other difficulties were encountered during the mercury analysis.

All other quality control parameters were within the acceptance limits.

SILICA GEL TREATED (SGT/PETROLEUM HYDROCARBON) AND N-HEXANE EXTRACTABLE MATERIAL (HEM/OIL&GREASE)
Samples Outfall Comp (460-225164-1) and Outfall Grab (460-225164-2) were analyzed for Silica Gel Treated (SGT/Petroleum Hydrocarbon) and N-Hexane Extractable Material (HEM/Oil&Grease) in accordance with EPA SW-846 Method 1664A. The samples were analyzed on 12/29/2020.

No difficulties were encountered during the SGT-HEM/HEM analysis.

All quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS
Sample Outfall Comp (460-225164-1) was analyzed for total suspended solids in accordance with SM 2540D. The samples were analyzed on 12/23/2020.

No difficulties were encountered during the TSS analysis.

All quality control parameters were within the acceptance limits.

TOTAL CYANIDE
Sample Outfall Grab (460-225164-2) was analyzed for total cyanide in accordance with EPA Method 335.4. The samples were prepared and analyzed on 12/28/2020.

Cyanide, Total failed the recovery criteria high for the MS/MSD of sample 460-225011-2 in batch 460-749829.

Refer to the QC report for details.

No other difficulties were encountered during the cyanide analysis.

All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE PHENOLS
Sample Outfall Grab (460-225164-2) was analyzed for total recoverable phenols in accordance with EPA Method 420.1. The samples were prepared and analyzed on 12/28/2020.

No difficulties were encountered during the phenol analysis.

All quality control parameters were within the acceptance limits.

BIOCHEMICAL OXYGEN DEMAND 5 DAY
Sample Outfall Comp (460-225164-1) was analyzed for Biochemical Oxygen Demand 5 Day in accordance with SM 5210B. The samples were analyzed on 12/19/2020.

Biochemical Oxygen Demand exceeded the RPD limit for the duplicate of sample 460-225159-2. Refer to the QC report for details.

No other difficulties were encountered during the BOD5 analysis.

All other quality control parameters were within the acceptance limits.

CHEMICAL OXYGEN DEMAND
Sample Outfall Comp (460-225164-1) was analyzed for Chemical Oxygen Demand in accordance with SM 5220D. The samples were

Job ID: 460-225164-1 (Continued)

Laboratory: Eurofins TestAmerica, Edison (Continued)

analyzed on 12/26/2020.

Chemical Oxygen Demand failed the recovery criteria low for the MS/MSD of sample 460-225462-1 in batch 460-749544.

Refer to the QC report for details.

Sample Outfall Comp (460-225164-1)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the COD analysis.

All other quality control parameters were within the acceptance limits.

FIELD PH
Sample Outfall Grab (460-225164-2) was analyzed for field pH in accordance with SM 4500_H+_F. The samples were analyzed on 12/18/2020.

No difficulties were encountered during the field pH analysis.

All quality control parameters were within the acceptance limits.

AMMONIA
Sample Outfall Comp (460-225164-1) was analyzed for ammonia in accordance with SM4500NH3_G. The samples were analyzed on 12/29/2020.

No difficulties were encountered during the ammonia analysis.

All quality control parameters were within the acceptance limits.

CARBONACEOUS BIOCHEMICAL OXYGEN DEMAND 20 DAY
Sample Outfall Comp (460-225164-1) was analyzed for Carbonaceous Biochemical Oxygen Demand 20 Day in accordance with SM 5210B. The samples were analyzed on 12/19/2020.

No difficulties were encountered during the CBOD20 analysis.

All quality control parameters were within the acceptance limits.

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Client Sample ID: Outfall Comp — Lab Sample ID: 460-225164-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	44.6		4.0	1.1	ug/L	1		200.8	Total Recoverable
Nickel	1.7	J	4.0	0.84	ug/L	1		200.8	Total Recoverable
Lead	0.72	J	1.2	0.071	ug/L	1		200.8	Total Recoverable
Zinc	58.3		16.0	2.6	ug/L	1		200.8	Total Recoverable
Mercury	0.26		0.20	0.091	ug/L	1		245.1	Total/NA
HEM	7.5		5.0	5.0	mg/L	1		1664A	Total/NA
Total Suspended Solids	52.0		20.0	20.0	mg/L	1		SM 2540D	Total/NA
Ammonia	7.0		0.10	0.050	mg/L	1		SM 4500 NH3 G	Total/NA
Biochemical Oxygen Demand	60.2		1.0	1.0	mg/L	1		SM 5210B	Total/NA
Chemical Oxygen Demand	160		20.0	6.6	mg/L	2		SM 5220D	Total/NA
Carbonaceous Biochemical Oxygen Demand 20	149		1.0	1.0	mg/L	1		SM5210B	Total/NA

Client Sample ID: Outfall Grab — Lab Sample ID: 460-225164-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1	0.087		0.043	0.00047	ng/L	1		1668A	Total/NA
PCB-2	0.024	J B	0.043	0.00049	ng/L	1		1668A	Total/NA
PCB-3	0.11	B	0.043	0.00049	ng/L	1		1668A	Total/NA
PCB-4	0.14	S	0.064	0.0088	ng/L	1		1668A	Total/NA
PCB-5	0.017	J q	0.043	0.0066	ng/L	1		1668A	Total/NA
PCB-6	0.13		0.043	0.0058	ng/L	1		1668A	Total/NA
PCB-7	0.087	q	0.043	0.0059	ng/L	1		1668A	Total/NA
PCB-8	0.44		0.064	0.0054	ng/L	1		1668A	Total/NA
PCB-9	0.050	q	0.043	0.0061	ng/L	1		1668A	Total/NA
PCB-10	0.014	J q	0.043	0.0065	ng/L	1		1668A	Total/NA
PCB-11	0.096	B	0.064	0.0057	ng/L	1		1668A	Total/NA
PCB-12	0.13	C	0.086	0.0059	ng/L	1		1668A	Total/NA
PCB-13	0.13	C12	0.086	0.0059	ng/L	1		1668A	Total/NA
PCB-15	0.25		0.043	0.0059	ng/L	1		1668A	Total/NA
PCB-16	0.088		0.043	0.0014	ng/L	1		1668A	Total/NA
PCB-17	0.077		0.043	0.0013	ng/L	1		1668A	Total/NA
PCB-18	0.17	C	0.086	0.0011	ng/L	1		1668A	Total/NA
PCB-19	0.012	J q	0.043	0.0015	ng/L	1		1668A	Total/NA
PCB-20	0.30	C B	0.086	0.0010	ng/L	1		1668A	Total/NA
PCB-21	0.20	C B	0.086	0.00098	ng/L	1		1668A	Total/NA
PCB-22	0.11	B	0.043	0.0010	ng/L	1		1668A	Total/NA
PCB-25	0.026	J	0.043	0.00093	ng/L	1		1668A	Total/NA
PCB-26	0.048	J C	0.086	0.00099	ng/L	1		1668A	Total/NA
PCB-27	0.014	J	0.043	0.00092	ng/L	1		1668A	Total/NA
PCB-28	0.30	C20 B	0.086	0.0010	ng/L	1		1668A	Total/NA
PCB-29	0.048	J C26	0.086	0.00099	ng/L	1		1668A	Total/NA
PCB-30	0.17	C18	0.086	0.0011	ng/L	1		1668A	Total/NA
PCB-31	0.26	B	0.043	0.00098	ng/L	1		1668A	Total/NA
PCB-32	0.065		0.043	0.00088	ng/L	1		1668A	Total/NA
PCB-33	0.20	C21 B	0.086	0.00098	ng/L	1		1668A	Total/NA
PCB-35	0.0069	J q	0.043	0.0010	ng/L	1		1668A	Total/NA
PCB-37	0.082	B	0.043	0.0010	ng/L	1		1668A	Total/NA
PCB-40	0.085	J C B	0.13	0.0021	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-225164-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-41	0.085	J C40 B	0.13	0.0021	ng/L	1		1668A	Total/NA
PCB-42	0.039	J	0.043	0.0021	ng/L	1		1668A	Total/NA
PCB-43	0.012	J C	0.086	0.0019	ng/L	1		1668A	Total/NA
PCB-44	0.24	C B	0.13	0.0018	ng/L	1		1668A	Total/NA
PCB-45	0.029	J C	0.086	0.0022	ng/L	1		1668A	Total/NA
PCB-46	0.0084	J q	0.043	0.0026	ng/L	1		1668A	Total/NA
PCB-47	0.24	C44 B	0.13	0.0018	ng/L	1		1668A	Total/NA
PCB-48	0.037	J	0.043	0.0021	ng/L	1		1668A	Total/NA
PCB-49	0.11	C B	0.086	0.0017	ng/L	1		1668A	Total/NA
PCB-50	0.022	J C	0.086	0.0020	ng/L	1		1668A	Total/NA
PCB-51	0.029	J C45	0.086	0.0022	ng/L	1		1668A	Total/NA
PCB-52	0.41	B	0.043	0.0021	ng/L	1		1668A	Total/NA
PCB-53	0.022	J C50	0.086	0.0020	ng/L	1		1668A	Total/NA
PCB-55	0.016	J	0.043	0.0015	ng/L	1		1668A	Total/NA
PCB-56	0.066	B	0.043	0.0015	ng/L	1		1668A	Total/NA
PCB-59	0.014	J C	0.13	0.0015	ng/L	1		1668A	Total/NA
PCB-60	0.042	J q	0.043	0.0015	ng/L	1		1668A	Total/NA
PCB-61	0.39	C B	0.17	0.0014	ng/L	1		1668A	Total/NA
PCB-62	0.014	J C59	0.13	0.0015	ng/L	1		1668A	Total/NA
PCB-63	0.0057	J	0.043	0.0014	ng/L	1		1668A	Total/NA
PCB-64	0.080	B	0.043	0.0014	ng/L	1		1668A	Total/NA
PCB-65	0.24	C44 B	0.13	0.0018	ng/L	1		1668A	Total/NA
PCB-66	0.16	B	0.043	0.0014	ng/L	1		1668A	Total/NA
PCB-67	0.0047	J	0.043	0.0013	ng/L	1		1668A	Total/NA
PCB-68	0.0051	J	0.043	0.0014	ng/L	1		1668A	Total/NA
PCB-69	0.11	C49 B	0.086	0.0017	ng/L	1		1668A	Total/NA
PCB-70	0.39	C61 B	0.17	0.0014	ng/L	1		1668A	Total/NA
PCB-71	0.085	J C40 B	0.13	0.0021	ng/L	1		1668A	Total/NA
PCB-73	0.012	J C43	0.086	0.0019	ng/L	1		1668A	Total/NA
PCB-74	0.39	C61 B	0.17	0.0014	ng/L	1		1668A	Total/NA
PCB-75	0.014	J C59	0.13	0.0015	ng/L	1		1668A	Total/NA
PCB-76	0.39	C61 B	0.17	0.0014	ng/L	1		1668A	Total/NA
PCB-77	0.0078	J	0.043	0.0015	ng/L	1		1668A	Total/NA
PCB-79	0.0031	J	0.043	0.0013	ng/L	1		1668A	Total/NA
PCB-82	0.032	J q	0.043	0.0011	ng/L	1		1668A	Total/NA
PCB-83	0.17	C B	0.086	0.0010	ng/L	1		1668A	Total/NA
PCB-84	0.11		0.043	0.0011	ng/L	1		1668A	Total/NA
PCB-85	0.049	J C B	0.13	0.00082	ng/L	1		1668A	Total/NA
PCB-86	0.20	J C B	0.26	0.00083	ng/L	1		1668A	Total/NA
PCB-87	0.20	J C86 B	0.26	0.00083	ng/L	1		1668A	Total/NA
PCB-88	0.049	J C	0.086	0.0010	ng/L	1		1668A	Total/NA
PCB-90	0.34	C B	0.13	0.00084	ng/L	1		1668A	Total/NA
PCB-91	0.049	J C88	0.086	0.0010	ng/L	1		1668A	Total/NA
PCB-92	0.056		0.043	0.00095	ng/L	1		1668A	Total/NA
PCB-93	0.0058	J q C	0.086	0.00096	ng/L	1		1668A	Total/NA
PCB-95	0.36	B	0.043	0.0011	ng/L	1		1668A	Total/NA
PCB-96	0.0028	J	0.043	0.00082	ng/L	1		1668A	Total/NA
PCB-97	0.20	J C86 B	0.26	0.00083	ng/L	1		1668A	Total/NA
PCB-98	0.010	J q C	0.086	0.00093	ng/L	1		1668A	Total/NA
PCB-99	0.17	C83 B	0.086	0.0010	ng/L	1		1668A	Total/NA
PCB-100	0.0058	J q C93	0.086	0.00096	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-225164-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-101	0.34	C90 B	0.13	0.00084	ng/L	1		1668A	Total/NA
PCB-102	0.010	J q C98	0.086	0.00093	ng/L	1		1668A	Total/NA
PCB-105	0.088		0.043	0.0011	ng/L	1		1668A	Total/NA
PCB-107	0.011	J q	0.043	0.0012	ng/L	1		1668A	Total/NA
PCB-108	0.0065	J q C	0.086	0.0012	ng/L	1		1668A	Total/NA
PCB-109	0.20	J C86 B	0.26	0.00083	ng/L	1		1668A	Total/NA
PCB-110	0.31	C B	0.086	0.00070	ng/L	1		1668A	Total/NA
PCB-112	0.0024	J q	0.043	0.00071	ng/L	1		1668A	Total/NA
PCB-113	0.34	C90 B	0.13	0.00084	ng/L	1		1668A	Total/NA
PCB-114	0.0064	J	0.043	0.0010	ng/L	1		1668A	Total/NA
PCB-115	0.31	C110 B	0.086	0.00070	ng/L	1		1668A	Total/NA
PCB-116	0.049	J C85 B	0.13	0.00082	ng/L	1		1668A	Total/NA
PCB-117	0.049	J C85 B	0.13	0.00082	ng/L	1		1668A	Total/NA
PCB-118	0.18	B	0.043	0.0010	ng/L	1		1668A	Total/NA
PCB-119	0.20	J C86 B	0.26	0.00083	ng/L	1		1668A	Total/NA
PCB-122	0.0033	J q	0.043	0.0013	ng/L	1		1668A	Total/NA
PCB-123	0.0037	J q	0.043	0.0011	ng/L	1		1668A	Total/NA
PCB-124	0.0065	J q C108	0.086	0.0012	ng/L	1		1668A	Total/NA
PCB-125	0.20	J C86 B	0.26	0.00083	ng/L	1		1668A	Total/NA
PCB-128	0.033	J C	0.086	0.0018	ng/L	1		1668A	Total/NA
PCB-129	0.28	C	0.17	0.0019	ng/L	1		1668A	Total/NA
PCB-130	0.0084	J q	0.043	0.0025	ng/L	1		1668A	Total/NA
PCB-132	0.095		0.043	0.0024	ng/L	1		1668A	Total/NA
PCB-133	0.0026	J q	0.043	0.0023	ng/L	1		1668A	Total/NA
PCB-134	0.016	J q C	0.086	0.0024	ng/L	1		1668A	Total/NA
PCB-135	0.072	J q C B	0.086	0.00089	ng/L	1		1668A	Total/NA
PCB-136	0.036	J B	0.043	0.00064	ng/L	1		1668A	Total/NA
PCB-137	0.0090	J q	0.043	0.0021	ng/L	1		1668A	Total/NA
PCB-138	0.28	C129	0.17	0.0019	ng/L	1		1668A	Total/NA
PCB-141	0.059		0.043	0.0022	ng/L	1		1668A	Total/NA
PCB-143	0.016	J q C134	0.086	0.0024	ng/L	1		1668A	Total/NA
PCB-144	0.0096	J	0.043	0.00081	ng/L	1		1668A	Total/NA
PCB-146	0.033	J	0.043	0.0020	ng/L	1		1668A	Total/NA
PCB-147	0.27	C	0.086	0.0023	ng/L	1		1668A	Total/NA
PCB-149	0.27	C147	0.086	0.0023	ng/L	1		1668A	Total/NA
PCB-151	0.072	J q C135 B	0.086	0.00089	ng/L	1		1668A	Total/NA
PCB-153	0.23	C	0.086	0.0016	ng/L	1		1668A	Total/NA
PCB-156	0.035	J C	0.086	0.0019	ng/L	1		1668A	Total/NA
PCB-157	0.035	J C156	0.086	0.0019	ng/L	1		1668A	Total/NA
PCB-158	0.028	J	0.043	0.0015	ng/L	1		1668A	Total/NA
PCB-159	0.0028	J q	0.043	0.0015	ng/L	1		1668A	Total/NA
PCB-160	0.28	C129	0.17	0.0019	ng/L	1		1668A	Total/NA
PCB-163	0.28	C129	0.17	0.0019	ng/L	1		1668A	Total/NA
PCB-164	0.019	J	0.043	0.0016	ng/L	1		1668A	Total/NA
PCB-166	0.033	J C128	0.086	0.0018	ng/L	1		1668A	Total/NA
PCB-167	0.0072	J	0.043	0.0010	ng/L	1		1668A	Total/NA
PCB-168	0.23	C153	0.086	0.0016	ng/L	1		1668A	Total/NA
PCB-170	0.10		0.043	0.00095	ng/L	1		1668A	Total/NA
PCB-171	0.019	J q C	0.086	0.00085	ng/L	1		1668A	Total/NA
PCB-172	0.013	J	0.043	0.00085	ng/L	1		1668A	Total/NA
PCB-173	0.019	J q C171	0.086	0.00085	ng/L	1		1668A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Client Sample ID: Outfall Grab (Continued)

Lab Sample ID: 460-225164-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
PCB-174	0.084		0.043	0.00080	ng/L	1		1668A	Total/NA
PCB-175	0.0022	J q	0.043	0.00077	ng/L	1		1668A	Total/NA
PCB-176	0.0075	J	0.043	0.00058	ng/L	1		1668A	Total/NA
PCB-177	0.045		0.043	0.00082	ng/L	1		1668A	Total/NA
PCB-178	0.014	J	0.043	0.00083	ng/L	1		1668A	Total/NA
PCB-179	0.028	J	0.043	0.00062	ng/L	1		1668A	Total/NA
PCB-180	0.19	C	0.086	0.00064	ng/L	1		1668A	Total/NA
PCB-182	0.0012	J q	0.043	0.00074	ng/L	1		1668A	Total/NA
PCB-183	0.049	J C B	0.086	0.00075	ng/L	1		1668A	Total/NA
PCB-185	0.049	J C183 B	0.086	0.00075	ng/L	1		1668A	Total/NA
PCB-187	0.088		0.043	0.00071	ng/L	1		1668A	Total/NA
PCB-189	0.0026	J q	0.043	0.00084	ng/L	1		1668A	Total/NA
PCB-190	0.013	J q	0.043	0.00056	ng/L	1		1668A	Total/NA
PCB-191	0.0046	J	0.043	0.00058	ng/L	1		1668A	Total/NA
PCB-192	0.0013	J q B	0.043	0.00065	ng/L	1		1668A	Total/NA
PCB-193	0.19	C180	0.086	0.00064	ng/L	1		1668A	Total/NA
PCB-194	0.051		0.043	0.0013	ng/L	1		1668A	Total/NA
PCB-195	0.016	J q	0.043	0.0014	ng/L	1		1668A	Total/NA
PCB-196	0.015	J q	0.043	0.00058	ng/L	1		1668A	Total/NA
PCB-197	0.0015	J	0.043	0.00044	ng/L	1		1668A	Total/NA
PCB-198	0.029	J C B	0.086	0.00059	ng/L	1		1668A	Total/NA
PCB-199	0.029	J C198 B	0.086	0.00059	ng/L	1		1668A	Total/NA
PCB-200	0.0028	J q	0.043	0.00040	ng/L	1		1668A	Total/NA
PCB-201	0.0028	J	0.043	0.00041	ng/L	1		1668A	Total/NA
PCB-202	0.0044	J	0.043	0.00045	ng/L	1		1668A	Total/NA
PCB-203	0.019	J	0.043	0.00053	ng/L	1		1668A	Total/NA
PCB-206	0.0075	J q	0.043	0.0015	ng/L	1		1668A	Total/NA
PCB-209	0.0016	J	0.043	0.00013	ng/L	1		1668A	Total/NA
HEM	15.3		5.0	5.0	mg/L	1		1664A	Total/NA
Cyanide, Total	0.0092	J	0.010	0.0040	mg/L	1		335.4	Total/NA
Field pH	6.08				SU	1		SM4500 H+	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Client Sample ID: Outfall Comp

Lab Sample ID: 460-225164-1
Date Collected: 12/18/20 09:35
Matrix: Water
Date Received: 12/18/20 19:30

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.61	U	2.0	0.61	ug/L		12/22/20 05:55	12/22/20 14:01	1
Cadmium	0.43	U	2.0	0.43	ug/L		12/22/20 05:55	12/22/20 14:01	1
Chromium	0.45	U	4.0	0.45	ug/L		12/22/20 05:55	12/22/20 14:01	1
Copper	**44.6**		4.0	1.1	ug/L		12/22/20 05:55	12/22/20 14:01	1
Nickel	**1.7**	**J**	4.0	0.84	ug/L		12/22/20 05:55	12/22/20 14:01	1
Lead	**0.72**	**J**	1.2	0.071	ug/L		12/22/20 05:55	12/22/20 14:01	1
Zinc	**58.3**		16.0	2.6	ug/L		12/22/20 05:55	12/22/20 14:01	1
Silver	0.12	U	2.0	0.12	ug/L		12/22/20 05:55	12/22/20 14:01	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.26**		0.20	0.091	ug/L		12/29/20 12:04	12/29/20 13:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	**7.5**		5.0	5.0	mg/L			12/29/20 15:27	1
Total Suspended Solids	**52.0**		20.0	20.0	mg/L			12/23/20 08:17	1
Ammonia	**7.0**		0.10	0.050	mg/L			12/29/20 15:43	1
Biochemical Oxygen Demand	**60.2**		1.0	1.0	mg/L			12/19/20 14:23	1
Chemical Oxygen Demand	**160**		20.0	6.6	mg/L			12/26/20 15:48	2
Carbonaceous Biochemical Oxygen Demand 20	**149**		1.0	1.0	mg/L			12/19/20 17:20	1

Client Sample ID: Outfall Grab

Lab Sample ID: 460-225164-2
Date Collected: 12/18/20 09:40
Matrix: Water
Date Received: 12/18/20 19:30

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	**0.087**		0.043	0.00047	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-2	**0.024**	**J B**	0.043	0.00049	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-3	**0.11**	**B**	0.043	0.00049	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-4	**0.14**	**S**	0.064	0.0088	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-5	**0.017**	**J q**	0.043	0.0066	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-6	**0.13**		0.043	0.0058	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-7	**0.087**	**q**	0.043	0.0059	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-8	**0.44**		0.064	0.0054	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-9	**0.050**	**q**	0.043	0.0061	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-10	**0.014**	**J q**	0.043	0.0065	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-11	**0.096**	**B**	0.064	0.0057	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-12	**0.13**	**C**	0.086	0.0059	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-13	**0.13**	**C12**	0.086	0.0059	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-14	0.0050	U	0.043	0.0050	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-15	**0.25**		0.043	0.0059	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-16	**0.088**		0.043	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-17	**0.077**		0.043	0.0013	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-18	**0.17**	**C**	0.086	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-19	**0.012**	**J q**	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-20	**0.30**	**C B**	0.086	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-21	**0.20**	**C B**	0.086	0.00098	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-22	**0.11**	**B**	0.043	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Client Sample ID: Outfall Grab

Date Collected: 12/18/20 09:40
Date Received: 12/18/20 19:30

Lab Sample ID: 460-225164-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-23	0.0010	U	0.043	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-24	0.0011	U	0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-25	**0.026**	**J**	0.043	0.00093	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-26	**0.048**	**J C**	0.086	0.00099	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-27	**0.014**	**J**	0.043	0.00092	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-28	**0.30**	**C20 B**	0.086	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-29	**0.048**	**J C26**	0.086	0.00099	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-30	**0.17**	**C18**	0.086	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-31	**0.26**	**B**	0.043	0.00098	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-32	**0.065**		0.043	0.00088	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-33	**0.20**	**C21 B**	0.086	0.00098	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-34	0.0011	U	0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-35	**0.0069**	**J q**	0.043	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-36	0.00099	U	0.043	0.00099	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-37	**0.082**	**B**	0.043	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-38	0.0011	U	0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-39	0.00096	U	0.043	0.00096	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-40	**0.085**	**J C B**	0.13	0.0021	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-41	**0.085**	**J C40 B**	0.13	0.0021	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-42	**0.039**	**J**	0.043	0.0021	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-43	**0.012**	**J C**	0.086	0.0019	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-44	**0.24**	**C B**	0.13	0.0018	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-45	**0.029**	**J C**	0.086	0.0022	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-46	**0.0084**	**J q**	0.043	0.0026	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-47	**0.24**	**C44 B**	0.13	0.0018	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-48	**0.037**	**J**	0.043	0.0021	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-49	**0.11**	**C B**	0.086	0.0017	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-50	**0.022**	**J C**	0.086	0.0020	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-51	**0.029**	**J C45**	0.086	0.0022	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-52	**0.41**	**B**	0.043	0.0021	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-53	**0.022**	**J C50**	0.086	0.0020	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-54	0.00031	U	0.043	0.00031	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-55	**0.016**	**J**	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-56	**0.066**	**B**	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-57	0.0015	U	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-58	0.0016	U	0.043	0.0016	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-59	**0.014**	**J C**	0.13	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-60	**0.042**	**J q**	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-61	**0.39**	**C B**	0.17	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-62	**0.014**	**J C59**	0.13	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-63	**0.0057**	**J**	0.043	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-64	**0.080**	**B**	0.043	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-65	**0.24**	**C44 B**	0.13	0.0018	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-66	**0.16**	**B**	0.043	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-67	**0.0047**	**J**	0.043	0.0013	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-68	**0.0051**	**J**	0.043	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-69	**0.11**	**C49 B**	0.086	0.0017	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-70	**0.39**	**C61 B**	0.17	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-71	**0.085**	**J C40 B**	0.13	0.0021	ng/L		01/05/21 14:43	01/14/21 23:51	1

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Client Sample ID: Outfall Grab

Date Collected: 12/18/20 09:40
Date Received: 12/18/20 19:30

Lab Sample ID: 460-225164-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-72	0.0015	U	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-73	**0.012**	**J C43**	0.086	0.0019	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-74	**0.39**	**C61 B**	0.17	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-75	**0.014**	**J C59**	0.13	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-76	**0.39**	**C61 B**	0.17	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-77	**0.0078**	**J**	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-78	0.0016	U	0.043	0.0016	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-79	**0.0031**	**J**	0.043	0.0013	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-80	0.0013	U	0.043	0.0013	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-81	0.0014	U	0.043	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-82	**0.032**	**J q**	0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-83	**0.17**	**C B**	0.086	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-84	**0.11**		0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-85	**0.049**	**J C B**	0.13	0.00082	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-86	**0.20**	**J C B**	0.26	0.00083	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-87	**0.20**	**J C86 B**	0.26	0.00083	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-88	**0.049**	**J C**	0.086	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-89	0.0011	U	0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-90	**0.34**	**C B**	0.13	0.00084	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-91	**0.049**	**J C88**	0.086	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-92	**0.056**		0.043	0.00095	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-93	**0.0058**	**J q C**	0.086	0.00096	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-94	0.0011	U	0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-95	**0.36**	**B**	0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-96	**0.0028**	**J**	0.043	0.00082	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-97	**0.20**	**J C86 B**	0.26	0.00083	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-98	**0.010**	**J q C**	0.086	0.00093	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-99	**0.17**	**C83 B**	0.086	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-100	**0.0058**	**J q C93**	0.086	0.00096	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-101	**0.34**	**C90 B**	0.13	0.00084	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-102	**0.010**	**J q C98**	0.086	0.00093	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-103	0.00096	U	0.043	0.00096	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-104	0.00073	U	0.043	0.00073	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-105	**0.088**		0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-106	0.0011	U	0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-107	**0.011**	**J q**	0.043	0.0012	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-108	**0.0065**	**J q C**	0.086	0.0012	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-109	**0.20**	**J C86 B**	0.26	0.00083	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-110	**0.31**	**C B**	0.086	0.00070	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-111	0.00068	U	0.043	0.00068	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-112	**0.0024**	**J q**	0.043	0.00071	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-113	**0.34**	**C90 B**	0.13	0.00084	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-114	**0.0064**	**J**	0.043	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-115	**0.31**	**C110 B**	0.086	0.00070	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-116	**0.049**	**J C85 B**	0.13	0.00082	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-117	**0.049**	**J C85 B**	0.13	0.00082	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-118	**0.18**	**B**	0.043	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-119	**0.20**	**J C86 B**	0.26	0.00083	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-120	0.00069	U	0.043	0.00069	ng/L		01/05/21 14:43	01/14/21 23:51	1

Client Sample ID: Outfall Grab

Date Collected: 12/18/20 09:40
Date Received: 12/18/20 19:30

Lab Sample ID: 460-225164-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-121	0.00071	U	0.043	0.00071	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-122	**0.0033**	**J q**	0.043	0.0013	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-123	**0.0037**	**J q**	0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-124	**0.0065**	**J q C108**	0.086	0.0012	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-125	**0.20**	**J C86 B**	0.26	0.00083	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-126	0.0014	U	0.043	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-127	0.0011	U	0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-128	**0.033**	**J C**	0.086	0.0018	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-129	**0.28**	**C**	0.17	0.0019	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-130	**0.0084**	**J q**	0.043	0.0025	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-131	0.0026	U	0.043	0.0026	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-132	**0.095**		0.043	0.0024	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-133	**0.0026**	**J q**	0.043	0.0023	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-134	**0.016**	**J q C**	0.086	0.0024	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-135	**0.072**	**J q C B**	0.086	0.00089	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-136	**0.036**	**J B**	0.043	0.00064	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-137	**0.0090**	**J q**	0.043	0.0021	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-138	**0.28**	**C129**	0.17	0.0019	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-139	0.0021	U C	0.086	0.0021	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-140	0.0021	U C139	0.086	0.0021	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-141	**0.059**		0.043	0.0022	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-142	0.0023	U	0.043	0.0023	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-143	**0.016**	**J q C134**	0.086	0.0024	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-144	**0.0096**	**J**	0.043	0.00081	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-145	0.00061	U	0.043	0.00061	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-146	**0.033**	**J**	0.043	0.0020	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-147	**0.27**	**C**	0.086	0.0023	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-148	0.00086	U	0.043	0.00086	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-149	**0.27**	**C147**	0.086	0.0023	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-150	0.00059	U	0.043	0.00059	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-151	**0.072**	**J q C135 B**	0.086	0.00089	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-152	0.00063	U	0.043	0.00063	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-153	**0.23**	**C**	0.086	0.0016	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-154	0.00070	U	0.043	0.00070	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-155	0.00059	U	0.043	0.00059	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-156	**0.035**	**J C**	0.086	0.0019	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-157	**0.035**	**J C156**	0.086	0.0019	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-158	**0.028**	**J**	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-159	**0.0028**	**J q**	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-160	**0.28**	**C129**	0.17	0.0019	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-161	0.0015	U	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-162	0.0015	U	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-163	**0.28**	**C129**	0.17	0.0019	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-164	**0.019**	**J**	0.043	0.0016	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-165	0.0017	U	0.043	0.0017	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-166	**0.033**	**J C128**	0.086	0.0018	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-167	**0.0072**	**J**	0.043	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-168	**0.23**	**C153**	0.086	0.0016	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-169	0.0015	U	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1

Client Sample ID: Outfall Grab

Date Collected: 12/18/20 09:40
Date Received: 12/18/20 19:30

Lab Sample ID: 460-225164-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-170	0.10		0.043	0.00095	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-171	0.019	J q C	0.086	0.00085	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-172	0.013	J	0.043	0.00085	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-173	0.019	J q C171	0.086	0.00085	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-174	0.084		0.043	0.00080	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-175	0.0022	J q	0.043	0.00077	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-176	0.0075	J	0.043	0.00058	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-177	0.045		0.043	0.00082	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-178	0.014	J	0.043	0.00083	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-179	0.028	J	0.043	0.00062	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-180	0.19	C	0.086	0.00064	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-181	0.00077	U	0.043	0.00077	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-182	0.0012	J q	0.043	0.00074	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-183	0.049	J C B	0.086	0.00075	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-184	0.00063	U	0.043	0.00063	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-185	0.049	J C183 B	0.086	0.00075	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-186	0.00061	U	0.043	0.00061	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-187	0.088		0.043	0.00071	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-188	0.00052	U	0.043	0.00052	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-189	0.0026	J q	0.043	0.00084	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-190	0.013	J q	0.043	0.00056	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-191	0.0046	J	0.043	0.00058	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-192	0.0013	J q B	0.043	0.00065	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-193	0.19	C180	0.086	0.00064	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-194	0.051		0.043	0.0013	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-195	0.016	J q	0.043	0.0014	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-196	0.015	J q	0.043	0.00058	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-197	0.0015	J	0.043	0.00044	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-198	0.029	J C B	0.086	0.00059	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-199	0.029	J C198 B	0.086	0.00059	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-200	0.0028	J q	0.043	0.00040	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-201	0.0028	J	0.043	0.00041	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-202	0.0044	J	0.043	0.00045	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-203	0.019	J	0.043	0.00053	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-204	0.00045	U	0.043	0.00045	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-205	0.0011	U	0.043	0.0011	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-206	0.0075	J q	0.043	0.0015	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-207	0.0010	U	0.043	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-208	0.0010	U	0.043	0.0010	ng/L		01/05/21 14:43	01/14/21 23:51	1
PCB-209	0.0016	J	0.043	0.00013	ng/L		01/05/21 14:43	01/14/21 23:51	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*72*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-3L	*89*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-4L	*60*	*S*	*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-15L	*70*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-19L	*72*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-37L	*68*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-54L	*75*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-77L	*74*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*

Client Sample Results

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Client Sample ID: Outfall Grab

Date Collected: 12/18/20 09:40
Date Received: 12/18/20 19:30

Lab Sample ID: 460-225164-2

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-81L	*74*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-104L	*76*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-105L	*87*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-114L	*92*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-118L	*90*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-123L	*88*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-126L	*75*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-155L	*75*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-156L	*78*	*C*	*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-157L	*78*	*C156*	*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-167L	*83*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-169L	*68*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-170L	*81*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-188L	*91*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-189L	*100*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-202L	*82*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-205L	*72*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-206L	*63*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-208L	*67*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-209L	*55*		*30 - 140*	*01/05/21 14:43*	*01/14/21 23:51*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-28L	*86*		*40 - 125*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-111L	*85*		*40 - 125*	*01/05/21 14:43*	*01/14/21 23:51*	*1*
PCB-178L	*96*		*40 - 125*	*01/05/21 14:43*	*01/14/21 23:51*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	**15.3**		5.0	5.0	mg/L			12/29/20 15:27	1
SGT-HEM	5.0	U	5.0	5.0	mg/L			12/29/20 15:27	1
Cyanide, Total	**0.0092**	**J**	0.010	0.0040	mg/L		12/28/20 10:22	12/28/20 13:09	1
Phenols, Total	0.21	U	0.25	0.21	mg/L		12/28/20 11:56	12/28/20 16:51	1

Method: SM4500 H+ - pH, Field

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.08**				SU			12/18/20 09:40	1

Surrogate Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	**Client Sample ID**	**PCB28L (40-125)**	**PCB111L (40-125)**	**PCB178L (40-125)**
460-225164-2	Outfall Grab	86	85	96
LCS 140-45806/6-A	Lab Control Sample	95	97	102
MB 140-45806/7-A	Method Blank	95	96	102

Surrogate Legend

PCB28L = PCB-28L
PCB111L = PCB-111L
PCB178L = PCB-178L

Isotope Dilution Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB1L	PCB3L	PCB4L	PCB15L	PCB19L	PCB37L	PCB54L	PCB77L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
460-225164-2	Outfall Grab	72	89	60 S	70	72	68	75	74
LCS 140-45806/6-A	Lab Control Sample	71	69	66	74	71	75	71	80
MB 140-45806/7-A	Method Blank	75	71	69	73	72	72	68	74

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB81L	PCB104L	PCB105L	P114L	PCB118L	PCB123L	PCB126L	PCB155L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
460-225164-2	Outfall Grab	74	76	87	92	90	88	75	75
LCS 140-45806/6-A	Lab Control Sample	79	64	92	90	92	87	83	69
MB 140-45806/7-A	Method Blank	75	57	97	93	92	87	86	54

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB156L	PCB157L	PCB167L	PCB169L	PCB170L	PCB188L	PCB189L	PCB202L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
460-225164-2	Outfall Grab	78 C	78 C156	83	68	81	91	100	82
LCS 140-45806/6-A	Lab Control Sample	84 C	84 C156	89	87	84	88	91	91
MB 140-45806/7-A	Method Blank	89 C	89 C156	94	93	89	78	96	89

		Percent Isotope Dilution Recovery (Acceptance Limits)			
		PCB205L	PCB206L	PCB208L	PCB209L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)
460-225164-2	Outfall Grab	72	63	67	55
LCS 140-45806/6-A	Lab Control Sample	76	73	77	66
MB 140-45806/7-A	Method Blank	80	78	80	70

Surrogate Legend

PCB1L = PCB-1L
PCB3L = PCB-3L
PCB4L = PCB-4L
PCB15L = PCB-15L
PCB19L = PCB-19L
PCB37L = PCB-37L
PCB54L = PCB-54L
PCB77L = PCB-77L
PCB81L = PCB-81L
PCB104L = PCB-104L
PCB105L = PCB-105L
P114L = PCB-114L
PCB118L = PCB-118L
PCB123L = PCB-123L
PCB126L = PCB-126L
PCB155L = PCB-155L
PCB156L = PCB-156L
PCB157L = PCB-157L
PCB167L = PCB-167L
PCB169L = PCB-169L
PCB170L = PCB-170L
PCB188L = PCB-188L
PCB189L = PCB-189L
PCB202L = PCB-202L
PCB205L = PCB-205L
PCB206L = PCB-206L

Isotope Dilution Summary

Client: IES Engineers
Job ID: 460-225164-1
Project/Site: Quarterly #183765;

PCB208L = PCB-208L
PCB209L = PCB-209L

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Lab Sample ID: MB 140-45806/7-A
Matrix: Water
Analysis Batch: 46055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45806

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.00023	U	0.040	0.00023	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-2	0.00443	J	0.040	0.00029	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-3	0.00231	J q	0.040	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-4	0.0077	U	0.060	0.0077	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-5	0.0065	U	0.040	0.0065	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-6	0.0057	U	0.040	0.0057	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-7	0.0059	U	0.040	0.0059	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-8	0.0053	U	0.060	0.0053	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-9	0.0060	U	0.040	0.0060	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-10	0.0064	U	0.040	0.0064	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-11	0.0235	J	0.060	0.0056	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-12	0.0058	U C	0.080	0.0058	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-13	0.0058	U C12	0.080	0.0058	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-14	0.0049	U	0.040	0.0049	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-15	0.0063	U	0.040	0.0063	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-16	0.0014	U	0.040	0.0014	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-17	0.0012	U	0.040	0.0012	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-18	0.0011	U C	0.080	0.0011	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-19	0.0015	U	0.040	0.0015	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-20	0.00532	J q C	0.080	0.00061	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-21	0.00358	J C	0.080	0.00060	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-22	0.00182	J	0.040	0.00063	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-23	0.00062	U	0.040	0.00062	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-24	0.0010	U	0.040	0.0010	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-25	0.00057	U	0.040	0.00057	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-26	0.00060	U C	0.080	0.00060	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-27	0.00089	U	0.040	0.00089	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-28	0.00532	J q C20	0.080	0.00061	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-29	0.00060	U C26	0.080	0.00060	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-30	0.0011	U C18	0.080	0.0011	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-31	0.00454	J	0.040	0.00060	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-32	0.00085	U	0.040	0.00085	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-33	0.00358	J C21	0.080	0.00060	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-34	0.00065	U	0.040	0.00065	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-35	0.00063	U	0.040	0.00063	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-36	0.00060	U	0.040	0.00060	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-37	0.00241	J	0.040	0.00062	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-38	0.00065	U	0.040	0.00065	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-39	0.00058	U	0.040	0.00058	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-40	0.00180	J q C	0.12	0.00085	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-41	0.00180	J q C40	0.12	0.00085	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-42	0.00085	U	0.040	0.00085	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-43	0.00080	U C	0.080	0.00080	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-44	0.00658	J C	0.12	0.00075	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-45	0.00089	U C	0.080	0.00089	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-46	0.0011	U	0.040	0.0011	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-47	0.00658	J C44	0.12	0.00075	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-48	0.00085	U	0.040	0.00085	ng/L		01/05/21 14:43	01/14/21 17:41	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-45806/7-A
Matrix: Water
Analysis Batch: 46055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45806

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	0.00200	J C	0.080	0.00069	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-50	0.00082	U C	0.080	0.00082	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-51	0.00089	U C45	0.080	0.00089	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-52	0.00254	J	0.040	0.00084	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-53	0.00082	U C50	0.080	0.00082	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-54	0.00020	U	0.040	0.00020	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-55	0.00062	U	0.040	0.00062	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-56	0.00104	J q	0.040	0.00062	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-57	0.00063	U	0.040	0.00063	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-58	0.00064	U	0.040	0.00064	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-59	0.00060	U C	0.12	0.00060	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-60	0.00063	U	0.040	0.00063	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-61	0.00531	J C	0.16	0.00059	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-62	0.00060	U C59	0.12	0.00060	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-63	0.00057	U	0.040	0.00057	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-64	0.00163	J	0.040	0.00057	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-65	0.00658	J C44	0.12	0.00075	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-66	0.00229	J	0.040	0.00059	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-67	0.00054	U	0.040	0.00054	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-68	0.00056	U	0.040	0.00056	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-69	0.00200	J C49	0.080	0.00069	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-70	0.00531	J C61	0.16	0.00059	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-71	0.00180	J q C40	0.12	0.00085	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-72	0.00062	U	0.040	0.00062	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-73	0.00080	U C43	0.080	0.00080	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-74	0.00531	J C61	0.16	0.00059	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-75	0.00060	U C59	0.12	0.00060	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-76	0.00531	J C61	0.16	0.00059	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-77	0.00062	U	0.040	0.00062	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-78	0.00064	U	0.040	0.00064	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-79	0.00055	U	0.040	0.00055	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-80	0.00054	U	0.040	0.00054	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-81	0.00056	U	0.040	0.00056	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-82	0.00046	U	0.040	0.00046	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-83	0.00257	J q C	0.080	0.00042	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-84	0.00047	U	0.040	0.00047	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-85	0.00135	J q C	0.12	0.00034	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-86	0.00289	J q C	0.24	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-87	0.00289	J q C86	0.24	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-88	0.00042	U C	0.080	0.00042	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-89	0.00046	U	0.040	0.00046	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-90	0.00233	J q C	0.12	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-91	0.00042	U C88	0.080	0.00042	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-92	0.00040	U	0.040	0.00040	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-93	0.00040	U C	0.080	0.00040	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-94	0.00045	U	0.040	0.00045	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-95	0.00156	J q	0.040	0.00044	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-96	0.00034	U	0.040	0.00034	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-97	0.00289	J q C86	0.24	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-45806/7-A
Matrix: Water
Analysis Batch: 46055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45806

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-98	0.00039	U C	0.080	0.00039	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-99	0.00257	J q C83	0.080	0.00042	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-100	0.00040	U C93	0.080	0.00040	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-101	0.00233	J q C90	0.12	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-102	0.00039	U C98	0.080	0.00039	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-103	0.00040	U	0.040	0.00040	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-104	0.00031	U	0.040	0.00031	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-105	0.00051	U	0.040	0.00051	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-106	0.00055	U	0.040	0.00055	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-107	0.00059	U	0.040	0.00059	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-108	0.00056	U C	0.080	0.00056	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-109	0.00289	J q C86	0.24	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-110	0.00245	J q C	0.080	0.00029	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-111	0.00028	U	0.040	0.00028	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-112	0.00030	U	0.040	0.00030	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-113	0.00233	J q C90	0.12	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-114	0.00051	U	0.040	0.00051	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-115	0.00245	J q C110	0.080	0.00029	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-116	0.00135	J q C85	0.12	0.00034	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-117	0.00135	J q C85	0.12	0.00034	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-118	0.00198	J	0.040	0.00049	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-119	0.00289	J q C86	0.24	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-120	0.00029	U	0.040	0.00029	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-121	0.00030	U	0.040	0.00030	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-122	0.00063	U	0.040	0.00063	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-123	0.00055	U	0.040	0.00055	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-124	0.00056	U C108	0.080	0.00056	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-125	0.00289	J q C86	0.24	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-126	0.00063	U	0.040	0.00063	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-127	0.00055	U	0.040	0.00055	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-128	0.00075	U C	0.080	0.00075	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-129	0.00078	U C	0.16	0.00078	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-130	0.0010	U	0.040	0.0010	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-131	0.0011	U	0.040	0.0011	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-132	0.0010	U	0.040	0.0010	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-133	0.00097	U	0.040	0.00097	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-134	0.0010	U C	0.080	0.0010	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-135	0.00126	J q C	0.080	0.00029	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-136	0.000925	J q	0.040	0.00021	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-137	0.00088	U	0.040	0.00088	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-138	0.00078	U C129	0.16	0.00078	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-139	0.00087	U C	0.080	0.00087	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-140	0.00087	U C139	0.080	0.00087	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-141	0.00091	U	0.040	0.00091	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-142	0.00097	U	0.040	0.00097	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-143	0.0010	U C134	0.080	0.0010	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-144	0.00027	U	0.040	0.00027	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-145	0.00020	U	0.040	0.00020	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-146	0.00086	U	0.040	0.00086	ng/L		01/05/21 14:43	01/14/21 17:41	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-45806/7-A
Matrix: Water
Analysis Batch: 46055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45806

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-147	0.00098	U C	0.080	0.00098	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-148	0.00028	U	0.040	0.00028	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-149	0.00098	U C147	0.080	0.00098	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-150	0.00019	U	0.040	0.00019	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-151	0.00126	J q C135	0.080	0.00029	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-152	0.00021	U	0.040	0.00021	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-153	0.00068	U C	0.080	0.00068	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-154	0.00023	U	0.040	0.00023	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-155	0.000538	J q	0.040	0.00019	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-156	0.00084	U C	0.080	0.00084	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-157	0.00084	U C156	0.080	0.00084	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-158	0.00061	U	0.040	0.00061	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-159	0.00065	U	0.040	0.00065	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-160	0.00078	U C129	0.16	0.00078	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-161	0.00064	U	0.040	0.00064	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-162	0.00064	U	0.040	0.00064	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-163	0.00078	U C129	0.16	0.00078	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-164	0.00068	U	0.040	0.00068	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-165	0.00073	U	0.040	0.00073	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-166	0.00075	U C128	0.080	0.00075	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-167	0.00045	U	0.040	0.00045	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-168	0.00068	U C153	0.080	0.00068	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-169	0.00055	U	0.040	0.00055	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-170	0.00049	U	0.040	0.00049	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-171	0.00051	U C	0.080	0.00051	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-172	0.00051	U	0.040	0.00051	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-173	0.00051	U C171	0.080	0.00051	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-174	0.00048	U	0.040	0.00048	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-175	0.00046	U	0.040	0.00046	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-176	0.00035	U	0.040	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-177	0.00049	U	0.040	0.00049	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-178	0.00050	U	0.040	0.00050	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-179	0.00037	U	0.040	0.00037	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-180	0.00039	U C	0.080	0.00039	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-181	0.00046	U	0.040	0.00046	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-182	0.00044	U	0.040	0.00044	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-183	0.00133	J q C	0.080	0.00045	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-184	0.00038	U	0.040	0.00038	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-185	0.00133	J q C183	0.080	0.00045	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-186	0.00037	U	0.040	0.00037	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-187	0.00043	U	0.040	0.00043	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-188	0.00034	U	0.040	0.00034	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-189	0.00050	U	0.040	0.00050	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-190	0.00033	U	0.040	0.00033	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-191	0.00035	U	0.040	0.00035	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-192	0.00123	J	0.040	0.00039	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-193	0.00039	U C180	0.080	0.00039	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-194	0.00034	U	0.040	0.00034	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-195	0.00037	U	0.040	0.00037	ng/L		01/05/21 14:43	01/14/21 17:41	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-45806/7-A
Matrix: Water
Analysis Batch: 46055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45806

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-196	0.00023	U	0.040	0.00023	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-197	0.00018	U	0.040	0.00018	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-198	0.000915	J q C	0.080	0.00023	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-199	0.000915	J q C198	0.080	0.00023	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-200	0.00016	U	0.040	0.00016	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-201	0.00016	U	0.040	0.00016	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-202	0.00018	U	0.040	0.00018	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-203	0.00021	U	0.040	0.00021	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-204	0.00112	J	0.040	0.00018	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-205	0.00028	U	0.040	0.00028	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-206	0.0014	U	0.040	0.0014	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-207	0.00097	U	0.040	0.00097	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-208	0.00098	U	0.040	0.00098	ng/L		01/05/21 14:43	01/14/21 17:41	1
PCB-209	0.00010	U	0.040	0.00010	ng/L		01/05/21 14:43	01/14/21 17:41	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*75*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-3L	*71*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-4L	*69*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-15L	*73*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-19L	*72*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-37L	*72*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-54L	*68*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-77L	*74*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-81L	*75*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-104L	*57*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-105L	*97*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-114L	*93*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-118L	*92*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-123L	*87*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-126L	*86*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-155L	*54*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-156L	*89*	*C*	*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-157L	*89*	*C156*	*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-167L	*94*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-169L	*93*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-170L	*89*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-188L	*78*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-189L	*96*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-202L	*89*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-205L	*80*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-206L	*78*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-208L	*80*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-209L	*70*		*30 - 140*	*01/05/21 14:43*	*01/14/21 17:41*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-28L	*95*		*40 - 125*	*01/05/21 14:43*	*01/14/21 17:41*	*1*
PCB-111L	*96*		*40 - 125*	*01/05/21 14:43*	*01/14/21 17:41*	*1*

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-45806/7-A
Matrix: Water
Analysis Batch: 46055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45806

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-178L	*102*		*40 - 125*	*01/05/21 14:43*	*01/14/21 17:41*	*1*

Lab Sample ID: LCS 140-45806/6-A
Matrix: Water
Analysis Batch: 46055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45806

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	1.00	1.018		ng/L		102	50 - 150
PCB-3	1.00	1.120		ng/L		112	50 - 150
PCB-4	1.00	1.209		ng/L		121	50 - 150
PCB-15	1.00	1.478		ng/L		148	50 - 150
PCB-19	1.00	1.184		ng/L		118	50 - 150
PCB-37	1.00	1.205		ng/L		120	50 - 150
PCB-54	1.00	1.009		ng/L		101	50 - 150
PCB-77	1.00	1.159		ng/L		116	50 - 150
PCB-81	1.00	1.181		ng/L		118	50 - 150
PCB-104	1.00	1.087		ng/L		109	50 - 150
PCB-105	1.00	1.204		ng/L		120	50 - 150
PCB-114	1.00	1.287		ng/L		129	50 - 150
PCB-118	1.00	1.210		ng/L		121	50 - 150
PCB-123	1.00	1.300		ng/L		130	50 - 150
PCB-126	1.00	1.401		ng/L		140	50 - 150
PCB-155	1.00	0.994		ng/L		99	50 - 150
PCB-156	2.00	2.740	C	ng/L		137	50 - 150
PCB-157	2.00	2.740	C156	ng/L		137	50 - 150
PCB-167	1.00	1.330		ng/L		133	50 - 150
PCB-169	1.00	1.261		ng/L		126	50 - 150
PCB-188	1.00	1.109		ng/L		111	50 - 150
PCB-189	1.00	1.307		ng/L		131	50 - 150
PCB-202	1.00	1.115		ng/L		111	50 - 150
PCB-205	1.00	1.496		ng/L		150	50 - 150
PCB-206	1.00	1.222		ng/L		122	50 - 150
PCB-208	1.00	1.245		ng/L		125	50 - 150
PCB-209	1.00	1.368		ng/L		137	50 - 150

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
PCB-1L	*71*		*30 - 140*
PCB-3L	*69*		*30 - 140*
PCB-4L	*66*		*30 - 140*
PCB-15L	*74*		*30 - 140*
PCB-19L	*71*		*30 - 140*
PCB-37L	*75*		*30 - 140*
PCB-54L	*71*		*30 - 140*
PCB-77L	*80*		*30 - 140*
PCB-81L	*79*		*30 - 140*
PCB-104L	*64*		*30 - 140*
PCB-105L	*92*		*30 - 140*
PCB-114L	*90*		*30 - 140*

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 140-45806/6-A
Matrix: Water
Analysis Batch: 46055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45806

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-118L	92		30 - 140
PCB-123L	87		30 - 140
PCB-126L	83		30 - 140
PCB-155L	69		30 - 140
PCB-156L	84	C	30 - 140
PCB-157L	84	C156	30 - 140
PCB-167L	89		30 - 140
PCB-169L	87		30 - 140
PCB-170L	84		30 - 140
PCB-188L	88		30 - 140
PCB-189L	91		30 - 140
PCB-202L	91		30 - 140
PCB-205L	76		30 - 140
PCB-206L	73		30 - 140
PCB-208L	77		30 - 140
PCB-209L	66		30 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
PCB-28L	95		40 - 125
PCB-111L	97		40 - 125
PCB-178L	102		40 - 125

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 460-748681/1-A
Matrix: Water
Analysis Batch: 748835

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 748681

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.61	U	2.0	0.61	ug/L		12/22/20 05:54	12/22/20 12:43	1
Cadmium	0.43	U	2.0	0.43	ug/L		12/22/20 05:54	12/22/20 12:43	1
Chromium	0.45	U	4.0	0.45	ug/L		12/22/20 05:54	12/22/20 12:43	1
Copper	1.1	U	4.0	1.1	ug/L		12/22/20 05:54	12/22/20 12:43	1
Nickel	0.84	U	4.0	0.84	ug/L		12/22/20 05:54	12/22/20 12:43	1
Lead	0.071	U	1.2	0.071	ug/L		12/22/20 05:54	12/22/20 12:43	1
Zinc	2.6	U	16.0	2.6	ug/L		12/22/20 05:54	12/22/20 12:43	1
Silver	0.12	U	2.0	0.12	ug/L		12/22/20 05:54	12/22/20 12:43	1

Lab Sample ID: LCS 460-748681/2-A
Matrix: Water
Analysis Batch: 748835

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 748681

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	51.48		ug/L		103	85 - 115
Cadmium	25.0	26.19		ug/L		105	85 - 115
Chromium	50.0	51.69		ug/L		103	85 - 115
Copper	50.0	51.89		ug/L		104	85 - 115
Nickel	50.0	51.52		ug/L		103	85 - 115
Lead	25.0	25.01		ug/L		100	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 460-748681/2-A
Matrix: Water
Analysis Batch: 748835

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 748681

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Zinc			250	256.7		ug/L		103	85 - 115		
Silver			25.0	24.97		ug/L		100	85 - 115		

Lab Sample ID: 460-225144-A-1-B MS
Matrix: Water
Analysis Batch: 748835

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 748681

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	0.61	U	50.0	45.17		ug/L		90	70 - 130		
Cadmium	0.43	U	25.0	23.85		ug/L		95	70 - 130		
Chromium	4.3		50.0	50.78		ug/L		93	70 - 130		
Copper	25.9		50.0	72.49		ug/L		93	70 - 130		
Nickel	10.6		50.0	58.21		ug/L		95	70 - 130		
Lead	2.1		25.0	24.84		ug/L		91	70 - 130		
Zinc	104		250	319.1		ug/L		86	70 - 130		
Silver	0.12	U	25.0	22.82		ug/L		91	70 - 130		

Lab Sample ID: 460-225217-B-1-B DU
Matrix: Water
Analysis Batch: 748835

Client Sample ID: Duplicate
Prep Type: Total Recoverable
Prep Batch: 748681

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	4.3			4.18		ug/L				4	20
Cadmium	2.1			2.33		ug/L				9	20
Chromium	0.45	U		0.45	U	ug/L				NC	20
Copper	2.2	J		2.15	J	ug/L				4	20
Nickel	35.5			35.71		ug/L				0.5	20
Lead	4.0			4.43		ug/L				11	20
Zinc	42.5			42.91		ug/L				0.9	20
Silver	0.12	U		0.12	U	ug/L				NC	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 460-750057/1-A
Matrix: Water
Analysis Batch: 750120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 750057

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.091	U	0.20	0.091	ug/L		12/29/20 12:04	12/29/20 13:41	1

Lab Sample ID: LCS 460-750057/2-A
Matrix: Water
Analysis Batch: 750120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 750057

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			1.00	1.07		ug/L		107	85 - 115		

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 200-56574-E-9-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750120 — **Prep Batch: 750057**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.098	J	1.00	0.985		ug/L		89	70 - 130		

Lab Sample ID: 200-56574-E-9-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750120 — **Prep Batch: 750057**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.098	J	1.00	1.09		ug/L		100	70 - 130	10	20

Lab Sample ID: 200-56574-E-9-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750120 — **Prep Batch: 750057**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Mercury	0.098	J		0.108	J	ug/L				10	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 460-750106/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	5.0	mg/L			12/29/20 15:27	1
SGT-HEM	5.0	U	5.0	5.0	mg/L			12/29/20 15:27	1

Lab Sample ID: LCS 460-750106/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750106

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
HEM			40.0	35.60		mg/L		89	78 - 114		
SGT-HEM			20.0	14.80		mg/L		74	64 - 132		

Lab Sample ID: LCSD 460-750106/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750106

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM			40.0	36.10		mg/L		90	78 - 114	1	18
SGT-HEM			20.0	14.80		mg/L		74	64 - 132	0	34

Lab Sample ID: 480-179447-A-2 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750106

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
HEM	5.0	U	40.0	35.60		mg/L		89	78 - 114		
SGT-HEM	5.0	U	20.0	14.40		mg/L		72	64 - 132		

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 460-749785/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749829 — **Prep Batch: 749785**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0040	U	0.010	0.0040	mg/L		12/28/20 10:22	12/28/20 12:55	1

Lab Sample ID: LCS 460-749785/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749829 — **Prep Batch: 749785**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.102		mg/L		102	90 - 110

Lab Sample ID: 460-225011-J-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749829 — **Prep Batch: 749785**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0040	U F1	0.200	0.240	F1	mg/L		120	90 - 110

Lab Sample ID: 460-225011-J-2-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749829 — **Prep Batch: 749785**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.0040	U F1	0.200	0.246	F1	mg/L		123	90 - 110	2	35

Method: 420.1 - Phenolics, Total Recoverable

Lab Sample ID: MB 460-749800/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749871 — **Prep Batch: 749800**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total	0.041	U	0.050	0.041	mg/L		12/28/20 11:56	12/28/20 16:51	1

Lab Sample ID: LCS 460-749800/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749871 — **Prep Batch: 749800**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.400	0.422		mg/L		105	86 - 118

Lab Sample ID: 460-223999-F-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749871 — **Prep Batch: 749800**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.041	U	0.400	0.425		mg/L		106	86 - 118

Method: 420.1 - Phenolics, Total Recoverable (Continued)

Lab Sample ID: 460-223999-F-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749871 — **Prep Batch: 749800**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenols, Total	0.041	U	0.400	0.435		mg/L		109	86 - 118	2	30

Lab Sample ID: MRL 460-749871/11 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749871

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Phenols, Total			0.0500	0.0527		mg/L		105	50 - 150		

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 460-749006/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749006

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	2.5	U	2.5	2.5	mg/L			12/23/20 08:17	1

Lab Sample ID: LCSSRM 460-749006/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749006

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			57.6	54.00		mg/L		93.8	79.0 - 113.4		

Lab Sample ID: 460-225166-B-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749006

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	158			154.0		mg/L				3	5

Method: SM 4500 NH3 G - Ammonia

Lab Sample ID: MB 460-750110/73 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750110

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.050	U	0.10	0.050	mg/L			12/29/20 15:11	1

Lab Sample ID: LCS 460-750110/74 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750110

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia			2.00	2.01		mg/L		101	89 - 113		

Method: SM 4500 NH3 G - Ammonia (Continued)

Lab Sample ID: MRL 460-750110/12 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750110

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia			0.100	0.103		mg/L		103	50 - 150		

Lab Sample ID: 460-225552-I-4 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750110

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia	6.5		2.00	8.45		mg/L		99	89 - 113		

Lab Sample ID: 460-225552-I-4 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 750110

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	6.5		2.00	8.48		mg/L		100	89 - 113	0	10

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 460-748081/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 748081

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	1.0	U	1.0	1.0	mg/L			12/19/20 13:20	1

Lab Sample ID: LCS 460-748081/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 748081

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Biochemical Oxygen Demand			146	149.0		mg/L		102	84.6 - 115.4		

Lab Sample ID: 460-225159-B-2 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 748081

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Biochemical Oxygen Demand	8.6			5.62	F3	mg/L				42	30

Method: SM 5220D - COD

Lab Sample ID: MB 460-749544/31 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749544

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.3	U	10.0	3.3	mg/L			12/26/20 15:48	1

Method: SM 5220D - COD (Continued)

Lab Sample ID: LCSSRM 460-749544/32 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749544

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand			117	111.9		mg/L		95.6	77.2 - 118.8		

Lab Sample ID: MRL 460-749544/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749544

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand			10.0	9.35	J	mg/L		94	50 - 150		

Lab Sample ID: 460-225462-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749544

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand	28.1	F1	50.0	56.33	F1	mg/L		56	90 - 110		

Lab Sample ID: 460-225462-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 749544

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	28.1	F1	50.0	57.60	F1	mg/L		59	90 - 110	2	10

Method: SM5210B - Carbonaceous BOD, 20 day

Lab Sample ID: USB 460-748084/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 748084

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand 20	1.0	U	1.0	1.0	mg/L			12/19/20 17:15	1

Lab Sample ID: 460-225164-1 DU — **Client Sample ID: Outfall Comp**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 748084

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Carbonaceous Biochemical Oxygen Demand 20	149			131.0		mg/L				13	30

QC Association Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Specialty Organics

Prep Batch: 45806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-2	Outfall Grab	Total/NA	Water	HRMS-Sepf	
MB 140-45806/7-A	Method Blank	Total/NA	Water	HRMS-Sepf	
LCS 140-45806/6-A	Lab Control Sample	Total/NA	Water	HRMS-Sepf	

Analysis Batch: 46055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-2	Outfall Grab	Total/NA	Water	1668A	45806
MB 140-45806/7-A	Method Blank	Total/NA	Water	1668A	45806
LCS 140-45806/6-A	Lab Control Sample	Total/NA	Water	1668A	45806

Metals

Prep Batch: 748681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-1	Outfall Comp	Total Recoverable	Water	200.8	
MB 460-748681/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 460-748681/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
460-225144-A-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	
460-225217-B-1-B DU	Duplicate	Total Recoverable	Water	200.8	

Analysis Batch: 748835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-1	Outfall Comp	Total Recoverable	Water	200.8	748681
MB 460-748681/1-A	Method Blank	Total Recoverable	Water	200.8	748681
LCS 460-748681/2-A	Lab Control Sample	Total Recoverable	Water	200.8	748681
460-225144-A-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	748681
460-225217-B-1-B DU	Duplicate	Total Recoverable	Water	200.8	748681

Prep Batch: 750057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-1	Outfall Comp	Total/NA	Water	245.1	
MB 460-750057/1-A	Method Blank	Total/NA	Water	245.1	
LCS 460-750057/2-A	Lab Control Sample	Total/NA	Water	245.1	
200-56574-E-9-C MS	Matrix Spike	Total/NA	Water	245.1	
200-56574-E-9-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	
200-56574-E-9-B DU	Duplicate	Total/NA	Water	245.1	

Analysis Batch: 750120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-1	Outfall Comp	Total/NA	Water	245.1	750057
MB 460-750057/1-A	Method Blank	Total/NA	Water	245.1	750057
LCS 460-750057/2-A	Lab Control Sample	Total/NA	Water	245.1	750057
200-56574-E-9-C MS	Matrix Spike	Total/NA	Water	245.1	750057
200-56574-E-9-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	750057
200-56574-E-9-B DU	Duplicate	Total/NA	Water	245.1	750057

General Chemistry

Analysis Batch: 748081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-1	Outfall Comp	Total/NA	Water	SM 5210B	
USB 460-748081/1	Method Blank	Total/NA	Water	SM 5210B	

General Chemistry (Continued)

Analysis Batch: 748081 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 460-748081/2	Lab Control Sample	Total/NA	Water	SM 5210B	
460-225159-B-2 DU	Duplicate	Total/NA	Water	SM 5210B	

Analysis Batch: 748084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-1	Outfall Comp	Total/NA	Water	SM5210B	
USB 460-748084/1	Method Blank	Total/NA	Water	SM5210B	
460-225164-1 DU	Outfall Comp	Total/NA	Water	SM5210B	

Analysis Batch: 749006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-1	Outfall Comp	Total/NA	Water	SM 2540D	
MB 460-749006/1	Method Blank	Total/NA	Water	SM 2540D	
LCSSRM 460-749006/2	Lab Control Sample	Total/NA	Water	SM 2540D	
460-225166-B-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 749544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-1	Outfall Comp	Total/NA	Water	SM 5220D	
MB 460-749544/31	Method Blank	Total/NA	Water	SM 5220D	
LCSSRM 460-749544/32	Lab Control Sample	Total/NA	Water	SM 5220D	
MRL 460-749544/3	Lab Control Sample	Total/NA	Water	SM 5220D	
460-225462-A-1 MS	Matrix Spike	Total/NA	Water	SM 5220D	
460-225462-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5220D	

Prep Batch: 749785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-2	Outfall Grab	Total/NA	Water	Distill/CN	
MB 460-749785/2-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 460-749785/3-A	Lab Control Sample	Total/NA	Water	Distill/CN	
460-225011-J-2-B MS	Matrix Spike	Total/NA	Water	Distill/CN	
460-225011-J-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/CN	

Prep Batch: 749800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-2	Outfall Grab	Total/NA	Water	Distill/Phenol	
MB 460-749800/1-A	Method Blank	Total/NA	Water	Distill/Phenol	
LCS 460-749800/2-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	
460-223999-F-1-B MS	Matrix Spike	Total/NA	Water	Distill/Phenol	
460-223999-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/Phenol	

Analysis Batch: 749829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-2	Outfall Grab	Total/NA	Water	335.4	749785
MB 460-749785/2-A	Method Blank	Total/NA	Water	335.4	749785
LCS 460-749785/3-A	Lab Control Sample	Total/NA	Water	335.4	749785
MRL 460-749829/10	Lab Control Sample	Total/NA	Water	335.4	
460-225011-J-2-B MS	Matrix Spike	Total/NA	Water	335.4	749785
460-225011-J-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	335.4	749785

QC Association Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

General Chemistry

Analysis Batch: 749871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-2	Outfall Grab	Total/NA	Water	420.1	749800
MB 460-749800/1-A	Method Blank	Total/NA	Water	420.1	749800
LCS 460-749800/2-A	Lab Control Sample	Total/NA	Water	420.1	749800
MRL 460-749871/11	Lab Control Sample	Total/NA	Water	420.1	
460-223999-F-1-B MS	Matrix Spike	Total/NA	Water	420.1	749800
460-223999-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	420.1	749800

Analysis Batch: 750106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-1	Outfall Comp	Total/NA	Water	1664A	
460-225164-2	Outfall Grab	Total/NA	Water	1664A	
MB 460-750106/1	Method Blank	Total/NA	Water	1664A	
LCS 460-750106/2	Lab Control Sample	Total/NA	Water	1664A	
LCSD 460-750106/3	Lab Control Sample Dup	Total/NA	Water	1664A	
480-179447-A-2 MS	Matrix Spike	Total/NA	Water	1664A	

Analysis Batch: 750110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-1	Outfall Comp	Total/NA	Water	SM 4500 NH3 G	
MB 460-750110/73	Method Blank	Total/NA	Water	SM 4500 NH3 G	
LCS 460-750110/74	Lab Control Sample	Total/NA	Water	SM 4500 NH3 G	
MRL 460-750110/12	Lab Control Sample	Total/NA	Water	SM 4500 NH3 G	
460-225552-I-4 MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 G	
460-225552-I-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 G	

Field Service / Mobile Lab

Analysis Batch: 749311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-225164-2	Outfall Grab	Total/NA	Water	SM4500 H+	

Lab Chronicle

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Client Sample ID: Outfall Comp

Lab Sample ID: 460-225164-1
Date Collected: 12/18/20 09:35
Matrix: Water
Date Received: 12/18/20 19:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			748681	12/22/20 05:55	GMC	TAL EDI
Total Recoverable	Analysis	200.8		1	748835	12/22/20 14:01	YZH	TAL EDI
Total/NA	Prep	245.1			750057	12/29/20 12:04	RBS	TAL EDI
Total/NA	Analysis	245.1		1	750120	12/29/20 13:51	RBS	TAL EDI
Total/NA	Analysis	1664A		1	750106	12/29/20 15:27	AAA	TAL EDI
Total/NA	Analysis	SM 2540D		1	749006	12/23/20 08:17	AAP	TAL EDI
Total/NA	Analysis	SM 4500 NH3 G		1	750110	12/29/20 15:43	DLE	TAL EDI
Total/NA	Analysis	SM 5210B		1	748081	12/19/20 14:23	MBE	TAL EDI
Total/NA	Analysis	SM 5220D		2	749544	12/26/20 15:48	HTV	TAL EDI
Total/NA	Analysis	SM5210B		1	748084	12/19/20 17:20	MBE	TAL EDI

Client Sample ID: Outfall Grab

Lab Sample ID: 460-225164-2
Date Collected: 12/18/20 09:40
Matrix: Water
Date Received: 12/18/20 19:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sepf			45806	01/05/21 14:43	SMA	TAL KNX
Total/NA	Analysis	1668A		1	46055	01/14/21 23:51	JMN	TAL KNX
Total/NA	Analysis	1664A		1	750106	12/29/20 15:27	AAA	TAL EDI
Total/NA	Prep	Distill/CN			749785	12/28/20 10:22	IAA	TAL EDI
Total/NA	Analysis	335.4		1	749829	12/28/20 13:09	HTV	TAL EDI
Total/NA	Prep	Distill/Phenol			749800	12/28/20 11:56	IAA	TAL EDI
Total/NA	Analysis	420.1		1	749871	12/28/20 16:51	HTV	TAL EDI
Total/NA	Analysis	SM4500 H+		1	749311	12/18/20 09:40	DMM	TAL EDI

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Laboratory: Eurofins TestAmerica, Edison

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

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0200	09-30-20 *
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	12-31-21
Georgia	State	12028 (NJ)	07-01-21
Massachusetts	State	M-NJ312	06-30-21
New Jersey	NELAP	12028	06-30-21
New York	NELAP	11452	04-01-21
Pennsylvania	NELAP	68-00522	02-28-21
Rhode Island	State	LAO00132	12-31-20
USDA	US Federal Programs	P330-20-00244	11-03-23

Laboratory: Eurofins TestAmerica, Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
ANAB	Dept. of Energy	L2311.01	02-13-22
ANAB	ISO/IEC 17025	L2311	02-13-22
ANAB	ISO/IEC 17025	L2311	02-14-22
Arkansas DEQ	State	88-0688	06-17-21
California	State	2423	06-30-21
Colorado	State	TN00009	02-28-21
Connecticut	State	PH-0223	09-30-21
Florida	NELAP	E87177	07-01-21
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-21
Kansas	NELAP	E-10349	10-31-21
Kentucky (DW)	State	90101	01-01-21 *
Louisiana	NELAP	83979	06-30-21
Louisiana (DW)	State	LA019	12-31-21
Maryland	State	277	03-31-21
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-21
New Hampshire	NELAP	299919	01-17-21
New Jersey	NELAP	TN001	07-01-21
New York	NELAP	10781	03-31-21
North Carolina (DW)	State	21705	07-31-21
North Carolina (WW/SW)	State	64	12-31-21
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-21
Oregon	NELAP	TNI0189	01-01-22
Pennsylvania	NELAP	68-00576	12-31-21
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-21
Virginia	NELAP	460176	09-14-21
Washington	State	C593	01-19-21
West Virginia (DW)	State	9955C	01-01-21 *

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

Laboratory: Eurofins TestAmerica, Knoxville (Continued)

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

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	345	05-01-21
Wisconsin	State	998044300	08-31-21

Method Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Method	Method Description	Protocol	Laboratory
1668A	Chlorinated Biphenyl Congeners (HRGC/HRMS)	EPA	TAL KNX
200.8	Metals (ICP/MS)	EPA	TAL EDI
245.1	Mercury (CVAA)	EPA	TAL EDI
1664A	HEM and SGT-HEM	1664A	TAL EDI
335.4	Cyanide, Total	MCAWW	TAL EDI
420.1	Phenolics, Total Recoverable	MCAWW	TAL EDI
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL EDI
SM 4500 NH3 G	Ammonia	SM	TAL EDI
SM 5210B	BOD, 5-Day	SM	TAL EDI
SM 5220D	COD	SM	TAL EDI
SM5210B	Carbonaceous BOD, 20 day	SM	TAL EDI
SM4500 H+	pH, Field	SM	TAL EDI
200.8	Preparation, Total Recoverable Metals	EPA	TAL EDI
245.1	Preparation, Mercury	EPA	TAL EDI
Distill/CN	Distillation, Cyanide	None	TAL EDI
Distill/Phenol	Distillation, Phenolics	None	TAL EDI
HRMS-Sepf	Separatory Funnel (Liquid-Liquid) Extraction	EPA	TAL KNX

Protocol References:

1664A = EPA-821-98-002
EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900
TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: IES Engineers
Project/Site: Quarterly #183765;

Job ID: 460-225164-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
460-225164-1	Outfall Comp	Water	12/18/20 09:35	12/18/20 19:30	
460-225164-2	Outfall Grab	Water	12/18/20 09:40	12/18/20 19:30	

Eurofins TestAmerica, Edison
777 New Durham Road
Edison, NJ 08817
Phone: 732-549-3900 Fax: 732-549-3679

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Gilmore, Julie L	Carrier Tracking No(s):	COC No: 460-60394.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Julie.Gilmore@Eurofinset.com	State of Origin: Pennsylvania	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 460-225164-1
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 1/18/2021			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37921				
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:			
Email:	WO #:			
Project Name: Quarterly #183765;	Project #: 46028651			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1668A/1668_P_Sep 209 PCBs	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall Grab (460-225164-2)	12/18/20	09:40 Eastern		Water			X	2	RL/ND

CUSTODY SEALS INTACT
RECEIVED AT RT 1.6/ CT1.7°C
BKD 12-23-20
1 COOLER FED X# 1161 6402 9792 PO

460-225164 Chain of Custody

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: [signature]	Date/Time: 12/21/20 1900	Company: ETA Ed.	Received by: [signature]	Date/Time: 12-23-20 11:00	Company: ETA KNX
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Loc: 460
225164

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	✓			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : 5168 Correction factor: +0.1°C	✓			☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?			✓	☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: 8178 2021/04	✓		✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

Project #: _____ PM Instructions: _____

Sample Receiving Associate: [signature] Date: 12-23-20

QA026R32.doc, 062719

TestAmerica South Jersey
3000 Lincoln Drive East Suite A
Marlton, NJ 08053
Phone (856) 334-1030 Fax (856) 222-1984

2.8 cft 1/24

Chain of Custody Record Field Services SJO

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: D. McCarty	Lab PM: Bennett, Allison L	Carrier Tracking No(s):	COC No: 460-109420-70098.1
Client Contact: Michael Tucci	Phone:	E-Mail: allison.bennett@testamericainc.com		Page: Page 1 of 1
Company: IES Engineers				Job #: 225164
Address: 1720 Walton Road	Due Date Requested:			
City: Blue Bell	TAT Requested (days):			
State, Zip: PA, 19422				
Phone:	PO #: Purchase Order Requested			
Email: MTucci@iesengineers.com	WO #:			
Project Name: Quarterly #183765;	Project #: 46028651			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500_NH3_H - Ammonia (Comp)	200.8, 245.1 - Cd, Cr, Cu, Pb, Ni, Ag, As, Zn, Hg (comp)	SM5210B_CBOD_20 - CBOD, 20-day (comp)	1664A_NP - Oil & Grease (Comp)	2540D - TSS (comp)	5210B - BOD, 5-day (comp)	5220D - COD (Comp)		420.1 - Phenolics, Total Recoverable (grab)	335.4 - Cyanide, Total (Grab)	1664A_NP - Oil & Grease/TPH (Grab)	1668A - 209 PCBs (grab)	SM4500_H+_F - pH, Field (price included in field servi	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	D	N	A	N	N	S		S	B	A	N	N		
Outfall Comp	12-18-20	0935	C	W			X	X	X	X	X	X	X							7	1
Outfall Grab	12-18-20	0940	G	W											X	X	X	X	X	~~7~~ 6	2

pH (S.U.): 6.08
Temp (°C): 14.4

SHORT HOLD

460-225164 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	12-18-20 / 1500	YA	[signature]	12/18/20	[signature]
[signature]	12/18/20	[signature]	1930 [signature]	12/18/20 1930	TA GSI

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 08/04/2016

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 225164

Number of Coolers: 1 IR Gun # #IR4

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	8 °C	°C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1		<2		<2											
2								<2				>12			

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

**Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: DM Date: 12/18/20

EDS-WI-038, Rev 4, 06/09/2014

Login Sample Receipt Checklist

Client: IES Engineers

Job Number: 460-225164-1

Login Number: 225164
List Number: 1
Creator: Rivera, Kenneth

List Source: Eurofins TestAmerica, Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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 containers received 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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT 2

SUMMARY OF THE PCB LABORATORY RESULTS

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison

Lab Job ID: 460-225164-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-225164-2
Sampling Date	TDS<2500	TDS<2500			12/18/2020 09:40:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
WATER BY 1668A					
PCB-1	NA	NA	0.087		0.043
PCB-10	NA	NA	0.014	J q	0.043
PCB-100	NA	NA	0.0058	C93	0.086
PCB-101	NA	NA	0.34	90 B	0.13
PCB-102	NA	NA	0.010	C98	0.086
PCB-103	NA	NA	0.00096	U	0.043
PCB-104	NA	NA	0.00073	U	0.043
PCB-105	NA	NA	0.088		0.043
PCB-106	NA	NA	0.0011	U	0.043
PCB-107	NA	NA	0.011	J q	0.043
PCB-108	NA	NA	0.0065	J q C	0.086
PCB-109	NA	NA	0.20	86 B	0.26
PCB-11	NA	NA	0.096	B	0.064
PCB-110	NA	NA	0.31	C B	0.086
PCB-111	NA	NA	0.00068	U	0.043
PCB-112	NA	NA	0.0024	J q	0.043
PCB-113	NA	NA	0.34	90 B	0.13
PCB-114	NA	NA	0.0064	J	0.043
PCB-115	NA	NA	0.31	10 B	0.086
PCB-116	NA	NA	0.049	85 B	0.13
PCB-117	NA	NA	0.049	85 B	0.13
PCB-118	NA	NA	0.18	B	0.043
PCB-119	NA	NA	0.20	86 B	0.26
PCB-12	NA	NA	0.13	C	0.086
PCB-120	NA	NA	0.00069	U	0.043
PCB-121	NA	NA	0.00071	U	0.043
PCB-122	NA	NA	0.0033	J q	0.043
PCB-123	NA	NA	0.0037	J q	0.043
PCB-124	NA	NA	0.0065	C108	0.086
PCB-125	NA	NA	0.20	86 B	0.26
PCB-126	NA	NA	0.0014	U	0.043
PCB-127	NA	NA	0.0011	U	0.043
PCB-128	NA	NA	0.033	J C	0.086
PCB-129	NA	NA	0.28	C	0.17
PCB-13	NA	NA	0.13	C12	0.086
PCB-130	NA	NA	0.0084	J q	0.043
PCB-131	NA	NA	0.0026	U	0.043
PCB-132	NA	NA	0.095		0.043
PCB-133	NA	NA	0.0026	J q	0.043
PCB-134	NA	NA	0.016	J q C	0.086
PCB-135	NA	NA	0.072	q C B	0.086
PCB-136	NA	NA	0.036	J B	0.043
PCB-137	NA	NA	0.0090	J q	0.043
PCB-138	NA	NA	0.28	C129	0.17
PCB-139	NA	NA	0.0021	U C	0.086
PCB-14	NA	NA	0.0050	U	0.043
PCB-140	NA	NA	0.0021	C139	0.086
PCB-141	NA	NA	0.059		0.043
PCB-142	NA	NA	0.0023	U	0.043
PCB-143	NA	NA	0.016	C134	0.086
PCB-144	NA	NA	0.0096	J	0.043
PCB-145	NA	NA	0.00061	U	0.043
PCB-146	NA	NA	0.033	J	0.043
PCB-147	NA	NA	0.27	C	0.086
PCB-148	NA	NA	0.00086	U	0.043
PCB-149	NA	NA	0.27	C147	0.086
PCB-15	NA	NA	0.25		0.043
PCB-150	NA	NA	0.00059	U	0.043
PCB-151	NA	NA	0.072	35 B	0.086
PCB-152	NA	NA	0.00063	U	0.043
PCB-153	NA	NA	0.23	C	0.086

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison
Lab Job ID: 460-225164-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-225164-2
Sampling Date	TDS<2500	TDS<2500			12/18/2020 09:40:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-154	NA	NA	0.00070	U	0.043
PCB-155	NA	NA	0.00059	U	0.043
PCB-156	NA	NA	0.035	J C	0.086
PCB-157	NA	NA	0.035	C156	0.086
PCB-158	NA	NA	0.028	J	0.043
PCB-159	NA	NA	0.0028	J q	0.043
PCB-16	NA	NA	0.088		0.043
PCB-160	NA	NA	0.28	C129	0.17
PCB-161	NA	NA	0.0015	U	0.043
PCB-162	NA	NA	0.0015	U	0.043
PCB-163	NA	NA	0.28	C129	0.17
PCB-164	NA	NA	0.019	J	0.043
PCB-165	NA	NA	0.0017	U	0.043
PCB-166	NA	NA	0.033	C128	0.086
PCB-167	NA	NA	0.0072	J	0.043
PCB-168	NA	NA	0.23	C153	0.086
PCB-169	NA	NA	0.0015	U	0.043
PCB-17	NA	NA	0.077		0.043
PCB-170	NA	NA	0.10		0.043
PCB-171	NA	NA	0.019	J q C	0.086
PCB-172	NA	NA	0.013	J	0.043
PCB-173	NA	NA	0.019	C171	0.086
PCB-174	NA	NA	0.084		0.043
PCB-175	NA	NA	0.0022	J q	0.043
PCB-176	NA	NA	0.0075	J	0.043
PCB-177	NA	NA	0.045		0.043
PCB-178	NA	NA	0.014	J	0.043
PCB-179	NA	NA	0.028	J	0.043
PCB-18	NA	NA	0.17	C	0.086
PCB-180	NA	NA	0.19	C	0.086
PCB-181	NA	NA	0.00077	U	0.043
PCB-182	NA	NA	0.0012	J q	0.043
PCB-183	NA	NA	0.049	J C B	0.086
PCB-184	NA	NA	0.00063	U	0.043
PCB-185	NA	NA	0.049	83 B	0.086
PCB-186	NA	NA	0.00061	U	0.043
PCB-187	NA	NA	0.088		0.043
PCB-188	NA	NA	0.00052	U	0.043
PCB-189	NA	NA	0.0026	J q	0.043
PCB-19	NA	NA	0.012	J q	0.043
PCB-190	NA	NA	0.013	J q	0.043
PCB-191	NA	NA	0.0046	J	0.043
PCB-192	NA	NA	0.0013	J q B	0.043
PCB-193	NA	NA	0.19	C180	0.086
PCB-194	NA	NA	0.051		0.043
PCB-195	NA	NA	0.016	J q	0.043
PCB-196	NA	NA	0.015	J q	0.043
PCB-197	NA	NA	0.0015	J	0.043
PCB-198	NA	NA	0.029	J C B	0.086
PCB-199	NA	NA	0.029	98 B	0.086
PCB-2	NA	NA	0.024	J B	0.043
PCB-20	NA	NA	0.30	C B	0.086
PCB-200	NA	NA	0.0028	J q	0.043
PCB-201	NA	NA	0.0028	J	0.043
PCB-202	NA	NA	0.0044	J	0.043
PCB-203	NA	NA	0.019	J	0.043
PCB-204	NA	NA	0.00045	U	0.043
PCB-205	NA	NA	0.0011	U	0.043
PCB-206	NA	NA	0.0075	J q	0.043
PCB-207	NA	NA	0.0010	U	0.043
PCB-208	NA	NA	0.0010	U	0.043
PCB-209	NA	NA	0.0016	J	0.043

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison
Lab Job ID: 460-225164-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-225164-2
Sampling Date	TDS<2500	TDS<2500			12/18/2020 09:40:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-21	NA	NA	0.20	C B	0.086
PCB-22	NA	NA	0.11	B	0.043
PCB-23	NA	NA	0.0010	U	0.043
PCB-24	NA	NA	0.0011	U	0.043
PCB-25	NA	NA	0.026	J	0.043
PCB-26	NA	NA	0.048	J C	0.086
PCB-27	NA	NA	0.014	J	0.043
PCB-28	NA	NA	0.30	20 B	0.086
PCB-29	NA	NA	0.048	C26	0.086
PCB-3	NA	NA	0.11	B	0.043
PCB-30	NA	NA	0.17	C18	0.086
PCB-31	NA	NA	0.26	B	0.043
PCB-32	NA	NA	0.065		0.043
PCB-33	NA	NA	0.20	21 B	0.086
PCB-34	NA	NA	0.0011	U	0.043
PCB-35	NA	NA	0.0069	J q	0.043
PCB-36	NA	NA	0.00099	U	0.043
PCB-37	NA	NA	0.082	B	0.043
PCB-38	NA	NA	0.0011	U	0.043
PCB-39	NA	NA	0.00096	U	0.043
PCB-4	NA	NA	0.14	S	0.064
PCB-40	NA	NA	0.085	J C B	0.13
PCB-41	NA	NA	0.085	40 B	0.13
PCB-42	NA	NA	0.039	J	0.043
PCB-43	NA	NA	0.012	J C	0.086
PCB-44	NA	NA	0.24	C B	0.13
PCB-45	NA	NA	0.029	J C	0.086
PCB-46	NA	NA	0.0084	J q	0.043
PCB-47	NA	NA	0.24	44 B	0.13
PCB-48	NA	NA	0.037	J	0.043
PCB-49	NA	NA	0.11	C B	0.086
PCB-5	NA	NA	0.017	J q	0.043
PCB-50	NA	NA	0.022	J C	0.086
PCB-51	NA	NA	0.029	C45	0.086
PCB-52	NA	NA	0.41	B	0.043
PCB-53	NA	NA	0.022	C50	0.086
PCB-54	NA	NA	0.00031	U	0.043
PCB-55	NA	NA	0.016	J	0.043
PCB-56	NA	NA	0.066	B	0.043
PCB-57	NA	NA	0.0015	U	0.043
PCB-58	NA	NA	0.0016	U	0.043
PCB-59	NA	NA	0.014	J C	0.13
PCB-6	NA	NA	0.13		0.043
PCB-60	NA	NA	0.042	J q	0.043
PCB-61	NA	NA	0.39	C B	0.17
PCB-62	NA	NA	0.014	C59	0.13
PCB-63	NA	NA	0.0057	J	0.043
PCB-64	NA	NA	0.080	B	0.043
PCB-65	NA	NA	0.24	44 B	0.13
PCB-66	NA	NA	0.16	B	0.043
PCB-67	NA	NA	0.0047	J	0.043
PCB-68	NA	NA	0.0051	J	0.043
PCB-69	NA	NA	0.11	49 B	0.086
PCB-7	NA	NA	0.087	q	0.043
PCB-70	NA	NA	0.39	61 B	0.17
PCB-71	NA	NA	0.085	40 B	0.13
PCB-72	NA	NA	0.0015	U	0.043
PCB-73	NA	NA	0.012	C43	0.086
PCB-74	NA	NA	0.39	61 B	0.17
PCB-75	NA	NA	0.014	C59	0.13
PCB-76	NA	NA	0.39	61 B	0.17
PCB-77	NA	NA	0.0078	J	0.043

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison
Lab Job ID: 460-225164-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential			**Outfall Grab**
Lab Sample ID	Used Aquifers	Used Aquifers			460-225164-2
Sampling Date	TDS<2500	TDS<2500			12/18/2020 09:40:00
Matrix					Water
Dilution Factor					1
Unit	ng/l	ng/l			ng/l
			Result	Q	RL
PCB-78	NA	NA	0.0016	U	0.043
PCB-79	NA	NA	0.0031	J	0.043
PCB-8	NA	NA	0.44		0.064
PCB-80	NA	NA	0.0013	U	0.043
PCB-81	NA	NA	0.0014	U	0.043
PCB-82	NA	NA	0.032	J q	0.043
PCB-83	NA	NA	0.17	C B	0.086
PCB-84	NA	NA	0.11		0.043
PCB-85	NA	NA	0.049	J C B	0.13
PCB-86	NA	NA	0.20	J C B	0.26
PCB-87	NA	NA	0.20	86 B	0.26
PCB-88	NA	NA	0.049	J C	0.086
PCB-89	NA	NA	0.0011	U	0.043
PCB-9	NA	NA	0.050	q	0.043
PCB-90	NA	NA	0.34	C B	0.13
PCB-91	NA	NA	0.049	C88	0.086
PCB-92	NA	NA	0.056		0.043
PCB-93	NA	NA	0.0058	J q C	0.086
PCB-94	NA	NA	0.0011	U	0.043
PCB-95	NA	NA	0.36	B	0.043
PCB-96	NA	NA	0.0028	J	0.043
PCB-97	NA	NA	0.20	86 B	0.26
PCB-98	NA	NA	0.010	J q C	0.086
PCB-99	NA	NA	0.17	83 B	0.086

B : Compound was found in the blank and sample.
C : The compound co-eluted with other compounds
C108 : The compound co-eluted with PCB-108
C110 : The compound co-eluted with PCB-110
C12 : The compound co-eluted with PCB-12
C128 : The compound co-eluted with PCB-128
C129 : The compound co-eluted with PCB-129
C134 : The compound co-eluted with PCB-134
C135 : The compound co-eluted with PCB-135
C139 : The compound co-eluted with PCB-139
C147 : The compound co-eluted with PCB-147
C153 : The compound co-eluted with PCB-153
C156 : The compound co-eluted with PCB-156
C171 : The compound co-eluted with PCB-171
C18 : The compound co-eluted with PCB-18
C180 : The compound co-eluted with PCB-180
C183 : The compound co-eluted with PCB-183
C198 : The compound co-eluted with PCB-198
C20 : The compound co-eluted with PCB-20
C21 : The compound co-eluted with PCB-21
C26 : The compound co-eluted with PCB-26
C40 : The compound co-eluted with PCB-40
C43 : The compound co-eluted with PCB-43
C44 : The compound co-eluted with PCB-44
C45 : The compound co-eluted with PCB-45
C49 : The compound co-eluted with PCB-49
C50 : The compound co-eluted with PCB-50
C59 : The compound co-eluted with PCB-59
C61 : The compound co-eluted with PCB-61
C83 : The compound co-eluted with PCB-83
C85 : The compound co-eluted with PCB-85
C86 : The compound co-eluted with PCB-86
C88 : The compound co-eluted with PCB-88
C90 : The compound co-eluted with PCB-90
C93 : The compound co-eluted with PCB-93
C98 : The compound co-eluted with PCB-98
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

Lab Job ID: 460-225164-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID	PA Residential	PA NonResidential	**Outfall Grab**		
Lab Sample ID	Used Aquifers	Used Aquifers	460-225164-2		
Sampling Date	TDS<2500	TDS<2500	12/18/2020 09:40:00		
Matrix			Water		
Dilution Factor			1		
Unit	ng/l	ng/l	ng/l		
			Result	Q	RL

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification crit

S : Ion suppression

U : Indicates the analyte was analyzed for but not detected.

Lab Contact:
Julie Gilmore
Project Manager I
(484)685-0865

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
Lab Job ID: 460-225164-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
WATER BY 1668A
PCB-1
PCB-10
PCB-100
PCB-101
PCB-102
PCB-103
PCB-104
PCB-105
PCB-106
PCB-107
PCB-108
PCB-109
PCB-11
PCB-110
PCB-111
PCB-112
PCB-113
PCB-114
PCB-115
PCB-116
PCB-117
PCB-118
PCB-119
PCB-12
PCB-120
PCB-121
PCB-122
PCB-123
PCB-124
PCB-125
PCB-126
PCB-127
PCB-128
PCB-129
PCB-13
PCB-130
PCB-131
PCB-132
PCB-133
PCB-134
PCB-135
PCB-136
PCB-137
PCB-138
PCB-139
PCB-14
PCB-140
PCB-141
PCB-142
PCB-143
PCB-144
PCB-145
PCB-146
PCB-147
PCB-148
PCB-149
PCB-15
PCB-150
PCB-151
PCB-152
PCB-153

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
Lab Job ID: 460-225164-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
PCB-154
PCB-155
PCB-156
PCB-157
PCB-158
PCB-159
PCB-16
PCB-160
PCB-161
PCB-162
PCB-163
PCB-164
PCB-165
PCB-166
PCB-167
PCB-168
PCB-169
PCB-17
PCB-170
PCB-171
PCB-172
PCB-173
PCB-174
PCB-175
PCB-176
PCB-177
PCB-178
PCB-179
PCB-18
PCB-180
PCB-181
PCB-182
PCB-183
PCB-184
PCB-185
PCB-186
PCB-187
PCB-188
PCB-189
PCB-19
PCB-190
PCB-191
PCB-192
PCB-193
PCB-194
PCB-195
PCB-196
PCB-197
PCB-198
PCB-199
PCB-2
PCB-20
PCB-200
PCB-201
PCB-202
PCB-203
PCB-204
PCB-205
PCB-206
PCB-207
PCB-208
PCB-209

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
Lab Job ID: 460-225164-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
PCB-21
PCB-22
PCB-23
PCB-24
PCB-25
PCB-26
PCB-27
PCB-28
PCB-29
PCB-3
PCB-30
PCB-31
PCB-32
PCB-33
PCB-34
PCB-35
PCB-36
PCB-37
PCB-38
PCB-39
PCB-4
PCB-40
PCB-41
PCB-42
PCB-43
PCB-44
PCB-45
PCB-46
PCB-47
PCB-48
PCB-49
PCB-5
PCB-50
PCB-51
PCB-52
PCB-53
PCB-54
PCB-55
PCB-56
PCB-57
PCB-58
PCB-59
PCB-6
PCB-60
PCB-61
PCB-62
PCB-63
PCB-64
PCB-65
PCB-66
PCB-67
PCB-68
PCB-69
PCB-7
PCB-70
PCB-71
PCB-72
PCB-73
PCB-74
PCB-75
PCB-76
PCB-77

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
Lab Job ID: 460-225164-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit
PCB-78
PCB-79
PCB-8
PCB-80
PCB-81
PCB-82
PCB-83
PCB-84
PCB-85
PCB-86
PCB-87
PCB-88
PCB-89
PCB-9
PCB-90
PCB-91
PCB-92
PCB-93
PCB-94
PCB-95
PCB-96
PCB-97
PCB-98
PCB-99

B : Compound was found in the blank and sa
C : The compound co-eluted with other com
C108 : The compound co-eluted with PCB-1
C110 : The compound co-eluted with PCB-1
C12 : The compound co-eluted with PCB-12
C128 : The compound co-eluted with PCB-1
C129 : The compound co-eluted with PCB-1
C134 : The compound co-eluted with PCB-1
C135 : The compound co-eluted with PCB-1
C139 : The compound co-eluted with PCB-1
C147 : The compound co-eluted with PCB-1
C153 : The compound co-eluted with PCB-1
C156 : The compound co-eluted with PCB-1
C171 : The compound co-eluted with PCB-1
C18 : The compound co-eluted with PCB-18
C180 : The compound co-eluted with PCB-1
C183 : The compound co-eluted with PCB-1
C198 : The compound co-eluted with PCB-1
C20 : The compound co-eluted with PCB-20
C21 : The compound co-eluted with PCB-21
C26 : The compound co-eluted with PCB-26
C40 : The compound co-eluted with PCB-40
C43 : The compound co-eluted with PCB-43
C44 : The compound co-eluted with PCB-44
C45 : The compound co-eluted with PCB-45
C49 : The compound co-eluted with PCB-49
C50 : The compound co-eluted with PCB-50
C59 : The compound co-eluted with PCB-59
C61 : The compound co-eluted with PCB-61
C83 : The compound co-eluted with PCB-83
C85 : The compound co-eluted with PCB-85
C86 : The compound co-eluted with PCB-86
C88 : The compound co-eluted with PCB-88
C90 : The compound co-eluted with PCB-90
C93 : The compound co-eluted with PCB-93
C98 : The compound co-eluted with PCB-98
J : Result is less than the RL but greater than

TestAmerica Laboratories, I
Eurofins TestAmerica, Edis
Lab Job ID: 460-225164-1
Job Description: Quarterly #183765;
For:
IES Engineers
1720 Walton Road
Blue Bell, Pennsylvania 19422

Client ID
Lab Sample ID
Sampling Date
Matrix
Dilution Factor
Unit

q : The reported result is the estimated maxeria and indicates a possible interference.
S : Ion suppression
U : Indicates the analyte was analyzed for b

Lab Contact:
Julie Gilmore
Project Manager I
(484)685-0865

ATTACHMENT 3

WATER METER DATA

Attachment 3				
Lower Bucks Hospital - 501 Bath Road, Bristol, PA				
Water Meter Data				
December 2020				
2" Meter			4" Meter	
Billing Start Date	12/1/2020		Billing Start Date	12/1/2020
Billing End Date	1/4/2021		Billing End Date	1/4/2021
No. of Days (*Billing Period*)	34		No. of Days (*Billing Period*)	34
	Gallons			**Gallons**
2" Meter	64,000		4" Meter	504,700
Total Water Usage for Both Meters is 568,700 gallons				
Average GPD 2"	1,882		Average GPD 4"	14,844
Average Total Flow	16,726	Gallons Per Day		

Notes:

1. The facility currently estimates wastewater discharge flow to be equivalent to the quantity of water purchased based on the facility water bill.

Analytical Report

Serialized: 02/13/2020 04:39pm QC36

MICHAEL GOLDBERG
ROSCOM, INC.
2925 STATE ROAD

CROYDON,PA 19021

Regarding:

ROSCOM, INC.
2925 STATE ROAD
ROS01-MANHOLE IN FRONT PARKING LOT
CROYDON, PA 19021

PROJECT ID:

SR0053 MANHOLE

LABORATORY REPORT NUMBER:

L7179856

PO NUMBER:

13424

Authorized by: Douglas J. Gump
Client Services Manager

Eurofins QC, LLC

Analytical Report

Printed 02/13/20 16:39 QC36

MICHAEL GOLDBERG
ROSCOM, INC.
2925 STATE ROAD
ROS01-MANHOLE IN FRONT PARKING LOT
CROYDON, PA 19021

Regarding:
MICHAEL GOLDBERG
ROSCOM, INC.
2925 STATE ROAD
ROS01-MANHOLE IN FRONT PARKING LOT
CROYDON, PA 19021

Account No: SR0053, ROSCOM, INC. **P.O. No:**13424 **Inv. No:** 2005704 PI
Project No: SR0053 MANHOLE, ROSCOM, INC. **PWSID No:**

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L7179856-1	QTLY ROS01 EFFLUENT MANHOLE COMPOSITE 1/20-21	01/21/20 07:15am NA C	Kenneth McGrady, Eurofins QC, LLC

Received Date/Time/Temp 01/21/20 02:05pm 3.1 C **Iced (Y/N):** Y

--SUBCONTRACTED RESULT REFERENCES--QTLY ROS01 EFFLUENT MANHOLE COMPOSITE 1/20-21

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)

AMMONIA
ARSENIC
BIOCHEMICAL OXYGEN DEMAND
CADMIUM
CHEMICAL OXYGEN DEMAND
CHROMIUM
COPPER
EPA 624+ACROLEIN/ACRYLONITRILE
EPA METHOD 625 SEMI VOLATILES
EPA METHODS 625 DIOXIN SCREEN
LEAD
MERCURY
NICKEL
SILVER
TOTAL SUSPENDED SOLIDS
ZINC

PIN: 41851 Serial Number: 6571408

Eurofins QC, LLC

Analytical Report

Printed 02/13/20 16:39

Account No: SR0053, ROSCOM, INC. **P.O. No:**13424 **Inv. No:** 2005704 PI
Project No: SR0053 MANHOLE, ROSCOM, INC. **PWSID No:**

Parameter	Result	Qual	Units	Method	DF	RL	Test Date, Time, Analyst

SUBCONTRACT -- QTLY ROS01 EFFLUENT MANHOLE GRAB

Attached	ATTACHED

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L7179856-2	QTLY ROS01 EFFLUENT MANHOLE GRAB	01/21/20 07:36am NA C	Kenneth McGrady, Eurofins QC, LLC

Received Date/Time/Temp 01/21/20 02:05pm 3.1 C **Iced (Y/N):** Y

--SUBCONTRACTED RESULT REFERENCES--QTLY ROS01 EFFLUENT MANHOLE GRAB

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
CHEMICAL OXYGEN DEMAND
CYANIDE,TOTAL
EPA 1664 HEXANE EXTRACTABLE MATERIAL
PCB CONGENERS
PHENOL

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L7179856-3	QTLY ROS01 EFFLUENT MANHOLE GRAB RINSATE BLANK	01/20/20 07:12am NA C	Kenneth McGrady, Eurofins QC, LLC

Received Date/Time/Temp 01/21/20 02:05pm 3.1 C **Iced (Y/N):** Y

Parameter	Result	Qual	Units	Method	DF	RL	Test Date, Time, Analyst

SUBCONTRACT -- QTLY ROS01 EFFLUENT MANHOLE GRAB RINSATE BLANK

Attached	ATTACHED

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L7179856-3	QTLY ROS01 EFFLUENT MANHOLE GRAB RINSATE BLANK	01/20/20 07:12am NA C	Kenneth McGrady, Eurofins QC, LLC

Received Date/Time/Temp 01/21/20 02:05pm 3.1 C **Iced (Y/N):** Y

--SUBCONTRACTED RESULT REFERENCES--QTLY ROS01 EFFLUENT MANHOLE GRAB RINSATE BLANK

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
PCB CONGENERS

PIN: 41851 Serial Number: 6571408

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DEFINITIONS

The following terms or abbreviations are used in this report: ***Eurofins QC, LLC (EQC)***

<	Less than: In conjunction with a numerical value, indicates a concentration less than RL / MDL
>	Greater than: In conjunction with a numerical value, indicates a concentration greater than RL / MDL
CFU	Colony Forming Unit
DF	Dilution Factor (For Microbiology, DF = volume of sample tested)
DRY	Result was reported on a dry weight basis
MCL	EPA recommended "Maximum Contaminant Level"
MDL	Method Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
ND	For odor test: No Odor Observed
ND	For all other tests: Analyte concentration Not Detected greater than the RL / MDL

NEG	Negative / Absent
NTU	Nephelometric Turbidity Units
POS	Positive / Present
PPB (µg/L)	Parts per billion: equivalent to 1 microgram per kilogram (µg/Kg) for solids or one microgram per liter (µg/L) for aqueous samples
PPM (mg/L)	Parts per million: equivalent to 1 milligram per kilogram (mg/Kg) for solids or one milligram per liter (mg/L) for aqueous samples
PRES	Presumptive
QUAL	Qualifier (Q)
RL	Laboratory Reporting Limit or Limit of Quantitation (LOQ)
TNTC	Too Numerous To Count
TON	Threshold Odor Number

Data Qualifiers

J	Estimated value ≥ MDL, but < RL
T	Temperature exceedance at receipt, refer to Sample Comments / Results Qualifiers section
E	Estimated CFU count (Microbiology)
Q	Qualifier defined in Sample Comment section on report

Warranties, Terms, and Conditions

- Unless otherwise indicated in the Parameter field, analyses for environmental microbiology, odor, and pharmaceutical microbiology are performed at the EQC Horsham Facility (702 Electronic Dr. Horsham, PA 19044).
- Analyses for Field Parameters are performed by EQC Field staff. Locations and certifications are identified on the Chain of Custody as follows:
  - "ERF" = field staff performs tests under NJ State certification # 02015.
  - "VL" = field staff performs tests under NJ State certification # 06005.
  - "WG" = field staff performs tests under NJ State certification # PA001.
- Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.
- The report shall not be reproduced, except in full, without the written consent of the laboratory.
- All samples are collected as "grab" samples unless otherwise identified.
- Reported results relate only to the sample as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.
- EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance. EQC's internet program "LIVE ACCESS" will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.
- The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry), Amanda Berd (Pharmaceutical Microbiology), and Zachary Smith (Water Microbiology).

EQC Accreditations

Horsham Facility	NELAP/State IDs-	PA: 46-05499	NJ: PA093	NY: 12080	MD: 357	
East Rutherford Facility	State ID-	NJ: 02015				
Vineland Facility	State ID-	NJ: 06005				
Wind Gap Facility	State ID-	NJ: PA001				

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CHAIN OF CUSTODY

Page 1 of 2

Lab LIMS No: 7179856

702 Electronic Drive
Horsham, PA 19044
Phone: 215-355-3900
Fax: 215-392-0626

Client/Acct. No. ROSCOM, INC
Address 2965 STATE RD
City/State/Zip CROYDON, PA
Phone/Fax
Client Contact:

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

P.O. No. PWSID #:
Quote #
e-mail:

LAB USE ONLY:

___ Ascorbic/HCL Vials # 3 HCl Vials
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
1 HNO_3 pH 1/2 DTPL
3 H_2SO_4 pH PTPL 250 AMB 1/2 DTPL
1 NaOH pH 1/2 DTPL
13 Unpreserved (4) AMB GAL (3) Vials (4) 250 AMB (2) PLOT
2 HCl # ___ NH4Cl # ___ MeOH AMBOT
___ DI Water

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

PROJECT / FIELD ID	Collection Date	Military Time	GRAB	COMP	Matrix Code	Number of Containers: Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT		ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
-1 QTLY ROSOI EFFLUENT	1-20 →	0715		X	WW	~~14~~ KEM	1		6	1		KEM	~~6~~			624 AC/ACN	
MANHOLE COMP	1-21-20	0715				~~12~~							~~4~~			625 AEAN, DIOX SCREEN	
06-16-10-R						14							6			Ag As Cd Cr Cu Hg Ni Pb Zn	
																BOD5 TSS	
																COD, NH_3	
-2 QTLY ROSOI EFFLUENT	1-21-20	0736	X		WW		2	2			1		2			1664 HEM-SGT	
MANHOLE GRAB																CN	
11-10-R																COD PHENOL	
																PCB CONGENERS 1668 A	

SAMPLED BY: (Name/Company) KEM / EQC

TAT: ☐ STANDARD (10 DAY) or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD ☐ Standard + QC ☐ Forms ☐ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By: Initials Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1. [signature]	1-21-20	1405	1. [signature]	1-21-20	1405
2.			2.		
3.			3.		
4.			4.		
5.			5.		

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER ___

Custody Seal Number

Rec'd Temp.: 3.1°C Initials: KEM Ice Y / N Location: QC

COMMENTS:

Hazardous: yes / no

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CHAIN OF CUSTODY

Page 2 of 2

Lab LIMS No: 7179856

702 Electronic Drive
Horsham, PA 19044
Phone: 215-355-3900
Fax: 215-392-0626

Client/Acct. No. Museum, INC
Address Sec B 1
City/State/Zip
Phone/Fax
Client Contact:

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

P.O. No. PWSID #:
Quote #
e-mail:

LAB USE ONLY:

___ Ascorbic/HCL Vials # ___ HCl Vials
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
___ HNO_3 pH
___ H_2SO_4 pH
___ NaOH pH
___ Unpreserved
___ HCl # ___ NH4Cl # ___ MeOH
___ DI Water

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

PROJECT / FIELD ID	Collection Date	Military Time	GRAB	COMP	Matrix Code	Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT	ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
OTH PROJ EFFLUENT	1-21-20	0712	X		X	2							2		PCB CONGENERS 1668A	
MANHOLE MUSATTE BLANK																

SAMPLED BY: (Name/Company) KEM / EQC

TAT: ☐ STANDARD (10 DAY)
or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD
☐ Standard + QC ☐ Forms ☐ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By:
Initials | Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1.	1-21-20	1405	1.	1/21/20	1405
RELINQUISHED BY 2.	DATE	TIME	RECEIVED BY 2.	DATE	TIME
RELINQUISHED BY 3.	DATE	TIME	RECEIVED BY 3.	DATE	TIME
RELINQUISHED BY 4.	DATE	TIME	RECEIVED BY 4.	DATE	TIME
RELINQUISHED BY 5.	DATE	TIME	RECEIVED BY 5.	DATE	TIME

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐UPS ☐FEDEX ☐OTHER

Custody Seal Number

Rec'd Temp.: 3.1 °C Initials: KEM Ice Y/N Location: QC

COMMENTS:

Hazardous: yes / no

EQC Eurofins QC, LLC

Picksheet: P7179856
Cust: SR0053 MANHOLE
Schd: 43397

Expected: MONDAY 01/06/20 - 03/31/20
Project Name: ROSCOM, INC.
Start Date: 03/13/15 Stop Date:

MICHAEL GOLDBERG
ROSCOM, INC.
2925 STATE ROAD
ROS01-MANHOLE IN FRONT PARKING LOT
CROYDON, PA 19021
(215)781-1700

Comments/Schedule Details:
MANHOLE IN FRONT PARKING LOT. PCB CONGENERS RUN BY METHOD 1668A. NOT DRBC REPORTABLE.

LAB USE ONLY

#_____	Ascorbic/HCL Vials	#_____	HCL Vials
#_____	NA2S2O3		
#_____	NaOH/Zn acetate pH		
#_____	HNO3 pH		
#_____	H2SO4 pH		
#_____	NaOH pH		
#_____	Unpreserved		
#_____	HCL		
#_____	NH4CL		
#_____	MEOH		
#_____	Na2SO3/HCL		
#_____	DI Water		

Bottle Type

Route: 86 KEN MCGRADY: LANDFILLS / DISCHARGES, ETC.

PWSID:

Field Tests By: _____ /Time: _____

	Pseudo	HPC	eColi	Coli	Collection Date	Collection Time (Military)	Total # Bottles	Free Cl2 mg/L	pH/TempC	BR2 YES/NO	Total CL2 mg/L
7179856-1 QTLY ROS01 EFFLUENT MANHOLE COMPOSITE 06-COMP NO FLD, 16-COMP RENT, 624 AC/ACN, 625 AEBN, AG, AS, BOD 5, CD, COD, CR, CU, DIOXIN SCREEN, HG, METAL PREP, NH3, NI, PB, TSS, ZN PP FIELD WORK CODE: _____											
7179856-2 QTLY ROS01 EFFLUENT MANHOLE GRAB 11-ADD LOC NO FLD, 1664 HEM-SGT, CN, COD, PCB CONGENERS, PHENOL FIELD WORK CODE: _____											

Cooler ID:

Sample Collected By	Circle One		Initials
	Client	EQC	

Required TAT: Standard ___/Rush___# Days _____

Relinquished By	Time	Date	Received By	Time	Date	Temp	Iced Y/N	Site	Initials

Comments (reporting, methods, etc)

Hazardous Y/N

M: 07:00-18:00 T: 07:00-18:00 W: 07:00-18:00 Th: 07:00-18:00 F: 07:00-18:00 St: - Sn: - Printed: 12/20/19 GPS X: _____ Y: _____
M: - T: - W: - Th: - F: - St: - Sn: -
PM: STEPHEN

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Eurofins QC, LLC
702 Electronic Drive
Horsham PA 19044

Report Date: February 13, 2020 14:32

Project: L7179856

Account #: 25368
Group Number: 2084163
SDG: OMC01
State of Sample Origin: PA

Electronic Copy To Eurofins QC, LLC Attn: Nicki Smith

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
L7179856-1 Composite Wastewater	01/21/2020 07:15	1243712
L7179856-2 Grab Wastewater	01/21/2020 07:36	1243713
L7179856-3 Grab Wastewater	01/20/2020 07:12	1243714

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Respectfully Submitted,

Wendy A. Kozma
Principal Specialist Group Leader

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

Sample Description: **L7179856-1 Composite Wastewater Effluent QTLY ROS01 MANHOLE 1/20-21**

Project Name: **L7179856**

Eurofins QC, LLC
ELLE Sample #: WW 1243712
ELLE Group #: 2084163
Matrix: Wastewater

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/21/2020 07:15
SDG#: OMC01-01

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	
14687	Acrolein	107-02-8	N.D. Q2	10.0	1
14687	Acrylonitrile	107-13-1	N.D.	1.00	1
14687	Benzene	71-43-2	N.D.	1.00	1
14687	Bromodichloromethane	75-27-4	N.D.	1.00	1
14687	Bromoform	75-25-2	N.D.	1.00	1
14687	Bromomethane	74-83-9	N.D.	1.00	1
14687	Carbon Tetrachloride	56-23-5	N.D.	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	1.00	1
14687	Chloroethane	75-00-3	N.D.	1.00	1
14687	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	1.00	1
14687	Chloroform	67-66-3	2.95	1.00	1
14687	Chloromethane	74-87-3	N.D.	1.00	1
14687	Dibromochloromethane	124-48-1	N.D.	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	1.00	1
14687	1,1-Dichloroethane	75-34-3	N.D.	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	1.00	1
14687	1,1-Dichloroethene	75-35-4	N.D.	1.00	1
14687	trans-1,2-Dichloroethene	156-60-5	N.D.	1.00	1
14687	1,2-Dichloropropane	78-87-5	N.D.	1.00	1
14687	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.00	1
14687	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	1.00	1
14687	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.00	1
14687	Tetrachloroethene	127-18-4	N.D.	1.00	1
14687	Toluene	108-88-3	N.D.	1.00	1
14687	1,1,1-Trichloroethane	71-55-6	N.D.	1.00	1
14687	1,1,2-Trichloroethane	79-00-5	N.D.	1.00	1
14687	Trichloroethene	79-01-6	N.D.	1.00	1
14687	Trichlorofluoromethane	75-69-4	N.D.	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	1.00	1
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	
14669	Acenaphthene	83-32-9	N.D.	5	1
14669	Acenaphthylene	208-96-8	N.D.	5	1
14669	Anthracene	120-12-7	N.D.	5	1
14669	Benzidine	92-87-5	N.D.	58	1
14669	Benzo(a)anthracene	56-55-3	N.D.	5	1
14669	Benzo(a)pyrene	50-32-8	N.D.	5	1
14669	Benzo(b)fluoranthene	205-99-2	N.D.	5	1
14669	Benzo(g,h,i)perylene	191-24-2	N.D.	5	1
14669	Benzo(k)fluoranthene	207-08-9	N.D.	5	1
14669	4-Bromophenyl-phenylether	101-55-3	N.D.	5	1
14669	Butylbenzylphthalate	85-68-7	N.D.	5	1
14669	Di-n-butylphthalate	84-74-2	N.D.	5	1
14669	4-Chloro-3-methylphenol	59-50-7	N.D.	5	1

Sample Description: **L7179856-1 Composite Wastewater Effluent QTLY ROS01 MANHOLE 1/20-21**

Project Name: **L7179856**

Eurofins QC, LLC
ELLE Sample #: WW 1243712
ELLE Group #: 2084163
Matrix: Wastewater

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/21/2020 07:15
SDG#: OMC01-01

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	
14669	bis(2-Chloroethoxy)methane	111-91-1	N.D.	5	1
14669	bis(2-Chloroethyl)ether	111-44-4	N.D.	5	1
14669	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	5	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.				
14669	2-Chloronaphthalene	91-58-7	N.D.	5	1
14669	2-Chlorophenol	95-57-8	N.D.	5	1
14669	4-Chlorophenyl-phenylether	7005-72-3	N.D.	5	1
14669	Chrysene	218-01-9	N.D.	5	1
14669	Dibenz(a,h)anthracene	53-70-3	N.D.	5	1
14669	3,3'-Dichlorobenzidine	91-94-1	N.D.	5	1
14669	2,4-Dichlorophenol	120-83-2	N.D.	5	1
14669	Diethylphthalate	84-66-2	N.D.	5	1
14669	2,4-Dimethylphenol	105-67-9	N.D.	5	1
14669	Dimethylphthalate	131-11-3	N.D.	5	1
14669	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	10	1
14669	2,4-Dinitrophenol	51-28-5	N.D. K4	10	1
14669	2,4-Dinitrotoluene	121-14-2	N.D.	5	1
14669	2,6-Dinitrotoluene	606-20-2	N.D.	5	1
00382	Dioxin Screen[1]	n.a.	N.D.	2	1
14669	1,2-Diphenylhydrazine	122-66-7	N.D.	5	1
	Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.				
14669	bis(2-Ethylhexyl)phthalate	117-81-7	56	5	1
14669	Fluoranthene	206-44-0	N.D.	5	1
14669	Fluorene	86-73-7	N.D.	5	1
14669	Hexachlorobenzene	118-74-1	N.D.	5	1
14669	Hexachlorobutadiene	87-68-3	N.D.	2	1
14669	Hexachlorocyclopentadiene	77-47-4	N.D.	15	1
14669	Hexachloroethane	67-72-1	N.D.	2	1
14669	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	5	1
14669	Isophorone	78-59-1	N.D.	5	1
14669	Naphthalene	91-20-3	N.D.	2	1
14669	Nitrobenzene	98-95-3	N.D.	5	1
14669	2-Nitrophenol	88-75-5	N.D.	5	1
14669	4-Nitrophenol	100-02-7	N.D.	5	1
14669	N-Nitrosodimethylamine	62-75-9	N.D.	5	1
14669	N-Nitroso-di-n-propylamine	621-64-7	N.D.	5	1
14669	N-Nitrosodiphenylamine	86-30-6	N.D.	5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.				
14669	Di-n-octylphthalate	117-84-0	N.D.	5	1
14669	Pentachlorophenol	87-86-5	N.D. K4	5	1
14669	Phenanthrene	85-01-8	N.D.	5	1

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **L7179856-1 Composite Wastewater Effluent QTLY ROS01 MANHOLE 1/20-21**

Project Name: **L7179856**

Eurofins QC, LLC
ELLE Sample #: WW 1243712
ELLE Group #: 2084163
Matrix: Wastewater

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/21/2020 07:15
SDG#: OMC01-01

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	
14669	Phenol		108-95-2	11	1	1
14669	Pyrene		129-00-0	N.D.	5	1
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	1	1
14669	2,4,6-Trichlorophenol		88-06-2	N.D.	5	1
Metals		**EPA 200.7 rev 4.4**		**mg/l**	**mg/l**	
07035	Arsenic		7440-38-2	N.D.	0.0300	1
07049	Cadmium		7440-43-9	N.D.	0.0050	1
07051	Chromium		7440-47-3	N.D.	0.0150	1
07053	Copper		7440-50-8	0.0740	0.0200	1
07055	Lead		7439-92-1	N.D.	0.0150	1
07061	Nickel		7440-02-0	0.0130	0.0100	1
07066	Silver		7440-22-4	N.D.	0.0100	1
07072	Zinc		7440-66-6	0.340	0.0200	1
		EPA 245.1 rev 3		**mg/l**	**mg/l**	
00259	Mercury		7439-97-6	N.D.	0.00020	1
Wet Chemistry		**EPA 350.1**		**mg/l**	**mg/l**	
12892	Ammonia Nitrogen		7664-41-7	45.2	4.0	40
		EPA 410.4		**mg/l**	**mg/l**	
04001	Chemical Oxygen Demand		n.a.	324	188	2.5
		SM 2540 D-2011		**mg/l**	**mg/l**	
13858	Total Suspended Solids		n.a.	111	30.0	1
		SM 5210 B-2011		**mg/l**	**mg/l**	
14108	Biochemical Oxygen Demand-BOD		n.a.	112 W	2.00	1
	The dissolved oxygen uptake for the unseeded blank is 0.24 mg/L.					

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

[1] = This analyte was not on the laboratory's PA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U200241AA	01/24/2020 09:32	John Glacken	1
00382	Dioxin Screen	EPA 625.1	1	20022WDC026	01/29/2020 09:46	Edward C Monborne	1
14669	Method 625.1 MINI	EPA 625.1	1	20022WAC625	01/27/2020 15:33	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	20022WAC625	01/22/2020 17:00	Laura Duquette	1
07035	Arsenic	EPA 200.7 rev 4.4	1	200230571603	01/23/2020 12:08	Patrick J Engle	1
07049	Cadmium	EPA 200.7 rev 4.4	1	200230571603	01/23/2020 12:08	Patrick J Engle	1

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Analysis Report

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	EPA 200.7 rev 4.4	1	200230571603	01/23/2020 12:08	Patrick J Engle	1
07053	Copper	EPA 200.7 rev 4.4	1	200230571603	01/23/2020 12:08	Patrick J Engle	1
07055	Lead	EPA 200.7 rev 4.4	1	200230571603	01/23/2020 12:08	Patrick J Engle	1
07061	Nickel	EPA 200.7 rev 4.4	1	200230571603	01/23/2020 12:08	Patrick J Engle	1
07066	Silver	EPA 200.7 rev 4.4	1	200230571603	01/23/2020 12:08	Patrick J Engle	1
07072	Zinc	EPA 200.7 rev 4.4	1	200230571603	01/23/2020 12:08	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	200230571401	01/23/2020 10:02	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	200230571603	01/23/2020 03:00	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	200230571401	01/23/2020 05:16	James L Mertz	1
12892	Ammonia Nitrogen	EPA 350.1	1	20029107101A	01/29/2020 20:23	Gregory Baldree	40
04001	Chemical Oxygen Demand	EPA 410.4	1	20023400102A	01/23/2020 06:51	Susan A Engle	2.5
13858	Total Suspended Solids	SM 2540 D-2011	1	20022385802B	01/22/2020 13:36	Angelica Cintron	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	20022141081A	01/22/2020 12:30	Benjamin M Morrison	1

Sample Description: **L7179856-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Project Name: **L7179856**

Eurofins QC, LLC
ELLE Sample #: WW 1243713
ELLE Group #: 2084163
Matrix: Wastewater

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/21/2020 07:36
SDG#: OMC01-02

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor
Wet Chemistry		**EPA 335.4**		**mg/l**	**mg/l**	
00237	Total Cyanide (water)		57-12-5	0.050	0.010	1
		EPA 420.4		**mg/l**	**mg/l**	
14002	Phenols (water)		n.a.	N.D.	0.020	1
		EPA 1664A		**mg/l**	**mg/l**	
08078	SGT-HEM (TPH)		n.a.	N.D.	5.0	1
		EPA 1664B		**mg/l**	**mg/l**	
08079	HEM (oil & grease)		n.a.	N.D.	5.0	1
		EPA 410.4		**mg/l**	**mg/l**	
04001	Chemical Oxygen Demand		n.a.	75.1	75.0	1

Sample Description: **L7179856-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Project Name: **L7179856**

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/21/2020 07:36
SDG#: OMC01-02

Eurofins QC, LLC
ELLE Sample #: WW 1243713
ELLE Group #: 2084163
Matrix: Wastewater

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668_A PCB Congeners**		**pg/l**	**pg/l**	
13584	PCB1	2051-60-7	N.D.	21.7	1
13584	PCB2	2051-61-8	N.D.	21.7	1
13584	PCB3	2051-62-9	N.D.	54.3	1
13584	PCB4	13029-08-8	N.D.	54.3	1
13584	PCB5	16605-91-7	N.D.	21.7	1
13584	PCB6	25569-80-6	N.D.	21.7	1
13584	PCB7	33284-50-3	N.D.	21.7	1
13584	PCB8	34883-43-7	N.D.	54.3	1
13584	PCB9	34883-39-1	N.D.	21.7	1
13584	PCB10	33146-45-1	N.D.	54.3	1
13584	PCB11	2050-67-1	N.D.	109	1
13584	PCB12+13	n.a.	N.D.	54.3	1
13584	PCB14	34883-41-5	N.D.	21.7	1
13584	PCB15	2050-68-2	N.D.	54.3	1
13584	PCB16	38444-78-9	N.D.	21.7	1
13584	PCB17	37680-66-3	N.D.	21.7	1
13584	PCB18+30	n.a.	N.D.	54.3	1
13584	PCB19	38444-73-4	N.D.	21.7	1
13584	PCB20+28	n.a.	N.D.	54.3	1
13584	PCB21+33	n.a.	N.D.	54.3	1
13584	PCB22	38444-85-8	N.D.	21.7	1
13584	PCB23	55720-44-0	N.D.	21.7	1
13584	PCB24	55702-45-9	N.D.	21.7	1
13584	PCB25	55712-37-3	N.D.	21.7	1
13584	PCB26+29	n.a.	N.D.	54.3	1
13584	PCB27	38444-76-7	N.D.	21.7	1
13584	PCB31	16606-02-3	N.D.	54.3	1
13584	PCB32	38444-77-8	N.D.	21.7	1
13584	PCB34	37680-68-5	N.D.	21.7	1
13584	PCB35	37680-69-6	N.D.	21.7	1
13584	PCB36	38444-87-0	N.D.	21.7	1
13584	PCB37	38444-90-5	N.D.	21.7	1
13584	PCB38	53555-66-1	N.D.	21.7	1
13584	PCB39	38444-88-1	N.D.	21.7	1
13584	PCB40+71	n.a.	N.D.	109	1
13584	PCB41	52663-59-9	N.D.	109	1
13584	PCB42	36559-22-5	N.D.	54.3	1
13584	PCB43	70362-46-8	N.D.	54.3	1
13584	PCB44+47+65	n.a.	622 C	109	1
13584	PCB45	70362-45-7	N.D.	54.3	1
13584	PCB46	41464-47-5	N.D.	21.7	1
13584	PCB48	70362-47-9	N.D.	54.3	1
13584	PCB49+69	n.a.	N.D.	109	1
13584	PCB50+53	n.a.	N.D.	109	1
13584	PCB51	68194-04-7	184	54.3	1
13584	PCB52	35693-99-3	N.D.	54.3	1
13584	PCB54	15968-05-5	N.D.	54.3	1

Sample Description: **L7179856-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Project Name: **L7179856**

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/21/2020 07:36
SDG#: OMC01-02

Eurofins QC, LLC
ELLE Sample #: WW 1243713
ELLE Group #: 2084163
Matrix: Wastewater

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668_A PCB Congeners**		**pg/l**	**pg/l**	
13584	PCB55	74338-24-2	N.D.	54.3	1
13584	PCB56	41464-43-1	N.D.	54.3	1
13584	PCB57	70424-67-8	N.D.	54.3	1
13584	PCB58	41464-49-7	N.D.	54.3	1
13584	PCB59+62+75	n.a.	N.D.	109	1
13584	PCB60	33025-41-1	N.D.	54.3	1
13584	PCB61+70+74+76	n.a.	N.D.	217	1
13584	PCB63	74472-34-7	N.D.	54.3	1
13584	PCB64	52663-58-8	N.D.	54.3	1
13584	PCB66	32598-10-0	N.D.	54.3	1
13584	PCB67	73575-53-8	N.D.	54.3	1
13584	PCB68	73575-52-7	162	54.3	1
13584	PCB72	41464-42-0	N.D.	54.3	1
13584	PCB73	74338-23-1	N.D.	54.3	1
13584	PCB77	32598-13-3	N.D.	54.3	1
13584	PCB78	70362-49-1	N.D.	54.3	1
13584	PCB79	41464-48-6	N.D.	54.3	1
13584	PCB80	33284-52-5	N.D.	54.3	1
13584	PCB81	70362-50-4	N.D.	54.3	1
13584	PCB82	52663-62-4	N.D.	54.3	1
13584	PCB83	60145-20-2	N.D.	109	1
13584	PCB84	52663-60-2	N.D.	21.7	1
13584	PCB85+116+117	n.a.	N.D.	109	1
13584	PCB86+87+97+109+119+125	n.a.	N.D.	217	1
13584	PCB88	55215-17-3	N.D.	54.3	1
13584	PCB89	73575-57-2	N.D.	54.3	1
13584	PCB90+101+113	n.a.	N.D.	217	1
13584	PCB91	68194-05-8	N.D.	54.3	1
13584	PCB92	52663-61-3	N.D.	54.3	1
13584	PCB93+100	n.a.	N.D.	217	1
13584	PCB94	73575-55-0	N.D.	54.3	1
13584	PCB95	38379-99-6	N.D.	217	1
13584	PCB96	73575-54-9	N.D.	54.3	1
13584	PCB98+102	n.a.	N.D.	217	1
13584	PCB99	38380-01-7	N.D.	109	1
13584	PCB103	60145-21-3	N.D.	54.3	1
13584	PCB104	56558-16-8	N.D.	54.3	1
13584	PCB105	32598-14-4	N.D.	54.3	1
13584	PCB106	70424-69-0	N.D.	54.3	1
13584	PCB107	70424-68-9	N.D.	54.3	1
13584	PCB108+124	n.a.	N.D.	109	1
13584	PCB110+115	n.a.	N.D.	109	1
13584	PCB111	39635-32-0	N.D.	54.3	1
13584	PCB112	74472-36-9	N.D.	54.3	1
13584	PCB114	74472-37-0	N.D.	54.3	1
13584	PCB118	31508-00-6	N.D.	109	1
13584	PCB120	68194-12-7	N.D.	54.3	1

Sample Description: **L7179856-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Project Name: **L7179856**

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/21/2020 07:36
SDG#: OMC01-02

Eurofins QC, LLC
ELLE Sample #: WW 1243713
ELLE Group #: 2084163
Matrix: Wastewater

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668_A PCB Congeners**		**pg/l**	**pg/l**	
13584	PCB121	56558-18-0	N.D.	54.3	1
13584	PCB122	76842-07-4	N.D.	54.3	1
13584	PCB123	65510-44-3	N.D.	54.3	1
13584	PCB126	57465-28-8	N.D.	54.3	1
13584	PCB127	39635-33-1	N.D.	54.3	1
13584	PCB128+166	n.a.	N.D.	109	1
13584	PCB129+138+163	n.a.	N.D.	217	1
13584	PCB130	52663-66-8	N.D.	54.3	1
13584	PCB131	61798-70-7	N.D.	54.3	1
13584	PCB132	38380-05-1	N.D.	54.3	1
13584	PCB133	35694-04-3	N.D.	54.3	1
13584	PCB134	52704-70-8	N.D.	109	1
13584	PCB135+151	n.a.	N.D.	109	1
13584	PCB136	38411-22-2	N.D.	54.3	1
13584	PCB137	35694-06-5	N.D.	54.3	1
13584	PCB139+140	n.a.	N.D.	109	1
13584	PCB141	52712-04-6	N.D.	54.3	1
13584	PCB142	41411-61-4	N.D.	54.3	1
13584	PCB143	68194-15-0	N.D.	109	1
13584	PCB144	68194-14-9	N.D.	54.3	1
13584	PCB145	74472-40-5	N.D.	54.3	1
13584	PCB146	51908-16-8	N.D.	54.3	1
13584	PCB147+149	n.a.	N.D.	109	1
13584	PCB148	74472-41-6	N.D.	54.3	1
13584	PCB150	68194-08-1	N.D.	54.3	1
13584	PCB152	68194-09-2	N.D.	54.3	1
13584	PCB153+168	n.a.	N.D.	109	1
13584	PCB154	60145-22-4	N.D.	109	1
13584	PCB155	33979-03-2	N.D.	54.3	1
13584	PCB156+157	n.a.	N.D.	109	1
13584	PCB158	74472-42-7	N.D.	54.3	1
13584	PCB159	39635-35-3	N.D.	54.3	1
13584	PCB160	41411-62-5	N.D.	217	1
13584	PCB161	74472-43-8	N.D.	54.3	1
13584	PCB162	39635-34-2	N.D.	54.3	1
13584	PCB164	74472-45-0	N.D.	54.3	1
13584	PCB165	74472-46-1	N.D.	54.3	1
13584	PCB167	52663-72-6	N.D.	54.3	1
13584	PCB169	32774-16-6	N.D.	54.3	1
13584	PCB170	35065-30-6	N.D.	54.3	1
13584	PCB171+173	n.a.	N.D.	109	1
13584	PCB172	52663-74-8	N.D.	54.3	1
13584	PCB174	38411-25-5	N.D.	54.3	1
13584	PCB175	40186-70-7	N.D.	54.3	1
13584	PCB176	52663-65-7	N.D.	54.3	1
13584	PCB177	52663-70-4	N.D.	54.3	1
13584	PCB178	52663-67-9	N.D.	54.3	1

Sample Description: **L7179856-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Project Name: **L7179856**

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/21/2020 07:36
SDG#: OMC01-02

Eurofins QC, LLC
ELLE Sample #: WW 1243713
ELLE Group #: 2084163
Matrix: Wastewater

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668_A PCB Congeners**		**pg/l**	**pg/l**	
13584	PCB179	52663-64-6	N.D.	54.3	1
13584	PCB180+193	n.a.	N.D.	109	1
13584	PCB181	74472-47-2	N.D.	54.3	1
13584	PCB182	60145-23-5	N.D.	54.3	1
13584	PCB183+185	n.a.	N.D.	109	1
13584	PCB184	74472-48-3	N.D.	54.3	1
13584	PCB186	74472-49-4	N.D.	54.3	1
13584	PCB187	52663-68-0	N.D.	54.3	1
13584	PCB188	74487-85-7	N.D.	54.3	1
13584	PCB189	39635-31-9	N.D.	54.3	1
13584	PCB190	41411-64-7	N.D.	54.3	1
13584	PCB191	74472-50-7	N.D.	54.3	1
13584	PCB192	74472-51-8	N.D.	54.3	1
13584	PCB194	35694-08-7	N.D.	54.3	1
13584	PCB195	52663-78-2	N.D.	54.3	1
13584	PCB196	42740-50-1	N.D.	54.3	1
13584	PCB197+200	n.a.	N.D.	109	1
13584	PCB198+199	n.a.	N.D.	109	1
13584	PCB201	40186-71-8	N.D.	54.3	1
13584	PCB202	2136-99-4	N.D.	109	1
13584	PCB203	52663-76-0	N.D.	54.3	1
13584	PCB204	74472-52-9	N.D.	54.3	1
13584	PCB205	74472-53-0	N.D. Q1	54.3	1
13584	PCB206	40186-72-9	N.D.	54.3	1
13584	PCB207	52663-79-3	N.D.	54.3	1
13584	PCB208	52663-77-1	N.D.	54.3	1
13584	PCB209	2051-24-3	N.D.	54.3	1

The summation PCBs reported cannot be resolved under the chromatographic conditions used for sample analysis. The concentration(s) reported is the combined total of the PCBs and would be the maximum possible concentration for any individual PCB of interest.

The recovery of PCB 205 in the Ongoing Precision and Recovery (OPR) sample was outside QC acceptance criteria as noted on the QC summary. Sufficient sample volume was not available to perform a reanalysis.

Reporting limits were raised due to interference from the sample matrix.

Total PCBs	**EPA 1668_A PCB Congeners**		**pg/l**	**pg/l**	
13584	Total PCBs[1]	1336-36-3	1,600 B	21.7	1

The summation PCBs reported cannot be resolved under the chromatographic conditions used for sample analysis. The concentration(s) reported is the combined total of the PCBs and would be the maximum possible concentration for any individual PCB of interest.

The recovery of PCB 205 in the Ongoing Precision and Recovery (OPR) sample was outside QC acceptance criteria as noted on the QC summary.

Sample Description: **L7179856-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Project Name: **L7179856**

Eurofins QC, LLC
ELLE Sample #: WW 1243713
ELLE Group #: 2084163
Matrix: Wastewater

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/21/2020 07:36
SDG#: OMC01-02

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor

Sufficient sample volume was not available to perform a reanalysis.

Reporting limits were raised due to interference from the sample matrix.

Labeled Compounds	%Rec	Windows
13C12-PCB1	66	15 - 150
13C12-PCB3	62	15 - 150
13C12-PCB4	82	25 - 150
13C12-PCB15	70	25 - 150
13C12-PCB19	90	25 - 150
13C12-PCB37	69	25 - 150
13C12-PCB54	74	25 - 150
13C12-PCB77	75	25 - 150
13C12-PCB81	75	25 - 150
13C12-PCB104	97	25 - 150
13C12-PCB105	75	25 - 150
13C12-PCB114	75	25 - 150
13C12-PCB118	75	25 - 150
13C12-PCB123	73	25 - 150
13C12-PCB126	79	25 - 150
13C12-PCB155	96	25 - 150
13C12-PCB167	77	25 - 150
13C12-PCB169	89	25 - 150
13C12-PCB188	92	25 - 150
13C12-PCB189	83	25 - 150
13C12-PCB202	87	25 - 150
13C12-PCB205	89	25 - 150
13C12-PCB206	103	25 - 150
13C12-PCB208	94	25 - 150
13C12-PCB209	100	25 - 150
13C12-PCB156+157	79	10 - 145

Dioxins/Furans Data Qualifiers:

J	*The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL)*
U	*The analyte was not detected in the sample at the estimated detection limit (EDL)*
E	*Exceeds calibration range*
D	*Dilution Data. Result was obtained from the analysis of a dilution*
B	*Analyte found in sample and associated blank*
C	*Co-eluting congener*
EMPC	*Estimated Maximum Possible Concentration*
Q0	*LCS/LCSD Low*
Q1	*LCS/LCSD High*
Q2	*MS/MSD Low*
Q3	*MS/MSD High*
Q7	*LCS/LCSD RPD*

Sample Description: **L7179856-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Eurofins QC, LLC
ELLE Sample #: WW 1243713
ELLE Group #: 2084163
Matrix: Wastewater

Project Name: **L7179856**

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/21/2020 07:36
SDG#: OMC01-02

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
Q8	*DUP RPD*				
Q9	*MS/MSD RPD*				

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

[1] = This analyte was not on the laboratory's PA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13584	DRBC PCB Congeners in Water	EPA 1668_A PCB Congeners	1	20031023	02/05/2020 17:01	Joseph D Anderson	1
14069	DRBC Congeners in Water-SepF	EPA 1668_A PCB Congeners	1	20031023	02/03/2020 08:00	Casey Horejs	1
00237	Total Cyanide (water)	EPA 335.4	1	20022102101B	01/24/2020 19:06	Gregory Baldree	1
14002	Phenols (water)	EPA 420.4	1	20027125101A	01/27/2020 12:49	Gregory Baldree	1
00492	Cyanide Water Distillation	EPA 335.4	1	20022102101B	01/22/2020 17:00	Barbara A Washington	1
08078	SGT-HEM (TPH)	EPA 1664A	1	20027807801A	01/27/2020 18:35	Tesfaye Dabsu	1
08079	HEM (oil & grease)	EPA 1664B	1	20027807902A	01/27/2020 18:31	Tesfaye Dabsu	1
04001	Chemical Oxygen Demand	EPA 410.4	1	20023400102A	01/23/2020 06:51	Susan A Engle	1

Sample Description: **L7179856-3 Grab Wastewater QTLY ROS01 MANHOLE RINSATE BLANK**

Eurofins QC, LLC
ELLE Sample #: WW 1243714
ELLE Group #: 2084163
Matrix: Wastewater

Project Name: **L7179856**

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/20/2020 07:12
SDG#: OMC01-03RB

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668_A PCB Congeners**		**pg/l**	**pg/l**	
13584	PCB1	2051-60-7	N.D.	10.3	1
13584	PCB2	2051-61-8	N.D.	10.3	1
13584	PCB3	2051-62-9	N.D.	25.6	1
13584	PCB4	13029-08-8	N.D.	25.6	1
13584	PCB5	16605-91-7	N.D.	10.3	1
13584	PCB6	25569-80-6	N.D.	10.3	1
13584	PCB7	33284-50-3	N.D.	10.3	1
13584	PCB8	34883-43-7	N.D.	25.6	1

Sample Description: **L7179856-3 Grab Wastewater**
QTLY ROS01 MANHOLE RINSATE BLANK

Project Name: **L7179856**

Eurofins QC, LLC
ELLE Sample #: WW 1243714
ELLE Group #: 2084163
Matrix: Wastewater

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/20/2020 07:12
SDG#: OMC01-03RB

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668_A PCB Congeners**		**pg/l**	**pg/l**	
13584	PCB9	34883-39-1	N.D.	10.3	1
13584	PCB10	33146-45-1	N.D.	25.6	1
13584	PCB11	2050-67-1	N.D.	51.3	1
13584	PCB12+13	n.a.	N.D.	25.6	1
13584	PCB14	34883-41-5	N.D.	10.3	1
13584	PCB15	2050-68-2	N.D.	25.6	1
13584	PCB16	38444-78-9	N.D.	10.3	1
13584	PCB17	37680-66-3	N.D.	10.3	1
13584	PCB18+30	n.a.	N.D.	25.6	1
13584	PCB19	38444-73-4	N.D.	10.3	1
13584	PCB20+28	n.a.	N.D.	25.6	1
13584	PCB21+33	n.a.	N.D.	25.6	1
13584	PCB22	38444-85-8	N.D.	10.3	1
13584	PCB23	55720-44-0	N.D.	10.3	1
13584	PCB24	55702-45-9	N.D.	10.3	1
13584	PCB25	55712-37-3	N.D.	10.3	1
13584	PCB26+29	n.a.	N.D.	25.6	1
13584	PCB27	38444-76-7	N.D.	10.3	1
13584	PCB31	16606-02-3	N.D.	25.6	1
13584	PCB32	38444-77-8	N.D.	10.3	1
13584	PCB34	37680-68-5	N.D.	10.3	1
13584	PCB35	37680-69-6	N.D.	10.3	1
13584	PCB36	38444-87-0	N.D.	10.3	1
13584	PCB37	38444-90-5	N.D.	10.3	1
13584	PCB38	53555-66-1	N.D.	10.3	1
13584	PCB39	38444-88-1	N.D.	10.3	1
13584	PCB40+71	n.a.	N.D.	51.3	1
13584	PCB41	52663-59-9	N.D.	51.3	1
13584	PCB42	36559-22-5	N.D.	25.6	1
13584	PCB43	70362-46-8	N.D.	25.6	1
13584	PCB44+47+65	n.a.	N.D.	51.3	1
13584	PCB45	70362-45-7	N.D.	25.6	1
13584	PCB46	41464-47-5	N.D.	10.3	1
13584	PCB48	70362-47-9	N.D.	25.6	1
13584	PCB49+69	n.a.	N.D.	51.3	1
13584	PCB50+53	n.a.	N.D.	51.3	1
13584	PCB51	68194-04-7	N.D.	25.6	1
13584	PCB52	35693-99-3	N.D.	25.6	1
13584	PCB54	15968-05-5	N.D.	25.6	1
13584	PCB55	74338-24-2	N.D.	25.6	1
13584	PCB56	41464-43-1	N.D.	25.6	1
13584	PCB57	70424-67-8	N.D.	25.6	1
13584	PCB58	41464-49-7	N.D.	25.6	1
13584	PCB59+62+75	n.a.	N.D.	51.3	1
13584	PCB60	33025-41-1	N.D.	25.6	1
13584	PCB61+70+74+76	n.a.	N.D.	103	1
13584	PCB63	74472-34-7	N.D.	25.6	1
13584	PCB64	52663-58-8	N.D.	25.6	1

Sample Description: **L7179856-3 Grab Wastewater**
QTLY ROS01 MANHOLE RINSATE BLANK

Project Name: **L7179856**

Eurofins QC, LLC
ELLE Sample #: WW 1243714
ELLE Group #: 2084163
Matrix: Wastewater

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/20/2020 07:12
SDG#: OMC01-03RB

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668_A PCB Congeners**		**pg/l**	**pg/l**	
13584	PCB66	32598-10-0	N.D.	25.6	1
13584	PCB67	73575-53-8	N.D.	25.6	1
13584	PCB68	73575-52-7	N.D.	25.6	1
13584	PCB72	41464-42-0	N.D.	25.6	1
13584	PCB73	74338-23-1	N.D.	25.6	1
13584	PCB77	32598-13-3	N.D.	25.6	1
13584	PCB78	70362-49-1	N.D.	25.6	1
13584	PCB79	41464-48-6	N.D.	25.6	1
13584	PCB80	33284-52-5	N.D.	25.6	1
13584	PCB81	70362-50-4	N.D.	25.6	1
13584	PCB82	52663-62-4	N.D.	25.6	1
13584	PCB83	60145-20-2	N.D.	51.3	1
13584	PCB84	52663-60-2	N.D.	10.3	1
13584	PCB85+116+117	n.a.	N.D.	51.3	1
13584	PCB86+87+97+109+119+125	n.a.	N.D.	103	1
13584	PCB88	55215-17-3	N.D.	25.6	1
13584	PCB89	73575-57-2	N.D.	25.6	1
13584	PCB90+101+113	n.a.	N.D.	103	1
13584	PCB91	68194-05-8	N.D.	25.6	1
13584	PCB92	52663-61-3	N.D.	25.6	1
13584	PCB93+100	n.a.	N.D.	103	1
13584	PCB94	73575-55-0	N.D.	25.6	1
13584	PCB95	38379-99-6	N.D.	103	1
13584	PCB96	73575-54-9	N.D.	25.6	1
13584	PCB98+102	n.a.	N.D.	103	1
13584	PCB99	38380-01-7	N.D.	51.3	1
13584	PCB103	60145-21-3	N.D.	25.6	1
13584	PCB104	56558-16-8	N.D.	25.6	1
13584	PCB105	32598-14-4	N.D.	25.6	1
13584	PCB106	70424-69-0	N.D.	25.6	1
13584	PCB107	70424-68-9	N.D.	25.6	1
13584	PCB108+124	n.a.	N.D.	51.3	1
13584	PCB110+115	n.a.	N.D.	51.3	1
13584	PCB111	39635-32-0	N.D.	25.6	1
13584	PCB112	74472-36-9	N.D.	25.6	1
13584	PCB114	74472-37-0	N.D.	25.6	1
13584	PCB118	31508-00-6	N.D.	51.3	1
13584	PCB120	68194-12-7	N.D.	25.6	1
13584	PCB121	56558-18-0	N.D.	25.6	1
13584	PCB122	76842-07-4	N.D.	25.6	1
13584	PCB123	65510-44-3	N.D.	25.6	1
13584	PCB126	57465-28-8	N.D.	25.6	1
13584	PCB127	39635-33-1	N.D.	25.6	1
13584	PCB128+166	n.a.	N.D.	51.3	1
13584	PCB129+138+163	n.a.	N.D.	103	1
13584	PCB130	52663-66-8	N.D.	25.6	1
13584	PCB131	61798-70-7	N.D.	25.6	1
13584	PCB132	38380-05-1	N.D.	25.6	1

Sample Description: **L7179856-3 Grab Wastewater**
QTLY ROS01 MANHOLE RINSATE BLANK

Project Name: **L7179856**

Eurofins QC, LLC
ELLE Sample #: WW 1243714
ELLE Group #: 2084163
Matrix: Wastewater

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/20/2020 07:12
SDG#: OMC01-03RB

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668_A PCB Congeners**		**pg/l**	**pg/l**	
13584	PCB133	35694-04-3	N.D.	25.6	1
13584	PCB134	52704-70-8	N.D.	51.3	1
13584	PCB135+151	n.a.	N.D.	51.3	1
13584	PCB136	38411-22-2	N.D.	25.6	1
13584	PCB137	35694-06-5	N.D.	25.6	1
13584	PCB139+140	n.a.	N.D.	51.3	1
13584	PCB141	52712-04-6	N.D.	25.6	1
13584	PCB142	41411-61-4	N.D.	25.6	1
13584	PCB143	68194-15-0	N.D.	51.3	1
13584	PCB144	68194-14-9	N.D.	25.6	1
13584	PCB145	74472-40-5	N.D.	25.6	1
13584	PCB146	51908-16-8	N.D.	25.6	1
13584	PCB147+149	n.a.	N.D.	51.3	1
13584	PCB148	74472-41-6	N.D.	25.6	1
13584	PCB150	68194-08-1	N.D.	25.6	1
13584	PCB152	68194-09-2	N.D.	25.6	1
13584	PCB153+168	n.a.	N.D.	51.3	1
13584	PCB154	60145-22-4	N.D.	51.3	1
13584	PCB155	33979-03-2	N.D.	25.6	1
13584	PCB156+157	n.a.	N.D.	51.3	1
13584	PCB158	74472-42-7	N.D.	25.6	1
13584	PCB159	39635-35-3	N.D.	25.6	1
13584	PCB160	41411-62-5	N.D.	103	1
13584	PCB161	74472-43-8	N.D.	25.6	1
13584	PCB162	39635-34-2	N.D.	25.6	1
13584	PCB164	74472-45-0	N.D.	25.6	1
13584	PCB165	74472-46-1	N.D.	25.6	1
13584	PCB167	52663-72-6	N.D.	25.6	1
13584	PCB169	32774-16-6	N.D.	25.6	1
13584	PCB170	35065-30-6	N.D.	25.6	1
13584	PCB171+173	n.a.	N.D.	51.3	1
13584	PCB172	52663-74-8	N.D.	25.6	1
13584	PCB174	38411-25-5	N.D.	25.6	1
13584	PCB175	40186-70-7	N.D.	25.6	1
13584	PCB176	52663-65-7	N.D.	25.6	1
13584	PCB177	52663-70-4	N.D.	25.6	1
13584	PCB178	52663-67-9	N.D.	25.6	1
13584	PCB179	52663-64-6	N.D.	25.6	1
13584	PCB180+193	n.a.	N.D.	51.3	1
13584	PCB181	74472-47-2	N.D.	25.6	1
13584	PCB182	60145-23-5	N.D.	25.6	1
13584	PCB183+185	n.a.	N.D.	51.3	1
13584	PCB184	74472-48-3	N.D.	25.6	1
13584	PCB186	74472-49-4	N.D.	25.6	1
13584	PCB187	52663-68-0	N.D.	25.6	1
13584	PCB188	74487-85-7	N.D.	25.6	1
13584	PCB189	39635-31-9	N.D.	25.6	1
13584	PCB190	41411-64-7	N.D.	25.6	1

Sample Description: **L7179856-3 Grab Wastewater**
QTLY ROS01 MANHOLE RINSATE BLANK

Project Name: **L7179856**

Eurofins QC, LLC
ELLE Sample #: WW 1243714
ELLE Group #: 2084163
Matrix: Wastewater

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/20/2020 07:12
SDG#: OMC01-03RB

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668_A PCB Congeners**		**pg/l**	**pg/l**	
13584	PCB191	74472-50-7	N.D.	25.6	1
13584	PCB192	74472-51-8	N.D.	25.6	1
13584	PCB194	35694-08-7	N.D.	25.6	1
13584	PCB195	52663-78-2	N.D.	25.6	1
13584	PCB196	42740-50-1	N.D.	25.6	1
13584	PCB197+200	n.a.	N.D.	51.3	1
13584	PCB198+199	n.a.	N.D.	51.3	1
13584	PCB201	40186-71-8	N.D.	25.6	1
13584	PCB202	2136-99-4	N.D.	51.3	1
13584	PCB203	52663-76-0	N.D.	25.6	1
13584	PCB204	74472-52-9	N.D.	25.6	1
13584	PCB205	74472-53-0	N.D. Q1	25.6	1
13584	PCB206	40186-72-9	N.D.	25.6	1
13584	PCB207	52663-79-3	N.D.	25.6	1
13584	PCB208	52663-77-1	N.D.	25.6	1
13584	PCB209	2051-24-3	N.D.	25.6	1

The summation PCBs reported cannot be resolved under the chromatographic conditions used for sample analysis. The concentration(s) reported is the combined total of the PCBs and would be the maximum possible concentration for any individual PCB of interest.

The recovery of PCB 205 in the Ongoing Precision and Recovery (OPR) sample was outside QC acceptance criteria as noted on the QC summary. Sufficient sample volume was not available to perform a reanalysis.

Total PCBs	**EPA 1668_A PCB Congeners**		**pg/l**	**pg/l**	
13584	Total PCBs[1]	1336-36-3	198 B	10.3	1

The summation PCBs reported cannot be resolved under the chromatographic conditions used for sample analysis. The concentration(s) reported is the combined total of the PCBs and would be the maximum possible concentration for any individual PCB of interest.

The recovery of PCB 205 in the Ongoing Precision and Recovery (OPR) sample was outside QC acceptance criteria as noted on the QC summary. Sufficient sample volume was not available to perform a reanalysis.

Labeled Compounds	**%Rec**	**Windows**
13C12-PCB1	44	15 - 150
13C12-PCB3	38	15 - 150
13C12-PCB4	57	25 - 150
13C12-PCB15	45	25 - 150
13C12-PCB19	63	25 - 150
13C12-PCB37	48	25 - 150
13C12-PCB54	60	25 - 150
13C12-PCB77	65	25 - 150
13C12-PCB81	64	25 - 150
13C12-PCB104	74	25 - 150
13C12-PCB105	66	25 - 150
13C12-PCB114	67	25 - 150

Sample Description: **L7179856-3 Grab Wastewater**
QTLY ROS01 MANHOLE RINSATE BLANK

Project Name: **L7179856**

Eurofins QC, LLC
ELLE Sample #: WW 1243714
ELLE Group #: 2084163
Matrix: Wastewater

Submittal Date/Time: 01/21/2020 23:05
Collection Date/Time: 01/20/2020 07:12
SDG#: OMC01-03RB

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor

Labeled Compounds	%Rec	Windows
13C12-PCB118	66	25 - 150
13C12-PCB123	65	25 - 150
13C12-PCB126	75	25 - 150
13C12-PCB155	78	25 - 150
13C12-PCB167	72	25 - 150
13C12-PCB169	81	25 - 150
13C12-PCB188	77	25 - 150
13C12-PCB189	74	25 - 150
13C12-PCB202	77	25 - 150
13C12-PCB205	79	25 - 150
13C12-PCB206	95	25 - 150
13C12-PCB208	86	25 - 150
13C12-PCB209	85	25 - 150
13C12-PCB156+157	75	10 - 145

Dioxins/Furans Data Qualifiers:

J	*The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL)*
U	*The analyte was not detected in the sample at the estimated detection limit (EDL)*
E	*Exceeds calibration range*
D	*Dilution Data. Result was obtained from the analysis of a dilution*
B	*Analyte found in sample and associated blank*
C	*Co-eluting congener*
EMPC	*Estimated Maximum Possible Concentration*
Q0	*LCS/LCSD Low*
Q1	*LCS/LCSD High*
Q2	*MS/MSD Low*
Q3	*MS/MSD High*
Q7	*LCS/LCSD RPD*
Q8	*DUP RPD*
Q9	*MS/MSD RPD*

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

[1] = This analyte was not on the laboratory's PA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13584	DRBC PCB Congeners in Water	EPA 1668_A PCB Congeners	1	20031023	02/05/2020 18:16	Joseph D Anderson	1
14069	DRBC Congeners in Water-SepF	EPA 1668_A PCB Congeners	1	20031023	02/03/2020 08:00	Casey Horejs	1

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Quality Control Outlier Summary

Client Name: Eurofins QC, LLC
Reported: 02/13/2020 14:32

Group Number: 2084163

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result pg/l	LOQ pg/l
Batch number: 20031023	Sample number(s): 1243713-1243714	
Total DiCB	41.0	10.0
Total TrCB	16.9	10.0
Total TeCB	44.7	10.0
Total PeCB	41.7	10.0
Total HxCB	27.7	25.0
Analysis Name	**Result pg/l**	**MRL pg/l**
Total PCBs	212	10.0

OPR/OPRD

Analysis Name	OPR Spike Added pg/l	OPR Conc pg/l	OPRD Spike Added pg/l	OPRD Conc pg/l	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 20031023	Sample number(s): 1243713-1243714								
PCB205	500	778.8			156*		50-150		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: U200241AA	Sample number(s): 1243712 UNSPK: 1243712									
Acrolein	N.D.	150	71.12	150	58.71	47	39*	40-160	19	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

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Quality Control Outlier Summary

Client Name: Eurofins QC, LLC
Reported: 02/13/2020 14:32

Group Number: 2084163

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

2084163

EUROFINS QC, LLC
702 Electronic Drive
Horsham, PA 19044
Contact: Nicki Smith x3360
Phone: 215-355-3900
FAX: 215-392-0626

Bill to:

Horsham, PA 19044

EUROFINS QC, INC.
LANCASTER (ELLE) CHAIN OF CUSTODY
Jan 21 2020, 03:16 pm

PWSID:

Sample ID	Analysis	Number of Containers											Sampled Date and Time	Tier
State: PA		Total	H2SO4	HCl	AscAc	HNO3	NaOH	ZnAc	Unpre	Bact	NaThio	Other		
L7179856-1 QTLY ROS01 EFFLUENT MANHOLE COMPOSITE 1/20-21		14	/	/		/			/				01/21/20 07:15 AM	
COMM: PP														
02/03/20 WASTEWATER	624 AC/ACN 204													
02/03/20 WASTEWATER	625 AEBN 205													
02/03/20 WASTEWATER	AG													
02/03/20 WASTEWATER	AS 158													
02/03/20 WASTEWATER	BOD 5 146													
02/03/20 WASTEWATER	CD													
02/03/20 WASTEWATER	COD 08													
02/03/20 WASTEWATER	CR													
02/03/20 WASTEWATER	CU 38X3													
02/03/20 WASTEWATER	DIOXIN SCREEN													
02/03/20 WASTEWATER	HG 40X3													
02/03/20 WASTEWATER	NH3													
02/03/20 WASTEWATER	NI 153X4													
02/03/20 WASTEWATER	PB													
02/03/20 WASTEWATER	TSS													
02/03/20 WASTEWATER	ZN													
State: PA		Total	H2SO4	HCl	AscAc	HNO3	NaOH	ZnAc	Unpre	Bact	NaThio	Other		
L7179856-2 QTLY ROS01 EFFLUENT MANHOLE GRAB		6	/	/			/		/				01/21/20 07:36 AM	
COMM: PCB CONGENERS BY 1668A														
02/03/20 WASTEWATER	1664 HEM-SGT 06X2 02 99													
02/03/20 WASTEWATER	CN 157 151													
02/03/20 WASTEWATER	COD													

Moisture? _____

E-Account Number: 25368 ROSCOM, INC. CS REP: STEPHEN

Package Type:

Relinquished By	Date	Time
[illegible]	1/21/20	1645

Received By	Date	Time
890	1/21/20	1645
[illegible]	1/21/20	2305

Comments:

20841163

EUROFINS QC, LLC
702 Electronic Drive
Horsham, PA 19044
Contact: Nicki Smith x3360
Phone: 215-355-3900
FAX: 215-392-0626

Bill to:

Horsham, PA 19044

EUROFINS QC, INC.
LANCASTER (ELLE) CHAIN OF CUSTODY
Jan 21 2020, 03:16 pm

PWSID:

Sample ID	Analysis	Number of Containers	Sampled Date and Time	Tier
02/03/20 WASTEWATER	PCB CONGENERS			
02/03/20 WASTEWATER	PHENOL			

State: PA

	Total	H2SO4	HCl	AscAc	HNO3	NaOH	ZnAc	Unpre	Bact	NaThio	Other	
L7179856-3 QTLY ROS01 EFFLUENT MANHOLE GRAB RINSATE BLANK	/							/				01/20/20 07:12 AM
COMM: 1668A BLANK												
02/03/20 QA PCB CONGENERS 99												

Moisture? _____

E-Account Number: 25368 ROSCOM, INC. CS REP: STEPHEN

Package Type:

Relinquished By	Date	Time
	1/21/20	1645

Received By	Date	Time
890	1/21/20	1645
	1/21/20	2305

Comments:

2084163

eurofins | **QC**

702 Electronic Drive
Horsham, PA 19044
Phone: 215-355-3900
Fax: 215-392-0626

CHAIN OF CUSTODY

Page 1 of 2

Lab LIMS No: 7179856

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

Client/Acct. No. ROSCOM, INC
Address 2925 STATE RD
City/State/Zip CROYDON, PA
Phone/Fax
Client Contact:

P.O. No. PWSID #:
Quote #
e-mail:

LAB USE ONLY:

___ Ascorbic/HCL Vials # 3 HCl Vials
___ $Na_2S_2O_3$ ___
___ Na OH/Zn acetate pH ___
1 HNO_3 pH 1/2 DTPL
3 H_2SO_4 pH PTPL 250 AMB 1/2 DTPL
1 NaOH pH 1/2 DTPL
13 Unpreserved (4) AMB GAL (3) vials (4) 250 AMB (2) PLOT
2 HCl AMB OT # ___ NH4Cl # ___ MeOH
___ DI Water

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

PROJECT

FIELD ID	Collection Date	Military Time	GRAB	COMP	Matrix Code	Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT		ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
-1 QTLY RUSOI EFFLUENT	1-20 →	0715		X	WW	~~14~~ KEM	1		6	1		KEM	~~6~~			624 AC/ACN	
MANHOLE COMP	1-21-20	0715				~~12~~							~~4~~			625 ACEAN, DIOX SCREEN	
06-16-10-R						14							6			Ag As Cd Cr Cu Hg Ni Pb Zn	
																BOD5 TSS	
																COD, NH_3	
-2 QTLY RUSOI EFFLUENT	1-21-20	0736	X		WW		2	2			1		2			1664 HEM-SGT	
MANHOLE GRAB																CN	
11-10-R																COD PHENOL	
																PCB CONGENERS 1668 A	

SAMPLED BY: (Name/Company) KEM / EQC

TAT: ☐ STANDARD (10 DAY)
or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD ☐ Standard + QC ☐ Forms ☐ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By:
Initials
Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1. [signature]	1-21-20	1405	1. [signature]	1-21-20	1405
RELINQUISHED BY 2.	DATE	TIME	RECEIVED BY 2.	DATE	TIME
RELINQUISHED BY 3.	DATE	TIME	RECEIVED BY 3.	DATE	TIME
RELINQUISHED BY 4.	DATE	TIME	RECEIVED BY 4.	DATE	TIME
RELINQUISHED BY 5.	DATE	TIME	RECEIVED BY 5. [signature]	DATE 1/21/20	TIME 2305

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER ___

Custody Seal Number

Rec'd Temp.: 3.1°C Initials: KEM Ice Y / N Location: QC

COMMENTS:

Hazardous: yes / no

2084163

eurofins | QC

702 Electronic Drive
Horsham, PA 19044
Phone: 215-355-3900
Fax: 215-392-0626

CHAIN OF CUSTODY

Page 2 of 2

Lab LIMS No: 7179856

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Sampling Site Address (if different) Include State

Client/Acct. No. ROSCOM, INC
Address See B 1
City/State/Zip
Phone/Fax
Client Contact:

P.O. No. PWSID #:
Quote #
e-mail:

LAB USE ONLY:

___ Ascorbic/HCL Vials # ___ HCl Vials
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
___ HNO_3 pH
___ H_2SO_4 pH
___ NaOH pH
___ Unpreserved
___ HCl # ___ NH4Cl # ___ MeOH
___ DI Water

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

PROJECT / FIELD ID	Collection Date	Military Time	GRAB	COMP	Matrix Code	Number of Containers: Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT		ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
OTH ROSOI EFFLUENT	1-20-20	0712	X		X	2							2			PCB CONGENERS 1668A	
MANHOLE MUSATE BLANK																	

SAMPLED BY: (Name/Company) KEM / EQC

TAT: ☐ STANDARD (10 DAY)
or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD
☐ Standard + QC ☐ Forms ☐ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By:
Initials
Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1. [signature]	1-21-20	1405	1. [signature]	1/21/20	1405
2.			2.		
3.			3.		
4.			4.		
5.			5. [signature]	1/21/20	2305

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number

Rec'd Temp.: 3.1 °C Initials: KEM Ice Y/N Location: QC
COMMENTS:

Hazardous: yes / no

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 272996

Group Number(s): 2084163

Client: EQCL

Delivery and Receipt Information

Delivery Method:	EQCL Drop Off	Arrival Date:	01/21/2020
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	0
Samples Chilled:	Yes	Air Quality Samples Present:	No
Paperwork Enclosed:	Yes		
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Kari Moritz

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	46730060WS	2.3	IR	Wet	Y	Loose	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report
B	Detection in the Method Blank
Q0	LCS/LCSD Low
Q1	LCS/LCSD High
Q2	MS/MSD Low
Q3	MS/MSD High
Q7	LCS/LCSD RPD
Q8	DUP RPD
Q9	MS/MSD RPD

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical Report

Serialized: 05/21/2020 08:40am QC36

MICHAEL GOLDBERG
ROSCOM, INC.
2925 STATE ROAD

CROYDON,PA 19021

Regarding:

ROSCOM, INC.
2925 STATE ROAD
ROS01-MANHOLE IN FRONT PARKING LOT
CROYDON, PA 19021

PROJECT ID:

SR0053 MANHOLE

LABORATORY REPORT NUMBER:

L7195308

PO NUMBER:

13424

Authorized by: Douglas J. Gump
Client Services Manager

Eurofins QC, LLC

Analytical Report

Printed 05/21/20 08:40 QC36

MICHAEL GOLDBERG
ROSCOM, INC.
2925 STATE ROAD
ROS01-MANHOLE IN FRONT PARKING LOT
CROYDON, PA 19021

Regarding:
MICHAEL GOLDBERG
ROSCOM, INC.
2925 STATE ROAD
ROS01-MANHOLE IN FRONT PARKING LOT
CROYDON, PA 19021

Account No: SR0053, ROSCOM, INC. **P.O. No:**13424 **Inv. No:** 2011753 PI
Project No: SR0053 MANHOLE, ROSCOM, INC. **PWSID No:**

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L7195308-1	QTLY ROS01 EFFLUENT MANHOLE COMPOSITE 4/27-28	04/28/20 10:15am NA C	Kenneth McGrady, Eurofins QC, LLC

Received Date/Time/Temp 04/28/20 03:00pm 2.4 C **Iced (Y/N):** Y

--SUBCONTRACTED RESULT REFERENCES--QTLY ROS01 EFFLUENT MANHOLE COMPOSITE 4/27-28

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
- ARSENIC
- BIOCHEMICAL OXYGEN DEMAND
- CADMIUM
- CHROMIUM
- COPPER
- EPA 624+ACROLEIN/ACRYLONITRILE
- EPA METHOD 625 SEMI VOLATILES
- EPA METHODS 625 DIOXIN SCREEN
- LEAD
- MERCURY
- NICKEL
- SILVER
- TOTAL SUSPENDED SOLIDS
- ZINC

Eurofins - Test America, Inc. (Ohio) (TESTAMOH)
- AMMONIA
- CHEMICAL OXYGEN DEMAND

PIN: 41851 Serial Number: 6599220

Eurofins QC, LLC

Analytical Report

Printed 05/21/20 08:40

Account No: SR0053, ROSCOM, INC. **P.O. No:**13424 **Inv. No:** 2011753 PI
Project No: SR0053 MANHOLE, ROSCOM, INC. **PWSID No:**

Parameter	Result	Qual	Units	Method	DF	RL	Test Date, Time, Analyst

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L7195308-2	QTLY ROS01 EFFLUENT MANHOLE GRAB	04/28/20 10:47am NA C	Kenneth McGrady, Eurofins QC, LLC

Received Date/Time/Temp 04/28/20 03:00pm 2.4 C **Iced (Y/N):** Y

--SUBCONTRACTED RESULT REFERENCES--QTLY ROS01 EFFLUENT MANHOLE GRAB

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
CYANIDE,TOTAL
EPA 1664 HEXANE EXTRACTABLE MATERIAL
PCB CONGENERS

Eurofins - Test America, Inc. (Ohio) (TESTAMOH)
CHEMICAL OXYGEN DEMAND
PHENOL

PIN: 41851 Serial Number: 6599220

eurofins | QC

DEFINITIONS

The following terms or abbreviations are used in this report: ***Eurofins QC, LLC (EQC)***

<	Less than: In conjunction with a numerical value, indicates a concentration less than RL / MDL
>	Greater than: In conjunction with a numerical value, indicates a concentration greater than RL / MDL
CFU	Colony Forming Unit
DF	Dilution Factor (For Microbiology, DF = volume of sample tested)
DRY	Result was reported on a dry weight basis
MCL	EPA recommended "Maximum Contaminant Level"
MDL	Method Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
ND	For odor test: No Odor Observed
ND	For all other tests: Analyte concentration Not Detected greater than the RL / MDL

NEG	Negative / Absent
NTU	Nephelometric Turbidity Units
POS	Positive / Present
PPB (µg/L)	Parts per billion: equivalent to 1 microgram per kilogram (µg/Kg) for solids or one microgram per liter (µg/L) for aqueous samples
PPM (mg/L)	Parts per million: equivalent to 1 milligram per kilogram (mg/Kg) for solids or one milligram per liter (mg/L) for aqueous samples
PRES	Presumptive
QUAL	Qualifier (Q)
RL	Laboratory Reporting Limit or Limit of Quantitation (LOQ)
TNTC	Too Numerous To Count
TON	Threshold Odor Number

Data Qualifiers

J	Estimated value ≥ MDL, but < RL
T	Temperature exceedance at receipt, refer to Sample Comments / Results Qualifiers section
E	Estimated CFU count (Microbiology)
Q	Qualifier defined in Sample Comment section on report

Warranties, Terms, and Conditions

- Unless otherwise indicated in the Parameter field, analyses for environmental microbiology, odor, and pharmaceutical microbiology are performed at the EQC Horsham Facility (702 Electronic Dr. Horsham, PA 19044).
- Analyses for Field Parameters are performed by EQC Field staff. Locations and certifications are identified on the Chain of Custody as follows:
  - "ERF" = field staff performs tests under NJ State certification # 02015.
  - "VL" = field staff performs tests under NJ State certification # 06005.
  - "WG" = field staff performs tests under NJ State certification # PA001.
- Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.
- The report shall not be reproduced, except in full, without the written consent of the laboratory.
- All samples are collected as "grab" samples unless otherwise identified.
- Reported results relate only to the sample as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.
- EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance. EQC's internet program "LIVE ACCESS" will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.
- The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry), Amanda Berd (Pharmaceutical Microbiology), and Zachary Smith (Water Microbiology).

EQC Accreditations

Horsham Facility	NELAP/State IDs-	PA: 46-05499	NJ: PA093	NY: 12080	MD: 357	
East Rutherford Facility	State ID-	NJ: 02015				
Vineland Facility	State ID-	NJ: 06005				
Wind Gap Facility	State ID-	NJ: PA001				

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CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No: 7195308

702 Electronic Drive
Horsham, PA 19044-0962
Phone: 215-355-3900
Fax: 215-355-7231

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City/State/Zip CROYDON, PA
Phone/Fax
Client Contact:

P.O. No. PWSID #:
Quote #
e-mail:

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___ $Na_2S_2O_3$
___ NaOH/Zn acetate pH
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___ NaOH pH
___ Unpreserved
___ HCl # ___ NH4Cl # ___ MeOH
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LAB USE ONLY

PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers: Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT		ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
-1 QTLY ROSOI	4-27	1015		X	WW	16	1		6	1			8			624 AC-PACN	
EFFLUENT MANHOLE COMP	4-28-20	1015														625 ACAN DIOXIN SCREEN	
06-16-10-R																Ag As Cd Cr Cu Hg Ni Pb Zn	
																BOD_5 TSS	
																COD NH_3	
-2 QTLY ROSOI	4-28-20	1047	X		WW	7	2	2			1		2			1664 HEM-SGT	
EFFLUENT MANHOLE GRAB																CN	
11-10-R																COD PHENOL	
																PCB CONGENERS	

SAMPLED BY: (Name/Company) KEM / EQC

TAT: ☐ STANDARD (10 DAY)
or DUE DATE ___/___/___

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☐ Standard + QC ☐ Forms ☐ EDD

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Initials
Date/Time:

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RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1. [signature]	4-28-20	1500	1. [signature]	4/28/20	1500
2.			2.		
3.			3.		
4.			4.		
5.			5.		

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER ___

Custody Seal Number

Rec'd Temp.: 2.4 °C Initials: KEM Ice Y / N Location: [illegible]

COMMENTS:

Hazardous: yes / no

EQC Eurofins QC, LLC

Picksheet: P7195308
Cust: SR0053 MANHOLE
Schd: 43397

MICHAEL GOLDBERG
ROSCOM, INC.
2925 STATE ROAD
ROS01-MANHOLE IN FRONT PARKING LOT
CROYDON, PA 19021
(215)781-1700

Expected: MONDAY 04/06/20 - 06/30/20
Project Name: ROSCOM, INC.
Start Date: 03/13/15 Stop Date:

Comments/Schedule Details:
MANHOLE IN FRONT PARKING LOT. PCB CONGENERS RUN BY METHOD 1668A. NOT DRBC REPORTABLE.

LAB USE ONLY

#_____ Ascorbic/HCL Vials
#_____ NA2S2O3
#_____ NaOH/Zn acetate pH _____
#_____ HNO3 pH _____
#_____ H2SO4 pH _____
#_____ NaOH pH _____
#_____ Unpreserved _____
#_____ HCL _____
#_____ NH4CL _____
#_____ MEOH _____
#_____ Na2SO3/HCL _____
#_____ DI Water _____

Bottle Type
#_____ HCL Vials

Route: 86 KEN MCGRADY: LANDFILLS / DISCHARGES, ETC.

PWSID:

Field Tests By: _____ /Time: _____

	Pseudo	HPC	eColi	Coli	Collection Date	Collection Time (Military)	Total # Bottles	Free Cl2 mg/L	pH/TempC	BR2 YES/NO	Total CL2 mg/L	
7195308-1 QTLY ROS01 EFFLUENT MANHOLE COMPOSITE 06-COMP NO FLD, 16-COMP RENT, 624 AC/ACN, 625 AEBN, AG, AS, BOD 5, CD, COD, CR, CU, DIOXIN SCREEN, HG, METAL PREP, NH3, NI, PB, TSS, ZN PP FIELD WORK CODE: _____												
7195308-2 QTLY ROS01 EFFLUENT MANHOLE GRAB 11-ADD LOC NO FLD, 1664 HEM-SGT, CN, COD, PCB CONGENERS, PHENOL FIELD WORK CODE: _____												

Cooler ID:

Sample Collected By	Circle One		Initials
	Client	EQC	

Required TAT: Standard ___/Rush___# Days _____

Relinquished By	Time	Date	Received By	Time	Date	Temp	Iced Y/N	Site	Initials

Comments (reporting, methods, etc)

Hazardous Y/N

M: 07:00-18:00 T: 07:00-18:00 W: 07:00-18:00 Th: 07:00-18:00 F: 07:00-18:00 St: - Sn: - Printed: 03/18/20 GPS X: _____ Y: _____
M: - T: - W: - Th: - F: - St: - Sn: -
PM: STEPHEN

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Eurofins QC, LLC
702 Electronic Drive
Horsham PA 19044

Report Date: May 14, 2020 18:45

Project: L7195308

Account #: 25368
Group Number: 2097722
State of Sample Origin: PA

Electronic Copy To Eurofins QC, LLC Attn: Nicki Smith

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
L7195308-1 Composite Wastewater	04/28/2020 10:15	1306259
L7195308-2 Grab Wastewater	04/28/2020 10:47	1306260

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Respectfully Submitted,

Wendy A. Kozma
Principal Specialist Group Leader

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **L7195308-1 Composite Wastewater Effluent QTLY ROS01 MANHOLE 4/27-28**

Project Name: **L7195308**

Submittal Date/Time: 04/28/2020 21:45
Collection Date/Time: 04/28/2020 10:15

Eurofins QC, LLC
ELLE Sample #: WW 1306259
ELLE Group #: 2097722
Matrix: Wastewater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	
14687	Acrolein	107-02-8	N.D.	10.0	1
14687	Acrylonitrile	107-13-1	N.D.	1.00	1
14687	Benzene	71-43-2	N.D.	1.00	1
14687	Bromodichloromethane	75-27-4	N.D.	1.00	1
14687	Bromoform	75-25-2	N.D.	1.00	1
14687	Bromomethane	74-83-9	N.D.	1.00	1
14687	Carbon Tetrachloride	56-23-5	N.D.	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	1.00	1
14687	Chloroethane	75-00-3	N.D.	1.00	1
14687	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	1.00	1
14687	Chloroform	67-66-3	3.55	1.00	1
14687	Chloromethane	74-87-3	N.D.	1.00	1
14687	Dibromochloromethane	124-48-1	N.D.	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	1.00	1
14687	1,1-Dichloroethane	75-34-3	N.D.	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	1.00	1
14687	1,1-Dichloroethene	75-35-4	N.D.	1.00	1
14687	trans-1,2-Dichloroethene	156-60-5	N.D.	1.00	1
14687	1,2-Dichloropropane	78-87-5	N.D.	1.00	1
14687	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.00	1
14687	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	1.00	1
14687	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.00	1
14687	Tetrachloroethene	127-18-4	N.D.	1.00	1
14687	Toluene	108-88-3	N.D.	1.00	1
14687	1,1,1-Trichloroethane	71-55-6	N.D.	1.00	1
14687	1,1,2-Trichloroethane	79-00-5	N.D.	1.00	1
14687	Trichloroethene	79-01-6	N.D.	1.00	1
14687	Trichlorofluoromethane	75-69-4	N.D.	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	1.00	1
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	
14669	Acenaphthene	83-32-9	N.D.	5	1
14669	Acenaphthylene	208-96-8	N.D.	5	1
14669	Anthracene	120-12-7	N.D.	5	1
14669	Benzidine	92-87-5	N.D.	58	1
14669	Benzo(a)anthracene	56-55-3	N.D.	5	1
14669	Benzo(a)pyrene	50-32-8	N.D.	5	1
14669	Benzo(b)fluoranthene	205-99-2	N.D.	5	1
14669	Benzo(g,h,i)perylene	191-24-2	N.D.	5	1
14669	Benzo(k)fluoranthene	207-08-9	N.D.	5	1
14669	4-Bromophenyl-phenylether	101-55-3	N.D.	5	1
14669	Butylbenzylphthalate	85-68-7	N.D.	5	1
14669	Di-n-butylphthalate	84-74-2	N.D.	5	1
14669	4-Chloro-3-methylphenol	59-50-7	N.D.	5	1
14669	bis(2-Chloroethoxy)methane	111-91-1	N.D.	5	1

Sample Description: **L7195308-1 Composite Wastewater Effluent QTLY ROS01 MANHOLE 4/27-28**

Project Name: **L7195308**

Eurofins QC, LLC
ELLE Sample #: WW 1306259
ELLE Group #: 2097722
Matrix: Wastewater

Submittal Date/Time: 04/28/2020 21:45
Collection Date/Time: 04/28/2020 10:15

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	
14669	bis(2-Chloroethyl)ether	111-44-4	N.D.	5	1
14669	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	5	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.				
14669	2-Chloronaphthalene	91-58-7	N.D.	5	1
14669	2-Chlorophenol	95-57-8	N.D.	5	1
14669	4-Chlorophenyl-phenylether	7005-72-3	N.D.	5	1
14669	Chrysene	218-01-9	N.D.	5	1
14669	Dibenz(a,h)anthracene	53-70-3	N.D.	5	1
14669	3,3'-Dichlorobenzidine	91-94-1	N.D.	5	1
14669	2,4-Dichlorophenol	120-83-2	N.D.	5	1
14669	Diethylphthalate	84-66-2	N.D.	5	1
14669	2,4-Dimethylphenol	105-67-9	N.D.	5	1
14669	Dimethylphthalate	131-11-3	N.D.	5	1
14669	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	10	1
14669	2,4-Dinitrophenol	51-28-5	N.D.	10	1
14669	2,4-Dinitrotoluene	121-14-2	N.D.	5	1
14669	2,6-Dinitrotoluene	606-20-2	N.D.	5	1
00382	Dioxin Screen[1]	n.a.	N.D.	10	5
14669	1,2-Diphenylhydrazine	122-66-7	N.D.	5	1
	Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.				
14669	bis(2-Ethylhexyl)phthalate	117-81-7	350	49	10
14669	Fluoranthene	206-44-0	N.D.	5	1
14669	Fluorene	86-73-7	N.D.	5	1
14669	Hexachlorobenzene	118-74-1	N.D.	5	1
14669	Hexachlorobutadiene	87-68-3	N.D.	2	1
14669	Hexachlorocyclopentadiene	77-47-4	N.D.	15	1
14669	Hexachloroethane	67-72-1	N.D.	2	1
14669	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	5	1
14669	Isophorone	78-59-1	N.D.	5	1
14669	Naphthalene	91-20-3	N.D.	2	1
14669	Nitrobenzene	98-95-3	N.D.	5	1
14669	2-Nitrophenol	88-75-5	N.D.	5	1
14669	4-Nitrophenol	100-02-7	N.D.	5	1
14669	N-Nitrosodimethylamine	62-75-9	N.D.	5	1
14669	N-Nitroso-di-n-propylamine	621-64-7	N.D.	5	1
14669	N-Nitrosodiphenylamine	86-30-6	N.D.	5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.				
14669	Di-n-octylphthalate	117-84-0	N.D.	5	1
14669	Pentachlorophenol	87-86-5	N.D.	5	1
14669	Phenanthrene	85-01-8	N.D.	5	1
14669	Phenol	108-95-2	N.D.	1	1
14669	Pyrene	129-00-0	N.D.	5	1

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Analysis Report

Sample Description: **L7195308-1 Composite Wastewater Effluent QTLY ROS01 MANHOLE 4/27-28**

Eurofins QC, LLC
ELLE Sample #: WW 1306259
ELLE Group #: 2097722
Matrix: Wastewater

Project Name: **L7195308**

Submittal Date/Time: 04/28/2020 21:45
Collection Date/Time: 04/28/2020 10:15

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	1	1
14669	2,4,6-Trichlorophenol		88-06-2	N.D.	5	1
Metals		**EPA 200.7 rev 4.4**		**mg/l**	**mg/l**	
07035	Arsenic		7440-38-2	N.D.	0.0300	1
07049	Cadmium		7440-43-9	N.D.	0.0050	1
07051	Chromium		7440-47-3	N.D.	0.0150	1
07053	Copper		7440-50-8	0.0783	0.0200	1
07055	Lead		7439-92-1	N.D.	0.0150	1
07061	Nickel		7440-02-0	0.0123	0.0100	1
07066	Silver		7440-22-4	N.D.	0.0100	1
07072	Zinc		7440-66-6	0.574	0.0200	1
		EPA 245.1 rev 3		**mg/l**	**mg/l**	
00259	Mercury		7439-97-6	N.D.	0.00020	1
Wet Chemistry		**SM 2540 D-2011**		**mg/l**	**mg/l**	
13858	Total Suspended Solids		n.a.	33.5	15.0	1
		SM 5210 B-2011		**mg/l**	**mg/l**	
14108	Biochemical Oxygen Demand-BOD		n.a.	47.3	2.00	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.
Trip blank vials were not received by the laboratory for this sample group.

[1] = This analyte was not on the laboratory's PA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	M201211AA	04/30/2020 22:40	Jason M Long	1
00382	Dioxin Screen	EPA 625.1	1	20120WDD026	05/10/2020 16:18	William H Saadeh	5
14669	Method 625.1 MINI	EPA 625.1	1	20120WAD625	04/30/2020 13:17	Anthony P Bauer	1
14669	Method 625.1 MINI	EPA 625.1	1	20120WAD625	05/01/2020 19:36	Anthony P Bauer	10
08108	625 Water Extraction	EPA 625.1	1	20120WAD625	04/29/2020 19:00	Austin Robinson	1
07035	Arsenic	EPA 200.7 rev 4.4	1	201200571603	05/05/2020 19:40	Cindy M Gehman	1
07049	Cadmium	EPA 200.7 rev 4.4	1	201200571603	05/05/2020 19:40	Cindy M Gehman	1
07051	Chromium	EPA 200.7 rev 4.4	1	201200571603	05/05/2020 19:40	Cindy M Gehman	1
07053	Copper	EPA 200.7 rev 4.4	1	201200571603	05/05/2020 19:40	Cindy M Gehman	1
07055	Lead	EPA 200.7 rev 4.4	1	201200571603	05/05/2020 19:40	Cindy M Gehman	1
07061	Nickel	EPA 200.7 rev 4.4	1	201200571603	05/05/2020 19:40	Cindy M Gehman	1
07066	Silver	EPA 200.7 rev 4.4	1	201200571603	05/05/2020 19:40	Cindy M Gehman	1
07072	Zinc	EPA 200.7 rev 4.4	1	201200571603	05/05/2020 19:40	Cindy M Gehman	1
00259	Mercury	EPA 245.1 rev 3	1	201200571401	04/30/2020 09:08	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	201200571603	05/05/2020 03:00	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	201200571401	04/29/2020 17:30	JoElla L Rice	1

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Analysis Report

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13858	Total Suspended Solids	SM 2540 D-2011	1	20123385802A	05/02/2020 09:25	Alexa Sanchez	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	20120141082A	04/29/2020 12:46	Gaurang A Pandya	1

Sample Description: **L7195308-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Eurofins QC, LLC
ELLE Sample #: WW 1306260
ELLE Group #: 2097722
Matrix: Wastewater

Project Name: **L7195308**

Submittal Date/Time: 04/28/2020 21:45
Collection Date/Time: 04/28/2020 10:47

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor
Wet Chemistry		**EPA 335.4**		**mg/l**	**mg/l**	
00237	Total Cyanide (water)		57-12-5	0.019	0.010	1
		EPA 1664B		**mg/l**	**mg/l**	
08079	HEM (oil & grease)		n.a.	N.D.	5.0	1
08078	SGT-HEM (TPH)		n.a.	N.D.	5.0	1
		SM 2540 D-2011		**mg/l**	**mg/l**	
13858	Total Suspended Solids		n.a.	25.8	9.00	1

Sample Description: **L7195308-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Project Name: **L7195308**

Submittal Date/Time: 04/28/2020 21:45
Collection Date/Time: 04/28/2020 10:47

Eurofins QC, LLC
ELLE Sample #: WW 1306260
ELLE Group #: 2097722
Matrix: Wastewater

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668C PCB Congeners**		**pg/l**	**pg/l**	
12429	PCB1	2051-60-7	N.D.	200	1
12429	PCB2	2051-61-8	N.D.	200	1
12429	PCB3	2051-62-9	N.D.	200	1
12429	PCB4	13029-08-8	N.D.	40.0	1
12429	PCB10	33146-45-1	N.D.	40.0	1
12429	PCB9	34883-39-1	N.D.	40.0	1
12429	PCB7	33284-50-3	N.D.	40.0	1
12429	PCB6	25569-80-6	N.D.	40.0	1
12429	PCB5	16605-91-7	N.D.	40.0	1
12429	PCB8	34883-43-7	N.D.	40.0	1
12429	PCB19	38444-73-4	N.D.	40.0	1
12429	PCB14	34883-41-5	N.D.	40.0	1
12429	PCB18+30	n.a.	N.D.	80.0	1
12429	PCB11	2050-67-1	N.D.	300	1
12429	PCB17	37680-66-3	N.D.	40.0	1
12429	PCB12+13	n.a.	N.D.	80.0	1
12429	PCB27	38444-76-7	N.D.	40.0	1
12429	PCB24	55702-45-9	N.D.	40.0	1
12429	PCB16	38444-78-9	N.D.	40.0	1
12429	PCB15	2050-68-2	N.D.	40.0	1
12429	PCB54	15968-05-5	N.D.	80.0	1
12429	PCB32	38444-77-8	N.D.	40.0	1
12429	PCB34	37680-68-5	N.D.	40.0	1
12429	PCB23	55720-44-0	N.D.	40.0	1
12429	PCB26+29	n.a.	N.D.	80.0	1
12429	PCB25	55712-37-3	N.D.	40.0	1
12429	PCB50+53	n.a.	N.D.	300	1
12429	PCB31	16606-02-3	N.D.	40.0	1
12429	PCB20+28	n.a.	N.D.	80.0	1
12429	PCB45	70362-45-7	N.D.	80.0	1
12429	PCB51	68194-04-7	N.D.	80.0	1
12429	PCB21+33	n.a.	N.D.	80.0	1
12429	PCB46	41464-47-5	N.D.	80.0	1
12429	PCB22	38444-85-8	N.D.	40.0	1
12429	PCB52	35693-99-3	N.D.	80.0	1
12429	PCB73	74338-23-1	N.D.	80.0	1
12429	PCB43	70362-46-8	N.D.	80.0	1
12429	PCB36	38444-87-0	N.D.	40.0	1
12429	PCB49+69	n.a.	N.D.	160	1
12429	PCB39	38444-88-1	N.D.	40.0	1
12429	PCB48	70362-47-9	N.D.	80.0	1
12429	PCB104	56558-16-8	N.D.	80.0	1
12429	PCB44+47+65	n.a.	N.D.	240	1
12429	PCB38	53555-66-1	N.D.	40.0	1
12429	PCB59+62+75	n.a.	N.D.	240	1
12429	PCB96	73575-54-9	N.D.	80.0	1
12429	PCB42	36559-22-5	N.D.	80.0	1
12429	PCB35	37680-69-6	N.D.	40.0	1

Sample Description: **L7195308-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Project Name: **L7195308**

Submittal Date/Time: 04/28/2020 21:45
Collection Date/Time: 04/28/2020 10:47

Eurofins QC, LLC
ELLE Sample #: WW 1306260
ELLE Group #: 2097722
Matrix: Wastewater

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668C PCB Congeners**		**pg/l**	**pg/l**	
12429	PCB41	52663-59-9	N.D.	80.0	1
12429	PCB40+71	n.a.	N.D.	160	1
12429	PCB37	38444-90-5	N.D.	40.0	1
12429	PCB64	52663-58-8	N.D.	80.0	1
12429	PCB72	41464-42-0	N.D.	80.0	1
12429	PCB103	60145-21-3	N.D.	80.0	1
12429	PCB68	73575-52-7	N.D.	80.0	1
12429	PCB94	73575-55-0	N.D.	80.0	1
12429	PCB57	70424-67-8	N.D.	80.0	1
12429	PCB95	38379-99-6	N.D.	80.0	1
12429	PCB93+100	n.a.	N.D.	160	1
12429	PCB58	41464-49-7	N.D.	80.0	1
12429	PCB98+102	n.a.	N.D.	200	1
12429	PCB67	73575-53-8	N.D.	80.0	1
12429	PCB88	55215-17-3	N.D.	80.0	1
12429	PCB63	74472-34-7	N.D.	80.0	1
12429	PCB91	68194-05-8	N.D.	80.0	1
12429	PCB61+70+74+76	n.a.	N.D.	320	1
12429	PCB84	52663-60-2	N.D.	80.0	1
12429	PCB66	32598-10-0	N.D.	80.0	1
12429	PCB55	74338-24-2	N.D.	80.0	1
12429	PCB89	73575-57-2	N.D.	80.0	1
12429	PCB56	41464-43-1	N.D.	80.0	1
12429	PCB121	56558-18-0	N.D.	80.0	1
12429	PCB60	33025-41-1	N.D.	80.0	1
12429	PCB92	52663-61-3	N.D.	80.0	1
12429	PCB80	33284-52-5	N.D.	80.0	1
12429	PCB155	33979-03-2	N.D.	80.0	1
12429	PCB152	68194-09-2	N.D.	80.0	1
12429	PCB90+101+113	n.a.	N.D.	240	1
12429	PCB150	68194-08-1	N.D.	80.0	1
12429	PCB83	60145-20-2	N.D.	80.0	1
12429	PCB136	38411-22-2	N.D.	80.0	1
12429	PCB99	38380-01-7	N.D.	80.0	1
12429	PCB112	74472-36-9	N.D.	80.0	1
12429	PCB145	74472-40-5	N.D.	80.0	1
12429	PCB86+87+97+109+119+125	n.a.	N.D.	480	1
12429	PCB79	41464-48-6	N.D.	80.0	1
12429	PCB78	70362-49-1	N.D.	80.0	1
12429	PCB85+116+117	n.a.	N.D.	240	1
12429	PCB110+115	n.a.	N.D.	160	1
12429	PCB81	70362-50-4	N.D.	80.0	1
12429	PCB82	52663-62-4	N.D.	80.0	1
12429	PCB148	74472-41-6	N.D.	80.0	1
12429	PCB77	32598-13-3	N.D.	80.0	1
12429	PCB111	39635-32-0	N.D.	80.0	1
12429	PCB135+151	n.a.	N.D.	160	1
12429	PCB120	68194-12-7	N.D.	80.0	1

Sample Description: **L7195308-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Project Name: **L7195308**

Submittal Date/Time: 04/28/2020 21:45
Collection Date/Time: 04/28/2020 10:47

Eurofins QC, LLC
ELLE Sample #: WW 1306260
ELLE Group #: 2097722
Matrix: Wastewater

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668C PCB Congeners**		**pg/l**	**pg/l**	
12429	PCB154	60145-22-4	N.D.	200	1
12429	PCB144	68194-14-9	N.D.	80.0	1
12429	PCB147+149	n.a.	N.D.	160	1
12429	PCB134	52704-70-8	N.D.	80.0	1
12429	PCB143	68194-15-0	N.D.	80.0	1
12429	PCB108+124	n.a.	N.D.	160	1
12429	PCB139+140	n.a.	N.D.	160	1
12429	PCB107	70424-68-9	N.D.	80.0	1
12429	PCB131	61798-70-7	N.D.	80.0	1
12429	PCB123	65510-44-3	N.D.	80.0	1
12429	PCB106	70424-69-0	N.D.	80.0	1
12429	PCB142	41411-61-4	N.D.	80.0	1
12429	PCB118	31508-00-6	N.D.	80.0	1
12429	PCB132	38380-05-1	N.D.	80.0	1
12429	PCB122	76842-07-4	N.D.	80.0	1
12429	PCB188	74487-85-7	N.D.	200	1
12429	PCB114	74472-37-0	N.D.	80.0	1
12429	PCB133	35694-04-3	N.D.	80.0	1
12429	PCB179	52663-64-6	N.D.	80.0	1
12429	PCB165	74472-46-1	N.D.	80.0	1
12429	PCB105	32598-14-4	N.D.	80.0	1
12429	PCB146	51908-16-8	N.D.	80.0	1
12429	PCB184	74472-48-3	N.D.	80.0	1
12429	PCB161	74472-43-8	N.D.	80.0	1
12429	PCB176	52663-65-7	N.D.	80.0	1
12429	PCB153+168	n.a.	N.D.	160	1
12429	PCB141	52712-04-6	N.D.	80.0	1
12429	PCB186	74472-49-4	N.D.	80.0	1
12429	PCB130	52663-66-8	N.D.	80.0	1
12429	PCB127	39635-33-1	N.D.	80.0	1
12429	PCB137	35694-06-5	N.D.	80.0	1
12429	PCB164	74472-45-0	N.D.	80.0	1
12429	PCB129+138+163	n.a.	N.D.	240	1
12429	PCB160	41411-62-5	N.D.	80.0	1
12429	PCB158	74472-42-7	N.D.	80.0	1
12429	PCB178	52663-67-9	N.D.	80.0	1
12429	PCB175	40186-70-7	N.D.	80.0	1
12429	PCB126	57465-28-8	N.D.	80.0	1
12429	PCB128+166	n.a.	N.D.	160	1
12429	PCB187	52663-68-0	N.D.	80.0	1
12429	PCB182	60145-23-5	N.D.	80.0	1
12429	PCB183+185	n.a.	N.D.	160	1
12429	PCB174	38411-25-5	N.D.	80.0	1
12429	PCB159	39635-35-3	N.D.	80.0	1
12429	PCB162	39635-34-2	N.D.	80.0	1
12429	PCB177	52663-70-4	N.D.	80.0	1
12429	PCB202	2136-99-4	N.D.	120	1
12429	PCB167	52663-72-6	N.D.	80.0	1

Sample Description: **L7195308-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Project Name: **L7195308**

Submittal Date/Time: 04/28/2020 21:45
Collection Date/Time: 04/28/2020 10:47

Eurofins QC, LLC
ELLE Sample #: WW 1306260
ELLE Group #: 2097722
Matrix: Wastewater

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor
PCB Congeners	**EPA 1668C PCB Congeners**		**pg/l**	**pg/l**	
12429	PCB181	74472-47-2	N.D.	80.0	1
12429	PCB171+173	n.a.	N.D.	160	1
12429	PCB201	40186-71-8	N.D.	400	1
12429	PCB156+157	n.a.	N.D.	160	1
12429	PCB204	74472-52-9	N.D.	120	1
12429	PCB197+200	n.a.	N.D.	240	1
12429	PCB172	52663-74-8	N.D.	80.0	1
12429	PCB192	74472-51-8	N.D.	80.0	1
12429	PCB180+193	n.a.	N.D.	160	1
12429	PCB191	74472-50-7	N.D.	80.0	1
12429	PCB170	35065-30-6	N.D.	80.0	1
12429	PCB190	41411-64-7	N.D.	80.0	1
12429	PCB169	32774-16-6	N.D.	80.0	1
12429	PCB198+199	n.a.	N.D.	240	1
12429	PCB196	42740-50-1	N.D.	120	1
12429	PCB203	52663-76-0	N.D.	120	1
12429	PCB208	52663-77-1	N.D.	120	1
12429	PCB195	52663-78-2	N.D.	120	1
12429	PCB189	39635-31-9	N.D.	80.0	1
12429	PCB207	52663-79-3	N.D.	120	1
12429	PCB194	35694-08-7	N.D.	120	1
12429	PCB205	74472-53-0	N.D.	120	1
12429	PCB206	40186-72-9	N.D.	120	1
12429	PCB209	2051-24-3	N.D.	1,000	1

The summation PCBs reported cannot be resolved under the chromatographic conditions used for sample analysis. The concentration(s) reported is the combined total of the PCBs and would be the maximum possible concentration for any individual PCB of interest.

Labeled Compounds	**%Rec**	**Windows**
13C12-PCB1	34	5 - 145
13C12-PCB3	43	5 - 145
13C12-PCB4	48	5 - 145
13C12-PCB15	66	5 - 145
13C12-PCB19	55	5 - 145
13C12-PCB37	76	5 - 145
13C12-PCB54	53	5 - 145
13C12-PCB77	70	10 - 145
13C12-PCB81	68	10 - 145
13C12-PCB104	59	10 - 145
13C12-PCB105	67	10 - 145
13C12-PCB114	68	10 - 145
13C12-PCB118	69	10 - 145
13C12-PCB123	68	10 - 145
13C12-PCB126	67	10 - 145
13C12-PCB155	61	10 - 145
13C12-PCB167	66	10 - 145
13C12-PCB169	60	10 - 145

Sample Description: **L7195308-2 Grab Wastewater Effluent QTLY ROS01 MANHOLE**

Project Name: **L7195308**

Eurofins QC, LLC
ELLE Sample #: WW 1306260
ELLE Group #: 2097722
Matrix: Wastewater

Submittal Date/Time: 04/28/2020 21:45
Collection Date/Time: 04/28/2020 10:47

CAT No.	Analysis Name	CAS Number	Result	MRL	Dilution Factor

Labeled Compounds	%Rec	Windows
13C12-PCB188	64	10 - 145
13C12-PCB189	71	10 - 145
13C12-PCB202	66	10 - 145
13C12-PCB205	65	10 - 145
13C12-PCB206	64	10 - 145
13C12-PCB208	65	10 - 145
13C12-PCB209	59	10 - 145
13C12-PCB156+157	68	10 - 145
13C12-PCB8	52	5 - 145
13C12-PCB32	61	5 - 145
13C12-PCB31	70	5 - 145
13C12-PCB47	52	5 - 145
13C12-PCB95	54	10 - 145
13C12-PCB70	62	10 - 145
13C12-PCB60	65	10 - 145
13C12-PCB85	54	10 - 145
13C12-PCB133	54	10 - 145
13C12-PCB141	58	10 - 145
13C12-PCB127	65	10 - 145
13C12-PCB128	62	10 - 145
13C12-PCB162	63	10 - 145
13C12-PCB180	64	10 - 145

Dioxins/Furans Data Qualifiers:

B	*Detected in Method Blank*
U	*Undetected*
J	*Estimated concentration between Method Detection Limit and Minimum Reporting Level*
E	*Exceeds calibration range*
C	*Confirmed quantitation on secondary GC column*
Q	*EMPC - Estimated Maximum Possible Concentration*
F	*Interference is present*
S	*Saturation of detection signal*
Q0	*LCS/LCSD Low*
Q1	*LCS/LCSD High*
Q2	*MS/MSD Low*
Q3	*MS/MSD High*
Q7	*LCS/LCSD RPD*
Q8	*DUP RPD*
Q9	*MS/MSD RPD*

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12429	PCB Congeners in Water-HRMS	EPA 1668C PCB Congeners	1	20121012	05/11/2020 13:23	Michael Ziegler	1
13235	PCB Congeners in Water-SepF	EPA 1668C PCB Congeners	1	20121012	05/04/2020 15:15	Andrew Glick	1
00237	Total Cyanide (water)	EPA 335.4	1	20120102101A	04/29/2020 13:18	Jonathan Saul	1
00492	Cyanide Water Distillation	EPA 335.4	1	20120102101A	04/29/2020 07:25	Nancy J Shoop	1
08079	HEM (oil & grease)	EPA 1664B	1	20120807901A	04/29/2020 09:24	Yolunder Y Bunch	1
08078	SGT-HEM (TPH)	EPA 1664B	1	20120807801A	04/29/2020 09:37	Tesfaye Dabsu	1
13858	Total Suspended Solids	SM 2540 D-2011	1	20126385801A	05/05/2020 16:53	Alexa Sanchez	1

2097722

EUROFINS QC, LLC
702 Electronic Drive
Horsham, PA 19044
Contact: Nicki Smith x3360
Phone: 215-355-3900
FAX: 215-392-0626

Bill to:

Horsham, PA 19044

EUROFINS QC, INC.
LANCASTER (ELLE) CHAIN OF CUSTODY
Apr 28 2020, 02:28 pm

PWSID:

Sample ID	Analysis	Number of Containers											Sampled Date and Time	Tier
State: PA		Total	H2SO4	HCl	AscAc	HNO3	NaOH	ZnAc	Unpre	Bact	NaThio	Other		
L7195308-1 QTLY ROS01 EFFLUENT MANHOLE COMPOSITE 4/27-28		15		✓		✓			✓				04/28/20 10:15 AM	
COMM: COD, NH3 SUBBED TO TESTAMERICA CANTON														
05/11/20 WASTEWATER	624 AC/ACN													
05/11/20 WASTEWATER	625 AEBN													
05/11/20 WASTEWATER	AG													
05/11/20 WASTEWATER	AS													
05/11/20 WASTEWATER	BOD 5													
05/11/20 WASTEWATER	CD													
05/11/20 WASTEWATER	CR													
05/11/20 WASTEWATER	CU													
05/11/20 WASTEWATER	DIOXIN SCREEN													
05/11/20 WASTEWATER	HG													
05/11/20 WASTEWATER	NI													
05/11/20 WASTEWATER	PB													
05/11/20 WASTEWATER	TSS													
05/11/20 WASTEWATER	ZN													

38x3
40x3
08
153x6
204
205

State: PA		Total	H2SO4	HCl	AscAc	HNO3	NaOH	ZnAc	Unpre	Bact	NaThio	Other		
L7195308-2 QTLY ROS01 EFFLUENT MANHOLE GRAB		5		✓			✓		✓				04/28/20 10:47 AM	
COMM: COD, PHENOL SUBBED TO TESTAMERICA CANTON														
05/11/20 WASTEWATER	1664 HEM-SGT													
05/11/20 WASTEWATER	CN													
05/11/20 WASTEWATER	PCB CONGENERS													

243x2
02
06x2

Moisture? _____

E-Account Number: 25368 ROSCOM, INC. CS REP: STEPHEN

Package Type:

Relinquished By	Date	Time
[signature]	4/28/2020	1750

Received By	Date	Time
Cook 667	4/28/2020	1750
[signature]	4-28-20	2145

Comments:

eurofins | QC

CHAIN OF CUSTODY

Page 1 of 1

2097722

Lab LIMS No: 7195308

702 Electronic Drive
Horsham, PA 19044-0962
Phone: 215-355-3900
Fax: 215-355-7231

Client/Acct. No. ROSCOM, INC
Address 2925 STATE RD
City/State/Zip CROYDON, PA
Phone/Fax
Client Contact:

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

P.O. No. PWSID #:
Quote #
e-mail:

LAB USE ONLY:

___ Ascorbic/HCL Vials # ___ HCl Vials
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
___ HNO_3 pH
___ H_2SO_4 pH
___ NaOH pH
___ Unpreserved
___ HCl # ___ NH4Cl # ___ MeOH
___ DI Water

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

LAB USE ONLY

PROJECT

FIELD ID	Collection Date	Military Time	GRAB	COMP	Matrix Code	Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT		ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
-1 QTLY ROSOI	4-27 →	1015-		X	WW	16	1		6	1			8			624 AC-PACN	
EFFLUENT MANHOLE COMP	4-28-20	1015														625 AEAN DIOXIN SCREEN	
06-16-10-R																Ag As Cd Cr Cu Hg Ni Pb Zn	
																BOD_5 TSS	
																COD NH_3	
-2 QTLY ROSOI	4-28-20	1047	X		WW	7	2	2			1		2			1664 HEM-SGT	
EFFLUENT MANHOLE GRAB																CN	
11-10-R																COD PHENOL	
																PCB CONGENERS	

SAMPLED BY: (Name/Company) KEM / EQC

TAT: ☐ STANDARD (10 DAY)
or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD ☐ Standard + QC ☐ Forms ☐ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By:
Initials
Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1. [signature]	4-28-20	1500	1. [signature]	4/28/20	1500
2.			2.		
3.			3.		
4.			4.		
5.			5. [signature]	4-29-20	2145

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number

Rec'd Temp.: 2.4 °C Initials: KEM Ice Y / N Location: [illegible]

COMMENTS:

Hazardous: yes / no

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 283066

Group Number(s): 20997722

Client: EQCL

Delivery and Receipt Information

Delivery Method:	EQCL Drop Off	Arrival Date:	04/28/2020
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	0
Samples Chilled:	Yes	Air Quality Samples Present:	No
Paperwork Enclosed:	Yes		
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Kari Moritz

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	46730061WS	4.7	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report
B	Detection in the Method Blank
Q0	LCS/LCSD Low
Q1	LCS/LCSD High
Q2	MS/MSD Low
Q3	MS/MSD High
Q7	LCS/LCSD RPD
Q8	DUP RPD
Q9	MS/MSD RPD

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

Laboratory Job ID: 240-129623-1
Client Project/Site: L7195308

For:
Eurofins QC, LLC.
702 Electronic Drive
Horsham, Pennsylvania 19044-0962

Attn: Ms. Nicki Smith

Authorized for release by:
5/12/2020 5:24:30 PM

Leslie Howell, Project Manager I
(330)966-9266
leslie.howell@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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: Eurofins QC, LLC.
Project/Site: L7195308

Job ID: 240-129623-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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)
MQL	Method Quantitation Limit
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)

Job ID: 240-129623-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

Job Narrative
240-129623-1

Receipt
The samples were received on 4/29/2020 11:00 AM; the samples arrived in good condition, properly preserved, and where required, on ice. The temperature of the cooler at receipt time was 1.9°C

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

Method Summary

Client: Eurofins QC, LLC.
Project/Site: L7195308

Job ID: 240-129623-1

Method	Method Description	Protocol	Laboratory
420.1	Phenolics, Total Recoverable	MCAWW	TAL CAN
4500 NH3 C-2011	Ammonia	SM	TAL CAN
5220D-2011	Chemical Oxygen Demand	SM	TAL CAN
4500 NH3 B-2011	Ammonia, Distillation	SM	TAL CAN
Distill/Phenol	Distillation, Phenolics	None	TAL CAN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Eurofins QC, LLC.
Project/Site: L7195308

Job ID: 240-129623-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-129623-1	L7195308-1	Water	04/28/20 10:15	04/29/20 11:00	
240-129623-2	L7195308-2	Water	04/28/20 10:47	04/29/20 11:00	

Detection Summary

Client: Eurofins QC, LLC.
Project/Site: L7195308

Job ID: 240-129623-1

Client Sample ID: L7195308-1 — Lab Sample ID: 240-129623-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia	8.12		2.00	0.455	mg/L	1		4500 NH3 C-2011	Total/NA
Chemical Oxygen Demand	114		20.0	8.28	mg/L	2		5220D-2011	Total/NA

Client Sample ID: L7195308-2 — Lab Sample ID: 240-129623-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenols, Total	0.0637	B	0.0400	0.0140	mg/L	1		420.1	Total/NA
Chemical Oxygen Demand	68.6		10.0	4.14	mg/L	1		5220D-2011	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Eurofins QC, LLC.
Project/Site: L7195308

Job ID: 240-129623-1

Client Sample ID: L7195308-1

Date Collected: 04/28/20 10:15
Date Received: 04/29/20 11:00

Lab Sample ID: 240-129623-1

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	8.12		2.00	0.455	mg/L		05/11/20 18:30	05/11/20 20:40	1
Chemical Oxygen Demand	114		20.0	8.28	mg/L			05/12/20 06:16	2

Client Sample Results

Client: Eurofins QC, LLC.
Project/Site: L7195308

Job ID: 240-129623-1

Client Sample ID: L7195308-2

Date Collected: 04/28/20 10:47
Date Received: 04/29/20 11:00

Lab Sample ID: 240-129623-2

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total	0.0637	B	0.0400	0.0140	mg/L		05/08/20 08:34	05/08/20 10:50	1
Chemical Oxygen Demand	68.6		10.0	4.14	mg/L			05/12/20 06:18	1

QC Sample Results

Client: Eurofins QC, LLC.
Project/Site: L7195308

Job ID: 240-129623-1

Method: 420.1 - Phenolics, Total Recoverable

Lab Sample ID: MB 240-433641/1-A
Matrix: Water
Analysis Batch: 433647

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 433641

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total	0.03671	J	0.0400	0.0140	mg/L		05/08/20 08:34	05/08/20 09:42	1

Lab Sample ID: LCS 240-433641/2-A
Matrix: Water
Analysis Batch: 433647

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 433641

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	2.19	2.613		mg/L		119	57 - 120

Method: 4500 NH3 C-2011 - Ammonia

Lab Sample ID: MB 240-433915/1-A
Matrix: Water
Analysis Batch: 433920

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 433915

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.455		2.00	0.455	mg/L		05/11/20 18:30	05/11/20 20:35	1

Lab Sample ID: LCS 240-433915/2-A
Matrix: Water
Analysis Batch: 433920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 433915

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	2.59	2.800		mg/L		108	82 - 116

Method: 5220D-2011 - Chemical Oxygen Demand

Lab Sample ID: MB 240-433962/9
Matrix: Water
Analysis Batch: 433962

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	<4.14		10.0	4.14	mg/L			05/12/20 06:05	1

Lab Sample ID: LCS 240-433962/10
Matrix: Water
Analysis Batch: 433962

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	98.5	94.11		mg/L		96	90 - 110

QC Association Summary

Client: Eurofins QC, LLC.
Project/Site: L7195308

Job ID: 240-129623-1

General Chemistry

Prep Batch: 433641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-129623-2	L7195308-2	Total/NA	Water	Distill/Phenol	
MB 240-433641/1-A	Method Blank	Total/NA	Water	Distill/Phenol	
LCS 240-433641/2-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	

Analysis Batch: 433647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-129623-2	L7195308-2	Total/NA	Water	420.1	433641
MB 240-433641/1-A	Method Blank	Total/NA	Water	420.1	433641
LCS 240-433641/2-A	Lab Control Sample	Total/NA	Water	420.1	433641

Prep Batch: 433915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-129623-1	L7195308-1	Total/NA	Water	4500 NH3 B-2011	
MB 240-433915/1-A	Method Blank	Total/NA	Water	4500 NH3 B-2011	
LCS 240-433915/2-A	Lab Control Sample	Total/NA	Water	4500 NH3 B-2011	

Analysis Batch: 433920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-129623-1	L7195308-1	Total/NA	Water	4500 NH3 C-2011	433915
MB 240-433915/1-A	Method Blank	Total/NA	Water	4500 NH3 C-2011	433915
LCS 240-433915/2-A	Lab Control Sample	Total/NA	Water	4500 NH3 C-2011	433915

Analysis Batch: 433962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-129623-1	L7195308-1	Total/NA	Water	5220D-2011	
240-129623-2	L7195308-2	Total/NA	Water	5220D-2011	
MB 240-433962/9	Method Blank	Total/NA	Water	5220D-2011	
LCS 240-433962/10	Lab Control Sample	Total/NA	Water	5220D-2011	

Lab Chronicle

Client: Eurofins QC, LLC.
Project/Site: L7195308

Job ID: 240-129623-1

Client Sample ID: L7195308-1

Lab Sample ID: 240-129623-1
Matrix: Water

Date Collected: 04/28/20 10:15
Date Received: 04/29/20 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	4500 NH3 B-2011			433915	05/11/20 18:30	JMB	TAL CAN
Total/NA	Analysis	4500 NH3 C-2011		1	433920	05/11/20 20:40	JMB	TAL CAN
Total/NA	Analysis	5220D-2011		2	433962	05/12/20 06:16	TPH	TAL CAN

Client Sample ID: L7195308-2

Lab Sample ID: 240-129623-2
Matrix: Water

Date Collected: 04/28/20 10:47
Date Received: 04/29/20 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Distill/Phenol			433641	05/08/20 08:34	BLW	TAL CAN
Total/NA	Analysis	420.1		1	433647	05/08/20 10:50	BLW	TAL CAN
Total/NA	Analysis	5220D-2011		1	433962	05/12/20 06:18	TPH	TAL CAN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: Eurofins QC, LLC.
Project/Site: L7195308

Job ID: 240-129623-1

Laboratory: Eurofins TestAmerica, Canton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	68-00340	08-31-20

EUROFINS QC, LLC
702 Electronic Dr.
Horsham, PA 19044
Contact: Nicki Smith x3360
Phone: 215-355-3900
FAX: 215-392-0626

Bill to:

Horsham, PA 19044

EUROFINS QC, INC.
SUBCONTRACT CHAIN OF CUSTODY - TESTAMOH
Apr 28 2020, 02:28 pm

240-129623 Chain of Custody

Sample ID	Number of Containers											Sampled Date and Time	Tier
State: PA	Total	H2SO4	HCl	AscAc	HNO3	NaOH	ZnAc	Unpre	Bact	NaThio	Other		
L7195308-1 QTLY ROS01 EFFLUENT MANHOLE COMPOSITE 4/27-28	1	1										04/28/20 10:15 AM	
COMM: COD, NH3 SUBBED TO TESTAMERICA CANTON													
05/10/20 WASTEWATER COD													
05/10/20 WASTEWATER NH3													
State: PA	Total	H2SO4	HCl	AscAc	HNO3	NaOH	ZnAc	Unpre	Bact	NaThio	Other		
L7195308-2 QTLY ROS01 EFFLUENT MANHOLE GRAB	2	1										04/28/20 10:47 AM	
COMM: COD, PHENOL SUBBED TO TESTAMERICA CANTON													
05/10/20 WASTEWATER COD													
05/10/20 WASTEWATER PHENOL													

Package Type: _____

FINAL REPORT DUE: _____

Relinquished By	Date	Time
[illegible]	4/28/20	1700

Received By	Date	Time
FedEx	4/28/20	1700
[illegible]	4-29-20	1100

Comments:

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 129423

Client EQC Site Name _____ Cooler unpacked by: Ryan C

Cooler Received on 4-29-20 Opened on 4-29-20 1100

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TT Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp. 1.9 °C
   IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? RJC 4-29-20 Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC902937**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: AG

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
L7195308-1	240-129623-A-1	Plastic 500ml - with Sulfuric Acid	<2	____	_____	_____
L7195308-2	240-129623-A-2	Plastic 250ml - with Sulfuric Acid	<2	____	_____	_____
L7195308-2	240-129623-B-2	Amber Glass 250ml - Sulfuric Acid	<2	____	_____	_____

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins QC, LLC – Horsham, PA
702 Electronic Drive
Horsham, PA 19044-0962
Tel: (215)355-3900

Laboratory Job ID: 630-3379-1
Client Project/Site: SR0053 Roscom
Sampling Event: ANNUAL ROS01 EFFLUENT MANHOLE

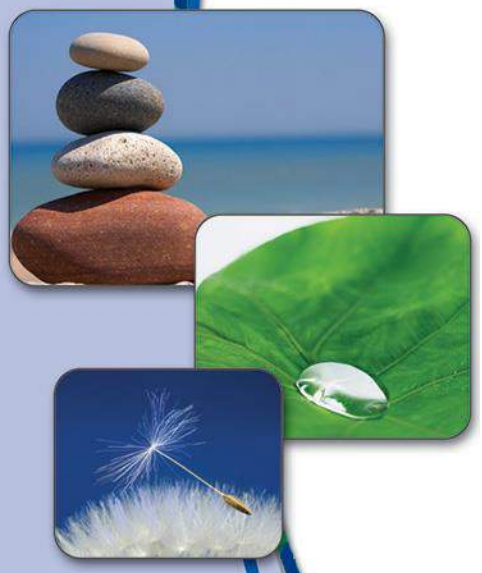
For:
Roscom, Inc.
2925 State Road
Croydon, Pennsylvania 19021

Attn: Michael Goldberg

Authorized for release by:
8/21/2020 10:26:00 AM
Patrick McCarthy, Account Executive
patrickmccarthy@eurofinsus.com

Designee for

Allison Leatherman, Project Manager I
(215)355-3900
allisonleatherman@eurofinsus.com



LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Coliform MCLs

· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically “SAFE” if no coliform bacteria are detected. To be considered “SAFE” your report should indicate “<1 cfu/100mL” or “NEG” for the coliform test. If you report indicates a positive result “POS” or a value greater than or equal to one, then your supply is “UNSAFE FOR DRINKING” contact your local health department.

Warranties, Terms, and Conditions

· Analyses for Field Parameters are performed by EQC field staff. Locations and certifications are identified on the Chain of Custody as follows:

ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as “grab” samples unless otherwise identified.

· Reported results related only to the samples as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins’ online data portal “TotalAccess” will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry) and Zachary Smith (Water Microbiology).

Patrick McCarthy
Account Executive
8/21/2020 10:26:00 AM

Case Narrative

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Job ID: 630-3379-1

Laboratory: Eurofins QC, LLC – Horsham, PA

Narrative

Job Narrative
630-3379-1

Receipt
The samples were received on 7/21/2020 2:50 PM; the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

Receipt Exceptions
A trip blank was not submitted for analysis with the sample shipment; and was not listed on the Chain of Custody (COC).

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

GC/MS Semi VOA
Method 625.1_PREC: The laboratory control sample (LCS) for preparation batch 410-25748 and analytical batch 410-25911 recovered outside control limits for the following analytes: Benzidine, Dimethylphthalate and Hexachlorocyclopentadiene. The associated sample(s) was re-prepared and re-analyzed within holding time and the recoveries for Benzidine, Dimethylphthalate and Hexachlorocyclopentadiene are again outside of control limits in the LCS. The first set of data has been reported.

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

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

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

General Chemistry
Method 2540D: Due to the matrix, the initial volume used for the following sample deviated from the standard procedure: ANNUAL ROS01 EFFLUENT MANHOLE COMPOSITE (630-3379-1). The reporting limits (RLs) have been adjusted proportionately.

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

Sample Summary

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
630-3379-1	ANNUAL ROS01 EFFLUENT MANHOLE COMPOSITE	Water	07/21/20 09:00	07/21/20 14:50	
630-3379-2	ANNUAL-QTLY ROS01 EFFLUENT MANHOLE GRAB	Water	07/21/20 08:44	07/21/20 14:50	

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Client Sample ID: ANNUAL ROS01 EFFLUENT MANHOLE COMPOSITE

Lab Sample ID: 630-3379-1

Date Collected: 07/21/20 09:00
Date Received: 07/21/20 14:50

Matrix: Water

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
1,1,1-Trichloroethane	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
1,1,2,2-Tetrachloroethane	ND		1.0	0.050	ug/L		07/25/20 02:38	1	MJ8R
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L		07/25/20 02:38	1	MJ8R
1,1-Dichloroethane	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
1,1-Dichloroethene	ND		1.0	0.20	ug/L		07/25/20 02:38	1	MJ8R
1,2-Dichlorobenzene	ND		1.0	0.070	ug/L		07/25/20 02:38	1	MJ8R
1,2-Dichloroethane	ND		1.0	0.20	ug/L		07/25/20 02:38	1	MJ8R
1,2-Dichloropropane	ND		1.0	0.20	ug/L		07/25/20 02:38	1	MJ8R
1,3-Dichlorobenzene	ND		1.0	0.060	ug/L		07/25/20 02:38	1	MJ8R
1,4-Dichlorobenzene	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
2-Chloroethyl vinyl ether	ND		1.0	0.50	ug/L		07/25/20 02:38	1	MJ8R
Acrolein	ND		10	1.0	ug/L		07/25/20 02:38	1	MJ8R
Acrylonitrile	ND		1.0	0.20	ug/L		07/25/20 02:38	1	MJ8R
Benzene	ND		1.0	0.050	ug/L		07/25/20 02:38	1	MJ8R
Bromodichloromethane	**3.4**		1.0	0.20	ug/L		07/25/20 02:38	1	MJ8R
Bromoform	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
Bromomethane	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
Carbon tetrachloride	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
Chlorobenzene	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
Chloroethane	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
Chloroform	**13**		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
Chloromethane	ND		1.0	0.30	ug/L		07/25/20 02:38	1	MJ8R
cis-1,3-Dichloropropene	ND		1.0	0.080	ug/L		07/25/20 02:38	1	MJ8R
Dibromochloromethane	**0.73**	**J**	1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
Ethylbenzene	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
Methylene Chloride	ND		1.0	0.30	ug/L		07/25/20 02:38	1	MJ8R
Tetrachloroethene	ND		1.0	0.20	ug/L		07/25/20 02:38	1	MJ8R
Toluene	ND		1.0	0.050	ug/L		07/25/20 02:38	1	MJ8R
trans-1,2-Dichloroethene	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
trans-1,3-Dichloropropene	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
Trichloroethene	ND		1.0	0.20	ug/L		07/25/20 02:38	1	MJ8R
Trichlorofluoromethane	ND		1.0	0.10	ug/L		07/25/20 02:38	1	MJ8R
Vinyl chloride	ND		1.0	0.30	ug/L		07/25/20 02:38	1	MJ8R

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Analyzed*	*Dil Fac*	*Analyst*
1,2-Dichloroethane-d4 (Surr)	*104*		*60 - 140*	*07/25/20 02:38*	*1*	*MJ8R*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*	*07/25/20 02:38*	*1*	*MJ8R*
Dibromofluoromethane (Surr)	*105*		*60 - 140*	*07/25/20 02:38*	*1*	*MJ8R*
Toluene-d8 (Surr)	*100*		*60 - 140*	*07/25/20 02:38*	*1*	*MJ8R*

Method: 625.1 - Dioxin Screen (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
2,3,7,8-TCDD	ND		0.46	0.46	ug/L		07/26/20 16:21	1	W6XI

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
1,2,4-Trichlorobenzene	ND		0.92	0.18	ug/L		07/24/20 18:13	1	ULM3
1,2-Diphenylhydrazine	ND		4.6	0.092	ug/L		07/24/20 18:13	1	ULM3
2,4,6-Trichlorophenol	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Client Sample ID: ANNUAL ROS01 EFFLUENT MANHOLE COMPOSITE

Lab Sample ID: 630-3379-1

Date Collected: 07/21/20 09:00
Date Received: 07/21/20 14:50

Matrix: Water

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
2,4-Dichlorophenol	ND		4.6	0.092	ug/L		07/24/20 18:13	1	ULM3
2,4-Dimethylphenol	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
2,4-Dinitrophenol	ND		9.2	0.92	ug/L		07/24/20 18:13	1	ULM3
2,4-Dinitrotoluene	ND		4.6	0.092	ug/L		07/24/20 18:13	1	ULM3
2,6-Dinitrotoluene	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
2-Chloronaphthalene	ND		4.6	0.55	ug/L		07/24/20 18:13	1	ULM3
2-Chlorophenol	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
2-Nitrophenol	ND		4.6	0.28	ug/L		07/24/20 18:13	1	ULM3
3,3'-Dichlorobenzidine	ND		4.6	0.28	ug/L		07/24/20 18:13	1	ULM3
4,6-Dinitro-2-methylphenol	ND		9.2	0.92	ug/L		07/24/20 18:13	1	ULM3
4-Bromophenyl-phenylether	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
4-Chloro-3-methylphenol	ND		4.6	0.28	ug/L		07/24/20 18:13	1	ULM3
4-Chlorophenyl-phenylether	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
4-Nitrophenol	ND		4.6	0.83	ug/L		07/24/20 18:13	1	ULM3
Acenaphthene	ND		4.6	0.083	ug/L		07/24/20 18:13	1	ULM3
Acenaphthylene	ND		4.6	0.074	ug/L		07/24/20 18:13	1	ULM3
Anthracene	ND		4.6	0.065	ug/L		07/24/20 18:13	1	ULM3
Benzidine	ND	*	55	5.5	ug/L		07/24/20 18:13	1	ULM3
Benzo[a]anthracene	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
Benzo[a]pyrene	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
Benzo[b]fluoranthene	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
Benzo[g,h,i]perylene	ND		4.6	0.092	ug/L		07/24/20 18:13	1	ULM3
Benzo[k]fluoranthene	ND		4.6	0.092	ug/L		07/24/20 18:13	1	ULM3
bis (2-chloroisopropyl) ether	ND		4.6	0.28	ug/L		07/24/20 18:13	1	ULM3
Bis(2-chloroethoxy)methane	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
Bis(2-chloroethyl)ether	ND		4.6	0.092	ug/L		07/24/20 18:13	1	ULM3
Bis(2-ethylhexyl) phthalate	**2.7**	**J**	4.6	0.92	ug/L		07/24/20 18:13	1	ULM3
Butylbenzylphthalate	ND		4.6	0.92	ug/L		07/24/20 18:13	1	ULM3
Chrysene	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
Dibenz(a,h)anthracene	ND		4.6	0.092	ug/L		07/24/20 18:13	1	ULM3
Diethylphthalate	ND	*1	4.6	0.28	ug/L		07/24/20 18:13	1	ULM3
Dimethylphthalate	ND	* *1	4.6	0.46	ug/L		07/24/20 18:13	1	ULM3
Di-n-butyl phthalate	ND		4.6	0.92	ug/L		07/24/20 18:13	1	ULM3
Di-n-octyl phthalate	ND		4.6	0.46	ug/L		07/24/20 18:13	1	ULM3
Fluoranthene	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
Fluorene	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
Hexachlorobenzene	ND		4.6	0.46	ug/L		07/24/20 18:13	1	ULM3
Hexachlorobutadiene	ND		1.8	0.18	ug/L		07/24/20 18:13	1	ULM3
Hexachlorocyclopentadiene	ND	*	14	0.18	ug/L		07/24/20 18:13	1	ULM3
Hexachloroethane	ND		1.8	0.092	ug/L		07/24/20 18:13	1	ULM3
Indeno[1,2,3-cd]pyrene	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
Isophorone	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
Naphthalene	ND		1.8	0.092	ug/L		07/24/20 18:13	1	ULM3
Nitrobenzene	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
N-Nitrosodimethylamine	ND		4.6	0.37	ug/L		07/24/20 18:13	1	ULM3
N-Nitrosodi-n-propylamine	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3
N-Nitrosodiphenylamine	ND		4.6	0.092	ug/L		07/24/20 18:13	1	ULM3
Pentachlorophenol	ND		4.6	0.74	ug/L		07/24/20 18:13	1	ULM3

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Client Sample ID: ANNUAL ROS01 EFFLUENT MANHOLE COMPOSITE

Lab Sample ID: 630-3379-1

Date Collected: 07/21/20 09:00
Date Received: 07/21/20 14:50

Matrix: Water

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Phenanthrene	ND		4.6	0.092	ug/L		07/24/20 18:13	1	ULM3
Phenol	ND		0.92	0.37	ug/L		07/24/20 18:13	1	ULM3
Pyrene	ND		4.6	0.18	ug/L		07/24/20 18:13	1	ULM3

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Analyzed*	*Dil Fac*	*Analyst*
2,4,6-Tribromofenol (Surr)	*62*		*14 - 134*	*07/24/20 18:13*	*1*	*ULM3*
2-Fluorobiphenyl (Surr)	*71*		*47 - 107*	*07/24/20 18:13*	*1*	*ULM3*
2-Fluorophenol (Surr)	*38*		*10 - 93*	*07/24/20 18:13*	*1*	*ULM3*
Nitrobenzene-d5 (Surr)	*72*		*49 - 106*	*07/24/20 18:13*	*1*	*ULM3*
Phenol-d5 (Surr)	*29*		*10 - 74*	*07/24/20 18:13*	*1*	*ULM3*
p-Terphenyl-d14 (Surr)	*80*		*41 - 134*	*07/24/20 18:13*	*1*	*ULM3*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Arsenic	ND		0.030	0.016	mg/L		08/03/20 07:16	1	ULJC
Cadmium	ND		0.0050	0.0010	mg/L		07/23/20 07:01	1	ULJC
Chromium	ND	*	0.015	0.0016	mg/L		07/23/20 07:01	1	ULJC
Copper	**0.099**		0.020	0.012	mg/L		07/23/20 07:01	1	ULJC
Lead	ND		0.015	0.0071	mg/L		07/23/20 07:01	1	ULJC
Nickel	**0.0065**	**J**	0.010	0.0021	mg/L		07/23/20 07:01	1	ULJC
Silver	ND		0.010	0.0050	mg/L		07/23/20 07:01	1	ULJC
Zinc	**0.19**		0.020	0.0037	mg/L		07/23/20 07:01	1	ULJC

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Mercury	ND		0.00020	0.000079	mg/L		07/23/20 08:23	1	UDSV

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Ammonia as N	**0.39**		0.10	0.050	mg/L		08/05/20 23:29	1	QU5I
Chemical Oxygen Demand	**35**	**J**	75	25	mg/L		07/22/20 10:27	1	USAE
Total Suspended Solids	**6.5**	**J**	7.5	2.5	mg/L		07/23/20 12:26	1	M98K
Biochemical Oxygen Demand	**11**		5.0	5.0	mg/L		07/22/20 18:16	1	F8TI

Client Sample ID: ANNUAL-QTLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-3379-2

Date Collected: 07/21/20 08:44
Date Received: 07/21/20 14:50

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
DCB Decachlorobiphenyl	ND		1000	360	pg/L		07/31/20 01:31	1	UJD2
PCB(C) 208	ND		120	26	pg/L		07/31/20 01:31	1	UJD2
PCB-1	ND		200	51	pg/L		07/31/20 01:31	1	UJD2
PCB-10	ND		40	5.4	pg/L		07/31/20 01:31	1	UJD2
PCB-103	ND		80	18	pg/L		07/31/20 01:31	1	UJD2
PCB-104	ND		80	13	pg/L		07/31/20 01:31	1	UJD2
PCB-105	ND		80	13	pg/L		07/31/20 01:31	1	UJD2
PCB-106	ND		80	16	pg/L		07/31/20 01:31	1	UJD2

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Client Sample ID: ANNUAL-QTLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-3379-2

Date Collected: 07/21/20 08:44
Date Received: 07/21/20 14:50

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
PCB-107	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-108/124	ND		160	32	pg/L		07/31/20 01:31	1	UJD2
PCB-11	ND		300	140	pg/L		07/31/20 01:31	1	UJD2
PCB-110/115	ND		160	61	pg/L		07/31/20 01:31	1	UJD2
PCB-111	ND		80	17	pg/L		07/31/20 01:31	1	UJD2
PCB-112	ND		80	18	pg/L		07/31/20 01:31	1	UJD2
PCB-114	ND		80	15	pg/L		07/31/20 01:31	1	UJD2
PCB-118	ND		80	14	pg/L		07/31/20 01:31	1	UJD2
PCB-12/13	ND		80	22	pg/L		07/31/20 01:31	1	UJD2
PCB-120	ND		80	17	pg/L		07/31/20 01:31	1	UJD2
PCB-121	ND		80	14	pg/L		07/31/20 01:31	1	UJD2
PCB-122	ND		80	14	pg/L		07/31/20 01:31	1	UJD2
PCB-123	ND		80	13	pg/L		07/31/20 01:31	1	UJD2
PCB-126	ND		80	17	pg/L		07/31/20 01:31	1	UJD2
PCB-127	ND		80	19	pg/L		07/31/20 01:31	1	UJD2
PCB-128/166	ND		160	40	pg/L		07/31/20 01:31	1	UJD2
PCB-129/138/163	ND		240	52	pg/L		07/31/20 01:31	1	UJD2
PCB-130	ND		80	19	pg/L		07/31/20 01:31	1	UJD2
PCB-131	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-132	ND		80	15	pg/L		07/31/20 01:31	1	UJD2
PCB-133	ND		80	18	pg/L		07/31/20 01:31	1	UJD2
PCB-134	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-135/151	ND		160	43	pg/L		07/31/20 01:31	1	UJD2
PCB-136	ND		80	15	pg/L		07/31/20 01:31	1	UJD2
PCB-137	ND		80	19	pg/L		07/31/20 01:31	1	UJD2
PCB-139/140	ND		160	33	pg/L		07/31/20 01:31	1	UJD2
PCB-14	ND		40	5.0	pg/L		07/31/20 01:31	1	UJD2
PCB-141	ND		80	23	pg/L		07/31/20 01:31	1	UJD2
PCB-142	ND		80	18	pg/L		07/31/20 01:31	1	UJD2
PCB-143	ND		80	17	pg/L		07/31/20 01:31	1	UJD2
PCB-144	ND		80	17	pg/L		07/31/20 01:31	1	UJD2
PCB-145	ND		80	15	pg/L		07/31/20 01:31	1	UJD2
PCB-146	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-147/149	ND		160	29	pg/L		07/31/20 01:31	1	UJD2
PCB-148	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-15	ND		40	8.5	pg/L		07/31/20 01:31	1	UJD2
PCB-150	ND		80	17	pg/L		07/31/20 01:31	1	UJD2
PCB-152	ND		80	15	pg/L		07/31/20 01:31	1	UJD2
PCB-153/168	ND		160	31	pg/L		07/31/20 01:31	1	UJD2
PCB-154	ND		200	47	pg/L		07/31/20 01:31	1	UJD2
PCB-155	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-156/157	ND		160	35	pg/L		07/31/20 01:31	1	UJD2
PCB-158	ND		80	19	pg/L		07/31/20 01:31	1	UJD2
PCB-159	ND		80	20	pg/L		07/31/20 01:31	1	UJD2
PCB-16	**7.7**	**J**	40	5.3	pg/L		07/31/20 01:31	1	UJD2
PCB-160	ND		80	20	pg/L		07/31/20 01:31	1	UJD2
PCB-161	ND		80	17	pg/L		07/31/20 01:31	1	UJD2
PCB-162	ND		80	20	pg/L		07/31/20 01:31	1	UJD2

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Client Sample ID: ANNUAL-QTLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-3379-2

Date Collected: 07/21/20 08:44
Date Received: 07/21/20 14:50

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
PCB-164	ND		80	18	pg/L		07/31/20 01:31	1	UJD2
PCB-165	ND		80	17	pg/L		07/31/20 01:31	1	UJD2
PCB-167	ND		80	17	pg/L		07/31/20 01:31	1	UJD2
PCB-169	ND		80	19	pg/L		07/31/20 01:31	1	UJD2
PCB-17	ND		40	6.1	pg/L		07/31/20 01:31	1	UJD2
PCB-170	ND		80	18	pg/L		07/31/20 01:31	1	UJD2
PCB-171/173	ND		160	38	pg/L		07/31/20 01:31	1	UJD2
PCB-172	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-174	ND		80	18	pg/L		07/31/20 01:31	1	UJD2
PCB-175	ND		80	21	pg/L		07/31/20 01:31	1	UJD2
PCB-176	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-177	ND		80	18	pg/L		07/31/20 01:31	1	UJD2
PCB-178	ND		80	27	pg/L		07/31/20 01:31	1	UJD2
PCB-179	ND		80	14	pg/L		07/31/20 01:31	1	UJD2
PCB-18/30	ND		80	10	pg/L		07/31/20 01:31	1	UJD2
PCB-180/193	ND		160	29	pg/L		07/31/20 01:31	1	UJD2
PCB-181	ND		80	21	pg/L		07/31/20 01:31	1	UJD2
PCB-182	ND		80	24	pg/L		07/31/20 01:31	1	UJD2
PCB-183/185	ND		160	52	pg/L		07/31/20 01:31	1	UJD2
PCB-184	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-186	ND		80	17	pg/L		07/31/20 01:31	1	UJD2
PCB-187	ND		80	20	pg/L		07/31/20 01:31	1	UJD2
PCB-188	ND		200	81	pg/L		07/31/20 01:31	1	UJD2
PCB-189	ND		80	18	pg/L		07/31/20 01:31	1	UJD2
PCB-19	ND		40	5.0	pg/L		07/31/20 01:31	1	UJD2
PCB-190	ND		80	20	pg/L		07/31/20 01:31	1	UJD2
PCB-191	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-192	ND		80	18	pg/L		07/31/20 01:31	1	UJD2
PCB-194	ND		120	29	pg/L		07/31/20 01:31	1	UJD2
PCB-195	ND		120	28	pg/L		07/31/20 01:31	1	UJD2
PCB-196	ND		120	24	pg/L		07/31/20 01:31	1	UJD2
PCB-197/200	ND		240	79	pg/L		07/31/20 01:31	1	UJD2
PCB-198/199	ND		240	50	pg/L		07/31/20 01:31	1	UJD2
PCB-2	ND		200	74	pg/L		07/31/20 01:31	1	UJD2
PCB-20/28	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-201	ND		400	100	pg/L		07/31/20 01:31	1	UJD2
PCB-202	ND		120	28	pg/L		07/31/20 01:31	1	UJD2
PCB-203	ND		120	21	pg/L		07/31/20 01:31	1	UJD2
PCB-204	ND		120	23	pg/L		07/31/20 01:31	1	UJD2
PCB-205	ND		120	28	pg/L		07/31/20 01:31	1	UJD2
PCB-206	ND		120	25	pg/L		07/31/20 01:31	1	UJD2
PCB-207	ND		120	25	pg/L		07/31/20 01:31	1	UJD2
PCB-21/33	ND		80	10	pg/L		07/31/20 01:31	1	UJD2
PCB-22	**6.1**	**J I**	40	5.9	pg/L		07/31/20 01:31	1	UJD2
PCB-23	ND		40	5.0	pg/L		07/31/20 01:31	1	UJD2
PCB-24	ND		40	5.0	pg/L		07/31/20 01:31	1	UJD2
PCB-25	ND		40	5.0	pg/L		07/31/20 01:31	1	UJD2
PCB-26/29	ND		80	29	pg/L		07/31/20 01:31	1	UJD2

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Client Sample ID: ANNUAL-QTLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-3379-2

Date Collected: 07/21/20 08:44
Date Received: 07/21/20 14:50

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
PCB-27	ND		40	5.0	pg/L		07/31/20 01:31	1	UJD2
PCB-3	ND		200	42	pg/L		07/31/20 01:31	1	UJD2
PCB-31	**12**	**J**	40	12	pg/L		07/31/20 01:31	1	UJD2
PCB-32	ND		40	5.1	pg/L		07/31/20 01:31	1	UJD2
PCB-34	ND		40	5.8	pg/L		07/31/20 01:31	1	UJD2
PCB-35	ND		40	5.0	pg/L		07/31/20 01:31	1	UJD2
PCB-36	ND		40	7.2	pg/L		07/31/20 01:31	1	UJD2
PCB-37	ND		40	5.8	pg/L		07/31/20 01:31	1	UJD2
PCB-38	ND		40	5.0	pg/L		07/31/20 01:31	1	UJD2
PCB-39	ND		40	6.2	pg/L		07/31/20 01:31	1	UJD2
PCB-4	**14**	**J I**	40	5.0	pg/L		07/31/20 01:31	1	UJD2
PCB-40/71	ND		160	20	pg/L		07/31/20 01:31	1	UJD2
PCB-41	ND		80	13	pg/L		07/31/20 01:31	1	UJD2
PCB-42	ND		80	14	pg/L		07/31/20 01:31	1	UJD2
PCB-43	ND		80	10	pg/L		07/31/20 01:31	1	UJD2
PCB-44/47/65	ND		240	39	pg/L		07/31/20 01:31	1	UJD2
PCB-45	ND		80	12	pg/L		07/31/20 01:31	1	UJD2
PCB-46	ND		80	10	pg/L		07/31/20 01:31	1	UJD2
PCB-48	ND		80	13	pg/L		07/31/20 01:31	1	UJD2
PCB-49/69	ND		160	25	pg/L		07/31/20 01:31	1	UJD2
PCB-5	ND		40	7.8	pg/L		07/31/20 01:31	1	UJD2
PCB-50/53	ND		300	95	pg/L		07/31/20 01:31	1	UJD2
PCB-51	ND		80	32	pg/L		07/31/20 01:31	1	UJD2
PCB-52	ND		80	21	pg/L		07/31/20 01:31	1	UJD2
PCB-54	ND		80	10	pg/L		07/31/20 01:31	1	UJD2
PCB-55	ND		80	12	pg/L		07/31/20 01:31	1	UJD2
PCB-56	ND		80	11	pg/L		07/31/20 01:31	1	UJD2
PCB-57	ND		80	14	pg/L		07/31/20 01:31	1	UJD2
PCB-58	ND		80	13	pg/L		07/31/20 01:31	1	UJD2
PCB-59/62/75	ND		240	42	pg/L		07/31/20 01:31	1	UJD2
PCB-6	ND		40	14	pg/L		07/31/20 01:31	1	UJD2
PCB-60	ND		80	13	pg/L		07/31/20 01:31	1	UJD2
PCB-61/70/74/76	ND		320	48	pg/L		07/31/20 01:31	1	UJD2
PCB-63	ND		80	13	pg/L		07/31/20 01:31	1	UJD2
PCB-64	ND		80	11	pg/L		07/31/20 01:31	1	UJD2
PCB-66	**12**	**J**	80	11	pg/L		07/31/20 01:31	1	UJD2
PCB-67	ND		80	12	pg/L		07/31/20 01:31	1	UJD2
PCB-68	ND		80	15	pg/L		07/31/20 01:31	1	UJD2
PCB-7	ND		40	8.3	pg/L		07/31/20 01:31	1	UJD2
PCB-72	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-73	ND		80	21	pg/L		07/31/20 01:31	1	UJD2
PCB-77	ND		80	11	pg/L		07/31/20 01:31	1	UJD2
PCB-78	ND		80	14	pg/L		07/31/20 01:31	1	UJD2
PCB-79	ND		80	14	pg/L		07/31/20 01:31	1	UJD2
PCB-8	ND		40	11	pg/L		07/31/20 01:31	1	UJD2
PCB-80	ND		80	17	pg/L		07/31/20 01:31	1	UJD2
PCB-81	ND		80	10	pg/L		07/31/20 01:31	1	UJD2
PCB-82	ND		80	12	pg/L		07/31/20 01:31	1	UJD2

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Client Sample ID: ANNUAL-QTLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-3379-2

Date Collected: 07/21/20 08:44
Date Received: 07/21/20 14:50

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
PCB-83	ND		80	13	pg/L		07/31/20 01:31	1	UJD2
PCB-84	ND		80	12	pg/L		07/31/20 01:31	1	UJD2
PCB-85/116/117	ND		240	68	pg/L		07/31/20 01:31	1	UJD2
PCB-86/87/97/109/119/125	ND		480	130	pg/L		07/31/20 01:31	1	UJD2
PCB-88	ND		80	15	pg/L		07/31/20 01:31	1	UJD2
PCB-89	ND		80	15	pg/L		07/31/20 01:31	1	UJD2
PCB-9	ND		40	8.8	pg/L		07/31/20 01:31	1	UJD2
PCB-90/101/113	ND		240	41	pg/L		07/31/20 01:31	1	UJD2
PCB-91	ND		80	12	pg/L		07/31/20 01:31	1	UJD2
PCB-92	ND		80	16	pg/L		07/31/20 01:31	1	UJD2
PCB-93/100	ND		160	31	pg/L		07/31/20 01:31	1	UJD2
PCB-94	ND		80	14	pg/L		07/31/20 01:31	1	UJD2
PCB-95	**16**	**J**	80	15	pg/L		07/31/20 01:31	1	UJD2
PCB-96	ND		80	13	pg/L		07/31/20 01:31	1	UJD2
PCB-98/102	ND		200	41	pg/L		07/31/20 01:31	1	UJD2
PCB-99	ND		80	15	pg/L		07/31/20 01:31	1	UJD2
Polychlorinated biphenyls, Total	**68**	**I B**	40	5.0	pg/L		07/31/20 01:31	1	UJD2

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Analyzed*	*Dil Fac*	*Analyst*
PCB-104L	*50*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-105L	*64*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-114L	*64*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-118L	*64*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-123L	*64*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-126L	*60*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-127L	*64*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-128L	*61*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-133L	*63*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-141L	*62*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-155L	*54*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-156L	*121*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-156L/157L	*60*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-157L	*121*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-15L	*59*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-162L	*64*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-167L	*64*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-169L	*53*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-180L	*66*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-188L	*67*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-189L	*62*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-19L	*51*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-1L	*36*		*15 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-202L	*67*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-205L	*61*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-206L	*63*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-208L	*63*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-209L	*59*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-31L	*69*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-32L	*61*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Client Sample ID: ANNUAL-QTLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-3379-2

Date Collected: 07/21/20 08:44
Date Received: 07/21/20 14:50

Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Analyzed*	*Dil Fac*	*Analyst*
PCB-37L	*64*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-3L	*42*		*15 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-47L	*58*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-4L	*44*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-54L	*49*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-60L	*66*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-70L	*64*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-77L	*68*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-81L	*67*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-85L	*63*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-8L	*49*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*
PCB-95L	*57*		*25 - 150*	*07/31/20 01:31*	*1*	*UJD2*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
HEM (Oil & Grease)	**2.6**	**J**	5.2	1.4	mg/L		07/29/20 17:15	1	QT6L
SGT-HEM (TPH)	ND		5.2	1.4	mg/L		07/29/20 17:15	1	QT6L
Cyanide, Total	ND		0.010	0.0050	mg/L		07/29/20 12:28	1	L8MI
Chemical Oxygen Demand	**57**	**J**	75	25	mg/L		07/22/20 10:30	1	USAE
Phenols, Total	**0.011**	**J**	0.020	0.010	mg/L		07/30/20 22:24	1	QU5I

Accreditation/Certification and Definitions Summary

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	36-00037	01-31-21

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
1668A	HRMS-Sepf	Water	PCB-108/124
1668A	HRMS-Sepf	Water	PCB-110/115
1668A	HRMS-Sepf	Water	PCB-12/13
1668A	HRMS-Sepf	Water	PCB-128/166
1668A	HRMS-Sepf	Water	PCB-129/138/163
1668A	HRMS-Sepf	Water	PCB-135/151
1668A	HRMS-Sepf	Water	PCB-139/140
1668A	HRMS-Sepf	Water	PCB-147/149
1668A	HRMS-Sepf	Water	PCB-153/168
1668A	HRMS-Sepf	Water	PCB-156/157
1668A	HRMS-Sepf	Water	PCB-171/173
1668A	HRMS-Sepf	Water	PCB-18/30
1668A	HRMS-Sepf	Water	PCB-180/193
1668A	HRMS-Sepf	Water	PCB-183/185
1668A	HRMS-Sepf	Water	PCB-197/200
1668A	HRMS-Sepf	Water	PCB-198/199
1668A	HRMS-Sepf	Water	PCB-21/33
1668A	HRMS-Sepf	Water	PCB-26/29
1668A	HRMS-Sepf	Water	PCB-40/71
1668A	HRMS-Sepf	Water	PCB-44/47/65
1668A	HRMS-Sepf	Water	PCB-49/69
1668A	HRMS-Sepf	Water	PCB-50/53
1668A	HRMS-Sepf	Water	PCB-59/62/75
1668A	HRMS-Sepf	Water	PCB-61/70/74/76
1668A	HRMS-Sepf	Water	PCB-85/116/117
1668A	HRMS-Sepf	Water	PCB-86/87/97/109/119/125
1668A	HRMS-Sepf	Water	PCB-90/101/113
1668A	HRMS-Sepf	Water	PCB-93/100
1668A	HRMS-Sepf	Water	PCB-98/102
1668A	HRMS-Sepf	Water	PCB-99
1668A	HRMS-Sepf	Water	Polychlorinated biphenyls, Total
625.1	625.1	Water	2,3,7,8-TCDD

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).

Qualifiers (Continued)

Dioxin (Continued)

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Method Summary

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-3379-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	ELLE
625.1	Dioxin Screen (GC/MS SIM)	40CFR136A	ELLE
625.1	Semivolatile Organic Compounds (GC/MS)	40CFR136A	ELLE
1668A	Chlorinated Biphenyl Congeners (HRGC/HRMS)	EPA	ELLE
200.7 Rev 4.4	Metals (ICP)	EPA	ELLE
245.1	Mercury (CVAA)	EPA	ELLE
1664A	HEM and SGT-HEM	1664A	ELLE
335.4	Cyanide, Total	MCAWW	ELLE
350.1	Nitrogen, Ammonia	MCAWW	ELLE
410.4	COD	MCAWW	ELLE
420.4	Phenolics, Total Recoverable	MCAWW	ELLE
SM 2540D	Solids, Total Suspended (TSS)	SM	ELLE
SM 5210B	BOD, 5-Day	SM	ELLE
200.7	Preparation, Total Recoverable Metals	EPA	ELLE
245.1	Preparation, Mercury	EPA	ELLE
625.1	Liquid-Liquid Extraction	40CFR136A	ELLE
Distill/CN	Distillation, Cyanide	None	ELLE
HRMS-Sepf	Separatory Funnel (Liquid-Liquid) Extraction	EPA	ELLE

Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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CHAIN OF CUSTODY

Page 1 of 1

Lab L

LAB U

630-3379 Chain of Custody

702 Electronic Drive
Horsham, PA 19044
Phone: 215-355-3900
Fax: 215-392-0626

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

Client/Acct. No. ROSCOM, INC
Address 2925 STATE ROAD
City/State/Zip CROYDON PA
Phone/Fax
Client Contact:

P.O. No. PWSID #:
Quote #
e-mail:

___ Ascorbic/HCL Vials # 3 HCl Vials
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
1 HNO_3 pH 1/2 PT PL
3 H_2SO_4 pH PT PL 1/2 PT PL 250 AMB
1 NaOH pH 1/2 PT PL
13 Unpreserved (2) AMB GAC (3) vials (6) AMB 250 (2) PL OT
2 HCl # ___ NH4Cl # ___ MeOH AMB OT
___ DI Water

MATRIX CODES
W: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

PROJECT / FIELD ID	Collection Date	Military Time	GRAB	COMP	Matrix Code	Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT		ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
-1 ANNUAL ROSOI	7.20 →	0900		X	WW	16	1		6	1			8			624 ACRON, 625 ACRON DIOXINSCREEN	
EFFLUENT MANHOLE	7.21.20	0900														Ag As Cd Cr Cu Hg Ni Pb Zn	
COMP																BOD_5 TSS	
06-16-10-B																COD, NH_3	
-2 ANNUAL - QTLY ROSOI	7.21.20	0844	X		WW	7	2	2			1		2			1664 HEX-SGT	
EFFLUENT MANHOLE																CN	
GRAB																COD, PHENOL	
11.10-B																PCB CONG 1668A	

SAMPLED BY: (Name/Company) KEM / EOS

TAT: ☐ STANDARD (10 DAY) or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD ☐ Standard + QC ☐ Forms ☐ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By: Initials Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1. [signature]	7.21.20	1450	1. [signature]	7/21/20	1450
RELINQUISHED BY 2.	DATE	TIME	RECEIVED BY 2.	DATE	TIME
RELINQUISHED BY 3.	DATE	TIME	RECEIVED BY 3.	DATE	TIME
RELINQUISHED BY 4.	DATE	TIME	RECEIVED BY 4.	DATE	TIME
RELINQUISHED BY 5.	DATE	TIME	RECEIVED BY 5.	DATE	TIME

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number

Rec'd Temp.: 3.2 °C Initials: KEM Ice Y / N Location: AC

COMMENTS:

Hazardous: yes / no

Eurofins QC, LLC.
702 Electronic Drive
Horsham, PA 19044-0962
Phone: 215-355-3900 Fax: 888-785-8567

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Leatherman, Allison	Carrier Tracking No(s):	COC No: 630-1508.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: allisonleatherman@eurofinsus.com	State of Origin: Pennsylvania	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Env LLC		Accreditations Required (See note): NELAP - Pennsylvania		Job #: 630-3379-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 7/30/2020			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: SR0053 Roscom	Project #: 63002227			
Site: Roscom Manhole in Front Parking Lot	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	624.1_PREC/624_Prep EPA 624 Standard VOCs + AC/ACN	625.1_PREC/625_Prep_LVI EPA 625 Standard AEBN List	625DioxinScreen/625_Prep_LVI Dioxin Screen	SM5210B_Calc/ BOD, 5-Day Only	410.4/ COD	245.1/245.1_Prep Mercury (CVAA)	2540D/ Solids, Total Suspended (TSS)	350.1/ Nitrogen, Ammonia	200.7/200.7_P_TR Metals (ICP)	1668A/1668_P_Sep PCB Congeners Full List + Total PCB	1664A_NP/ (MOD) 1664A SGT-HEM Only	420.4/ Phenolics, Total Recoverable	335.4/Distill_CN	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
ANNUAL ROS01 EFFLUENT MANHOLE COMPOSITE (630-3379	7/21/20	09:00 Eastern		Water			X	X	X	X	X	X	X	X	X					16	
ANNUAL-QTLY ROS01 EFFLUENT MANHOLE GRAB (630-3379	7/21/20	08:44 Eastern		Water							X					X	X	X	X	7	

Note: Since laboratory accreditations are subject to change, Eurofins QC, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins QC, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins QC, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins QC, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	7/21/2020 1920	EQL	Cooler 404	7/21/2020 1920	EQL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 7/22/20 2220	Company ELLE

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 404 | Cooler Temperature(s) °C and Other Remarks: 0.7 ; NO TB

Ver: 01/16/2019

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins QC, LLC – Horsham, PA
702 Electronic Drive
Horsham, PA 19044-0962
Tel: (215)355-3900

Laboratory Job ID: 630-9152-1
Client Project/Site: SR0053 Roscom
Sampling Event: QTLY ROS01 EFFLUENT MANHOLE

For:
Roscom, Inc.
2925 State Road
Croydon, Pennsylvania 19021

Attn: Michael Goldberg

Authorized for release by:
11/23/2020 10:26:23 AM
Erin Dougherty, Project Administrator
(215)355-3900
Erin.Dougherty@eurofinset.com

Designee for

Taylor Bruzzio, Project Manager I
(850)471-6226
Taylor.Bruzzio@Eurofinset.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.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD,and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs
· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically “SAFE” if no coliform bacteria are detected. To be considered “SAFE” your report should indicate “<1 cfu/100mL” or “NEG” for the coliform test. If you report indicates a positive result “POS” or a value greater than or equal to one, then your supply is “UNSAFE FOR DRINKING” contact your local health department.

Warranties, Terms, and Conditions
· Analyses for Field Parameters are performed by EQC field staff. Locations and certifications are identified on the Chain of Custody as follows:

ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

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· All samples are collected as “grab” samples unless otherwise identified.

· Reported results related only to the samples as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins’ online data portal “TotalAccess” will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry) and Zachary Smith (Water Microbiology).

Erin Dougherty
Project Administrator
11/23/2020 10:26:23 AM

Case Narrative

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Job ID: 630-9152-1

Laboratory: Eurofins QC, LLC – Horsham, PA

Narrative

Job Narrative
630-9152-1

Receipt
The samples were received on 10/27/2020 1:20 PM; the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.7°C

Receipt Exceptions
A trip blank was not submitted for analysis with the sample shipment; and was not listed on the Chain of Custody (COC).

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

GC/MS Semi VOA
Method 625.1_PREC: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 410-61137 recovered outside control limits for the following analyte(s): Benzidine. Benzidine has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

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

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

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

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

Sample Summary

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
630-9152-1	QUARTERLY ROS01 EFFLUENT MANHOLE COMPOSITE	Wastewater	10/27/20 09:15	10/27/20 13:20	
630-9152-2	QUARTERLY ROS01 EFFLUENT MANHOLE GRAB	Wastewater	10/27/20 09:12	10/27/20 13:20	

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Client Sample ID: QUARTERLY ROS01 EFFLUENT MANHOLE COMPOSITE

Lab Sample ID: 630-9152-1

Date Collected: 10/27/20 09:15
Date Received: 10/27/20 13:20

Matrix: Wastewater

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
1,1,1-Trichloroethane	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
1,1,2,2-Tetrachloroethane	ND		1.0	0.050	ug/L		10/29/20 11:53	1	UJML
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L		10/29/20 11:53	1	UJML
1,1-Dichloroethane	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
1,1-Dichloroethene	ND		1.0	0.20	ug/L		10/29/20 11:53	1	UJML
1,2-Dichlorobenzene	ND		1.0	0.070	ug/L		10/29/20 11:53	1	UJML
1,2-Dichloroethane	ND		1.0	0.20	ug/L		10/29/20 11:53	1	UJML
1,2-Dichloropropane	ND		1.0	0.20	ug/L		10/29/20 11:53	1	UJML
1,3-Dichlorobenzene	ND		1.0	0.060	ug/L		10/29/20 11:53	1	UJML
1,4-Dichlorobenzene	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
2-Chloroethyl vinyl ether	ND		1.0	0.50	ug/L		10/29/20 11:53	1	UJML
Acrolein	ND		10	1.0	ug/L		10/29/20 11:53	1	UJML
Acrylonitrile	ND		1.0	0.20	ug/L		10/29/20 11:53	1	UJML
Benzene	ND		1.0	0.050	ug/L		10/29/20 11:53	1	UJML
Bromodichloromethane	**5.9**		1.0	0.20	ug/L		10/29/20 11:53	1	UJML
Bromoform	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
Bromomethane	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
Carbon tetrachloride	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
Chlorobenzene	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
Chloroethane	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
Chloroform	**16**		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
Chloromethane	ND		1.0	0.30	ug/L		10/29/20 11:53	1	UJML
cis-1,3-Dichloropropene	ND		1.0	0.080	ug/L		10/29/20 11:53	1	UJML
Dibromochloromethane	**1.3**		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
Ethylbenzene	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
Methylene Chloride	ND		1.0	0.30	ug/L		10/29/20 11:53	1	UJML
Tetrachloroethene	ND		1.0	0.20	ug/L		10/29/20 11:53	1	UJML
Toluene	ND		1.0	0.050	ug/L		10/29/20 11:53	1	UJML
trans-1,2-Dichloroethene	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
trans-1,3-Dichloropropene	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
Trichloroethene	ND		1.0	0.20	ug/L		10/29/20 11:53	1	UJML
Trichlorofluoromethane	ND		1.0	0.10	ug/L		10/29/20 11:53	1	UJML
Vinyl chloride	ND		1.0	0.30	ug/L		10/29/20 11:53	1	UJML

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Analyzed*	*Dil Fac*	*Analyst*
1,2-Dichloroethane-d4 (Surr)	*110*		*60 - 140*	*10/29/20 11:53*	*1*	*UJML*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*	*10/29/20 11:53*	*1*	*UJML*
Dibromofluoromethane (Surr)	*108*		*60 - 140*	*10/29/20 11:53*	*1*	*UJML*
Toluene-d8 (Surr)	*97*		*60 - 140*	*10/29/20 11:53*	*1*	*UJML*

Method: 625.1 - Dioxin Screen (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
2,3,7,8-TCDD	ND		0.47	0.47	ug/L		11/08/20 09:55	1	W6XI

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
1,2,4-Trichlorobenzene	ND		0.94	0.19	ug/L		11/03/20 13:17	1	ULM3
1,2-Diphenylhydrazine	ND		4.7	0.094	ug/L		11/03/20 13:17	1	ULM3
2,4,6-Trichlorophenol	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Client Sample ID: QUARTERLY ROS01 EFFLUENT MANHOLE COMPOSITE

Lab Sample ID: 630-9152-1

Date Collected: 10/27/20 09:15
Date Received: 10/27/20 13:20

Matrix: Wastewater

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
2,4-Dichlorophenol	ND		4.7	0.094	ug/L		11/03/20 13:17	1	ULM3
2,4-Dimethylphenol	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
2,4-Dinitrophenol	ND		9.4	0.94	ug/L		11/03/20 13:17	1	ULM3
2,4-Dinitrotoluene	ND		4.7	0.094	ug/L		11/03/20 13:17	1	ULM3
2,6-Dinitrotoluene	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
2-Chloronaphthalene	ND		4.7	0.56	ug/L		11/03/20 13:17	1	ULM3
2-Chlorophenol	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
2-Nitrophenol	ND		4.7	0.28	ug/L		11/03/20 13:17	1	ULM3
3,3'-Dichlorobenzidine	ND		4.7	0.28	ug/L		11/03/20 13:17	1	ULM3
4,6-Dinitro-2-methylphenol	ND		9.4	0.94	ug/L		11/03/20 13:17	1	ULM3
4-Bromophenyl-phenylether	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
4-Chloro-3-methylphenol	ND		4.7	0.28	ug/L		11/03/20 13:17	1	ULM3
4-Chlorophenyl-phenylether	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
4-Nitrophenol	ND		4.7	0.84	ug/L		11/03/20 13:17	1	ULM3
Acenaphthene	ND		4.7	0.084	ug/L		11/03/20 13:17	1	ULM3
Acenaphthylene	ND		4.7	0.075	ug/L		11/03/20 13:17	1	ULM3
Anthracene	ND		4.7	0.066	ug/L		11/03/20 13:17	1	ULM3
Benzidine	ND	*	56	5.6	ug/L		11/03/20 13:17	1	ULM3
Benzo[a]anthracene	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
Benzo[a]pyrene	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
Benzo[b]fluoranthene	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
Benzo[g,h,i]perylene	ND		4.7	0.094	ug/L		11/03/20 13:17	1	ULM3
Benzo[k]fluoranthene	ND		4.7	0.094	ug/L		11/03/20 13:17	1	ULM3
bis (2-chloroisopropyl) ether	ND		4.7	0.28	ug/L		11/03/20 13:17	1	ULM3
Bis(2-chloroethoxy)methane	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
Bis(2-chloroethyl)ether	ND		4.7	0.094	ug/L		11/03/20 13:17	1	ULM3
Bis(2-ethylhexyl) phthalate	**3.2**	**J**	4.7	0.94	ug/L		11/03/20 13:17	1	ULM3
Butylbenzylphthalate	ND	*1	4.7	0.94	ug/L		11/03/20 13:17	1	ULM3
Chrysene	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
Dibenz(a,h)anthracene	ND		4.7	0.094	ug/L		11/03/20 13:17	1	ULM3
Diethylphthalate	ND		4.7	0.28	ug/L		11/03/20 13:17	1	ULM3
Dimethylphthalate	ND	*1	4.7	0.47	ug/L		11/03/20 13:17	1	ULM3
Di-n-butyl phthalate	ND		4.7	0.94	ug/L		11/03/20 13:17	1	ULM3
Di-n-octyl phthalate	ND		4.7	0.47	ug/L		11/03/20 13:17	1	ULM3
Fluoranthene	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
Fluorene	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
Hexachlorobenzene	ND		4.7	0.47	ug/L		11/03/20 13:17	1	ULM3
Hexachlorobutadiene	ND		1.9	0.19	ug/L		11/03/20 13:17	1	ULM3
Hexachlorocyclopentadiene	ND		14	0.19	ug/L		11/03/20 13:17	1	ULM3
Hexachloroethane	ND		1.9	0.094	ug/L		11/03/20 13:17	1	ULM3
Indeno[1,2,3-cd]pyrene	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
Isophorone	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
Naphthalene	ND		1.9	0.094	ug/L		11/03/20 13:17	1	ULM3
Nitrobenzene	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
N-Nitrosodimethylamine	ND		4.7	0.38	ug/L		11/03/20 13:17	1	ULM3
N-Nitrosodi-n-propylamine	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3
N-Nitrosodiphenylamine	ND		4.7	0.094	ug/L		11/03/20 13:17	1	ULM3
Pentachlorophenol	ND		4.7	0.75	ug/L		11/03/20 13:17	1	ULM3

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Client Sample ID: QUARTERLY ROS01 EFFLUENT MANHOLE COMPOSITE

Lab Sample ID: 630-9152-1

Date Collected: 10/27/20 09:15
Date Received: 10/27/20 13:20

Matrix: Wastewater

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Phenanthrene	ND		4.7	0.094	ug/L		11/03/20 13:17	1	ULM3
Phenol	ND		0.94	0.38	ug/L		11/03/20 13:17	1	ULM3
Pyrene	ND		4.7	0.19	ug/L		11/03/20 13:17	1	ULM3

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Analyzed*	*Dil Fac*	*Analyst*
2,4,6-Tribromofenol (Surr)	*83*		*14 - 134*	*11/03/20 13:17*	*1*	*ULM3*
2-Fluorobiphenyl (Surr)	*70*		*47 - 107*	*11/03/20 13:17*	*1*	*ULM3*
2-Fluorophenol (Surr)	*46*		*10 - 93*	*11/03/20 13:17*	*1*	*ULM3*
Nitrobenzene-d5 (Surr)	*89*		*49 - 106*	*11/03/20 13:17*	*1*	*ULM3*
Phenol-d5 (Surr)	*32*		*10 - 74*	*11/03/20 13:17*	*1*	*ULM3*
p-Terphenyl-d14 (Surr)	*64*		*41 - 134*	*11/03/20 13:17*	*1*	*ULM3*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Arsenic	ND		0.050	0.016	mg/L		11/03/20 16:59	1	UCIG
Cadmium	ND		0.0050	0.0010	mg/L		11/03/20 16:59	1	UCIG
Chromium	ND		0.015	0.0016	mg/L		11/03/20 16:59	1	UCIG
Copper	**0.039**		0.020	0.012	mg/L		11/03/20 16:59	1	UCIG
Lead	ND		0.015	0.0071	mg/L		11/03/20 16:59	1	UCIG
Nickel	ND		0.010	0.0021	mg/L		11/03/20 16:59	1	UCIG
Silver	ND		0.010	0.0050	mg/L		11/03/20 16:59	1	UCIG
Zinc	**0.063**		0.020	0.0037	mg/L		11/03/20 16:59	1	UCIG

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Mercury	ND		0.00020	0.000079	mg/L		11/03/20 20:53	1	UEFS

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Ammonia as N	**0.72**		0.10	0.050	mg/L		11/19/20 13:00	1	QU5I
Chemical Oxygen Demand	**41**	**J**	75	25	mg/L		10/30/20 05:45	1	USAE
Total Suspended Solids	**9.6**		4.5	1.5	mg/L		10/29/20 09:42	1	UOCA
Biochemical Oxygen Demand	**13**		1.5	1.5	mg/L		10/28/20 15:46	1	F8TI

Client Sample ID: QUARTERLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-9152-2

Date Collected: 10/27/20 09:12
Date Received: 10/27/20 13:20

Matrix: Wastewater

Method: 1668C - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
DCB Decachlorobiphenyl	ND		1000	360	pg/L		11/05/20 03:52	1	UJD2
PCB-1	ND		200	51	pg/L		11/05/20 03:52	1	UJD2
PCB-10	ND		40	5.4	pg/L		11/05/20 03:52	1	UJD2
PCB-103	ND		80	18	pg/L		11/05/20 03:52	1	UJD2
PCB-104	ND		80	13	pg/L		11/05/20 03:52	1	UJD2
PCB-105	ND		80	13	pg/L		11/05/20 03:52	1	UJD2
PCB-106	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-107	ND		80	16	pg/L		11/05/20 03:52	1	UJD2

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Client Sample ID: QUARTERLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-9152-2

Date Collected: 10/27/20 09:12
Date Received: 10/27/20 13:20

Matrix: Wastewater

Method: 1668C - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
PCB-108/124	ND		160	32	pg/L		11/05/20 03:52	1	UJD2
PCB-11	ND		300	140	pg/L		11/05/20 03:52	1	UJD2
PCB-110/115	ND		160	61	pg/L		11/05/20 03:52	1	UJD2
PCB-111	ND		80	17	pg/L		11/05/20 03:52	1	UJD2
PCB-112	ND		80	18	pg/L		11/05/20 03:52	1	UJD2
PCB-114	ND		80	15	pg/L		11/05/20 03:52	1	UJD2
PCB-118	ND		80	14	pg/L		11/05/20 03:52	1	UJD2
PCB-12/13	ND		80	22	pg/L		11/05/20 03:52	1	UJD2
PCB-120	ND		80	17	pg/L		11/05/20 03:52	1	UJD2
PCB-121	ND		80	14	pg/L		11/05/20 03:52	1	UJD2
PCB-122	ND		80	14	pg/L		11/05/20 03:52	1	UJD2
PCB-123	ND		80	13	pg/L		11/05/20 03:52	1	UJD2
PCB-126	ND		80	17	pg/L		11/05/20 03:52	1	UJD2
PCB-127	ND		80	19	pg/L		11/05/20 03:52	1	UJD2
PCB-128/166	ND		160	40	pg/L		11/05/20 03:52	1	UJD2
PCB-129/138/163	ND		240	52	pg/L		11/05/20 03:52	1	UJD2
PCB-130	ND		80	19	pg/L		11/05/20 03:52	1	UJD2
PCB-131	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-132	ND		80	15	pg/L		11/05/20 03:52	1	UJD2
PCB-133	ND		80	18	pg/L		11/05/20 03:52	1	UJD2
PCB-134	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-135/151	ND		160	43	pg/L		11/05/20 03:52	1	UJD2
PCB-136	ND		80	15	pg/L		11/05/20 03:52	1	UJD2
PCB-137	ND		80	19	pg/L		11/05/20 03:52	1	UJD2
PCB-139/140	ND		160	33	pg/L		11/05/20 03:52	1	UJD2
PCB-14	ND		40	5.0	pg/L		11/05/20 03:52	1	UJD2
PCB-141	ND		80	23	pg/L		11/05/20 03:52	1	UJD2
PCB-142	ND		80	18	pg/L		11/05/20 03:52	1	UJD2
PCB-143	ND		80	17	pg/L		11/05/20 03:52	1	UJD2
PCB-144	ND		80	17	pg/L		11/05/20 03:52	1	UJD2
PCB-145	ND		80	15	pg/L		11/05/20 03:52	1	UJD2
PCB-146	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-147/149	ND		160	29	pg/L		11/05/20 03:52	1	UJD2
PCB-148	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-15	ND		40	8.5	pg/L		11/05/20 03:52	1	UJD2
PCB-150	ND		80	17	pg/L		11/05/20 03:52	1	UJD2
PCB-152	ND		80	15	pg/L		11/05/20 03:52	1	UJD2
PCB-153/168	ND		160	31	pg/L		11/05/20 03:52	1	UJD2
PCB-154	ND		200	47	pg/L		11/05/20 03:52	1	UJD2
PCB-155	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-156/157	ND		160	35	pg/L		11/05/20 03:52	1	UJD2
PCB-158	ND		80	19	pg/L		11/05/20 03:52	1	UJD2
PCB-159	ND		80	20	pg/L		11/05/20 03:52	1	UJD2
PCB-16	ND		40	5.3	pg/L		11/05/20 03:52	1	UJD2
PCB-160	ND		80	20	pg/L		11/05/20 03:52	1	UJD2
PCB-161	ND		80	17	pg/L		11/05/20 03:52	1	UJD2
PCB-162	ND		80	20	pg/L		11/05/20 03:52	1	UJD2
PCB-164	ND		80	18	pg/L		11/05/20 03:52	1	UJD2

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Client Sample ID: QUARTERLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-9152-2

Date Collected: 10/27/20 09:12
Date Received: 10/27/20 13:20

Matrix: Wastewater

Method: 1668C - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
PCB-165	ND		80	17	pg/L		11/05/20 03:52	1	UJD2
PCB-167	ND		80	17	pg/L		11/05/20 03:52	1	UJD2
PCB-169	ND		80	19	pg/L		11/05/20 03:52	1	UJD2
PCB-17	ND		40	6.1	pg/L		11/05/20 03:52	1	UJD2
PCB-170	ND		80	18	pg/L		11/05/20 03:52	1	UJD2
PCB-171/173	ND		160	38	pg/L		11/05/20 03:52	1	UJD2
PCB-172	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-174	ND		80	18	pg/L		11/05/20 03:52	1	UJD2
PCB-175	ND		80	21	pg/L		11/05/20 03:52	1	UJD2
PCB-176	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-177	ND		80	18	pg/L		11/05/20 03:52	1	UJD2
PCB-178	ND		80	27	pg/L		11/05/20 03:52	1	UJD2
PCB-179	ND		80	14	pg/L		11/05/20 03:52	1	UJD2
PCB-18/30	ND		80	10	pg/L		11/05/20 03:52	1	UJD2
PCB-180/193	ND		160	29	pg/L		11/05/20 03:52	1	UJD2
PCB-181	ND		80	21	pg/L		11/05/20 03:52	1	UJD2
PCB-182	ND		80	24	pg/L		11/05/20 03:52	1	UJD2
PCB-183/185	ND		160	52	pg/L		11/05/20 03:52	1	UJD2
PCB-184	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-186	ND		80	17	pg/L		11/05/20 03:52	1	UJD2
PCB-187	ND		80	20	pg/L		11/05/20 03:52	1	UJD2
PCB-188	ND		200	81	pg/L		11/05/20 03:52	1	UJD2
PCB-189	ND		80	18	pg/L		11/05/20 03:52	1	UJD2
PCB-19	ND		40	5.0	pg/L		11/05/20 03:52	1	UJD2
PCB-190	ND		80	20	pg/L		11/05/20 03:52	1	UJD2
PCB-191	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-192	ND		80	18	pg/L		11/05/20 03:52	1	UJD2
PCB-194	ND		120	29	pg/L		11/05/20 03:52	1	UJD2
PCB-195	ND		120	28	pg/L		11/05/20 03:52	1	UJD2
PCB-196	ND		120	24	pg/L		11/05/20 03:52	1	UJD2
PCB-197/200	ND		240	79	pg/L		11/05/20 03:52	1	UJD2
PCB-198/199	ND		240	50	pg/L		11/05/20 03:52	1	UJD2
PCB-2	ND		200	74	pg/L		11/05/20 03:52	1	UJD2
PCB-20/28	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-201	ND		400	100	pg/L		11/05/20 03:52	1	UJD2
PCB-202	ND		120	28	pg/L		11/05/20 03:52	1	UJD2
PCB-203	ND		120	21	pg/L		11/05/20 03:52	1	UJD2
PCB-204	ND		120	23	pg/L		11/05/20 03:52	1	UJD2
PCB-205	ND		120	28	pg/L		11/05/20 03:52	1	UJD2
PCB-206	ND		120	25	pg/L		11/05/20 03:52	1	UJD2
PCB-207	ND		120	25	pg/L		11/05/20 03:52	1	UJD2
PCB-208	ND		120	26	pg/L		11/05/20 03:52	1	UJD2
PCB-21/33	ND		80	10	pg/L		11/05/20 03:52	1	UJD2
PCB-22	ND		40	5.9	pg/L		11/05/20 03:52	1	UJD2
PCB-23	ND		40	5.0	pg/L		11/05/20 03:52	1	UJD2
PCB-24	ND		40	5.0	pg/L		11/05/20 03:52	1	UJD2
PCB-25	ND		40	5.0	pg/L		11/05/20 03:52	1	UJD2
PCB-26/29	ND		80	29	pg/L		11/05/20 03:52	1	UJD2

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Client Sample ID: QUARTERLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-9152-2

Date Collected: 10/27/20 09:12
Date Received: 10/27/20 13:20

Matrix: Wastewater

Method: 1668C - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
PCB-27	ND		40	5.0	pg/L		11/05/20 03:52	1	UJD2
PCB-3	ND		200	42	pg/L		11/05/20 03:52	1	UJD2
PCB-31	ND		40	12	pg/L		11/05/20 03:52	1	UJD2
PCB-32	ND		40	5.1	pg/L		11/05/20 03:52	1	UJD2
PCB-34	ND		40	5.8	pg/L		11/05/20 03:52	1	UJD2
PCB-35	ND		40	5.0	pg/L		11/05/20 03:52	1	UJD2
PCB-36	ND		40	7.2	pg/L		11/05/20 03:52	1	UJD2
PCB-37	ND		40	5.8	pg/L		11/05/20 03:52	1	UJD2
PCB-38	ND		40	5.0	pg/L		11/05/20 03:52	1	UJD2
PCB-39	ND		40	6.2	pg/L		11/05/20 03:52	1	UJD2
PCB-4	ND		40	5.0	pg/L		11/05/20 03:52	1	UJD2
PCB-40/71	ND		160	20	pg/L		11/05/20 03:52	1	UJD2
PCB-41	ND		80	13	pg/L		11/05/20 03:52	1	UJD2
PCB-42	ND		80	14	pg/L		11/05/20 03:52	1	UJD2
PCB-43	ND		80	10	pg/L		11/05/20 03:52	1	UJD2
PCB-44/47/65	ND		240	39	pg/L		11/05/20 03:52	1	UJD2
PCB-45	ND		80	12	pg/L		11/05/20 03:52	1	UJD2
PCB-46	ND		80	10	pg/L		11/05/20 03:52	1	UJD2
PCB-48	ND		80	13	pg/L		11/05/20 03:52	1	UJD2
PCB-49/69	ND		160	25	pg/L		11/05/20 03:52	1	UJD2
PCB-5	ND		40	7.8	pg/L		11/05/20 03:52	1	UJD2
PCB-50/53	ND		300	95	pg/L		11/05/20 03:52	1	UJD2
PCB-51	ND		80	32	pg/L		11/05/20 03:52	1	UJD2
PCB-52	ND		80	21	pg/L		11/05/20 03:52	1	UJD2
PCB-54	ND		80	10	pg/L		11/05/20 03:52	1	UJD2
PCB-55	ND		80	12	pg/L		11/05/20 03:52	1	UJD2
PCB-56	ND		80	11	pg/L		11/05/20 03:52	1	UJD2
PCB-57	ND		80	14	pg/L		11/05/20 03:52	1	UJD2
PCB-58	ND		80	13	pg/L		11/05/20 03:52	1	UJD2
PCB-59/62/75	ND		240	42	pg/L		11/05/20 03:52	1	UJD2
PCB-6	ND		40	14	pg/L		11/05/20 03:52	1	UJD2
PCB-60	ND		80	13	pg/L		11/05/20 03:52	1	UJD2
PCB-61/70/74/76	ND		320	48	pg/L		11/05/20 03:52	1	UJD2
PCB-63	ND		80	13	pg/L		11/05/20 03:52	1	UJD2
PCB-64	ND		80	11	pg/L		11/05/20 03:52	1	UJD2
PCB-66	ND		80	11	pg/L		11/05/20 03:52	1	UJD2
PCB-67	ND		80	12	pg/L		11/05/20 03:52	1	UJD2
PCB-68	ND		80	15	pg/L		11/05/20 03:52	1	UJD2
PCB-7	ND		40	8.3	pg/L		11/05/20 03:52	1	UJD2
PCB-72	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-73	ND		80	21	pg/L		11/05/20 03:52	1	UJD2
PCB-77	ND		80	11	pg/L		11/05/20 03:52	1	UJD2
PCB-78	ND		80	14	pg/L		11/05/20 03:52	1	UJD2
PCB-79	ND		80	14	pg/L		11/05/20 03:52	1	UJD2
PCB-8	**15**	**J I**	40	11	pg/L		11/05/20 03:52	1	UJD2
PCB-80	ND		80	17	pg/L		11/05/20 03:52	1	UJD2
PCB-81	ND		80	10	pg/L		11/05/20 03:52	1	UJD2
PCB-82	ND		80	12	pg/L		11/05/20 03:52	1	UJD2

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Client Sample ID: QUARTERLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-9152-2

Date Collected: 10/27/20 09:12
Date Received: 10/27/20 13:20

Matrix: Wastewater

Method: 1668C - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
PCB-83	ND		80	13	pg/L		11/05/20 03:52	1	UJD2
PCB-84	ND		80	12	pg/L		11/05/20 03:52	1	UJD2
PCB-85/116/117	ND		240	68	pg/L		11/05/20 03:52	1	UJD2
PCB-86/87/97/109/119/125	ND		480	130	pg/L		11/05/20 03:52	1	UJD2
PCB-88	ND		80	15	pg/L		11/05/20 03:52	1	UJD2
PCB-89	ND		80	15	pg/L		11/05/20 03:52	1	UJD2
PCB-9	ND		40	8.8	pg/L		11/05/20 03:52	1	UJD2
PCB-90/101/113	ND		240	41	pg/L		11/05/20 03:52	1	UJD2
PCB-91	ND		80	12	pg/L		11/05/20 03:52	1	UJD2
PCB-92	ND		80	16	pg/L		11/05/20 03:52	1	UJD2
PCB-93/100	ND		160	31	pg/L		11/05/20 03:52	1	UJD2
PCB-94	ND		80	14	pg/L		11/05/20 03:52	1	UJD2
PCB-95	**37**	**J I B**	80	15	pg/L		11/05/20 03:52	1	UJD2
PCB-96	ND		80	13	pg/L		11/05/20 03:52	1	UJD2
PCB-98/102	ND		200	41	pg/L		11/05/20 03:52	1	UJD2
PCB-99	ND		80	15	pg/L		11/05/20 03:52	1	UJD2

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Analyzed*	*Dil Fac*	*Analyst*
PCB-104L	*22*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-105L	*30*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-114L	*29*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-118L	*29*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-123L	*29*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-126L	*32*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-127L	*32*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-128L	*21*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-133L	*24*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-141L	*26*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-155L	*22*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-156L/157L	*31*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-15L	*25*		*5 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-162L	*31*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-167L	*29*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-169L	*32*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-180L	*22*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-188L	*16*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-189L	*27*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-19L	*21*		*5 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-1L	*15*		*5 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-202L	*20*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-205L	*24*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-206L	*23*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-208L	*21*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-209L	*25*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-31L	*29*		*5 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-32L	*23*		*5 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-37L	*25*		*5 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-3L	*18*		*5 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-47L	*25*		*5 - 145*	*11/05/20 03:52*	*1*	*UJD2*

Client Sample Results

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Client Sample ID: QUARTERLY ROS01 EFFLUENT MANHOLE GRAB

Lab Sample ID: 630-9152-2

Date Collected: 10/27/20 09:12
Date Received: 10/27/20 13:20

Matrix: Wastewater

Method: 1668C - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Analyzed*	*Dil Fac*	*Analyst*
PCB-4L	*16*		*5 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-54L	*17*		*5 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-60L	*28*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-70L	*28*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-77L	*29*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-81L	*29*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-85L	*27*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-8L	*24*		*5 - 145*	*11/05/20 03:52*	*1*	*UJD2*
PCB-95L	*21*		*10 - 145*	*11/05/20 03:52*	*1*	*UJD2*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
HEM (Oil & Grease)	**2.0**	**J**	5.2	1.4	mg/L		11/06/20 17:05	1	QT6L
SGT-HEM (TPH)	ND		5.2	1.4	mg/L		11/06/20 17:05	1	QT6L
Cyanide, Total	**0.0061**	**J**	0.010	0.0050	mg/L		10/29/20 15:36	1	QU5I
Chemical Oxygen Demand	**70**	**J**	75	25	mg/L		10/30/20 05:45	1	USAE
Phenols, Total	**0.031**		0.020	0.010	mg/L		11/04/20 15:49	1	QU5I

Accreditation/Certification and Definitions Summary

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	36-00037	01-31-21

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
1668C	HRMS-Sepf	Wastewater	PCB-108/124
1668C	HRMS-Sepf	Wastewater	PCB-110/115
1668C	HRMS-Sepf	Wastewater	PCB-12/13
1668C	HRMS-Sepf	Wastewater	PCB-128/166
1668C	HRMS-Sepf	Wastewater	PCB-129/138/163
1668C	HRMS-Sepf	Wastewater	PCB-135/151
1668C	HRMS-Sepf	Wastewater	PCB-139/140
1668C	HRMS-Sepf	Wastewater	PCB-147/149
1668C	HRMS-Sepf	Wastewater	PCB-153/168
1668C	HRMS-Sepf	Wastewater	PCB-156/157
1668C	HRMS-Sepf	Wastewater	PCB-171/173
1668C	HRMS-Sepf	Wastewater	PCB-18/30
1668C	HRMS-Sepf	Wastewater	PCB-180/193
1668C	HRMS-Sepf	Wastewater	PCB-183/185
1668C	HRMS-Sepf	Wastewater	PCB-197/200
1668C	HRMS-Sepf	Wastewater	PCB-198/199
1668C	HRMS-Sepf	Wastewater	PCB-20/28
1668C	HRMS-Sepf	Wastewater	PCB-21/33
1668C	HRMS-Sepf	Wastewater	PCB-26/29
1668C	HRMS-Sepf	Wastewater	PCB-40/71
1668C	HRMS-Sepf	Wastewater	PCB-44/47/65
1668C	HRMS-Sepf	Wastewater	PCB-49/69
1668C	HRMS-Sepf	Wastewater	PCB-50/53
1668C	HRMS-Sepf	Wastewater	PCB-59/62/75
1668C	HRMS-Sepf	Wastewater	PCB-61/70/74/76
1668C	HRMS-Sepf	Wastewater	PCB-85/116/117
1668C	HRMS-Sepf	Wastewater	PCB-86/87/97/109/119/125
1668C	HRMS-Sepf	Wastewater	PCB-90/101/113
1668C	HRMS-Sepf	Wastewater	PCB-93/100
1668C	HRMS-Sepf	Wastewater	PCB-98/102
625.1	625.1	Wastewater	2,3,7,8-TCDD

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Accreditation/Certification and Definitions Summary

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Method Summary

Client: Roscom, Inc.
Project/Site: SR0053 Roscom

Job ID: 630-9152-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	ELLE
625.1	Dioxin Screen (GC/MS SIM)	40CFR136A	ELLE
625.1	Semivolatile Organic Compounds (GC/MS)	40CFR136A	ELLE
1668C	Chlorinated Biphenyl Congeners (HRGC/HRMS)	EPA	ELLE
200.7 Rev 4.4	Metals (ICP)	EPA	ELLE
245.1	Mercury (CVAA)	EPA	ELLE
1664A	HEM and SGT-HEM	1664A	ELLE
335.4	Cyanide, Total	MCAWW	ELLE
350.1	Nitrogen, Ammonia	MCAWW	ELLE
410.4	COD	MCAWW	ELLE
420.4	Phenolics, Total Recoverable	MCAWW	ELLE
SM 2540D	Solids, Total Suspended (TSS)	SM	ELLE
SM 5210B	BOD, 5-Day	SM	ELLE
200.7	Preparation, Total Recoverable Metals	EPA	ELLE
245.1	Preparation, Mercury	EPA	ELLE
625.1	Liquid-Liquid Extraction	40CFR136A	ELLE
Distill/CN	Distillation, Cyanide	None	ELLE
HRMS-Sepf	Separatory Funnel (Liquid-Liquid) Extraction	EPA	ELLE

Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

eurofins | QC

702 Electronic Drive
Horsham, PA 19044
Phone: 215-355-3900
Fax: 215-392-0626

CHAIN OF CUSTODY

Page 1 of 1

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

Client/Acct. No. ROSCOM, INC
Address 2925 STATE RD
City/State/Zip CROYDON, PA.
Phone/Fax
Client Contact:

P.O. No. PWSID #:
Quote #
e-mail:

Lab LIMS
LAB USE
630-9152 Chain of Custody

___ As
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
___ HNO_3 pH
___ H_2SO_4 pH
___ NaOH pH
___ Unpreserved
___ HCl # ___ NH4Cl # ___ MeOH
___ DI Water

MATRIX CODES
RINKING WATER
ROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

PROJECT

FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers: Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT	ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
-1 1/4LY EFFLUENT M.H.	10-26 →	0915		X	WW	16	1		6	1			8		624 AC/ACN	
COMP	10-27-20	0915													625 AEBN, DIOX. SCREEN	
06-16-10-R															BOD, TSS	
															Ag As Cd Cr Cu Hg Ni Pb Zn	
															COD NH_3	
-2 1/4LY EFFLUENT M.H.	10-27-20	0912	X		WW	7	2	2			1		2		1664 HEM-SGT	
GRAB															CN	
11-10-R															COD PHENOL	
															PCB CONGENERS	

SAMPLED BY: (Name/Company) KEM / EQC

TAT: ☐ STANDARD (10 DAY) or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD ☐ Standard + QC ☐ Forms ☐ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By:
Initials
Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1. [signature]	10-27-20	1320	1. [signature]	10/27/20	1320
RELINQUISHED BY 2.	DATE	TIME	RECEIVED BY 2.	DATE	TIME
RELINQUISHED BY 3.	DATE	TIME	RECEIVED BY 3.	DATE	TIME
RELINQUISHED BY 4.	DATE	TIME	RECEIVED BY 4.	DATE	TIME
RELINQUISHED BY 5.	DATE	TIME	RECEIVED BY 5.	DATE	TIME

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number

Rec'd Temp.: 2.7 °C Initials: KEM Ice Y/N Location: OC

COMMENTS:

Hazardous: yes / no

Eurofins QC, LLC – Horsham, PA
702 Electronic Drive
Horsham, PA 19044-0962
Phone: 215-355-3900 Fax: 888-785-8567

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bruzzio, Taylor M	Carrier Tracking No(s):	COC No: 630-2854.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Taylor.Bruzzio@Eurofinset.com	State of Origin: Pennsylvania	Page: Page 1 of 2
Company: Eurofins Lancaster Laboratories Env LLC		Accreditations Required (See note): NELAP - Pennsylvania		Job #: 630-9152-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 11/5/2020			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: SR0053 Roscom	Project #: 63002227			
Site: Roscom Manhole in Front Parking Lot	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM5210B_Calc/ BOD, 5-Day Only	410.4/ COD	245.1/245.1_Prep Mercury (CVAA)	2540D/ Solids, Total Suspended (TSS)	350.1/ Nitrogen, Ammonia	SM5210B_20Day/ BOD, 20-Day	200.7/200.7_P_TR Metals (ICP)	624.1_PREC/624_Prep EPA 624 Standard VOCs + AC/ACN	625.1_PREC/625_Prep_LVI EPA 625 Standard AEBN List	625DioxinScreen/625_Prep_LVI Dioxin Screen	1664A_NP/ (MOD) EPA 1664A HEM	420.4/ Phenolics, Total Recoverable	1668C/1668_P_Sep (MOD) PCB Congeners Full List	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
QUARTERLY ROS01 EFFLUENT MANHOLE COMPOSITE (630-	10/27/20	09:15 Eastern		Water			X	X	X	X	X	X	X	X	X	X				16	
QUARTERLY ROS01 EFFLUENT MANHOLE GRAB (630-9152-2	10/27/20	09:12 Eastern		Water				X									X	X	X	7	

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Note: Since laboratory accreditations are subject to change, Eurofins QC, LLC – Horsham, PA places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins QC, LLC – Horsham, PA laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins QC, LLC – Horsham, PA attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins QC, LLC – Horsham, PA.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 10/27/2020 1755	Company: ELC	Received by: Cooler 7979	Date/Time: 10/27/2020 1755	Company: ELC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10/28/20 0005	Company: ELC

Custody Seals Intact: ☑ Yes ☐ No | Custody Seal No.: 7979

Cooler Temperature(s) °C and Other Remarks: 1.7, no TBs

Ver: 01/16/2019

Eurofins QC, LLC – Horsham, PA
702 Electronic Drive
Horsham, PA 19044-0962
Phone: 215-355-3900 Fax: 888-785-8567

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bruzzio, Taylor M	Carrier Tracking No(s):	COC No: 630-2854.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Taylor.Bruzzio@Eurofinset.com	State of Origin: Pennsylvania	Page: Page 2 of 2
Company: Eurofins Lancaster Laboratories Env LLC		Accreditations Required (See note): NELAP - Pennsylvania		Job #: 630-9152-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 11/5/2020			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: SR0053 Roscom	Project #: 63002227			
Site: Roscom Manhole in Front Parking Lot	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4/Distill_CN	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
QUARTERLY ROS01 EFFLUENT MANHOLE COMPOSITE (630-	10/27/20	09:15 Eastern		Water				16	
QUARTERLY ROS01 EFFLUENT MANHOLE GRAB (630-9152-2	10/27/20	09:12 Eastern		Water			X	7	

Note: Since laboratory accreditations are subject to change, Eurofins QC, LLC – Horsham, PA places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins QC, LLC – Horsham, PA laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins QC, LLC – Horsham, PA attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins QC, LLC – Horsham, PA.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 10/28/20 0005	Company ECCE
Custody Seals Intact: ☒ Yes Δ No	Custody Seal No.: 7979		Cooler Temperature(s) °C and Other Remarks: 1.7		

Ver: 01/16/2019

Certificate of Analysis

M.J. Reider Associates, Inc.

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #06-00003

Laboratory No.: 2006780
Report: 05/04/20
Lab Contact: Bradley T Griffiths

Attention: Terry Sturgis
Reported To: Coyne Chemical
3015 State Road
Croydon, PA 19021

Project Info: Outfall COY01 - Monthly w/Quarterly

Lab ID: 2006780-01 **Collected By:** Client **Sampled:** 03/09/20 12:12 **Received:** 03/09/20 14:26
Sample Desc: Outfall COY01 - Grab **Sample Type:** Grab

	Result	Unit	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry							
Cyanide	<0.004	mg/l	0.004	Lachat 10-204-00-1X	03/11/20		SNF
Oil & Grease (HEM)	<7	mg/l	7	EPA 1664 Rev A	03/16/20	C-49	FDB
Total Phenolics	<0.010	mg/l	0.010	EPA 420.4	03/10/20	Q-10	SNF
Total Petroleum Hydrocarbons (SGT-HEM)	<7	mg/l	7	EPA 1664 Rev A	03/17/20		FDB
Organics							
PCB-1016	<5	ug/l	5	EPA 608	03/19/20		TWH
PCB-1221	<5	ug/l	5	EPA 608	03/19/20		TWH
PCB-1232	<5	ug/l	5	EPA 608	03/19/20		TWH
PCB-1242	<5	ug/l	5	EPA 608	03/19/20		TWH
PCB-1248	<5	ug/l	5	EPA 608	03/19/20		TWH
PCB-1254	<5	ug/l	5	EPA 608	03/19/20		TWH
PCB-1260	<5	ug/l	5	EPA 608	03/19/20		TWH
Surrogates							
2,4,5,6-Tetrachloro-m-xylene	*52.6%*		*1-136*	*EPA 608*	03/19/20		TWH
Decachlorobiphenyl	*39.2%*		*1-111*	*EPA 608*	03/19/20		TWH

107 Angelica Street ❍ Reading, PA 19611 ❍ www.mjreider.com ❍ (610) 374-5129 ❍ fax (610) 374-7234

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NELAP accredited by PA. (PADEP #06-00003) Visit our website to view our current
NELAC accreditations for various drinking water, wastewater and solid & chemical materials analytes.
Additional accreditations by CT (PH-0210), MD (261), NY(12094)

Lab ID: 2006780-02 **Collected By:** Client **Sampled:** 03/09/20 12:12 **Received:** 03/09/20 14:26
Sample Desc: Outfall COY01 - Composite **Sample Type:** Composite

	Result	Unit	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry							
Ammonia as N	<0.10	mg/l	0.10	ASTM D6919-03	03/10/20		APR
Biochemical Oxygen Demand	144	mg/l	2.0	SM 5210 B	03/10/20 13:25		ARG
Chemical Oxygen Demand	527	mg/l	25	HACH 8000	03/10/20		ALD
Solids, Total Suspended	71	mg/l	1	SM 2540 D	03/10/20		TMH
Total Metals							
Arsenic	0.011	mg/l	0.010	EPA 200.8 Rev 5.4	03/10/20		MPB
Cadmium	<0.0100	mg/l	0.0100	EPA 200.8 Rev 5.4	03/10/20		MPB
Chromium	0.0687	mg/l	0.0100	EPA 200.8 Rev 5.4	03/10/20		MPB
Copper	0.111	mg/l	0.010	EPA 200.8 Rev 5.4	03/10/20		MPB
Lead	0.035	mg/l	0.010	EPA 200.8 Rev 5.4	03/10/20		MPB
Mercury	0.0011	mg/l	0.0002	EPA 245.1 Rev 3.0	03/10/20		JAF
Nickel	0.0844	mg/l	0.0100	EPA 200.8 Rev 5.4	03/10/20		MPB
Silver	<0.0100	mg/l	0.0100	EPA 200.8 Rev 5.4	03/10/20		MPB
Zinc	0.235	mg/l	0.050	EPA 200.8 Rev 5.4	03/10/20		MPB

Preparation Methods

Specific Method	Preparation Method	Prep Batch	Prepared Date	Prepared By
2006780-01				
General Chemistry				
Lachat 10-204-00-1X	EPA 9010 C	B0C0666	03/11/2020	RCE
Organics				
EPA 608	EPA 3510 C	B0C0587	03/11/2020	RJD
2006780-02				
Total Metals				
EPA 200.8 Rev 5.4	EPA 200.2	B0C0557	03/10/2020	HRG
EPA 245.1 Rev 3.0	EPA 245.1 Rev 3.0	B0C0563	03/10/2020	JAF

Notes and Definitions

C-49 The sample was received with a pH > 2. Additional preservation was required in the laboratory.

Q-10 The matrix spike(s) were outside acceptable limits of 90-110% recovery at 30.1% and 26.4%.

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NELAC accreditations for various drinking water, wastewater and solid & chemical materials analytes.
Additional accreditations by CT (PH-0210), MD (261), NY(12094)

M.J. Reider Associates, Inc.
107 Angelica St, Reading PA, 19611
610-374-5129 www.mjreider.com

WORK ORDER
Chain of Custody

2006780

Client Code: 2711
Client: Coyne Chemical
Project Manager: Bradley T Griffiths
Project: Outfall COY01 - Monthly
Report To: Coyne Chemical - Terry Sturgis - 3015 State Road, Croydon, PA 19021
Invoice To: Coyne Chemical - Terry Sturgis - 3015 State Road, Croydon, PA 19021

Collected By : Bill Seiple
(Full Name)

Comments: Ph - 8.38

2006780-01 Outfall COY01 - Grab

O&G EPA 1664, Phenols EPA 420.4

Matrix: Non-Potable Water
Type: Grab
A - AG Liter WM HCL (O&G)
B - AG Liter WM HCL (O&G)
C - AG 250ml WM H2SO4

Date: 3-9-2020
Time: 12:12 pm

2006780-02 Outfall COY01 - Composite

BOD SM 5210B JMK
Ag EPA 200.8, As EPA 200.8, Cd EPA 200.8, COD Hach 8000, Cr EPA 200.8, Cu EPA 200.8, Hg EPA 245.1, NH3-N D6919-03, Ni EPA 200.8, Pb EPA 200.8, TSS SM 2540D, Zn EPA 200.8

Matrix: Non-Potable Water
Type: Composite (Simple)
A - Pl 500ml HNO3
B - Pl Liter NP
C - Pl 500ml H2SO4

Date: 3-9-2020
Time: 12:12 pm

Relinquished By	Date/Time 3/9/2020 12:20 pm	Received By	Date/Time 3/9/20 12:20
Relinquished By	Date/Time 3/9/20 14:26	Received By	Date/Time
Relinquished By	Date/Time	Received at Laboratory By Nancy Greenawald	Date/Time 030920 1424

Sample Kit Prepared By:	Date/Time 2-24-20 1030
Sample Temp (°C):	3
Samples on Ice?	Yes No NA
Approved By:	
Entered By:	

The Client, by signing (or having the client's agent sign), agrees to MJRA's Terms and Conditions and to pay for the above requested services including any additional associated fees incurred.

Page 1 of 12
030920

Printed: 2/24/2020 12:09:55PM

Report Template:

M.J. Reider Associates, Inc.
107 Angelica St, Reading PA, 19611
610-374-5129 www.mjreider.com

WORK ORDER
Chain of Custody

2006780

Client Code: 2711
Project Manager: Bradley T Griffiths
Client: Coyne Chemical
Project: Outfall COY01 - Quarterly
Report To: Coyne Chemical - Terry Sturgis - 3015 State Road, Croydon, PA 19021
Invoice To: Coyne Chemical - Terry Sturgis - 3015 State Road, Croydon, PA 19021

Collected By : Bill Seiple
(Full Name)

Comments: Ph - 8.38

2006~~781~~-80-01 Outfall COY01 - Grab pl

CN Lachat 10204001X, PCBs EPA 608, TPH EPA 1664

Matrix: Non-Potable Water
Type: Grab
Date: 3-9-2020
Time: 12:12 pm

D A - Pl 500ml NaAsO2 & NaOH
E B - AG Liter NM NP
F C - AG Liter NM NP
G D - AG Liter WM HCL (O&G)
H E - AG Liter WM HCL (O&G)

Relinquished By	Date/Time	Received By	Date/Time
[signature]	3/9/2020 12:20pm	[signature]	3/20/20 12:20
[signature]	3/9/20 14:26		
		Nancy Greenawald	030920 1424

Relinquished By	Date/Time	Received at Laboratory By	Date/Time

Sample Kit Prepared By:	Date/Time
[signature]	022420 1230

Sample Temp (°C): 3
Samples on Ice? Yes No NA
Approved By: [signature]
Entered By:

The Client, by signing (or having the client's agent sign), agrees to MJRA's Terms and Conditions and to pay for the above requested services including any additional associated fees incurred.

030920

Printed: 2/24/2020 12:09:57PM

Report Template:

MJRA Terms & Conditions

All samples submitted must be accompanied by signed documentation representing a Chain of Custody (COC). The COC Record acts as a contract between the client and MJRA. Signing the COC form gives approval for MJRA to perform the requested analyses and is an agreement to pay for the cost of such analyses. COC Records must be completed in black or blue indelible ink (must not run when wet). COC documentation begins at the time of sample collection. Client is required to document all sample details prior to releasing samples to MJRA. All samples must be placed on ice immediately after sampling and shipped or delivered to the laboratory in a manner that will maintain the sample temperature above freezing and below 6C (loose ice is preferred).

Sample Submission, Sample Acceptance & Sampling Containers

Included on the COC must be the sample description, date and time of collection (including start and stop for composites), container size and type, preservative information, sample matrix, indication of whether the sample is a grab or composite, number of containers & a list of the tests to be performed. Poor sample collection technique, inappropriate sampling containers and/or improper sample preservation may lead to sample rejection. Suitable sample containers, labels, and preservatives (as applicable), along with blank COCs are provided at no additional cost.

Turnaround Times (TAT)

Average TAT for test results range from 5 to 15 working days depending on the specific analyses and time of year submitted. Faster turnaround times (*RUSH TAT) may be available depending on the current workload in a particular department and the nature of the analyses requested. We encourage you to verify requests for expedited sample results with one of our Technical Directors prior to sample submittal. Without confirmation from a Technical Director, your results may not be completed by your deadline. *RUSH TAT Surcharges are applied for expedited turnaround times.

Analytical Results, Sample Collection Integrity & Subcontracting

Analytical values are for the sample as submitted and relate only to the item tested. The value indicates a snapshot of the constituent content of the sample at the time of sample collection. Analytical results can be impacted by poor sample collection technique and/or improper preservation. All sample collection completed by MJRA was performed in accordance with applicable regulatory protocols or as specified in customer specific sampling plans. Constituent content will vary over time based on the matrix of the sample and the physical and chemical changes to its environment. All sample results and laboratory reports are strictly confidential. Results will not be available to anyone except the primary client or authorized party representing the client unless MJRA receives additional permissions from the client. When necessary, MJRA will subcontract certain analyses to a third party accredited laboratory. If client prohibits subcontracting, it must be provided in writing and include instruction on how to proceed with client samples that require third party analyses.

Payment Terms

Payment Terms are Net 30 days. Prices are subject to change without notice. A standing monthly charge of 1.5% of the clients over-30-day-unpaid balance may be added to the balance after 30 days and each month thereafter (day 31, 61, 91 etc.). The laboratory accepts all major credit cards, ACH transactions, checks and cash. New clients must pay for all services rendered prior to sample collection and/or in some cases report processing. Clients must contact the MJRA accounting department to pursue a credit-based account. MJRA reserves the right to terminate the client's credit account and to refuse to perform additional services on a credit basis if any balance is outstanding for more than 60 days.

Warranty & Litigation

MJRA does not guarantee any results of its services but has agreed to use its best efforts, in accordance with the standards and practices of the industry, to cause such results to be accurate and complete. We disclaim any other warranties, expressed or implied, including a warranty of fitness for a particular purpose and warranty of merchantability. Clients agree that they shall reimburse MJRA for any and all fees, cost and litigation expenses, including reasonable attorney fees incurred by MJRA in obtaining payment for the services rendered. All costs associated with compliance with any subpoena for documents, testimony, or any other purpose relating to work performed by MJRA, for a client, shall be paid by that client. MJRA's aggregate liability for negligent acts and omissions and of an intentional breach by MJRA will not exceed the fee paid for the services. Client agrees to indemnify and hold MJRA harmless for any and all liabilities in excess of said amount. Neither MJRA nor the client shall be liable to the other for special, incidental consequential or punitive liability or damages included but not limited to those arising from delay, loss of use, loss of profits or revenues. MJRA will not be liable to the client unless the client has notified MJRA of the discovery of the alleged negligent act, error, omissions or breach within 30 days of the

Reviewed and Approved by:

Bradley T Griffiths
Project Manager

This certificate shall not be reproduced except in full without the written approval of M.J. Reider Associates, Inc.

Appendix 3 – NCBC Hauling Slips

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO.	PHONE	DATE
		1-23-20

NAME: Neshaminy Creek

ADDRESS: Croydon PA

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D.	PAID OUT

Pump 1 load
Wash Water
(6500 gl)

truck #130
Rob

TAX

SOLD BY | RECEIVED BY: left Guy | TOTAL

All claims and returned goods MUST be accompanied by this bill.

083032

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO.	PHONE	DATE
		1-24-20

NAME: Neshaminy Creek Brew

ADDRESS:

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D.	PAID OUT

Pump 6,300 Gals

R# 105 - VT03

TAX

SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill.

083961

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO.	PHONE	DATE
		1-28-20

NAME: Neshaminy Creek Brew

ADDRESS:

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D.	PAID OUT

Pump 6,000 Gals

R# 105-VT03

TAX

SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill.

083966

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO.	PHONE	DATE
2325771		1-31-20

NAME: Neshaminy creek brew

ADDRESS: Croydon, PA

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D.	PAID OUT

Waste water
6500 gal
Truck 166
Greg

TAX

SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill.

085773

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO.	PHONE	DATE
		2-4-20

NAME: Neshaminy Creek Brew
ADDRESS:

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D.	PAID OUT

Pump 5,500 Gals

Re 105-VT03

TAX

SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

083975

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO.	PHONE	DATE
		2-7-20

NAME: Neshaminy Creek Brew
ADDRESS:

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D.	PAID OUT

Pump 5,500 Gals

Re 105-VT03

TAX

SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

083984

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO.	PHONE	DATE
		2-11-20

NAME: Neshaminy Creek Brew
ADDRESS:

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D.	PAID OUT

Pump 6,000 Gals

Re 105-VT03

TAX

SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

083988

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO.	PHONE	DATE
		2-14-20

NAME: Neshaminy Creek Brew
ADDRESS:

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D.	PAID OUT

Pump 6,000 Gals

Re 105-VT03

TAX

SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

083996

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO.	PHONE	DATE
2329096		02-18-20

NAME: NESHAMINY CREEK BREWING

ADDRESS: CHALFONT, PA

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D.	PAID OUT

5500 GAL
WASTE WATER
DISCHARGE
TRUCK # 151
9:30AM - 10:10AM

TAX

SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill.

085524

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO.	PHONE	DATE
		2-21-20

NAME: Neshaminy Creek Brew

ADDRESS:

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D.	PAID OUT

Pump 6,000 Gals

RF 105 - KT03

TAX

SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill.

085599

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

233 2341			3-31-20

Meshanny Creek Brewing
Cleaner PA

Pump 1 load
Wash water
6500 gl
truck #130
Rob
left Copy

TAX
TOTAL

All charges and returned goods MUST be accompanied by this bill.

0056489 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

233 9021			4-7-20

Meshanny Creek Brewing
Cleaner PA

Pump 1 load
Wash water
6500 gl
truck #130
Rob
left Copy

TAX
TOTAL

All charges and returned goods MUST be accompanied by this bill.

0055527 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

			4-13-20

Meshanny Creek Brewing Co
Cleaner PA

Pump 1 load
Wash water
6500 gl
truck #130
Rob
left Copy

TAX
TOTAL

All charges and returned goods MUST be accompanied by this bill.

0055555 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

			4-20-20

Meshanny Creek Brewing
Cleaner PA

Pump 1 load
Wash water
6500 gl
truck #130
Rob
left Copy

TAX
TOTAL

All charges and returned goods MUST be accompanied by this bill.

0055591 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

4-22-20

Neshaminy Creek Brewing

Croydon PA

Pump 1 load
wastewater
6500gl

Truck #130
Bob

TAX

Left Comp

TOTAL

All claims and returned goods MUST be accompanied by this bill.

0055605 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

4-28-20

Neshaminy Creek Brewing

Croydon PA

Pump 1 load
wastewater
6500gl

Truck #130
Bob

TAX

Left Comp

TOTAL

All claims and returned goods MUST be accompanied by this bill.

0055636 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

5-1-20

Neshaminy Creek Brew

Pump 6,300 Gals

R# 105-VT03

TAX

TOTAL

All claims and returned goods MUST be accompanied by this bill.

088553 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

5-5-20

Neshaminy Creek Brewing

Croydon PA

Pump 1 load
wastewater
6500gl

Truck #130
Bob

TAX

Left Comp

TOTAL

All claims and returned goods MUST be accompanied by this bill.

090041 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

5-3-20

Neshaminy Creek Brew

Pump 6,000 Gals

R# 105-VT03

TAX

TOTAL

All cleans and removed goods MUST be accompanied by this bill

080804

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

5-4-20

Neshaminy Creek Brew

Pump 1 head

Wash water

6500 gal

TAX

TOTAL

All cleans and removed goods MUST be accompanied by this bill

090073

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

2340225

5-13-20

Neshaminy creek brew

waste water

6500 gal

Truck 166

Gray

TAX

TOTAL

All cleans and removed goods MUST be accompanied by this bill

082369

Thank You

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

5-15-20

Neshaminy Creek Brew

Pump 5,500 Gals

R# 105-VT03

TAX

TOTAL

All cleans and removed goods MUST be accompanied by this bill

080813

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
800 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

[illegible] | [illegible] | [illegible]

Nishaminy Creek Brew

Cumb [illegible]

Pump 1 load
Which water
(6500g)

[illegible]

[illegible]

TOTAL

All claims and returned goods MUST be accompanied by this bill

090112

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
800 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

[illegible] | [illegible] | 5-20-20

Nishaminy Creek Brew

Pump 6,300 Gals

R# 105-VT03

TOTAL

All claims and returned goods MUST be accompanied by this bill

080816

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		5-29-20

Neshaminy Creek Brew

Pump 6360 Gals

E 105-VT03

TAX

TOTAL

All charge and returned goods MUST be accompanied by this bill.

090821

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

2340223		5-26-20

Neshaminy Creek Brewing

Croydon PA

Pump 1 load

Wash water

6500 gal

Truck #130

Rob

TAX

TOTAL

All charge and returned goods MUST be accompanied by this bill.

090145

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

2340223		5-29-20

Neshaminy Creek Brewing

Croydon PA

Pump 1 load

Wash water

6500 gal

Truck 166

Greg

TAX

TOTAL

All charge and returned goods MUST be accompanied by this bill.

090161

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

2340223		5-29-20

Neshaminy creek brewing

Croydon PA

Waste water

6500 gal

Truck 166

Greg

TAX

TOTAL

All charge and returned goods MUST be accompanied by this bill.

090666

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

2343704 6-1-20

Neshaminy creek brew

Croydon PA

waste water

6500 gal

Truck 166

Greg

TAX

TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

090669

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

2343705 6-3-20

Neshaminy Creek Brew

Croydon Pa 19021

6300 gal.

Fuel/Ind L

Delcora

Dome Stat

TAX

TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

0059057

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

6-5-20

Neshaminy Creek Brew

Pump 6,300 Gals

R# 105-VT03

TAX

TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

080826

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

6-3-20

Neshaminy Creek Brew

Pump 6,300 Gals

R# 105-VT03

TAX

TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

080828

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		6-10-20

Neshaminy Creek Brew

	Pump 6,300 Gals					
R#	105-VT03					
					TAX	
					TOTAL	

All claims and returned goods MUST be accompanied by this bill.

087503 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		6-12-20

Neshaminy Creek Brew

	Pump 6,300 Gals					
R#	105-VT03					
					TAX	
					TOTAL	

All claims and returned goods MUST be accompanied by this bill.

087506 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		6-15-20

Neshaminy Creek Brew

	Pump 6,300 Gals					
R#	105-VT03					
					TAX	
					TOTAL	

All claims and returned goods MUST be accompanied by this bill.

087510 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		6-17-20

Neshaminy Creek Brew

	Pump 6,000 Gals					
R#	105-VT03					
					TAX	
					TOTAL	

All claims and returned goods MUST be accompanied by this bill.

087515 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.

Septic Systems

Cleaned - Installed - Repairs

Portable Toilet Service

920 South Balmar Street West Chester, PA 19382

(610) 444-5797 or (302) 656-0480

		6-19-20

Neshaminy Creek Brew

	Pump 3,000 Gals					
	TM 105 - V700					
	Ash - 6:00 AM					
	Showup - 7:00 AM					
	Dept - 7:30 AM					
					TAX	
					TOTAL	

All checks and returned goods MUST be accompanied by this bill

087523

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

6-24-20

Neshaminy Creek Brew

Pump 2,500 Gals

Re 105-VT03

TAX

TOTAL

All claims and returned goods MUST be accompanied by this bill

Thank You

0092177

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

6-26-20

Neshaminy Creek Brew

Pump 5,000 Gals

Re 105-VT03

TAX

TOTAL

All claims and returned goods MUST be accompanied by this bill

Thank You

0092183

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

6-29-20

Neshaminy Creek Brew

Pump 3,000 Gals

Re 105-VT03

TAX

TOTAL

All claims and returned goods MUST be accompanied by this bill

Thank You

0092186

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

7-1-20

Neshaminy Creek Brew

Pump 5,000 Gals

Re 105-VT03

TAX

TOTAL

All claims and returned goods MUST be accompanied by this bill

Thank You

0092192

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

DATE 7-8-20

Neshaminy Creek Brew

Pump 6,300 Gals

R# 105-VT03

TOTAL

All cleaning and returned goods MUST be accompanied by this bill.

Thank You

0095203

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

DATE 7-10-20

Neshaminy Creek Brew

Pump 6,300 Gals

R# 105-VT03

TOTAL

All cleaning and returned goods MUST be accompanied by this bill.

Thank You

0095208

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

DATE 7-13-20

Neshaminy Creek Brew

Pump 2,500 Gals

R# 105-VT03

TOTAL

All cleaning and returned goods MUST be accompanied by this bill.

Thank You

087150

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

2347615

DATE 7-17-20

Neshaminy Creek Brewing
Croydon PA 19021

6300 gal.
Ind/Food
Delcon
Dave Stark

TOTAL

All cleaning and returned goods MUST be accompanied by this bill.

Thank You

0059034

McGOVERN INC.

WM. P. MCGOVERN, INC.

Septic Systems

Cleaned - Installed - Repairs

Portable Toilet Service

820 South Bolmar Street West Chester, PA 19382

(610) 444-5797 or (302) 656-0480

		7-20-20

Nishaminy Creek Brew

	Pump 3,080				Gals	
TE#	105-VT03					
					TAX	
					TOTAL	

All claims and returned goods MUST be accompanied by this bill.

087163

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

7-24-20

Neshaminy Creek Brew

Pump 5,000 Gals

R# 105-VT03

TAX

TOTAL

All checks and returned goods MUST be accompanied by this bill.

Thank You

084451

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

7-27-20

Neshaminy Creek Brew

Pump 2500 Gals

R# 105-VT03

TAX

TOTAL

All checks and returned goods MUST be accompanied by this bill.

Thank You

084453

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

7-29-20

Neshaminy Creek Brew

Pump 4500 Gals

R# 105-VT03

TAX

TOTAL

All checks and returned goods MUST be accompanied by this bill.

Thank You

084457

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

2347621

7-31-20

Neshaminy creek brew
Croydon PA

Waste water
6500 gal
Truck 166
Greg

TAX

TOTAL

All checks and returned goods MUST be accompanied by this bill.

Thank You

090787

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

8-3-20

Neshaminy Creek Brew

Pump 0 Gals

R# 105-VT03

TOTAL

All shares and returned goods MUST be accompanied by this bill.

084466

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

8-10-20

Neshaminy Creek Brew

Pump 6,300 Gals

R# 105-VT03

TOTAL

All shares and returned goods MUST be accompanied by this bill.

084461

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

8-13-20

Neshaminy Creek Brew

Pump 6,300 Gals

R# 105-VT03

TOTAL

All shares and returned goods MUST be accompanied by this bill.

084489

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

8-17-20

Neshaminy Creek Brew

Pump 4,500 Gals

R# 105-VT03

TOTAL

All shares and returned goods MUST be accompanied by this bill.

0093308

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.

Septic Systems

Cleaned - Installed - Repairs

Portable Toilet Service

820 South Bolmar Street West Chester, PA 19382

(610) 444-5797 or (302) 656-0480

8-20-20

Neshaminy Creek Brew

Pump 5000 Gals

Rt 103-VT03

All means and returned goods MUST be accompanied by this ink

0093318

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		8-24-20

Neshaminy Creek Brew

	Pump 2,500	Gals	
R#	105-VT03		
		TAX	
		TOTAL	

All claims and returned goods MUST be accompanied by this bill.

Thank You

0090324

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		8-27-20

Neshaminy Creek Brew

	Pump 6,300	Gals	
R#	105-VT03		
		TAX	
		TOTAL	

All claims and returned goods MUST be accompanied by this bill.

Thank You

0093333

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		8-31-20

Neshaminy Creek Brew

	Pump 2,500	Gals	
R#	105-VT03		
		TAX	
		TOTAL	

All claims and returned goods MUST be accompanied by this bill.

Thank You

0093339

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		9-8-20

Neshaminy Creek Brew

	Pump 6,300	Gals	
R#	105-VT03		
		TAX	
		TOTAL	

All claims and returned goods MUST be accompanied by this bill.

Thank You

072509

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19562
(610) 444-6797 or (302) 656-0480

WM-25[illegible]	9-11-20

Neshaminy Creek Brewing

Pump Frac Tank

6000 Gal

Left Copy

TOTAL

All Sales and Exchanges goods MUST be accompanied by Invoice

077523

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

9-29-20

Neshaminy Creek Brew

Pump 6,300 Gals

R# 105 - VT03

TAX

TOTAL

All marks and returned goods MUST be accompanied by this bill.

072663 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

9-28-20

Neshaminy Creek Brew

Pump 5,500 Gals

R# 105 - VT03

TAX

TOTAL

All marks and returned goods MUST be accompanied by this bill.

072671 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

10-1-20

Neshaminy Creek Brew

Pump 6,000 Gals

R# 105 - VT03

TAX

TOTAL

All marks and returned goods MUST be accompanied by this bill.

072680 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

WO# 2358723 10-5-20

Neshaminy Creek Brewing
Croydon Pa

Pump Frac Tank
4000 Gal

TAX

TOTAL

Left Copy

All marks and returned goods MUST be accompanied by this bill.

077596 Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		10-8-20
Neshaminy Creek Brew		
Pump 5,000 Gals		
R# 105-VT03		
		TOTAL

All claims and returned goods MUST be accompanied by this bill.

072695 *Thank You*

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		10-12-20
Neshaminy Creek Brew		
Pump 4,000 Gals		
R# 105-VT03		
		TOTAL

All claims and returned goods MUST be accompanied by this bill.

072697 *Thank You*

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		10-15-20
Neshaminy Creek Brew		
Pump 6,000 Gals		
R# 105-VT03		
		TOTAL

All claims and returned goods MUST be accompanied by this bill.

0094845 *Thank You*

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

		10-19-20
Neshaminy Creek Brew		
Pump 4,000 Gals		
R# 105-VT03		
		TOTAL

All claims and returned goods MUST be accompanied by this bill.

0094552 *Thank You*

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

10-26-20

Mechanicy Creek Brew

Pump 6,000 Gals

Rt 105 - VT03

TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

0094970

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

10-28-20

Mechanicy Creek Brew

Pump 6,300 Gals

Rt 105 - VT03

TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

0100933

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

11-2-20

Mechanicy Creek Brew

Pump 6,300 Gals

Rt 105 - VT03

TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

0100939

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

11-5-20

Pump 1 load
Washer

Tank Pick
Rd

TOTAL

All claims and returned goods MUST be accompanied by this bill.

Thank You

0053643

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

11-9-20

Neshaminy Creek Brew

Pump 9,000 Gals

R# 105-VT03

TOTAL

All charts and returned goods MUST be accompanied by this bill.

0100955

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

Neshaminy Creek Brewing

Pump all Cleanable liquids from wash Tank

Sorry!

TOTAL

All charts and returned goods MUST be accompanied by this bill.

0092615

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

11-16-20

Neshaminy Creek Brew

Pump 2,500 Gals

R# 105-VT03

TOTAL

All charts and returned goods MUST be accompanied by this bill.

0099466

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

11-25-20

Neshaminy Creek Brew

Pump 6,000 Gals

R# 105-VT03

TOTAL

All charts and returned goods MUST be accompanied by this bill.

0099486

Thank You

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO. 236 5861 | PHONE | DATE 12-7-20
NAME Nishaminy Club Rising
ADDRESS Glenolden PA

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RETD.	PAID OUT
Arrive 08:30 - 09:45 Start load pump, take very heavy, Pump 1 load washlinter (50 Bags) truck #170 Rte					

TAX
SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill. Thank You

0092737

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO. | PHONE | DATE 12-10-20
NAME Neshaminy Creek Brew
ADDRESS

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RETD.	PAID OUT
Pump 6,000 Gals Rte 105 - VT15					

TAX
SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill. Thank You

0090496

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO. | PHONE | DATE 12-14-20
NAME Neshaminy Creek Brew
ADDRESS

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RETD.	PAID OUT
Pump 6,000 Gals Rte 105 - VT15					

TAX
SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill. Thank You

0106454

McGOVERN INC.

WM. P. MCGOVERN, INC.
Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service
920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO. | PHONE | DATE 12-18-20
NAME Neshaminy Creek Brew
ADDRESS

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RETD.	PAID OUT
Pump 6,500 Gals Rte 105 - VT15					

TAX
SOLD BY | RECEIVED BY | TOTAL

All claims and returned goods MUST be accompanied by this bill. Thank You

0106463

McGOVERN INC.

WM. P. MCGOVERN, INC.

Septic Systems
Cleaned - Installed - Repairs
Portable Toilet Service

920 South Bolmar Street West Chester, PA 19382
(610) 444-5797 or (302) 656-0480

CUSTOMER'S ORDER NO.	PHONE	DATE
		12-21-20

NAME: Neshaminy Creek Brew
ADDRESS

CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D.	PAID OUT	

	Pump 3,000 Gals		
R#	105-VT20		
		TAX	
SOLD BY	RECEIVED BY	TOTAL	

All claims and returned goods MUST be accompanied by this bill

0106466

Thank You

Appendix 4 – Non-Compliance Letters

REMINGTON & VERNICK ENGINEERS

922 Fayette Street
Conshohocken, PA 19428
O: (610) 940-1050
F: (610) 940-1161

February 26, 2020

UniFirst Corporation
940 River Road
Croydon, PA 19021

Attn: Mr. John Burns
Production Manager

Re: Bristol Township
IWDP Permit No. IND-01-S-2019
Acknowledgement of Correspondence
Our File #PBBTT109

Dear Mr. Burns:

This letter serves as Bristol Township's response to UniFirst Corporation Courtesy Correspondence regarding its Industrial Wastewater Discharge Permit with Bristol Township.

We understand that UniFirst Corporation collected a composite sample to measure MBAs in January 2020. However, moving forward as per your Bristol Township IWDP, the sample must be a grab.

Should you have any questions, or like additional information, please feel free to contact me at (610) 940-1050.

Very truly yours,
Remington & Vernick Engineers

Vanessa Nedrick, P.E., Senior Associate
Township Sewer Engineer

cc: Randee Elton, Township Manager, Bristol Township
Francis Phillips, Bristol Township (via email)
Thomas F. Beach, P.E., C.M.E, Executive Vice President
Christopher J. Fazio, P.E., C.M.E., Executive Vice President
Russell Sacco, Bristol Township Sewer Solicitor

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REMINGTON & VERNICK ENGINEERS

Lower Makefield Corporate Center, North Campus
1010 Stony Hill Road, Suite 175, Yardley, PA 19067
O: (267) 394-4500
F: (267) 394-4501

August 21, 2020

UniFirst Corporation
940 River Road
Croydon, PA 19021

Attn: Mr. John Burns
Production Manager

Re: Bristol Township
IWDP Permit No. IND-01-S-2019
Acknowledgement of Correspondence
Our File #PBBTT109

Dear Mr. Burns:

This letter serves as UniFirst Corporation's Notice of Violation of its Industrial Wastewater Discharge Permit with Bristol Township.

Below shows the sampling results from the July 2020 sampling performed for UniFirst Corporation. UniFirst Corporation was noncompliant for $CBOD_{20}$ for the sampling performed on July 21, 2020.

Parameter	Limit	July 21, 2020 Results
$CBOD_{20}$	750 mg/L	1150 mg/L

We understand that UniFirst Corporation collected samples to measure $CBOD_{20}$ on July 1, July 21, and July 28, 2020. Moving forward as per your Bristol Township IWDP, the samples must be collected biweekly.

Per the Code of the Township of Bristol, you are hereby ordered to respond in writing to this notice within twenty (20) days of receipt. Your written response must provide an explanation of the violation and a plan for the satisfactory correction and prevention of a repeat violation.

Should you have any questions, or like additional information, please feel free to contact me at (610) 940-1050.

Very truly yours,
Remington & Vernick Engineers

Vanessa Nedrick

Vanessa Nedrick, P.E., Senior Associate, Regional Manager
Township Sewer Engineer

cc: Randee Elton, Township Manager, Bristol Township
Francis Phillips, Bristol Township (via email)
Thomas F. Beach, P.E., C.M.E, Executive Vice President
Christopher J. Fazio, P.E., C.M.E., Executive Vice President
Russell Sacco, Bristol Township Sewer Solicitor

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REMINGTON & VERNICK ENGINEERS

Lower Makefield Corporate Center, North Campus
1010 Stony Hill Road, Suite 175, Yardley, PA 19067
O: (267) 394-4500
F: (267) 394-4501

September 21, 2020

UniFirst Corporation
940 River Road
Croydon, PA 19021

Attn: Mr. John Burns
Production Manager

Re: Bristol Township
IWDP Permit No. IND-01-S-2019
Notice of Violation
Our File #PBBTT109

Dear Mr. Burns:

This letter serves as UniFirst Corporation's Notice of Violation of its Industrial Wastewater Discharge Permit with Bristol Township.

Below shows the self-monitoring results from the August 2020 sampling performed for UniFirst Corporation. UniFirst Corporation was noncompliant for $CBOD_{20}$.

Parameter	Limit	August 2020 Results
$CBOD_{20}$	750 mg/L	985.5 mg/L

Per the Code of the Township of Bristol, you are hereby ordered to respond in writing to this notice within twenty (20) days of receipt. Your written response must provide an explanation of the violation and a plan for the satisfactory correction and prevention of a repeat violation.

Should you have any questions, or like additional information, please feel free to contact me at (610) 940-1050.

Very truly yours,
Remington & Vernick Engineers

Vanessa Nedrick, P.E., Senior Associate, Regional Manager
Township Sewer Engineer

cc: Randee Elton, Township Manager, Bristol Township
Francis Phillips, Bristol Township (via email)
Thomas F. Beach, P.E., C.M.E, Executive Vice President
Christopher J. Fazio, P.E., C.M.E., Executive Vice President
Russell Sacco, Bristol Township Sewer Solicitor

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REMINGTON & VERNICK ENGINEERS

Lower Makefield Corporate Center, North Campus
1010 Stony Hill Road, Suite 175, Yardley, PA 19067
O: (267) 394-4500
F: (267) 394-4501

October 15, 2020

Coyne Chemical Co., Inc.
3015 State Road
Croydon, PA 19021

Attn: Mr. Terry Sturgis
EHS Director

Re: Bristol Township
IWDP Permit No. IND-02-S-2019
Notice of Violation
Our File #PBBTT109

Dear Mr. Sturgis:

This letter serves as Coyne Chemical's Notice of Violation of its Industrial Wastewater Discharge Permit with Bristol Township.

Below are the self-monitoring results from the sampling performed by Suburban Testing Labs for Coyne Chemical on September 29, 2020. Coyne Chemical was noncompliant for BOD_5.

Parameter	Limit	Testing Results
BOD_5	750 mg/L	1160 mg/L

Per the Code of the Township of Bristol, you are hereby ordered to respond in writing to this notice within twenty (20) days of receipt. Your written response must provide an explanation of the violation and a plan for the satisfactory correction and prevention of a repeat violation.

Should you have any questions, or like additional information, please feel free to contact me at (267) 394-4500.

Very truly yours,
Remington & Vernick Engineers

Vanessa Nedrick

Vanessa Nedrick, P.E., Senior Associate, Regional Manager
Township Sewer Engineer

cc: Randee Elton, Township Manager, Bristol Township
Francis Phillips, Bristol Township (via email)
Christopher J. Fazio, P.E., C.M.E., Executive Vice President
Russell Sacco, Bristol Township Sewer Solicitor

s:\bristol township\pbbtt109 - 2020 ipp\nov letters\pbbtt109 - 2020.10.15 - coyne chemical september 2020.docx

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

March 5, 2021

File No. 2021-02011

Thomas Coyne Sr.
George S. Coyne Chemical Co., Inc.
3015 State Road
Croydon, PA 19021

Reference: George S. Coyne Chemical Co., Inc.
Bristol Township Sewer Department Industrial Wastewater Discharge Permit No. IND-02-S-2019
Bristol Township, Bucks County, PA
Notice of Violation & Administrative Fines

Dear Mr. Coyne:

Gilmore & Associates, Inc. is the Sewer Engineer for Bristol Township where your facility, George S. Coyne Chemical Co., Inc. (Coyne Chemical), conveys treated industrial wastewater to the sanitary sewer collection system. I am writing on behalf of the Township to advise you that the Township is seeking Administrative Fines in connection with violations of Industrial Wastewater Discharge Permit No. IND-02-S-2019 (the Permit). As more fully discussed below, Administrative Fines are warranted because Coyne Chemical's effluent was in violation of the terms of the Permit on numerous occasions over the period of the year 2020.

Based on the violations shown in this letter, the Township would be entitled to assess at least $4,834,000 in Administrative Fines for violations of the Permit's effluent limitations for all parameters.

The Township's action is necessary to protect its Publically-Owned Treatment Works (POTW) from upsets and pass-through of pollutants. Coyne Chemical's failure to comply with the Permit also may cause the POTW to be in violation of its National Pollutant Discharge Elimination System (NPDES) Permit for discharge of treated wastewater to the Delaware River. Under applicable law and the terms of a Consent Decree with the United States and the Commonwealth of Pennsylvania, the Township is required to implement its pretreatment program, including taking enforcement action when Significant Industrial Users (SIU) like Coyne Chemical violate their Industrial Wastewater Discharge Permits. Failure to take enforcement action also exposes the Township to the assessment of stipulated penalties by the United States Environmental Protection Agency (EPA), and the Pennsylvania Department of Environmental Protection (PADEP).

Coyne Chemical's Permit for the facility located at 3015 State Road in Croydon, PA was issued by the Township with an effective date of January 1, 2019 and expiration date of December 31, 2023. The monitoring frequency for the parameters listed in the Permit and their related effluent requirements are listed in Table 1 below:

Table 1 - Coyne Monitoring & Effluent Requirements

Parameter	Frequency	Sample Type	Monthly Average (mg/l)
Daily Flow	Daily	Meter	Monitor
pH	Daily	Grab	6.0 to 9.0
Total Suspended Solids (TSS)	Monthly	Grab	1,054.0 [3]
Organic Fats, Oils and Grease (FOG)	Monthly	Grab	107.0 [4]
Biochemical Oxygen Demand (5-day BOD)	Monthly	Composite	750.0 [1]
Chemical Oxygen Demand (COD)	Monthly	Composite	1,550.0 [2]
Ammonia (NH3-N)	Monthly	Composite	69.0
Cadmium (Total)	Monthly	Composite	0.10
Chromium (Total)	Monthly	Composite	1.80
Copper (Total)	Monthly	Composite	0.51
Lead (Total)	Monthly	Composite	0.43
Mercury (Total)	Monthly	Composite	0.003
Nickel (Total)	Monthly	Composite	0.51
Silver (Total)	Monthly	Composite	0.14
Arsenic (Total)	Monthly	Composite	2.30
Zinc (Total)	Monthly	Composite	2.90
Cyanide (Total)	Quarterly	Grab	2.30
Sulfate	Monthly	Grab	360
Phenols (Total)	Monthly	Grab	1.83
Total Petroleum Hydrocarbons (TPH)	Quarterly	Grab	Report
PCBs (EPA Method 1668A)	Quarterly	Grab	Report

[1] Variance from base limit (500 mg/l) per Code §160-70.26; strength surcharge for concentration >220 mg/l. See, Part 3, Section 1

[2] Variance from base limit (1,550 mg/l) per Code §160-70.26. See, Part 3, Section

[3] Strength surcharge for concentration >250 mg/l. See, Part 3, Section 1

[4] Variance from base limit (100 mg/l) per Code §160-70.26; strength surcharge for concentration > 100 mg/l. See, Part 3, Section 1

Bristol Township Code, Chapter 160 (The Code)

The Code sets forth the Township's regulations for Sewers and Sewage Disposal. The Permit implements the Code through effluent limitations and other conditions (§160-8).

Coyne Chemical is a SIU in that its batch discharges are as high as 5,000 gallons per day (gpd) and has a reasonable potential to adversely affect the Township's POTW operations at the Croydon Wastewater Treatment Plant (WWTP), including causing interference and pass-through of pollutants (§160-43).

Pursuant to the Code, SIU's like Coyne Chemical are required to pretreat their wastewater so that concentrations of pollutants do not impact the POTW (§160-50). Any violation of the Permit is a violation of the Code subjecting an SIU like Coyne Chemical to an array of sanctions (§160-70.11 to §§160-70.25, and §160-53). In addition to any other enforcement actions, the Township may modify the Permit to promote compliance, particularly where a discharge has changed significantly since any prior characterization [§160-61(A-I)].

The Code authorizes enforcement whenever a user has violated or continues to violate any provision of the Code, a permit, or any other pretreatment requirement. Enforcement may be commenced by the issuance of a notice of violation (§160-70.11) and the Code also authorizes:

- Consent orders (§160-70.12);
- Orders for show-cause hearings (§160-70.13);
- Compliance orders or cease-and-desist orders (§160-70.14, 15);
- Judicial relief, including injunctions, and civil and/or criminal penalties (§160-70.19, 20, 21); and,
- Administrative Fines (§160-70.16).

Per Code §160-70.16, Administrative Fines are authorized when a user has violated, or continues to violate any provision of the Code, a permit or any other pretreatment requirement. In such case, the Township may fine the user in an amount not to exceed $1,000, on a per-violation, per-day basis. In the case of monthly average limits, Administrative Fines may be assessed for each day during the period of violation [§160-70.16(A)]. The Township also may seek civil penalties of up to $25,000 per violation per day [§160-70.22(A)]. An additional penalty of 10% of the unpaid balance may be assessed for any fines and penalties that remain unpaid after 30 calendar days, and interest accrues thereafter at a rate of 1% per month [§160-70.16(B)].

Permit Requirements

The Permit monitoring requirements, frequency, and limitations are described above. The Permit authorizes Coyne Chemical to discharge treated process water to the Township's sewer collection system through the outfall designated as COY01. Under the terms of the Permit, Coyne Chemical expressly agreed to be subject to both civil and criminal enforcement proceedings in the event that it failed to comply with the terms of the Permit. The Permit also entitles the Township to recover the costs of any expense, loss, or damage caused by a violation. Coyne Chemical further agreed to contain any substance which may affect the POTW's effluent, including causing or contributing to a violation of the Township's NPDES Permit.

Assessment of Administrative Fines

In both January and February 2020 Coyne Chemical failed to sample all parameters except flow and pH. In March 2020 Coyne Chemical failed to sample for Sulfate. Due to the Covid Pandemic, Coyne Chemical failed to sample, except for flow and pH, from April through August 2020. However, Coyne Chemical continued to be in operation and did not inform the Township of the non-monitoring until October 2020, more than the 30-day notification window. Coyne Chemical reported that sampling in September 2020 was performed incorrectly and that all results except flow and pH should be considered invalid. In October, November, and December 2020 Coyne Chemical exceeded the Sulfate limitation. In December 2020 Coyne Chemical also violated their COD and Ammonia limitations. Lastly, it is noted that Cyanide, TPH, and PCBs were to be sampled quarterly. Cyanide and TPH were not reported for two quarters and PCBs were not sampled for three quarters.

Pursuant to Bristol Township Code, Chapter 160, Article IV, Section 160-70.16(A), the Superintendent may issue fines not to exceed $1,000 per day if it is found that a user has violated or continues to violate any provision

of the Code, and in the case of monthly limits, fines shall be assessed for each day during the period of violation. Failure to report and misreporting are in this case the equivalent of an exceedance. As such, Coyne Chemical was in violation of the Permit 243 days for each BOD5, TSS, FOG, Cadmium, Chromium, Copper, Cyanide, Lead, Mercury, Nickel, Silver, Arsenic, Zinc, Phenols, and TPH (totaling 3,645 days of non-compliance), 274 days for each COD and Ammonia (totaling 548 days of non-compliance), 275 days for PCBs, and 366 days for Sulfate. The total is 4,834 days of non-compliance for which the Township is entitled to collect up to $4,834,000 in Administrative Fines.

The Township understands that 3,477 days-worth of non-compliance were due to the Covid Pandemic and even though this was not reported to the Township within 30 days of the first instance, the Township has decided not to consider these violations in the total for administrative fines at this time as they understand many hardships occurred during the Covid Pandemic. Therefore, the number of days in violation is reduced to 1,357. This entitles the Township to collect up to $1,357,000 in Administrative Fines.

Of the parameters that are also measured at the Croydon WWTP monthly, 634 days-worth of parameters weren't monitored or were exceeded. This portion of Administrative Fines totals $634,000.

Settlement Offer

The Township is taking enforcement action to compel compliance with the Permit. The Township reserves all rights to assess and collect Administrative Fines, and take other enforcement action under the Code and other applicable law for the noted violations. Although the Township is entitled to assess at least $4,894,000 in Administrative Fines, it is willing to settle with Coyne Chemical amicably and without resorting to litigation. Accordingly, because it appears that the bulk of Coyne Chemical's violations were a result of failure to monitor and report, the Township is willing to accept the payment of **$173,500** to settle this enforcement action if those funds are remitted by **April 4, 2021**.

Thank you for your immediate attention to this matter. Please do not hesitate to contact me at your convenience if you have any questions or require anything further at this time.

Sincerely,

Steve Walsh, P.E.
Project Manager
Gilmore & Associates, Inc.

cc: Randee Elton, Township Manager
Jessica Ireland, Confidential Assistant to the Township Manager
Fran Phillips, Finance Director
Russell Sacco, Bristol Township Sewer Solicitor
Terry Sturgis, EHS Director – George S. Coyne Chemical Co., Inc.

Appendix 5 – Newspaper Articles for Facilities in Non-Compliance

NOTICE

Bristol Township's Industrial Pre-Treatment Program - Notice of Violation & Administrative Fines

In 2018, Bristol Township issued George S. Coyne Chemical Co., Inc. of 3015 State Road in Croydon, PA (Coyne Chemical) Industrial Wastewater Discharge Permit No. IND-02-S-2019 with an effective date of January 1, 2019 and expiration date of December 31, 2023. The Permit allows Coyne Chemical to conveys treated industrial wastewater to the Township's sanitary sewer collection system in accordance with the Township's United States Environmental Protection Agency (USEPA) approved Industrial Pretreatment Program (IPP).

This article is being written as notification that on March 5, 2021 Bristol Township issued a Notice of Violation (NOV) and Notice of Administrative Fines (NOAF) letter to Coyne Chemical in response to Coyne Chemical's failure to self-monitor and report in accordance with its Permit for the year 2020.

Coyne Chemical was found to be the only permit holder in the Township's sanitary sewer collection system that was in significant violation of their permit in 2020. No other permit holder was therefore issued a NOAF letter in 2020. Coyne Chemical's violations permitted the Township to seek $4,834,000 in administrative fines, but a lesser value was offered to Coyne Chemical to avoid litigation.

The Township's action is necessary to protect its Publically-Owned Treatment Works (POTW) from upsets and pass-through of pollutants. Coyne Chemical's failure to comply with their Permit also may cause the POTW to be in violation of its Pennsylvania Department of Environmental Protection (PADEP) issued National Pollutant Discharge Elimination System (NPDES) Permit for discharge of treated wastewater to the Delaware River. Under applicable law and the terms of a Consent Decree with the United States and the Commonwealth of Pennsylvania, the Township is required to implement its pretreatment program, including taking enforcement action when Significant Industrial Users (SIU) like Coyne Chemical violate their Permit. Failure to take enforcement action also exposes the Township to the assessment of stipulated penalties by the USEPA and the PADEP.

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