RANSOM
Consulting, Inc.

Consulting
Engineers
and Scientists

Via email: NPDES.Generalpermits@epa.gov

July 7, 2017

Project 061.01184.002

U.S. Environmental Protection Agency, Region I
Office of Ecosystem Protection
EPA/OEP RGP Applications Coordinator
5 Post Office Square - Suite 100 (OEP06-01)
Boston, Massachusetts 02109-3912

RE: Transmittal of Notice of Intent
2017 Remediation General Permit
MAG 910000
Ipswich Power Plant
276 High Street
Ipswich, Massachusetts

To Whom It May Concern:

On behalf of the Ipswich Municipal Light Department (IMLD), Ransom Consulting, Inc. (Ransom) is submitting this Notice of Intent (NOI) to continue a sump discharge from the basement of the Ipswich Power Plant (Power Plant) located at 276 High Street in Ipswich, Massachusetts (the Site). A Site Location Map is provided as Figure 1 in Attachment A. An aerial photograph is provided as Figure 2, Site Area Plan, in Attachment A. The purpose of this letter is to supplement the completed NOI Form, taken from Remediation General Permit (RGP) Appendix IV and included as Attachment B to this letter.

NOI Section B.1

As noted in Section B.1. of the NOI Form, the Site discharges to the Egypt River (an Outstanding Resource Water [ORW]) upstream from a National Heritage Endangered Species Program (NHESP) habitat and an Area of Critical Environmental Concern (ACEC). Refer to Figure 3 in Attachment A. According to Catherine Vakalopoulos, the Massachusetts Department of Environmental Protection (MA DEP) is preparing an authorization to discharge to this ORW.

NOI Sections B.4 - B.6

Ransom determined the seven day-ten-year low flow (7Q10) of the receiving water to be 0.12 cubic feet per second (ft^3/s) using modeling provided via the online USGS StreamStats program referenced in RGP Appendix V (streamstatsags.cr.usgs.gov/streamstats). However, in a telephone conversation with Catherine Vakalopoulos (MA DEP) on June 14, 2017, Ransom was informed that MA DEP could not approve the use of a dilution factor because of the intermittent nature of the flow in the Egypt River at the discharge point.

12 Kent Way, Suite 100, Byfield, Massachusetts 01922-1221, Tel (978) 465-1822, Fax (978) 465-2986
400 Commercial Street, Suite 404, Portland, Maine 04101, Tel (207) 772-2891
Pease International Tradeport, 112 Corporate Drive, Portsmouth, New Hampshire 03801, Tel (603) 436-1490
60 Valley Street, Building F, Suite 106, Providence, Rhode Island 02909, Tel (401) 433-2160
2127 Hamilton Avenue, Hamilton, New Jersey 08619, Tel (609) 584-0090

www.ransomenv.com

NOI Section B.7

Concentrations of metals, ammonia, and hardness for a surface water sample collected from the Egypt River ("Receiving Water") on May 15, 2017 are provided in Analytical Report No. L1715733 from Alpha Analytical, Inc. of Westborough, Massachusetts (Alpha), provided as Attachment C. Temperature and pH of the surface water measured in the field using hand-held meters were 14.2° C and 6.79 S.U., respectively.

NOI Section C.1-C.2

The system treats groundwater that passively infiltrates into the basement of the Power Plant. A summary of influent concentrations measured during the previous 12 months for the RGP in effect for the Power Plant is provided in Attachment C. Concentrations of metals and hardness for a source water sample collected from the basement ("Influent Water") on May 15, 2017 are provided in Analytical Report No. L1715733 from Alpha, also provided in Attachment C. Concentrations of halogenated and non-halogenated volatile and semi-volatile organic compounds, fuels parameters, ammonia, cyanide, and chlorine for a source water sample collected from the basement ("Influent") on June 6, 2017 are provided in Analytical Report No. L1718671 from Alpha, provided as Attachment D.

NOI Section D.1.

The discharge consists of groundwater and stormwater collected by the sump system in the basement of the Power Plant. When the water level rises in the collection system, it is pumped through the treatment vessels and discharged to the adjacent stormwater pond (a.k.a., the cooling pond). A discharge from the pond occurs only when the water level in the pond rises above its emergency overflow level, at which point it discharges to the Egypt River at the location shown on Figure 4 in Attachment A.

NOI Section D.4

Analytical data from the previous 12 months of monitoring under the RGP for chloride, arsenic, copper, iron, lead, zinc, and 1,1-dichloroethylene were considered in the influent data provided in Section D.4, along with chemical analysis data for the remaining RGP monitoring parameters collected in May and June 2017. Based on the analytical results, ten metals, ammonia, chloride, and three Group II polycyclic aromatic hydrocarbons (PAH) were present in the influent sample. However, of these parameters, only arsenic, copper, iron, lead, and/or zinc may be present in influent water above the proposed effluent limitations.

NOI Section E

The treatment system currently in place (i.e., liquifuge oil/water separation and granular activated carbon tanks) are not designed to remove the metals that are present in the influent water. The Town of Ipswich is in discussions with vendors for design of a treatment system to reduce metals concentrations. Based on historical flow measurements, the daily flow through the treatment system has ranged between approximately 550 and 8,900 gallons per day, with the lower volume recorded in times of drought, and the higher volume recorded when there was a break in a nearby underground water line. The average

daily flow has been approximately 2,250 gallons. Schematics of the treatment system will be provided when available.

NOI Section F

No chemicals or additives are applied to the effluent prior to discharge.

NOI Section G

On June 7, 2017, Ransom contact the U.S. Fish and Wildlife Service (USFWS) requesting a determination on potential impacts to listed species in the area. On June 16, 2017, Mr. David Simmons responded that the project as described is unlikely to have any effect on the listed species. Correspondence related to the USFWS consultation is provided in Attachment E.

NOI Section H

Certification was provided regarding the absence of historic properties with submittal of previous NOIs. Continuation of the existing discharge will not require construction activities that will disturb the ground or existing structures.

NOI Section J

Best management practices (BMPs) for spill control and equipment operation and maintenance are in use at the power plant. A certification statement relative to the use of BMPs is included in Attachment F.

Required MA DEP Forms

A copy of the Permit Transmittal Form (Number X275647) is provided in Attachment G. The applicant is a municipality; therefore, no project fee applies.

U.S. Environmental Protection Agency, Region I
Office of Ecosystem Protection

If you have any questions regarding this NOI submittal, please feel free to contact me at (978) 465-1822.

Sincerely,

RANSOM CONSULTING, INC.

Nancy Marshall
2017.07.07 13:59:32
-04'00'

Nancy E. Marshall, P.E.
Project Manager

Timothy J. Snay
2017.07.07
14:15:28 -04'00'

Timothy J. Snay, LSP
Vice President

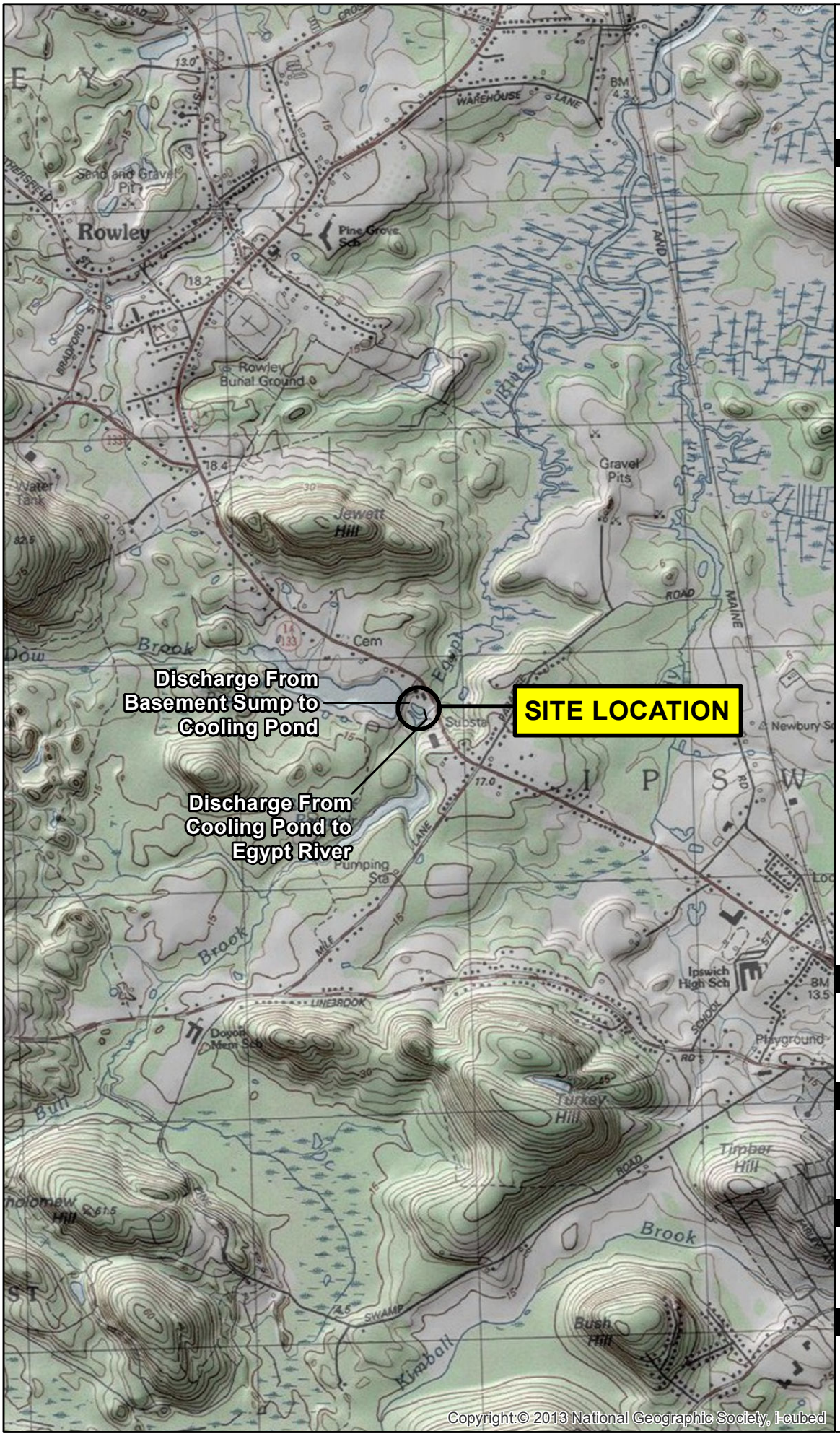
NEM/TJS:cnt
Attachments

cc: Mr. Jon Blair, Ipswich Utilities
MA DEP RGP Coordinator

ATTACHMENT A

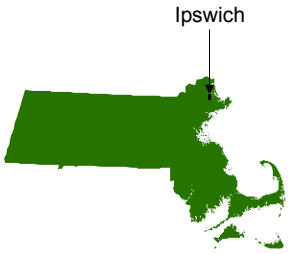
Figures

Transmittal of Notice of Intent
2017 Remediation General Permit
MAG 910000
Ipswich Power Plant
276 High Street
Ipswich, Massachusetts



RANSOM
Consulting Engineers and Scientists

Regional Locator Map



Notes

1. Data Source: USGS National Map Seamless Server, 24K DRG, 1/3" NED
2. USGS Quad Name: Ipswich
3. Latitude: 42° 41' 55" N
   Longitude: 70° 52' 12" W
   UTM Northing: 4728819 mN
   UTM Easting: 346831 mE

Scale and Orientation

0 1,000 2,000

Prepared For

Ipswich Municipal Light Department
272 High Street
Ipswich, Massachusetts

Site Address

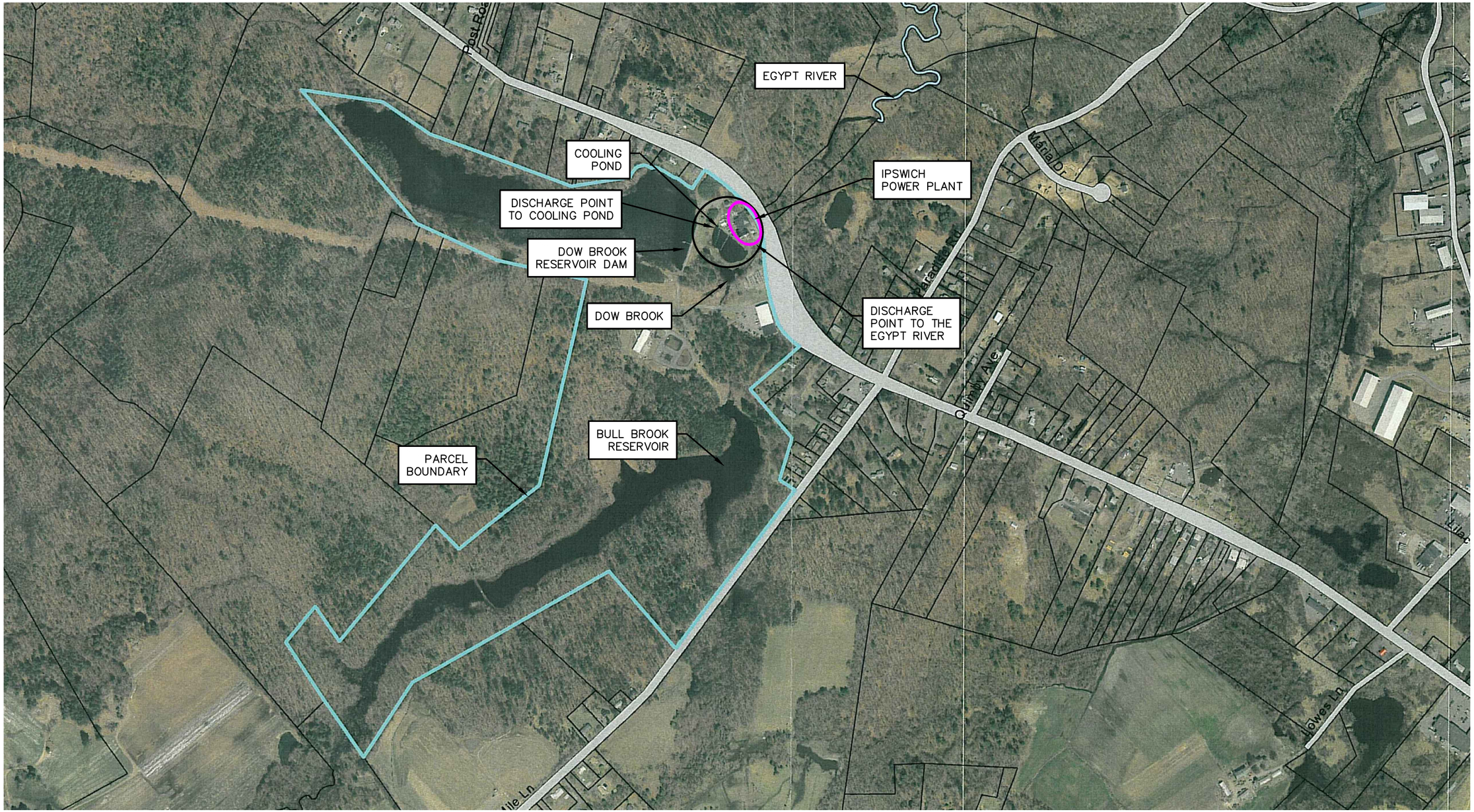
Ipswich Power Plant
276 High Street
Ipswich, Massachusetts

061.01184 | July 2017

Figure 1

Site Location Map

G:\Data\MA\Project\061_01184\Maps\Figure_1.mxd



NOTE:

1. SITE PLAN BASED ON MAPPING PROVIDED BY IPSWICH MUNICIPAL LIGHT DEPARTMENT.

0 300 600 1200

SCALE in FEET

RANSOM Consulting, Inc.

PREPARED FOR:
IPSWICH MUNICIPAL LIGHT DEPARTMENT
272 HIGH STREET
IPSWICH, MASSACHUSETTS

SITE:
IPSWICH POWER PLANT
276 HIGH STREET
IPSWICH, MASSACHUSETTS

SITE AREA PLAN

DATE: JULY 2017
PROJECT: 061.01184
FIGURE: 2

\\maserver\projects\2006\061184\RAO\061184-SITE AREA-2017.dwg Jul 07, 2017 - 10:12am

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
IPSWICH POWER PLANT
276 HIGH STREET IPSWICH, MA
NAD83 UTM Meters:
5266124mN , -7889159mE (Zone: 18)
July 6, 2017

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection

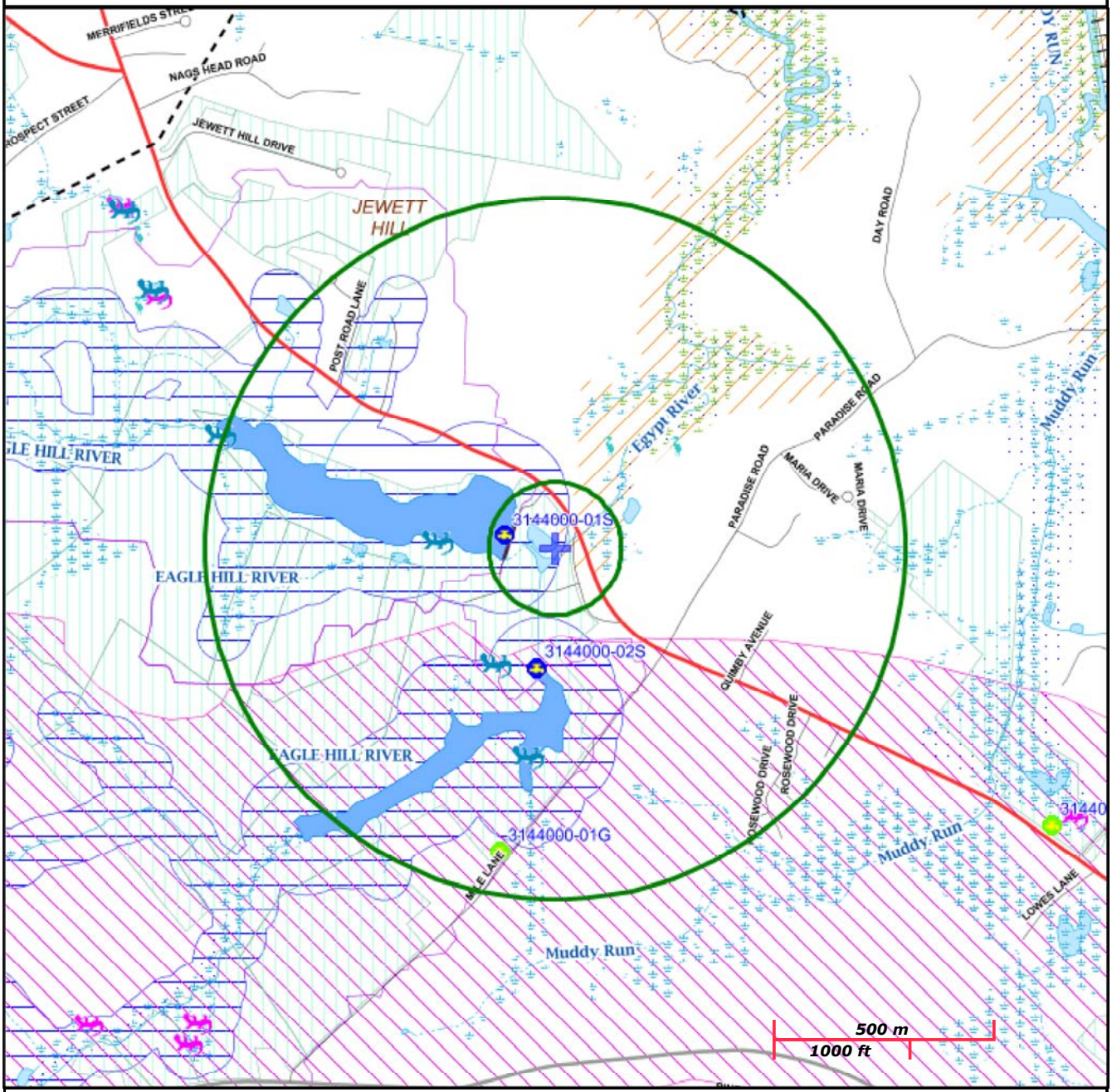
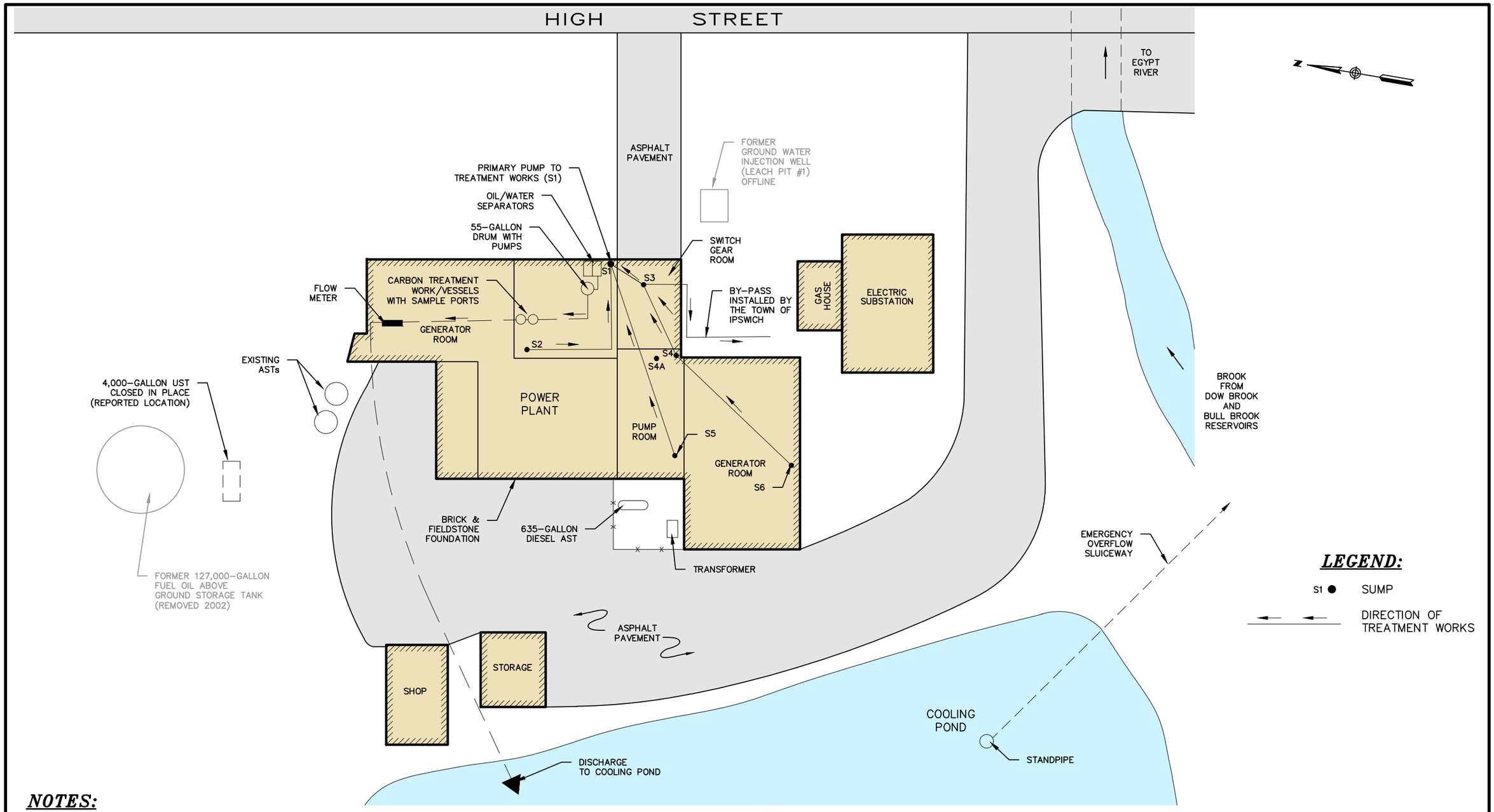


Figure 3: Sensitive Resources



LEGEND:

S1 ● SUMP

← DIRECTION OF TREATMENT WORKS

NOTES:

1. SITE PLAN BASED ON MEASUREMENTS AND OBSERVATIONS MADE BY RANSOM ENVIRONMENTAL CONSULTANTS, INC.
2. COLLECTION TRENCHES IN THE FLOOR LEAD TO IDENTIFIED SUMPS, WHICH PUMP TO THE TREATMENT SYSTEM.
3. SOME FEATURES ARE APPROXIMATE IN LOCATION AND SCALE.

0 15 30 60

SCALE in FEET

RANSOM Environmental Consultants, Inc.

PREPARED FOR:
IPSWICH MUNICIPAL LIGHT DEPARTMENT
272 HIGH STREET
IPSWICH, MASSACHUSETTS

SITE:
IPSWICH POWER PLANT
276 HIGH STREET
IPSWICH, MASSACHUSETTS

GROUNDWATER COLLECTION AND TREATMENT SYSTEM

DATE: JULY 2017
PROJECT: 061.01184.002
FIGURE: 4

\\maserver\projects\2006\061184\BG 002 Treatment System\2010 RGP NOI\061.01184-002.dwg Jul 07, 2017 - 10:22am

ATTACHMENT B

Completed Appendix IV - NOI
Remediation General Permit

Transmittal of Notice of Intent
2017 Remediation General Permit
MAG 910000
Ipswich Power Plant
276 High Street
Ipswich, Massachusetts

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

A. General site information:

<table>
<tr><td rowspan="4">1. Name of site:
Ipswich Power Plant</td><td colspan="3">Site address: : 276 High Street
Street:</td></tr>
<tr><td colspan="2">City: : Ipswich</td><td>State: MA</td><td>Zip: 01938</td></tr>
<tr><td colspan="3">Contact Person: Jon Blair</td></tr>
<tr><td colspan="2">Telephone: 978-356-6635 x2113</td><td>Email: jblair@ipswichutilities.org</td></tr>
<tr><td rowspan="4">2. Site owner
Town of Ipswich Power Company

Owner is (check one): ☐ Federal ☐ State/Tribal ☐ Private
■ Other; if so, specify: Municipality</td><td colspan="3">Mailing address: 272 High Street
Street:</td></tr>
<tr><td colspan="2">City: Ipswich</td><td>State: MA</td><td>Zip: 01938</td></tr>
<tr><td colspan="3">Contact Person: Jon Blair</td></tr>
<tr><td colspan="2">Telephone: 978-356-6635 x2113</td><td>Email: jblair@ipswichutilities.org</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Ipswich Municipal Light Department</td><td colspan="3">Mailing address:
Street: 272 High Street</td></tr>
<tr><td colspan="2">City: Ipswich</td><td>State: MA</td><td>Zip: 01938</td></tr>
<tr><td colspan="4">4. NPDES permit number assigned by EPA:
MAG910200

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td></tr>
<tr><td colspan="4">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s): 3-21793
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Egypt River	MA91-13 9152925	B

Receiving water is (check any that apply): ■ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River

2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ■ Yes ☐ No

Are sensitive receptors present near the site? (check one): ■ Yes ☐ No

If yes, specify: National Heritage Endangered Species Program (NHESP) habitat; Great Marsh Area of Critical Environmental Concern

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. On 2014 List as Category 3; TMDL Count: 0

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	0.12 ft^3/s
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	NA per MA DEP

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ■ Yes ☐ No

If yes, indicate date confirmation received: 06/14/2017

7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No

C. Source water information:

1. Source water(s) is (check any that apply):

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

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

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ■ Existing discharge ☐ New discharge ☐ New source	
Outfall(s): Basement Sump Discharge to Cooling Pond	Outfall location(s): (Latitude, Longitude) Lat: 42 41' 54.79" Long: 70 52' 12.48"
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Overflow from a storm water basin constructed for use as a cooling pond for the Power Plant; currently used for cooling water approximately 5 days/year. ☐ A private storm sewer system ☐ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ☐ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): July 2017 - indefinitely Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ■ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="5">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
☐ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
■ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

☐ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
☐ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td></tr>
<tr><td colspan="2">b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</td></tr>
<tr><td>■ G. Sites with Known Contamination</td><td>☐ H. Sites with Unknown Contamination</td></tr>
<tr><td>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)

■ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
☐ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td><td>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</td></tr>
</table>

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	1	4500NH3-	0.375 mg/l	0.437 mg/l	0.437 mg/l	Report mg/L	---
Chloride		✔	12	300.0	12,500	220,000	127,000	Report µg/l	---
Total Residual Chlorine	✔		1	4500CL-D	0.020 mg/l	< 0.02 mg/l	0	0.2 mg/L	11 ug/l
Total Suspended Solids		✔	1	2540D	5 mg/l	93 mg/l	93 mg/l	30 mg/L	---
Antimony		✔	1	200.8	0.42	0.43	0.43	206 µg/L	640 ug/;
Arsenic		✔	12	6010C	5	67	23	104 µg/L	10 ug/l
Cadmium		✔	1	200.8	0.05	0.16	0.16	10.2 µg/L	0.2349 ug/l
Chromium III	✔		1	200.8	10	<10	0	323 µg/L	73.7 ug/l
Chromium VI	✔		1	7196A	3	< 3	0	323 µg/L	11.4 ug/l
Copper		✔	12	6010C	10	754	236	242 µg/L	7.9 ug/l
Iron		✔	12	6010C	50	48,000	16,516	5,000 µg/L	1000 ug/l
Lead		✔	12	6010C	10	65	30	160 µg/L	2.49 ug/l
Mercury		✔	1	245.1	0.06	0.08	0.08	0.739 µg/L	0.91 ug/l
Nickel		✔	1	200.8	0.55	4.82	4.82	1,450 µg/L	44.4 ug/l
Selenium	✔		1	200.8	1.73	< 1.73	0	235.8 µg/L	5.0 ug/l
Silver	✔		1	200.8	0.26	< 0.26	0	35.1 µg/L	2.7 ug/l
Zinc		✔	12	6010C	50	568	166	420 µg/L	101.9 ug/l
Cyanide		✔	1	4500CN-C	5	5	5	178 mg/L	5.2 ug/l
B. Non-Halogenated VOCs									
Total BTEX	✔		1	8260C	1.0	< 1.0	0	100 µg/L	---
Benzene	✔		1	8260C	0.50	< 0.50	0	5.0 µg/L	---
1,4 Dioxane	✔		1	8260C-SI	3.0	< 3.0	0	200 µg/L	---
Acetone	✔		1	8260C	5.0	< 5.0	0	7.97 mg/L	---
Phenol	✔		1	8260C	5.0	< 5.0	0	1,080 µg/L	300 ug/l

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		1	8260C	0.50	< 0.50	0	4.4 µg/L	1.6 ug/l
1,2 Dichlorobenzene	✔		1	8260C	2.5	< 2.5	0	600 µg/L	---
1,3 Dichlorobenzene	✔		1	8260C	2.5	< 2.5	0	320 µg/L	---
1,4 Dichlorobenzene	✔		1	8260C	2.5	< 2.5	0	5.0 µg/L	---
Total dichlorobenzene	✔		1	8260C	2.5	< 2.5	0	763 µg/L in NH	---
1,1 Dichloroethane	✔		1	8260C	0.75	< 0.75	0	70 µg/L	---
1,2 Dichloroethane	✔		1	8260C	0.50	< 0.50	0	5.0 µg/L	---
1,1 Dichloroethylene	✔		12	8260C	0.50	< 0.50	0	3.2 µg/L	---
Ethylene Dibromide	✔		1	504.1	0.010	< 0.10	0	0.05 µg/L	---
Methylene Chloride	✔		1	8260C	3.0	< 3.0	0	4.6 µg/L	---
1,1,1 Trichloroethane	✔		1	8260C	0.50	< 0.75	0	200 µg/L	---
1,1,2 Trichloroethane	✔		1	8260C	0.75	< 0.75	0	5.0 µg/L	---
Trichloroethylene	✔		1	8260C	0.50	< 0.50	0	5.0 µg/L	---
Tetrachloroethylene	✔		1	8260C	0.50	< 0.50	0	5.0 µg/L	3.3 ug/l
cis-1,2 Dichloroethylene	✔		1	8260C	0.50	< 0.50	0	70 µg/L	---
Vinyl Chloride	✔		1	8260C	1.0	< 1.0	0	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		1	8270D	5.0	< 5.0	0	190 µg/L	---
Diethylhexyl phthalate	✔		1	8270D	3.0	<3.0	0	101 µg/L	2.2 ug/l
Total Group I PAHs	✔		1	8270D-SI	0.10	< 0.10	0	1.0 µg/L	---
Benzo(a)anthracene	✔		1	8270D-SI	0.10	< 0.10	0	As Total PAHs	0.0038 ug/l
Benzo(a)pyrene	✔		1	8270D-SI	0.10	< 0.10	0		0.0038 ug/l
Benzo(b)fluoranthene	✔		1	8270D-SI	0.10	< 0.10	0		0.0038 ug/l
Benzo(k)fluoranthene	✔		1	8270D-SI	0.10	< 0.10	0		0.0038 ug/l
Chrysene	✔		1	8270D-SI	0.10	< 0.10	0		0.0038 ug/l
Dibenzo(a,h)anthracene	✔		1	8270D-SI	0.10	< 0.10	0		0.0038 ug/l
Indeno(1,2,3-cd)pyrene	✔		1	8270D-SI	0.10	< 0.10	0		0.0038 ug/l

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		✔	1	8270D-SI	0.10	0.43	0.43	100 µg/L	---
Naphthalene		✔	1	8270D-SI	0.10	0.16	0.16	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		1	608	0.250	< 0.250	0	0.000064 µg/L	---
Pentachlorophenol	✔		1	8260D-SI	0.80	< 0.80	0	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔		1	1664A	4.0 mg/l	< 4.0 mg/l	0	5.0 mg/L	---
Ethanol	✔		1	1671	2 mg/l	< 2 mg/l	0	Report mg/L	---
Methyl-tert-Butyl Ether	✔		1	8260C	1.0	< 1.0	0	70 µg/L	20 ug/l
tert-Butyl Alcohol	✔		1	8260C	10	< 10	0	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	8260C	2.0	< 2.0	0	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
Group II PAH:									
Acenaphthalene			1	8270D-SI	0.10	0.12	0.12		
Naphthalene			1	8270D-SI	0.10	0.16	0.16		
Fluorene			1	8270D-SI	0.10	0.15	0.15		
pH			12	field meter	NA	6.7 - 7.9	7.3		
Hardness			1	200.7	0.660 mg/l	82.6 mg/l	82.6		

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ☐ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption

■ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ■ Separation/Filtration ■ Other; if so, specify:

The current system has an oil/water separator (which will remain) and GAC tanks. Ipswich intends to modify the system to provide for treatment of metals.

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.

The existing treatment system will be supplemented to add ion exchange tanks for removal of metals (arsenic, copper, iron, lead, and zinc) and additional filtration for a reduction of total suspended solids. The treated effluent will be discharged into the man-made storm water basin/cooling pond. The pond will only discharge when the level rises above the maximum design level.

Identify each major treatment component (check any that apply):

☐ Fractionation tanks☐ Equalization tank ■ Oil/water separator ☐ Mechanical filter ■ Media filter

☐ Chemical feed tank ☐ Air stripping unit ☐ Bag filter ■ Other; if so, specify: ion exchange

Indicate if either of the following will occur (check any that apply):

☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: To be determined. The preliminary design included a pump capable of pumping 2-6 gpm. Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	
Provide the proposed maximum effluent flow in gpm.	To be Determined
Provide the average effluent flow in gpm.	2,250
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	NA

4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ☐ Yes ■ No

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply)

☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:

2. Provide the following information for each chemical/additive, using attachments, if necessary:

a. Product name, chemical formula, and manufacturer of the chemical/additive;
b. Purpose or use of the chemical/additive or remedial agent;
c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;
e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and
f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).

3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): ☐ Yes ☐ No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive? (check one): ☐ Yes ☐ No

G. Endangered Species Act eligibility determination

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

☐ **FWS Criterion A**: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the "action area".

■ **FWS Criterion B**: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ■ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No

☐ **FWS Criterion C**: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have "no effect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ☐ the operator ☐ EPA ☐ Other; if so, specify:

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

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

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

H. National Historic Preservation Act eligibility determination

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

■ **Criterion A**: No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.

☐ **Criterion B**: Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.

☐ **Criterion C**: Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

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

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

I. Supplemental information

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

See Letter of Transmittal.

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

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

J. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
BMPP certification statement:	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ☐ No ☐ NA ■
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ☐ NA ■
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ■
Signature: 	Date: 7/7/2017
Print Name and Title: Jonathan Blair, Electric Light Manager	

ATTACHMENT C

Influent Chemical Analysis Results
Metals, Hardness, and Ammonia Concentrations
(Analytical Report No. L1715733)

Transmittal of Notice of Intent
2017 Remediation General Permit
MAG 910000
Ipswich Power Plant
276 High Street
Ipswich, Massachusetts

Table 1: **Monthly Remediation General Permit (RGP) Sampling Results: July 2016 - June 2017**
Ipswich Power Plant - Influent Samples
276 High Street
Ipswich, Massachusetts
Authorization MAG910200

RGP Required Sampling Parameters:	Organics	Total Metals					Non-Organics and Misc.		
	1,1-DCE	Arsenic	Copper	Iron	Lead	Zinc	Chloride	pH	Flow
Units	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(S.U.)	(gpd)
RGP App IV Test Method:	8260C	6010C	6010C	6010C	6010C	6010C	300.0, 4500CL-D	4500H	NA
Dates	Influent Sample Results (units shown above)								
July 2016	BRL (0.50)	0.0134	0.163	7.5	0.0156	0.0827	70.5	7.4	1,430
Aug 2016	BRL (0.50)	0.019	0.212	12	0.025	0.114	113	6.7	1,535
Sept 2016	BRL (0.50)	0.0185	0.0811	7.9	BRL (0.0100)	BRL (0.0500)	96.8	7.2	1,506
Oct 2016	BRL (0.50)	0.029	0.754	28	0.065	0.282	120	6.9	1,665
Nov 2016	BRL (0.50)	0.0665	0.535	41	0.0467	0.568	131	7.2	2,009
Dec 2016	BRL (0.50)	0.012	0.199	10	0.0211	0.148	220	7.9	1,262
Jan 2017	BRL (0.50)	0.0076	0.171	3.0	BRL (0.0100)	0.0865	122	7.1	1,875
Feb 2017	BRL (0.50)	0.052	0.180	48	0.030	0.243	154	7.8	1,489
Mar 2017	BRL (0.50)	0.014	0.057	8.2	BRL (0.010)	0.058	220	7.6	2,379
Apr 2017	BRL (0.50)	0.034	0.164	22	0.023	0.151	124	7.4	3,153
May-17	BRL (0.50)	0.0093	0.256	7.92	0.03808	0.07046	100	7.1	2,238
Jun-17	BRL (0.50)	0.00412	0.057	2.67	0.0069	0.02317	53	7.4	2,401

Notes:
1. Samples were collected by Ransom Consulting, Inc. and analyzed by Alpha Analytical, Inc. of Westborough, MA.
2. RGP = U.S. EPA Remediation General Permit (RGP) effective in 2010.
4. 1,1-DCE = 1,1-dichloroethene (a.k.a., 1,1-dichloroethylene)
5. µg/L = micrograms per liter; mg/L = milligrams per liter; S.U. = Specific Units; gpd = gallons per day
6. BRL ( ) = below reporting limit indicated in parentheses.

ANALYTICAL REPORT

Lab Number:	L1715733
Client:	Ransom Consulting, Inc. 12 Kent Way Suite 100 Byfield, MA 01922-1221
ATTN:	Nancy Marshall
Phone:	(978) 465-1822
Project Name:	IMLD
Project Number:	061.01184
Report Date:	05/22/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1715733-01	INFLUENT WATER	WATER	IPSWICH, MA	05/15/17 09:20	05/15/17
L1715733-02	TREATMENT SYSTEM DISCHARGE	WATER	IPSWICH, MA	05/15/17 09:25	05/15/17
L1715733-03	COOLING POND DISCHARGE	WATER	IPSWICH, MA	05/15/17 09:40	05/15/17
L1715733-04	RECEIVING WATER	WATER	IPSWICH, MA	05/15/17 09:55	05/15/17
L1715733-05	TRIP BLANK	WATER	IPSWICH, MA	05/15/17 00:00	05/15/17

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: IMLD **Lab Number:** L1715733
Project Number: 061.01184 **Report Date:** 05/22/17

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

The analyses performed were specified by the client.

A Trip Blank was received in the laboratory, but not listed on the Chain of Custody, and was not analyzed.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 05/22/17

ORGANICS

VOLATILES

Project Name: IMLD
Project Number: 061.01184
Lab Number: L1715733
Report Date: 05/22/17

SAMPLE RESULTS

Lab ID: L1715733-01
Client ID: INFLUENT WATER
Sample Location: IPSWICH, MA

Date Collected: 05/15/17 09:20
Date Received: 05/15/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/18/17 23:58
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	104		70-130

Project Name: IMLD
Lab Number: L1715733
Project Number: 061.01184
Report Date: 05/22/17

SAMPLE RESULTS

Lab ID: L1715733-02
Client ID: TREATMENT SYSTEM DISCHARGE
Sample Location: IPSWICH, MA

Date Collected: 05/15/17 09:25
Date Received: 05/15/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/19/17 00:27
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	104		70-130

Project Name: IMLD
Project Number: 061.01184
Lab Number: L1715733
Report Date: 05/22/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/18/17 22:05
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1005044-5					
1,1-Dichloroethene	ND		ug/l	0.50	0.17

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	102		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1005044-3 WG1005044-4								
1,1-Dichloroethene	92		90		61-145	2		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	115		113		70-130
Toluene-d8	105		108		70-130
4-Bromofluorobenzene	94		97		70-130
Dibromofluoromethane	102		103		70-130

METALS

Project Name: IMLD
Project Number: 061.01184
Lab Number: L1715733
Report Date: 05/22/17

SAMPLE RESULTS

Lab ID: L1715733-01
Client ID: INFLUENT WATER
Sample Location: IPSWICH, MA
Matrix: Water
Date Collected: 05/15/17 09:20
Date Received: 05/15/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	0.00043	J	mg/l	0.00400	0.00042	1	05/16/17 15:25	05/17/17 12:02	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00963		mg/l	0.00100	0.00016	1	05/16/17 15:25	05/17/17 12:02	EPA 3005A	3,200.8	AM
Cadmium, Total	0.00016	J	mg/l	0.00100	0.00005	1	05/16/17 15:25	05/17/17 12:02	EPA 3005A	3,200.8	AM
Chromium, Total	0.00342		mg/l	0.00100	0.00017	1	05/16/17 15:25	05/17/17 12:02	EPA 3005A	3,200.8	AM
Copper, Total	0.2556		mg/l	0.00100	0.00038	1	05/16/17 15:25	05/17/17 12:02	EPA 3005A	3,200.8	AM
Iron, Total	7.92		mg/l	0.050	0.009	1	05/16/17 15:25	05/19/17 00:33	EPA 3005A	19,200.7	AB
Lead, Total	0.03808		mg/l	0.00050	0.00034	1	05/16/17 15:25	05/17/17 12:02	EPA 3005A	3,200.8	AM
Mercury, Total	0.00008	J	mg/l	0.00020	0.00006	1	05/17/17 11:50	05/17/17 21:38	EPA 245.1	3,245.1	EA
Nickel, Total	0.00482		mg/l	0.00200	0.00055	1	05/16/17 15:25	05/17/17 12:02	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/16/17 15:25	05/17/17 12:02	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00100	0.00026	1	05/16/17 15:25	05/17/17 12:02	EPA 3005A	3,200.8	AM
Zinc, Total	0.07046		mg/l	0.01000	0.00341	1	05/16/17 15:25	05/17/17 12:02	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	82.6		mg/l	0.660	NA	1	05/16/17 15:25	05/19/17 00:33	EPA 3005A	19,200.7	AB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.010	1		05/17/17 12:02	NA	107,-	

Project Name: IMLD
Lab Number: L1715733
Project Number: 061.01184
Report Date: 05/22/17

SAMPLE RESULTS

Lab ID: L1715733-02
Client ID: TREATMENT SYSTEM DISCHARGE
Sample Location: IPSWICH, MA
Matrix: Water

Date Collected: 05/15/17 09:25
Date Received: 05/15/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	0.00042	1	05/16/17 15:25	05/17/17 12:06	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00645		mg/l	0.00100	0.00016	1	05/16/17 15:25	05/17/17 12:06	EPA 3005A	3,200.8	AM
Cadmium, Total	0.00008	J	mg/l	0.00100	0.00005	1	05/16/17 15:25	05/17/17 12:06	EPA 3005A	3,200.8	AM
Chromium, Total	0.00188		mg/l	0.00100	0.00017	1	05/16/17 15:25	05/17/17 12:06	EPA 3005A	3,200.8	AM
Copper, Total	0.05320		mg/l	0.00100	0.00038	1	05/16/17 15:25	05/17/17 12:06	EPA 3005A	3,200.8	AM
Iron, Total	5.25		mg/l	0.050	0.009	1	05/16/17 15:25	05/19/17 00:38	EPA 3005A	19,200.7	AB
Lead, Total	0.01462		mg/l	0.00050	0.00034	1	05/16/17 15:25	05/17/17 12:06	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/17/17 11:50	05/17/17 21:43	EPA 245.1	3,245.1	EA
Nickel, Total	0.00563		mg/l	0.00200	0.00055	1	05/16/17 15:25	05/17/17 12:06	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/16/17 15:25	05/17/17 12:06	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00100	0.00026	1	05/16/17 15:25	05/17/17 12:06	EPA 3005A	3,200.8	AM
Zinc, Total	0.07638		mg/l	0.01000	0.00341	1	05/16/17 15:25	05/17/17 12:06	EPA 3005A	3,200.8	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.010	1		05/17/17 12:06	NA	107,-	

Project Name: IMLD
Project Number: 061.01184
Lab Number: L1715733
Report Date: 05/22/17

SAMPLE RESULTS

Lab ID: L1715733-03
Client ID: COOLING POND DISCHARGE
Sample Location: IPSWICH, MA
Matrix: Water
Date Collected: 05/15/17 09:40
Date Received: 05/15/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	0.00059	J	mg/l	0.00400	0.00042	1	05/16/17 15:25	05/17/17 12:31	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00084	J	mg/l	0.00100	0.00016	1	05/16/17 15:25	05/17/17 12:31	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00100	0.00005	1	05/16/17 15:25	05/17/17 12:31	EPA 3005A	3,200.8	AM
Chromium, Total	0.00075	J	mg/l	0.00100	0.00017	1	05/16/17 15:25	05/17/17 12:31	EPA 3005A	3,200.8	AM
Copper, Total	0.00821		mg/l	0.00100	0.00038	1	05/16/17 15:25	05/17/17 12:31	EPA 3005A	3,200.8	AM
Iron, Total	0.320		mg/l	0.050	0.009	1	05/16/17 15:25	05/19/17 00:43	EPA 3005A	19,200.7	AB
Lead, Total	ND		mg/l	0.00050	0.00034	1	05/16/17 15:25	05/17/17 12:31	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/17/17 11:50	05/17/17 21:45	EPA 245.1	3,245.1	EA
Nickel, Total	ND		mg/l	0.00200	0.00055	1	05/16/17 15:25	05/17/17 12:31	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/16/17 15:25	05/17/17 12:31	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00100	0.00026	1	05/16/17 15:25	05/17/17 12:31	EPA 3005A	3,200.8	AM
Zinc, Total	0.00477	J	mg/l	0.01000	0.00341	1	05/16/17 15:25	05/17/17 12:31	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	48.0		mg/l	0.660	NA	1	05/16/17 15:25	05/19/17 00:43	EPA 3005A	19,200.7	AB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.010	1		05/17/17 12:31	NA	107,-	

Project Name: IMLD
Lab Number: L1715733
Project Number: 061.01184
Report Date: 05/22/17

SAMPLE RESULTS

Lab ID: L1715733-04
Client ID: RECEIVING WATER
Sample Location: IPSWICH, MA
Matrix: Water
Date Collected: 05/15/17 09:55
Date Received: 05/15/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	0.00042	1	05/16/17 15:25	05/17/17 12:34	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00173		mg/l	0.00100	0.00016	1	05/16/17 15:25	05/17/17 12:34	EPA 3005A	3,200.8	AM
Cadmium, Total	0.00006	J	mg/l	0.00100	0.00005	1	05/16/17 15:25	05/17/17 12:34	EPA 3005A	3,200.8	AM
Chromium, Total	0.00190		mg/l	0.00100	0.00017	1	05/16/17 15:25	05/17/17 12:34	EPA 3005A	3,200.8	AM
Copper, Total	0.00881		mg/l	0.00100	0.00038	1	05/16/17 15:25	05/17/17 12:34	EPA 3005A	3,200.8	AM
Iron, Total	0.470		mg/l	0.050	0.009	1	05/16/17 15:25	05/19/17 01:11	EPA 3005A	19,200.7	AB
Lead, Total	0.00067		mg/l	0.00050	0.00034	1	05/16/17 15:25	05/17/17 12:34	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/17/17 11:50	05/17/17 21:47	EPA 245.1	3,245.1	EA
Nickel, Total	0.00194	J	mg/l	0.00200	0.00055	1	05/16/17 15:25	05/17/17 12:34	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/16/17 15:25	05/17/17 12:34	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00100	0.00026	1	05/16/17 15:25	05/17/17 12:34	EPA 3005A	3,200.8	AM
Zinc, Total	0.01661		mg/l	0.01000	0.00341	1	05/16/17 15:25	05/17/17 12:34	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	63.5		mg/l	0.660	NA	1	05/16/17 15:25	05/19/17 01:11	EPA 3005A	19,200.7	AB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.010	1		05/17/17 12:34	NA	107,-	

Project Name: IMLD **Lab Number:** L1715733

Project Number: 061.01184 **Report Date:** 05/22/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1003960-1										
Antimony, Total	ND		mg/l	0.00400	0.00042	1	05/16/17 15:25	05/17/17 11:40	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	0.00016	1	05/16/17 15:25	05/17/17 11:40	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00100	0.00005	1	05/16/17 15:25	05/17/17 11:40	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	05/16/17 15:25	05/17/17 11:40	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	0.00038	1	05/16/17 15:25	05/17/17 11:40	3,200.8	AM
Lead, Total	ND		mg/l	0.00050	0.00034	1	05/16/17 15:25	05/17/17 11:40	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	05/16/17 15:25	05/17/17 11:40	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/16/17 15:25	05/17/17 11:40	3,200.8	AM
Silver, Total	ND		mg/l	0.00100	0.00026	1	05/16/17 15:25	05/17/17 11:40	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	0.00341	1	05/16/17 15:25	05/17/17 11:40	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1003962-1										
Iron, Total	ND		mg/l	0.050	0.009	1	05/16/17 15:25	05/18/17 23:18	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-04 Batch: WG1003962-1										
Hardness	ND		mg/l	0.660	NA	1	05/16/17 15:25	05/18/17 23:18	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Project Name: IMLD
Project Number: 061.01184
Lab Number: L1715733
Report Date: 05/22/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1004335-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/17/17 11:50	05/17/17 21:25	3,245.1	EA

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1003960-2								
Antimony, Total	97		-		85-115	-		
Arsenic, Total	104		-		85-115	-		
Cadmium, Total	108		-		85-115	-		
Chromium, Total	98		-		85-115	-		
Copper, Total	99		-		85-115	-		
Lead, Total	105		-		85-115	-		
Nickel, Total	97		-		85-115	-		
Selenium, Total	114		-		85-115	-		
Silver, Total	94		-		85-115	-		
Zinc, Total	100		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1003962-2								
Iron, Total	108		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-04 Batch: WG1003962-2								
Hardness	103		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1004335-2								
Mercury, Total	111		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1003960-3 QC Sample: L1715771-01 Client ID: MS Sample												
Antimony, Total	0.00092J	0.5	0.5135	103		-	-		70-130	-		20
Arsenic, Total	0.00249	0.12	0.1277	104		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05496	108		-	-		70-130	-		20
Chromium, Total	0.00056J	0.2	0.1995	100		-	-		70-130	-		20
Copper, Total	0.00273	0.25	0.2635	104		-	-		70-130	-		20
Lead, Total	0.00341	0.51	0.5377	105		-	-		70-130	-		20
Nickel, Total	0.00086J	0.5	0.5070	101		-	-		70-130	-		20
Selenium, Total	0.00378J	0.12	0.1307	109		-	-		70-130	-		20
Silver, Total	ND	0.05	0.04903	98		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5213	104		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1003962-3 QC Sample: L1715771-01 Client ID: MS Sample												
Iron, Total	0.281	1	1.29	101		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1003962-3 QC Sample: L1715771-01 Client ID: MS Sample												
Hardness	113.	66.2	173	91		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1004335-3 QC Sample: L1715658-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00539	108		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1004335-5 QC Sample: L1715733-01 Client ID: INFLUENT WATER												
Mercury, Total	0.00008J	0.005	0.00532	106		-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1003960-4 QC Sample: L1715771-01 Client ID: DUP Sample						
Antimony, Total	0.00092J	0.00124J	mg/l	NC		20
Arsenic, Total	0.00249	0.00258	mg/l	4		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	0.00056J	0.00052J	mg/l	NC		20
Copper, Total	0.00273	0.00283	mg/l	4		20
Lead, Total	0.00341	0.00356	mg/l	5		20
Nickel, Total	0.00086J	0.00075J	mg/l	NC		20
Selenium, Total	0.00378J	0.00295J	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1003962-4 QC Sample: L1715771-01 Client ID: DUP Sample						
Iron, Total	0.281	0.279	mg/l	1		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1004335-4 QC Sample: L1715658-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1004335-6 QC Sample: L1715733-01 Client ID: INFLUENT WATER						
Mercury, Total	0.00008J	0.00008J	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

SAMPLE RESULTS

Lab ID: L1715733-01
Client ID: INFLUENT WATER
Sample Location: IPSWICH, MA
Matrix: Water

Date Collected: 05/15/17 09:20
Date Received: 05/15/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/15/17 19:05	05/15/17 19:43	1,7196A	AS
Anions by Ion Chromatography - Westborough Lab										
Chloride	100.		mg/l	12.5	2.10	25	-	05/17/17 21:30	44,300.0	AU

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

SAMPLE RESULTS

Lab ID: L1715733-02
Client ID: TREATMENT SYSTEM DISCHARGE
Sample Location: IPSWICH, MA
Matrix: Water

Date Collected: 05/15/17 09:25
Date Received: 05/15/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/15/17 19:05	05/15/17 19:43	1,7196A	AS
Anions by Ion Chromatography - Westborough Lab										
Chloride	100.		mg/l	12.5	2.10	25	-	05/17/17 21:42	44,300.0	AU

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

SAMPLE RESULTS

Lab ID: L1715733-03
Client ID: COOLING POND DISCHARGE
Sample Location: IPSWICH, MA
Matrix: Water

Date Collected: 05/15/17 09:40
Date Received: 05/15/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	0.004	J	mg/l	0.010	0.003	1	05/15/17 19:05	05/15/17 20:09	1,7196A	AS

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

SAMPLE RESULTS

Lab ID: L1715733-04
Client ID: RECEIVING WATER
Sample Location: IPSWICH, MA
Matrix: Water

Date Collected: 05/15/17 09:55
Date Received: 05/15/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Ammonia	0.063	J	mg/l	0.075	0.022	1	05/16/17 14:20	05/16/17 20:59	121,4500NH3-BH	AT
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/15/17 19:05	05/15/17 20:10	1,7196A	AS

Project Name: IMLD
Project Number: 061.01184
Lab Number: L1715733
Report Date: 05/22/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1003645-1										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/15/17 19:05	05/15/17 19:42	1,7196A	AS
General Chemistry - Westborough Lab for sample(s): 04 Batch: WG1003790-1										
Nitrogen, Ammonia	ND		mg/l	0.075	0.022	1	05/16/17 14:20	05/16/17 20:50	121,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02 Batch: WG1004579-1										
Chloride	ND		mg/l	0.500	0.083	1	-	05/17/17 18:30	44,300.0	AU

Lab Control Sample Analysis

Batch Quality Control

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1003645-2								
Chromium, Hexavalent	103		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 04 Batch: WG1003790-2								
Nitrogen, Ammonia	96		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 Batch: WG1004579-2								
Chloride	103		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1003645-4 QC Sample: L1715733-02 Client ID: TREATMENT SYSTEM DISCHARGE												
Chromium, Hexavalent	ND	0.1	0.105	105		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 04 QC Batch ID: WG1003790-4 QC Sample: L1715733-04 Client ID: RECEIVING WATER												
Nitrogen, Ammonia	0.063J	4	3.86	96		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1004579-3 QC Sample: L1716044-01 Client ID: MS Sample												
Chloride	24.3	4	27.7	**85**	Q	-	-		90-110	-		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1003645-3 QC Sample: L1715733-01 Client ID: INFLUENT WATER						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 04 QC Batch ID: WG1003790-3 QC Sample: L1715733-04 Client ID: RECEIVING WATER						
Nitrogen, Ammonia	0.063J	0.062J	mg/l	NC		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1004579-4 QC Sample: L1716044-01 Client ID: DUP Sample						
Chloride	24.3	24.3	mg/l	0		18

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
B	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1715733-01A	Vial HCl preserved	B	N/A	3.8	Y	Absent	8260(14)
L1715733-01B	Vial HCl preserved	B	N/A	3.8	Y	Absent	8260(14)
L1715733-01C	Vial HCl preserved	B	N/A	3.8	Y	Absent	8260(14)
L1715733-01D	Plastic 250ml HNO3 preserved	B	<2	3.8	Y	Absent	CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1715733-01E	Plastic 250ml unpreserved	B	7	3.8	Y	Absent	CL-300(28),HEXCR-7196(1)
L1715733-02A	Vial HCl preserved	B	N/A	3.8	Y	Absent	8260(14)
L1715733-02B	Vial HCl preserved	B	N/A	3.8	Y	Absent	8260(14)
L1715733-02C	Vial HCl preserved	B	N/A	3.8	Y	Absent	8260(14)
L1715733-02D	Plastic 250ml HNO3 preserved	B	<2	3.8	Y	Absent	CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1715733-02E	Plastic 250ml unpreserved	B	7	3.8	Y	Absent	CL-300(28),HEXCR-7196(1),TRICR-CALC(1)
L1715733-03A	Plastic 250ml HNO3 preserved	B	<2	3.8	Y	Absent	-
L1715733-03B	Plastic 250ml unpreserved	B	7	3.8	Y	Absent	HEXCR-7196(1)
L1715733-03D	Plastic 500ml HNO3 preserved	B	<2	3.8	Y	Absent	CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1715733-04A	Plastic 250ml HNO3 preserved	B	<2	3.8	Y	Absent	-
L1715733-04B	Plastic 250ml unpreserved	B	7	3.8	Y	Absent	HEXCR-7196(1)
L1715733-04C	Plastic 500ml H2SO4 preserved	B	<2	3.8	Y	Absent	NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name: IMLD
Project Number: 061.01184

Lab Number: L1715733
Report Date: 05/22/17

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1715733-04D	Plastic 500ml HNO3 preserved	B	<2	3.8	Y	Absent	CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1715733-05A	Vial HCl preserved	B	N/A	3.8	Y	Absent	HOLD-8260(14)
L1715733-05B	Vial HCl preserved	B	N/A	3.8	Y	Absent	HOLD-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	IMLD	**Lab Number:**	L1715733
Project Number:	061.01184	**Report Date:**	05/22/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: DU Report with 'J' Qualifiers

Project Name:	IMLD	**Lab Number:**	L1715733
Project Number:	061.01184	**Report Date:**	05/22/17

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	IMLD	**Lab Number:**	L1715733
Project Number:	061.01184	**Report Date:**	05/22/17

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

107 Alpha Analytical - In-house calculation method.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL
World Class Chemistry
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 5/15/17

ALPHA Job #: L1715733

Client Information

Client: Ransom Consulting, Inc.
Address: 12 Kent Way, Suite 100, Byfield, MA 01922
Phone: 978-465-1822
Email: NMarshall@ransomenv.com

Project Information

Project Name: IMLD
Project Location: Ipswich, MA
Project #: 0610184
Project Manager: Nancy Marshall
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #: 10046

Regulatory Requirements & Project Information Requirements

☒ Yes ☒ No MA MCP Analytical Methods ☐ Yes ☒ No CT RCP Analytical Methods
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)
☒ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

NOI Parameter Group A Inorganics (13 metals)
CC: Christopher.Vezie@ransomenv.com

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☒ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Total Metals	Nitrate	Ammonia	Sample Comments	TOTAL # BOTTLES
15733-01	Influent Water	5/15/17	9:20	I	CMV	X								X	X			5
02	Treatment System Discharge	5/15/17	9:25	E	CMV	X								X				4
03	Cooling Pond Discharge	5/15/17	9:40	SW	CMV									X	X			2
04	Receiving Water	5/15/17	9:55	I	CMV									X	X	X		3

SAMPLE INFO
Filtration ☐ Field ☐ Lab to do
Preservation ☐ Lab to do

Container Type	V			P P P
Preservative	B			C A D

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
	5/15/17 3:20	AAL	5/15/17 13:20
AAL	5/15/17 16:55		5/15/17 16:55

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 5/15/17

ALPHA Job #: L1715733

ALPHA ANALYTICAL
World Class Chemistry
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: Ransom Consulting, Inc.
Address: 12 Kent Way, Suite 100, Byfield, MA 01922
Phone: 978-465-1822
Email: NMarshall@ransomenv.com

Project Information

Project Name: IMLD
Project Location: Ipswich, MA
Project #: 0610184
Project Manager: Nancy Marshall
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #: 10046

Regulatory Requirements & Project Information Requirements

☒ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☒ No CT RCP Analytical Methods
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)
☒ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

NOI Parameter Group A Inorganics (13 metals)
CC: Christopher.Vezie@ransomenv.com

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☒ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Total Metals	Nitrate	Ammonia	Sample Comments	TOTAL # BOTTLES
15733-01	Influent Water	5/15/17	9:20	I	CMV	X								X	X			5
02	Treatment System Discharge	5/15/17	9:25	E	CMV	X								X				4
03	Cooling Pond Discharge	5/15/17	9:40	SW	CMV									X	X			2
04	Receiving Water	5/15/17	9:55	I	CMV									X	X	X		3

SAMPLE INFO
Filtration ☐ Field ☐ Lab to do
Preservation ☐ Lab to do

Container Type	V			P P P
Preservative	B			C A D

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
	5/15/17 3:20	AAL	5/15/17 13:20
AAL	5/15/17 16:55		5/15/17 16:55

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

ATTACHMENT D

Influent Chemical Analysis Results
Fuels and Volatile and Semi-Volatile Organic Compounds
(Analytical Report No. L1718671)

Transmittal of Notice of Intent
2017 Remediation General Permit
MAG 910000
Ipswich Power Plant
276 High Street
Ipswich, Massachusetts

ANALYTICAL REPORT

Lab Number:	L1718671
Client:	Ransom Consulting, Inc. 12 Kent Way Suite 100 Byfield, MA 01922-1221
ATTN:	Nancy Marshall
Phone:	(978) 465-1822
Project Name:	IPSWICH POWER PLANT
Project Number:	061.01184
Report Date:	06/16/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184

Lab Number: L1718671
Report Date: 06/16/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1718671-01	INFLUENT-W1-060617	WATER	IPSWICH, MA	06/06/17 09:50	06/06/17
L1718671-02	EFFLUENT-W1-060617	WATER	IPSWICH, MA	06/06/17 10:05	06/06/17
L1718671-03	TRIP BLANK	WATER	IPSWICH, MA	06/06/17 00:00	06/06/17

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	IPSWICH POWER PLANT	**Lab Number:**	L1718671
Project Number:	061.01184	**Report Date:**	06/16/17

Case Narrative (continued)

Report Submission

This final report replaces the partial report issued June 13, 2017, and includes the results of all requested analyses.

The analysis of Ethanol was subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Sample Receipt

A Trip Blank was received in the laboratory, but not listed on the Chain of Custody, and was not analyzed. The analyses performed were specified by the client.

Chloride

The EFFLUENT-W1-060617 (L1718671-02) result is greater than the INFLUENT-W1-060617 (L1718671-01) result. The sample containers were verified as being labeled correctly by the laboratory

Chlorine, Total Residual

WG1010506: A matrix spike could not be performed due to insufficient sample volume available for analysis.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Kelly Stenstrom

Title: Technical Director/Representative Date: 06/16/17

ORGANICS

VOLATILES

Project Name: IPSWICH POWER PLANT
Lab Number: L1718671
Project Number: 061.01184
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-01
Client ID: INFLUENT-W1-060617
Sample Location: IPSWICH, MA

Date Collected: 06/06/17 09:50
Date Received: 06/06/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/09/17 12:57
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	--	1
1,1-Dichloroethane	ND		ug/l	0.75	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.75	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.75	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	2.5	--	1
1,3-Dichlorobenzene	ND		ug/l	2.5	--	1
1,4-Dichlorobenzene	ND		ug/l	2.5	--	1
Methyl tert butyl ether	ND		ug/l	1.0	--	1
p/m-Xylene	ND		ug/l	1.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Acetone	ND		ug/l	5.0	--	1
Tert-Butyl Alcohol	ND		ug/l	10	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1

Project Name: IPSWICH POWER PLANT
Lab Number: L1718671
Project Number: 061.01184
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-01
Client ID: INFLUENT-W1-060617
Sample Location: IPSWICH, MA
Date Collected: 06/06/17 09:50
Date Received: 06/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Volatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	89		70-130
Dibromofluoromethane	95		70-130

Project Name: IPSWICH POWER PLANT
Lab Number: L1718671
Project Number: 061.01184
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-01
Client ID: INFLUENT-W1-060617
Sample Location: IPSWICH, MA

Date Collected: 06/06/17 09:50
Date Received: 06/06/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C-SIM(M)
Analytical Date: 06/09/17 12:57
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	3.0	--	1

Project Name: IPSWICH POWER PLANT
Lab Number: L1718671
Project Number: 061.01184
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-01
Client ID: INFLUENT-W1-060617
Sample Location: IPSWICH, MA

Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 06/12/17 17:37
Analyst: NS

Date Collected: 06/06/17 09:50
Date Received: 06/06/17
Field Prep: Not Specified
Extraction Method: EPA 504.1
Extraction Date: 06/12/17 15:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	A

Project Name: IPSWICH POWER PLANT
Lab Number: L1718671
Project Number: 061.01184
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-02
Client ID: EFFLUENT-W1-060617
Sample Location: IPSWICH, MA

Date Collected: 06/06/17 10:05
Date Received: 06/06/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/13/17 00:08
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethene	ND		ug/l	0.50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	101		70-130

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C-SIM(M)
Analytical Date: 06/09/17 07:54
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1012062-5					
1,4-Dioxane	ND		ug/l	3.0	--

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/09/17 07:54
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1012069-5					
Methylene chloride	ND		ug/l	3.0	--
1,1-Dichloroethane	ND		ug/l	0.75	--
Carbon tetrachloride	ND		ug/l	0.50	--
1,1,2-Trichloroethane	ND		ug/l	0.75	--
Tetrachloroethene	ND		ug/l	0.50	--
1,2-Dichloroethane	ND		ug/l	0.50	--
1,1,1-Trichloroethane	ND		ug/l	0.50	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	0.75	--
Ethylbenzene	ND		ug/l	0.50	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	0.50	--
Trichloroethene	ND		ug/l	0.50	--
1,2-Dichlorobenzene	ND		ug/l	2.5	--
1,3-Dichlorobenzene	ND		ug/l	2.5	--
1,4-Dichlorobenzene	ND		ug/l	2.5	--
Methyl tert butyl ether	ND		ug/l	1.0	--
p/m-Xylene	ND		ug/l	1.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	0.50	--
Acetone	ND		ug/l	5.0	--
Tert-Butyl Alcohol	ND		ug/l	10	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/09/17 07:54
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1012069-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	91		70-130

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 06/12/17 16:49
Analyst: NS

Extraction Method: EPA 504.1
Extraction Date: 06/12/17 15:03

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1012290-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	A

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/12/17 22:14
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1012585-5					
1,1-Dichloroethene	ND		ug/l	0.50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	101		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1012062-3 WG1012062-4								
1,4-Dioxane	94		94		70-130	0		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1012069-3 WG1012069-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	100		110		70-130	10		20
Carbon tetrachloride	99		98		63-132	1		20
1,1,2-Trichloroethane	110		100		70-130	10		20
Tetrachloroethene	99		95		70-130	4		20
1,2-Dichloroethane	100		110		70-130	10		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Benzene	100		100		70-130	0		25
Toluene	100		100		70-130	0		25
Ethylbenzene	110		100		70-130	10		20
Vinyl chloride	100		100		55-140	0		20
1,1-Dichloroethene	100		110		61-145	10		25
Trichloroethene	99		100		70-130	1		25
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	98		94		70-130	4		20
1,4-Dichlorobenzene	100		99		70-130	1		20
Methyl tert butyl ether	120		120		63-130	0		20
p/m-Xylene	120		115		70-130	4		20
o-Xylene	110		105		70-130	5		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Acetone	130		130		58-148	0		20
Tert-Butyl Alcohol	130		**140**	Q	70-130	7		20
Tertiary-Amyl Methyl Ether	120		120		66-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1012069-3 WG1012069-4

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	91		92		70-130
Toluene-d8	106		98		70-130
4-Bromofluorobenzene	105		102		70-130
Dibromofluoromethane	98		96		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab Associated sample(s): 01 Batch: WG1012290-2									
1,2-Dibromoethane	75		-		70-130	-			A
1,2-Dibromo-3-chloropropane	74		-		70-130	-			A

Lab Control Sample Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1012585-3 WG1012585-4								
1,1-Dichloroethene	95		91		61-145	4		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		100		70-130
Toluene-d8	98		98		70-130
4-Bromofluorobenzene	98		99		70-130
Dibromofluoromethane	101		101		70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG1012290-3		QC Sample: L1718671-01		Client ID: INFLUENT-W1-060617							
1,2-Dibromoethane	ND	0.262	0.244	93		-	-		65-135	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.262	0.234	89		-	-		65-135	-		20	A

SEMIVOLATILES

Project Name: IPSWICH POWER PLANT
Lab Number: L1718671
Project Number: 061.01184
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-01
Client ID: INFLUENT-W1-060617
Sample Location: IPSWICH, MA

Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 06/11/17 10:33
Analyst: PS

Date Collected: 06/06/17 09:50
Date Received: 06/06/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 06/08/17 16:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	--	1
Butyl benzyl phthalate	ND		ug/l	5.0	--	1
Di-n-butylphthalate	ND		ug/l	5.0	--	1
Di-n-octylphthalate	ND		ug/l	5.0	--	1
Diethyl phthalate	ND		ug/l	5.0	--	1
Dimethyl phthalate	ND		ug/l	5.0	--	1
Phenol	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	28		10-120
Nitrobenzene-d5	67		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	70		41-149

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-01
Client ID: INFLUENT-W1-060617
Sample Location: IPSWICH, MA

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 06/09/17 19:25
Analyst: KL

Date Collected: 06/06/17 09:50
Date Received: 06/06/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 06/08/17 17:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.12		ug/l	0.10	--	1
Fluoranthene	ND		ug/l	0.10	--	1
Naphthalene	0.16		ug/l	0.10	--	1
Benzo(a)anthracene	ND		ug/l	0.10	--	1
Benzo(a)pyrene	ND		ug/l	0.10	--	1
Benzo(b)fluoranthene	ND		ug/l	0.10	--	1
Benzo(k)fluoranthene	ND		ug/l	0.10	--	1
Chrysene	ND		ug/l	0.10	--	1
Acenaphthylene	ND		ug/l	0.10	--	1
Anthracene	ND		ug/l	0.10	--	1
Benzo(ghi)perylene	ND		ug/l	0.10	--	1
Fluorene	0.15		ug/l	0.10	--	1
Phenanthrene	ND		ug/l	0.10	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--	1
Pyrene	ND		ug/l	0.10	--	1
Pentachlorophenol	ND		ug/l	0.80	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	26		21-120
Phenol-d6	20		10-120
Nitrobenzene-d5	56		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	61		10-120
4-Terphenyl-d14	51		41-149

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 06/10/17 02:03
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/08/17 16:45

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1011236-1					
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	--
Butyl benzyl phthalate	ND		ug/l	5.0	--
Di-n-butylphthalate	ND		ug/l	5.0	--
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--
Phenol	ND		ug/l	5.0	--
Tentatively Identified Compounds					
No Tentatively Identified Compounds	ND		ug/l		

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		21-120
Phenol-d6	34		10-120
Nitrobenzene-d5	77		23-120
2-Fluorobiphenyl	70		15-120
2,4,6-Tribromophenol	61		10-120
4-Terphenyl-d14	70		41-149

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 06/10/17 13:28
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 06/08/17 17:52

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1011278-1					
Acenaphthene	ND		ug/l	0.10	--
Fluoranthene	ND		ug/l	0.10	--
Naphthalene	ND		ug/l	0.10	--
Benzo(a)anthracene	ND		ug/l	0.10	--
Benzo(a)pyrene	ND		ug/l	0.10	--
Benzo(b)fluoranthene	ND		ug/l	0.10	--
Benzo(k)fluoranthene	ND		ug/l	0.10	--
Chrysene	ND		ug/l	0.10	--
Acenaphthylene	ND		ug/l	0.10	--
Anthracene	ND		ug/l	0.10	--
Benzo(ghi)perylene	ND		ug/l	0.10	--
Fluorene	ND		ug/l	0.10	--
Phenanthrene	ND		ug/l	0.10	--
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--
Pyrene	ND		ug/l	0.10	--
Pentachlorophenol	ND		ug/l	0.80	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		21-120
Phenol-d6	24		10-120
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	59		15-120
2,4,6-Tribromophenol	56		10-120
4-Terphenyl-d14	53		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1011236-2 WG1011236-3								
Bis(2-ethylhexyl)phthalate	118		135		40-140	13		30
Butyl benzyl phthalate	103		115		40-140	11		30
Di-n-butylphthalate	106		121		40-140	13		30
Di-n-octylphthalate	113		130		40-140	14		30
Diethyl phthalate	88		98		40-140	11		30
Dimethyl phthalate	81		91		40-140	12		30
Phenol	42		43		12-110	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	51		49		21-120
Phenol-d6	34		34		10-120
Nitrobenzene-d5	73		74		23-120
2-Fluorobiphenyl	65		68		15-120
2,4,6-Tribromophenol	61		67		10-120
4-Terphenyl-d14	64		71		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1011278-2 WG1011278-3								
Acenaphthene	50		50		37-111	0		40
Fluoranthene	52		52		40-140	0		40
Naphthalene	51		52		40-140	2		40
Benzo(a)anthracene	51		50		40-140	2		40
Benzo(a)pyrene	52		51		40-140	2		40
Benzo(b)fluoranthene	51		50		40-140	2		40
Benzo(k)fluoranthene	49		49		40-140	0		40
Chrysene	47		46		40-140	2		40
Acenaphthylene	61		62		40-140	2		40
Anthracene	51		50		40-140	2		40
Benzo(ghi)perylene	48		48		40-140	0		40
Fluorene	54		53		40-140	2		40
Phenanthrene	46		46		40-140	0		40
Dibenzo(a,h)anthracene	50		49		40-140	2		40
Indeno(1,2,3-cd)pyrene	52		51		40-140	2		40
Pyrene	52		51		26-127	2		40
Pentachlorophenol	52		50		9-103	4		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1011278-2 WG1011278-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	33		35		21-120
Phenol-d6	23		25		10-120
Nitrobenzene-d5	56		59		23-120
2-Fluorobiphenyl	56		59		15-120
2,4,6-Tribromophenol	52		52		10-120
4-Terphenyl-d14	51		52		41-149

PCBS

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-01
Client ID: INFLUENT-W1-060617
Sample Location: IPSWICH, MA

Matrix: Water
Analytical Method: 5,608
Analytical Date: 06/08/17 19:07
Analyst: JW

Date Collected: 06/06/17 09:50
Date Received: 06/06/17
Field Prep: Not Specified
Extraction Method: EPA 608
Extraction Date: 06/08/17 00:45
Cleanup Method: EPA 3665A
Cleanup Date: 06/08/17
Cleanup Method: EPA 3660B
Cleanup Date: 06/08/17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	--	1	B
Aroclor 1221	ND		ug/l	0.250	--	1	B
Aroclor 1232	ND		ug/l	0.250	--	1	B
Aroclor 1242	ND		ug/l	0.250	--	1	B
Aroclor 1248	ND		ug/l	0.250	--	1	B
Aroclor 1254	ND		ug/l	0.250	--	1	B
Aroclor 1260	ND		ug/l	0.200	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	58		30-150	B

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 5,608
Analytical Date: 06/08/17 19:19
Analyst: HT

Extraction Method: EPA 608
Extraction Date: 06/08/17 00:45
Cleanup Method: EPA 3665A
Cleanup Date: 06/08/17
Cleanup Method: EPA 3660B
Cleanup Date: 06/08/17

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1010921-1						
Aroclor 1016	ND		ug/l	0.250	--	B
Aroclor 1221	ND		ug/l	0.250	--	B
Aroclor 1232	ND		ug/l	0.250	--	B
Aroclor 1242	ND		ug/l	0.250	--	B
Aroclor 1248	ND		ug/l	0.250	--	B
Aroclor 1254	ND		ug/l	0.250	--	B
Aroclor 1260	ND		ug/l	0.200	--	B

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	53		30-150	B
Decachlorobiphenyl	72		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1010921-2									
Aroclor 1016	84		-		30-150	-		30	B
Aroclor 1260	78		-		30-150	-		30	B

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55				30-150	B
Decachlorobiphenyl	68				30-150	B

Matrix Spike Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1010921-3 QC Sample: L1718179-01 Client ID: MS Sample													
Aroclor 1016	ND	3.12	2.55	82		-	-		40-126	-		30	B
Aroclor 1260	ND	3.12	2.25	72		-	-		40-127	-		30	B

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63				30-150	B
Decachlorobiphenyl	58				30-150	B

Lab Duplicate Analysis
Batch Quality Control

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184

Lab Number: L1718671
Report Date: 06/16/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1010921-4 QC Sample: L1718183-01 Client ID: DUP Sample							
Aroclor 1016	ND	ND	ug/l	NC		30	B
Aroclor 1221	ND	ND	ug/l	NC		30	B
Aroclor 1232	ND	ND	ug/l	NC		30	B
Aroclor 1242	ND	ND	ug/l	NC		30	B
Aroclor 1248	ND	ND	ug/l	NC		30	B
Aroclor 1254	ND	ND	ug/l	NC		30	B
Aroclor 1260	ND	ND	ug/l	NC		30	B

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		56		30-150	B
Decachlorobiphenyl	54		49		30-150	B

METALS

Project Name: IPSWICH POWER PLANT
Lab Number: L1718671
Project Number: 061.01184
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-01
Client ID: INFLUENT-W1-060617
Sample Location: IPSWICH, MA
Matrix: Water

Date Collected: 06/06/17 09:50
Date Received: 06/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	0.00412		mg/l	0.00100	--	1	06/07/17 11:30	06/08/17 16:18	EPA 3005A	3,200.8	BV
Copper, Total	0.05696		mg/l	0.00100	--	1	06/07/17 11:30	06/08/17 16:18	EPA 3005A	3,200.8	BV
Iron, Total	2.67		mg/l	0.050	--	1	06/07/17 11:30	06/12/17 23:58	EPA 3005A	19,200.7	AB
Lead, Total	0.00690		mg/l	0.00100	--	1	06/07/17 11:30	06/08/17 16:18	EPA 3005A	3,200.8	BV
Zinc, Total	0.02317		mg/l	0.01000	--	1	06/07/17 11:30	06/08/17 16:18	EPA 3005A	3,200.8	BV

Project Name: IPSWICH POWER PLANT
Lab Number: L1718671
Project Number: 061.01184
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-02
Client ID: EFFLUENT-W1-060617
Sample Location: IPSWICH, MA
Matrix: Water

Date Collected: 06/06/17 10:05
Date Received: 06/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Copper, Total	0.02140		mg/l	0.00100	--	1	06/07/17 11:30	06/08/17 16:15	EPA 3005A	3,200.8	BV
Iron, Total	1.54		mg/l	0.050	--	1	06/07/17 11:30	06/13/17 00:02	EPA 3005A	19,200.7	AB
Lead, Total	0.00225		mg/l	0.00100	--	1	06/07/17 11:30	06/08/17 16:15	EPA 3005A	3,200.8	BV
Zinc, Total	0.05078		mg/l	0.01000	--	1	06/07/17 11:30	06/08/17 16:15	EPA 3005A	3,200.8	BV

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1010673-1										
Arsenic, Total	ND		mg/l	0.00100	--	1	06/07/17 11:30	06/08/17 14:00	3,200.8	BV
Copper, Total	ND		mg/l	0.00100	--	1	06/07/17 11:30	06/08/17 14:00	3,200.8	BV
Lead, Total	ND		mg/l	0.00100	--	1	06/07/17 11:30	06/08/17 14:00	3,200.8	BV
Zinc, Total	ND		mg/l	0.01000	--	1	06/07/17 11:30	06/08/17 14:00	3,200.8	BV

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1010677-1										
Iron, Total	ND		mg/l	0.050	--	1	06/07/17 11:30	06/12/17 22:57	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1010673-2								
Arsenic, Total	98		-		85-115	-		
Copper, Total	98		-		85-115	-		
Lead, Total	100		-		85-115	-		
Zinc, Total	94		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1010677-2								
Iron, Total	106		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1010673-3 QC Sample: L1718534-01 Client ID: MS Sample												
Arsenic, Total	ND	0.12	0.1119	93		-	-		70-130	-		20
Copper, Total	0.3490	0.25	0.5548	82		-	-		70-130	-		20
Lead, Total	0.0017	0.51	0.5100	100		-	-		70-130	-		20
Zinc, Total	0.0124	0.5	0.4452	86		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1010677-3 QC Sample: L1718534-01 Client ID: MS Sample												
Iron, Total	ND	1	1.05	105		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184

Lab Number: L1718671
Report Date: 06/16/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1010673-4 QC Sample: L1718534-01 Client ID: DUP Sample						
Copper, Total	0.3490	0.3359	mg/l	4		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1010677-4 QC Sample: L1718534-01 Client ID: DUP Sample						
Iron, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-01
Client ID: INFLUENT-W1-060617
Sample Location: IPSWICH, MA
Matrix: Water
Date Collected: 06/06/17 09:50
Date Received: 06/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	93.		mg/l	5.0	NA	1	-	06/07/17 04:40	121,2540D	VB
Cyanide, Total	0.005		mg/l	0.005	--	1	06/08/17 10:50	06/09/17 12:51	121,4500CN-CE	LK
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	06/07/17 00:09	121,4500CL-D	AS
Nitrogen, Ammonia	0.437		mg/l	0.375	--	5	06/07/17 12:54	06/08/17 22:44	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	06/09/17 09:55	06/09/17 20:00	74,1664A	ML
Anions by Ion Chromatography - Westborough Lab										
Chloride	53.0		mg/l	12.5	--	25	-	06/06/17 22:20	44,300.0	AU

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

SAMPLE RESULTS

Lab ID: L1718671-02
Client ID: EFFLUENT-W1-060617
Sample Location: IPSWICH, MA
Matrix: Water

Date Collected: 06/06/17 10:05
Date Received: 06/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Anions by Ion Chromatography - Westborough Lab										
Chloride	63.2		mg/l	12.5	--	25	-	06/06/17 22:32	44,300.0	AU

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184
Lab Number: L1718671
Report Date: 06/16/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02 Batch: WG1010505-1										
Chloride	ND		mg/l	0.500	--	1	-	06/06/17 17:33	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1010506-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	06/07/17 00:09	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1010526-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	06/07/17 04:40	121,2540D	VB
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1010683-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	06/07/17 12:54	06/08/17 22:40	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1011049-1										
Cyanide, Total	ND		mg/l	0.005	--	1	06/08/17 10:50	06/09/17 12:32	121,4500CN-CE	LK
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1011524-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	06/09/17 09:55	06/09/17 20:00	74,1664A	ML

Lab Control Sample Analysis

Batch Quality Control

Project Name: IPSWICH POWER PLANT

Project Number: 061.01184

Lab Number: L1718671

Report Date: 06/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 Batch: WG1010505-2								
Chloride	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1010506-2								
Chlorine, Total Residual	109		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1010683-2								
Nitrogen, Ammonia	98		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1011049-2								
Cyanide, Total	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1011524-2								
TPH	78		-		64-132	-		34

Matrix Spike Analysis
Batch Quality Control

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184

Lab Number: L1718671
Report Date: 06/16/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1010505-3 QC Sample: L1718534-01 Client ID: MS Sample												
Chloride	13.5	4	17.1	90		-	-		90-110	-		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1010683-4 QC Sample: L1718648-02 Client ID: MS Sample												
Nitrogen, Ammonia	0.928	4	4.66	93		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1011049-4 QC Sample: L1718588-01 Client ID: MS Sample												
Cyanide, Total	0.008	0.2	0.198	95		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1011524-4 QC Sample: L1718631-02 Client ID: MS Sample												
TPH	ND	20	17.6	88		-	-		64-132	-		34

Lab Duplicate Analysis
Batch Quality Control

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184

Lab Number: L1718671
Report Date: 06/16/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1010505-4 QC Sample: L1718534-01 Client ID: DUP Sample						
Chloride	13.5	13.5	mg/l	0		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1010506-3 QC Sample: L1718671-01 Client ID: INFLUENT-W1-060617						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1010526-2 QC Sample: L1718574-04 Client ID: DUP Sample						
Solids, Total Suspended	70	76	mg/l	8		29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1010683-3 QC Sample: L1718648-02 Client ID: DUP Sample						
Nitrogen, Ammonia	0.928	0.942	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1011049-3 QC Sample: L1718588-01 Client ID: DUP Sample						
Cyanide, Total	0.008	0.008	mg/l	5		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1011524-3 QC Sample: L1718631-01 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184

Lab Number: L1718671
Report Date: 06/16/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1718671-01A	Vial HCl preserved	A	N/A	N/A	4.6	Y	Absent		8260-SIM(14),8260(14)
L1718671-01B	Vial HCl preserved	A	N/A	N/A	4.6	Y	Absent		8260-SIM(14),8260(14)
L1718671-01C	Vial HCl preserved	A	N/A	N/A	4.6	Y	Absent		8260-SIM(14),8260(14)
L1718671-01D	Vial Na2S2O3 preserved	A	N/A	N/A	4.6	Y	Absent		504(14)
L1718671-01E	Vial Na2S2O3 preserved	A	N/A	N/A	4.6	Y	Absent		504(14)
L1718671-01F	Vial HCl preserved	A	N/A	N/A	4.6	Y	Absent		SUB-ETHANOL(14)
L1718671-01G	Vial HCl preserved	A	N/A	N/A	4.6	Y	Absent		SUB-ETHANOL(14)
L1718671-01H	Vial HCl preserved	A	N/A	N/A	4.6	Y	Absent		SUB-ETHANOL(14)
L1718671-01I	Plastic 60ml unpreserved	A	7	7	4.6	Y	Absent		CL-300(28)
L1718671-01J	Plastic 500ml unpreserved	A	7	7	4.6	Y	Absent		TRC-4500(1)
L1718671-01K	Plastic 950ml unpreserved	A	7	7	4.6	Y	Absent		TSS-2540(7)
L1718671-01L	Plastic 250ml HNO3 preserved	A	<2	<2	4.6	Y	Absent		FE-UI(180)
L1718671-01M	Plastic 500ml NaOH preserved	A	7	>12	4.6	N	Absent		TCN-4500(14)
L1718671-01N	Plastic 500ml H2SO4 preserved	A	7	<2	4.6	N	Absent		NH3-4500(28)
L1718671-01O	Amber 1000ml unpreserved	A	7	7	4.6	Y	Absent		8270TCL(7)
L1718671-01P	Amber 1000ml unpreserved	A	7	7	4.6	Y	Absent		8270TCL(7)
L1718671-01Q	Amber 1000ml Na2S2O3	A	7	7	4.6	Y	Absent		PCB-608(7)
L1718671-01R	Amber 1000ml Na2S2O3	A	7	7	4.6	Y	Absent		PCB-608(7)
L1718671-01S	Amber 1000ml HCl preserved	A	<2	<2	4.6	Y	Absent		TPH-1664(28)
L1718671-01T	Amber 1000ml HCl preserved	A	<2	<2	4.6	Y	Absent		TPH-1664(28)
L1718671-02A	Vial HCl preserved	A	N/A	N/A	4.6	Y	Absent		8260(14)
L1718671-02B	Vial HCl preserved	A	N/A	N/A	4.6	Y	Absent		8260(14)
L1718671-02C	Vial HCl preserved	A	N/A	N/A	4.6	Y	Absent		8260(14)

*Values in parentheses indicate holding time in days

Project Name: IPSWICH POWER PLANT
Project Number: 061.01184

Lab Number: L1718671
Report Date: 06/16/17

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1718671-02D	Plastic 60ml unpreserved	A	7	7	4.6	Y	Absent		CL-300(28)
L1718671-02E	Plastic 250ml HNO3 preserved	A	<2	<2	4.6	Y	Absent		ZN-2008T(180),CU-2008T(180),FE-UI(180),PB-2008T(180)
L1718671-03A	Vial HCl preserved	A	N/A	N/A	4.6	Y	Absent		HOLD-8260(14)
L1718671-03B	Vial HCl preserved	A	N/A	N/A	4.6	Y	Absent		HOLD-8260(14)
L1718671-03C	Vial Na2S2O3 preserved	A	N/A	N/A	4.6	Y	Absent		HOLD-504/8011(14)
L1718671-03D	Vial Na2S2O3 preserved	A	N/A	N/A	4.6	Y	Absent		HOLD-504/8011(14)

*Values in parentheses indicate holding time in days

Project Name:	IPSWICH POWER PLANT	**Lab Number:**	L1718671
Project Number:	061.01184	**Report Date:**	06/16/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

Report Format: Data Usability Report

Project Name:	IPSWICH POWER PLANT	**Lab Number:**	L1718671
Project Number:	061.01184	**Report Date:**	06/16/17

Data Qualifiers

projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	IPSWICH POWER PLANT	**Lab Number:**	L1718671
Project Number:	061.01184	**Report Date:**	06/16/17

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

5 Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).

14 Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water. EPA/600/4-88/039, Revised July 1991.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

74 Method 1664,Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 6/6/17

ALPHA Job #: L1718671

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: Ransom Consulting Inc
Address: 12 Kent Way #100, Byfield, MA 01922
Phone: 978-465-1822
Email: Nmarshall@ransomenv.com

Project Information

Project Name: Ipswich power plant
Project Location: Ipswich, MA
Project #: 061.0184
Project Manager: Nancy Marshall
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #: 10119

Regulatory Requirements & Project Information Requirements

☐ Yes ☒ No MA MCP Analytical Methods
☐ Yes ☒ No CT RCP Analytical Methods
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)
☒ Yes ☐ No NPDES RGP
☒ Other State /Fed Program U.S EPA Criteria

Additional Project Information:
Ammonia Nitrogen - preserve in lab H2SO4
Cyanide - preserve in lab NaOH
1,1-DCE only on 8260

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☒ 8260 ☐ 624	SVOC: ☐ 524.2 SIM ☒ ABN ☐ PAH 625 TLC	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☒ PCB ☐ PEST 608	TPH: ☐ Quant Only ☐ Fingerprint 1664	Total As, Cu, Fe, Pb, Zn	Ammonia Nitrogen	Cyanide	TRC, CL / TSS / Cl	Ethanol	5014	SAMPLE INFO: Filtration ☐ Field ☐ Lab to do; Preservation ☒ Lab to do	Sample Comments	TOTAL # BOTTLES
18671 -01	Influent - WW-060617	6/6/17	9:50	I	CW	X	X					X	X	X	X	X	X	X	X		20
-02	Effluent - WW-060617	6/6/17	10:05	E	CW	X								X			X			No As on Eff → Test Cl on Eff	5

Container Type	V	A								A	A	P	A	A	P	V	V				
Preservative	B	A								H	B	C	A	A	A	B	H				

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature] ADEC	6/6/17 @ 13:40	[signature] ADEC	6-6-17 18:40
[signature] ADEC	6-6-17 17:40	[signature]	6/6/17 17:45

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

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Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Alpha Analytical, Inc.
145 Flanders Road
Westborough MA 01581

Report Date: June 15, 2017

Project: L1718671

Submittal Date: 06/08/2017
Group Number: 1810835
PO Number: L1718671
State of Sample Origin: MA

Client Sample Description	Lancaster Labs (LL) #
Influent-W1-060617 Water	9036601

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Alpha Analytical, Inc.	Attn: Melissa Gulli
Electronic Copy To	Alpha Analytical, Inc.	Attn: Sublab Contact

Respectfully Submitted,

Bonnie Stadelmann

Bonnie Stadelmann
Senior Project Manager

(312) 590-3133

eurofins | Lancaster Laboratories Environmental

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Analysis Report

REVISED

Sample Description: Influent-W1-060617 Water
L1718671

LL Sample # WW 9036601
LL Group # 1810835
Account # 09847

Project Name: L1718671

Collected: 06/06/2017 09:50

Submitted: 06/08/2017 09:35
Reported: 06/15/2017 16:49

Alpha Analytical, Inc.
145 Flanders Road
Westborough MA 01581

08671

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC Miscellaneous	**EPA 1671 Rev A**		ug/l	ug/l	
02366	ethanol	64-17-5	N.D.	2,000	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02366	EPA 1671 VOCs	EPA 1671 Rev A	1	171640025A	06/13/2017 23:37	Tyler O Griffin	1

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Analysis Report

REVISED

Quality Control Summary

Client Name: Alpha Analytical, Inc. Group Number: 1810835
Reported: 06/15/2017 16:49

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	LOQ
	ug/l	ug/l
Batch number: 171640025A	Sample number(s): 9036601	
ethanol	N.D.	2,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 171640025A	Sample number(s): 9036601								
ethanol	4000	4182.7	4000	4091.59	105	102	70-132	2	30

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 171640025A	Sample number(s): 9036601 UNSPK: P042119									
ethanol	N.D.	4000	3753.56	4000	3851.49	94	96	70-132	3	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA 1671 VOCs
Batch number: 171640025A

	Amyl Alcohol
9036601	103
Blank	102
LCS	106

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Analysis Report

REVISED

Quality Control Summary

Client Name: Alpha Analytical, Inc. Group Number: 1810835
Reported: 06/15/2017 16:49

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA 1671 VOCs
Batch number: 171640025A

	Amyl Alcohol
LCSD	105
MS	104
MSD	105
Limits:	52-144

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Serial_No:06161712:29

SUB UPS: Eurofins, Lancaster, PA

A: 9847 G: 1810835 S: 9036061

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193

Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: L1708671

Project Information

Project Name:

Project Location: MA

Project #:

Project Manager: Melissa Gulli

ALPHA Quote #:

Client Information

Client: Alpha Analytical Lab

Address: 8 Walkup Drive

Westborough, Ma 01581

Phone: 508-898-9220

Fax:

Email: mgulli@alphalab.com, subreports@alphalab.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

X Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: 06/21/17 Time:

Report Information Data Deliverables

☐ FAX X EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
MA	NPDES

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

Please reference Alpha Job #L1718671 on this report.-

ANALYSIS

SAMPLE HANDLING

Filtration

☐ Done

☐ Not Needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Ethanol- 1671	Sample Specific Comments	TOTAL # BOTTLES
	Influent-W1-060617	6/6/17	09:50	WW		X		3
Container Type						V		
Preservative						B		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

FORM NO: 01-01(I) (rev. 30-JUL-07)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	6/7/17 1700		
		[signature]	6/8/17 09:35

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

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Sample Administration Receipt Documentation Log

Doc Log ID: 185755

Group Number(s): 1810835

Client: Alpha Analytical

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	06/08/2017 8:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	MA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Conrad Burkholder (12671) at 13:12 on 06/08/2017

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	32170023	2.6	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

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F | 717-656-2681
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Explanation of Symbols and Abbreviations

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

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	none detected
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

< 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.

Laboratory Data Qualifiers:

C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
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.
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.

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 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.

ATTACHMENT E

USFWS Consultation

Transmittal of Notice of Intent
2017 Remediation General Permit
MAG 910000
Ipswich Power Plant
276 High Street
Ipswich, Massachusetts

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
http://www.fws.gov/newengland

January 20, 2017

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm (accessed January 2017)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Maria Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

Christine Touchette

From: David Simmons <David_Simmons@fws.gov>
Sent: Friday, June 16, 2017 1:16 PM
To: Nancy Marshall; Heather E. Dudley-Tatman
Subject: Ipswich Power Plant, Bradford & Bigelow; projects 061.01184.006, 991.01001

Hello Ms. Marshall and Ms. Dudley-Tatman,

We are in receipt of your letters regarding activities at the Ipswich Power Plant in Ipswich, Massachusetts, and the Bradford and Bigelow property in Newburyport, Massachusetts. Thank you for contacting us about the potential for the northern long-eared bat or migratory birds to be affected by the proposed activities. If the extent of the projects is as described—pumping groundwater and dewatering an existing building basement, and discharging to existing waterways—and no tree cutting will occur, the projects are unlikely to have any effect on the northern long-eared bat or migratory birds. If this is the case, please print the "No Species Present" letter available at this link https://www.fws.gov/newengland/pdfs/2017_no_species_present_ltr.PDF, and include it with your application to EPA. To date, this letter has been sufficient to satisfy EPA's requirements for coordination with our office, provided there are no effects to the species listed in the IPaC report. Please let me know if you have any questions. Regards,

David

David Simmons
Endangered Species Program Supervisor
New England Fish and Wildlife Office
U.S. Fish and Wildlife Service
70 Commercial Street, Suite 300
Concord, New Hampshire 03301
603.227.6425

RANSOM
Consulting, Inc.

Consulting
Engineers
and Scientists

June 7, 2017

Project 061.01184.006

Supervisor
U.S. Fish and Wildlife Service
70 Commercial Street, Suite 300
Concord, New Hampshire 03301

Re: Endangered Species Consultation
Ipswich Utilities Electric Power Plant
276 High Street
Ipswich, Massachusetts

Dear Supervisor:

The Ipswich Municipal Light Department (IMLD) has contracted us to prepare a Notice of Intent (NOI) under the National Pollution Discharge Elimination System (NPDES) 2017 Remediation General Permit (RGP) for a discharge of water from a basement sump in the Ipswich Power Plant located at 276 High Street in Ipswich, Massachusetts (the Site). According to Part 1, Section 1.4 of the RGP, coverage under the permit is available only if the permittee can certify that the discharge will not adversely affect endangered or threatened species or critical habitat.

Therefore, on behalf of the IMLD, Ransom Consulting, Inc. (Ransom) is requesting a determination from your office regarding the potential impacts to listed species from continuation of an existing discharge from the Ipswich Power Plant. This discharge was permitted under two previous RGPs.

PROJECT DESCRIPTION

The Ipswich Power Plant is located between High Street (Route 1A) to the northeast, the Dow Brook Reservoir dam to the west, Dow Brook to the south, and the Egypt River to the southeast. The majority of the land located upland from the Power Plant is protected watershed for the Dow Brook and Bull Brook Reservoirs, and the majority of the area to the northeast along the Egypt River is wetlands designated as the Great Marsh Area of Critical Environmental Concern (ACEC) and a Natural Heritage and Endangered Species Program (NHESP) habitat. Ipswich municipal offices and residential properties are located along High Street and Paradise Road. A Site Location Map and a Site Area Plan are provided as Figures 1 and 2.

The Power Plant was originally constructed in 1903 with mortared stone and brick masonry basement walls. A manmade pond located on the southwest side of the Power Plant is used to cool the Power Plant engines when they operate (which is typically less than 10 days per year). The elevation of the basement floor of the Power Plant is several feet lower than the groundwater table elevation and groundwater seepage into the basement is a prevalent condition. Therefore, for several years the basement of the Power Plant has relied on a system of trenches and sump pumps to passively collect groundwater that

12 Kent Way, Suite 100, Byfield, Massachusetts 01922-1221, Tel (978) 465-1822, Fax (978) 465-2986
400 Commercial Street, Suite 404, Portland, Maine 04101, Tel (207) 772-2891
Pease International Tradeport, 112 Corporate Drive, Portsmouth, New Hampshire 03801, Tel (603) 436-1490
60 Valley Street, Building F, Suite 106, Providence, Rhode Island 02909, Tel (401) 433-2160
2127 Hamilton Avenue, Hamilton, New Jersey 08619, Tel (609) 584-0090

www.ransomenv.com

enters the basement, pass it through an oil/water separator, and discharge it outside of the Power Plant. This is the discharge proposed for permitting under the 2017 RGP. The discharged water will be pumped to the cooling pond, which intermittently discharges directly to the Egypt River. The proposed effluent sampling location is at the discharge from the cooling pond.

In May 2002, the Power Plant was identified as a Disposal Site under the Massachusetts Contingency Plan. During the initial site investigations, groundwater was discovered to have been impacted by oil and hazardous material (OHM). Therefore, beginning in May 2003, granular activated carbon (GAC) vessels were added to the basement groundwater collection system to provide treatment for volatile organic compounds (VOCs) prior to the discharge of groundwater. The entire collection/remedial treatment system currently consists of open trenches located throughout the basement floor of the Power Plant, six basement sumps, a sediment filter bag, two 200-gallon oil-water separators, a 55-gallon collection drum, and two 300-pound aqueous- phase carbon units connected in series.

Remedial response actions addressed soil and groundwater contamination at the Site, and the release at the Disposal Site was "closed" in accordance with the MCP in June 2012. Since that time, the groundwater discharge has included low concentrations of some metals, but petroleum hydrocarbons and VOCs have not been present above laboratory detection limits.

The flow volume through the treatment system for the past 6 months (i.e., from 12/20/16 through 6/6/17) was 291,975 gallons (i.e., average ~1,860 gallons per day), but the discharge volume from the cooling pond has not been measured. The pond naturally overflows to the Egypt River through an emergency overflow pipe when the pond level exceeds the design capacity as a result of precipitation and/or high groundwater levels. The portion of the Egypt River into which the discharge flows is created by the confluence of Dow Brook and Bull Brook. Note that the streambed is dry and no discharge occurs from the pond at certain times of the year under low water conditions.

SPECIES LISTS

Ransom accessed the U.S. Fish & Wildlife Service (FWS) Information for Planning and Consultation (IPaC) website. The project area is within the range of the threatened Northern Long-eared Bat, but there is no critical habitat within the project area. A copy of the *Official Species List* from IPaC is provided in Attachment A.

Nineteen Species of migratory birds and known wetland areas are present downstream from the project area. A copy of the list of *Federally Listed Endangered and Threatened Species in Massachusetts* from the local FWS office is also provided in Attachment A.

The Massachusetts Department of Environmental Protection (MA DEP) has designated the Egypt River to be an Outstanding Resource Water (ORW). According to Part 1, Section 1.3.1 of the RGP, discharges to ORW in Massachusetts are ineligible for coverage under the RGP unless an authorization is granted the by the MA DEP. Catherine Vakalopoulos of the MA DEP Central Office is currently preparing a tentative determination to approve this discharge.

Supervisor
U.S. Fish and Wildlife Service

If you need additional information to respond to this request, please contact me as soon as possible at 978-465-1822 or via email at nmarshall@ransomenv.com.

Sincerely,

Nancy E. Marshall
Nancy Marshall
2017.06.07 16:53:18 -04'00'

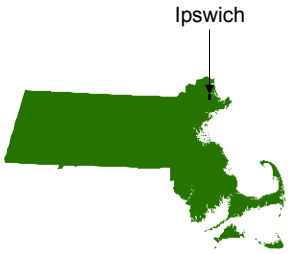
Nancy E. Marshall, P.E.
Project Manager

NEM:cnt
Attachments

cc: Jon Blair, Electric Operations Manager, Ipswich Utilities Department (jblair@ipswichutilities.org)
Catherine Vakalopoulos, MA DEP (Catherine.Vakalopoulos@MassMail.State.MA.US)

RANSOM
Consulting Engineers and Scientists

Regional Locator Map



Notes

1. Data Source: USGS National Map Seamless Server, 24K DRG, 1/3" NED
2. USGS Quad Name: Ipswich
3. Latitude: 42° 41' 55" N
   Longitude: 70° 52' 12" W
   UTM Northing: 4728819 mN
   UTM Easting: 346831 mE

Scale and Orientation

0 1,000 2,000

1 inch = 2,000 feet

Prepared For

Ipswich Municipal Light Department
272 High Street
Ipswich, Massachusetts

Site Address

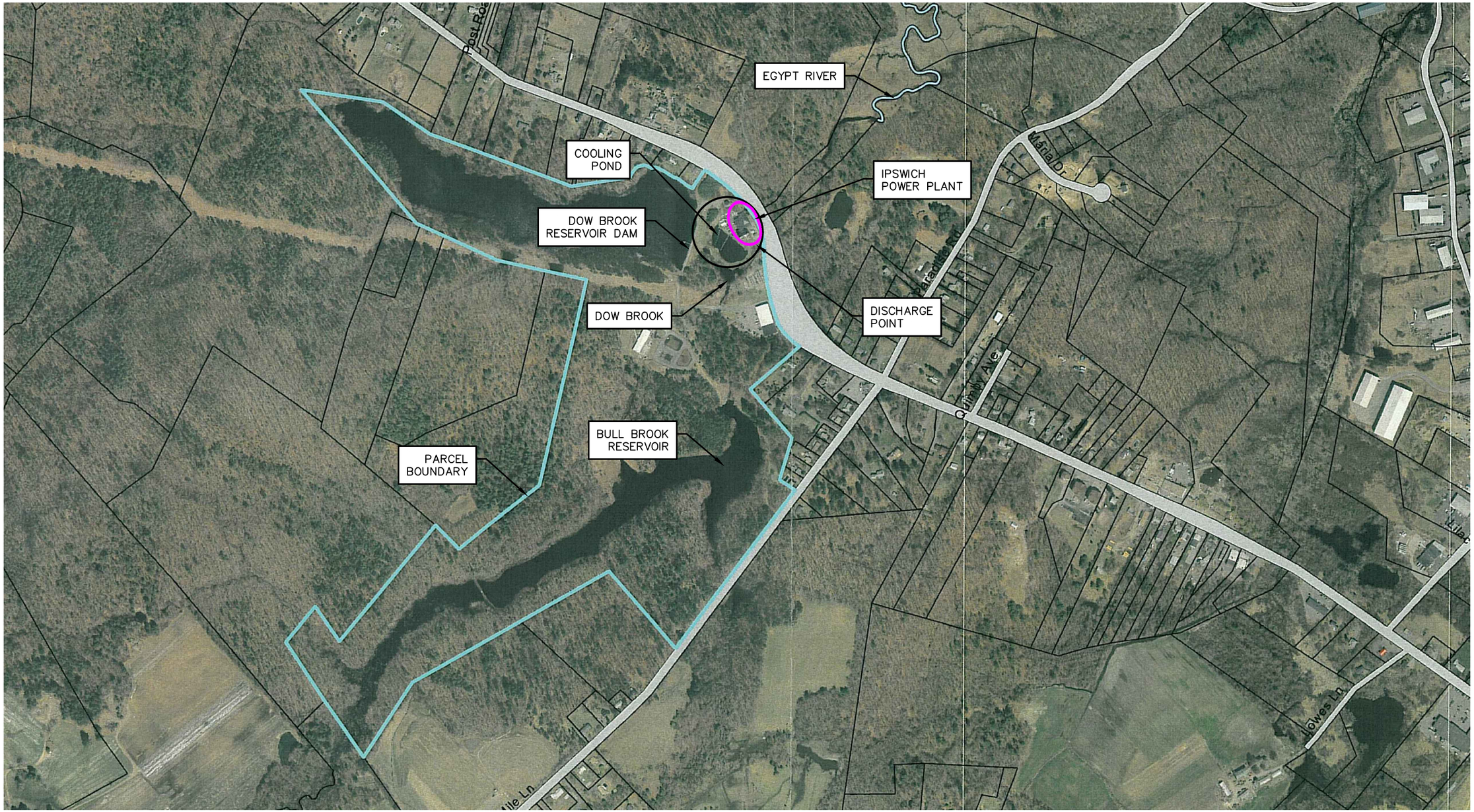
Ipswich Power Plant
276 High Street
Ipswich, Massachusetts

061.01184 | June 2017

Figure 1

Facility Location Map

G:\Data\MA\Project\061_01184\Maps\Figure_1.mxd



NOTE:

1. SITE PLAN BASED ON MAPPING PROVIDED BY IPSWICH MUNICIPAL LIGHT DEPARTMENT.

0 300 600 1200

SCALE in FEET
1"=600'

RANSOM Consulting, Inc.

PREPARED FOR:
IPSWICH MUNICIPAL LIGHT DEPARTMENT
272 HIGH STREET
IPSWICH, MASSACHUSETTS

SITE:
IPSWICH POWER PLANT
276 HIGH STREET
IPSWICH, MASSACHUSETTS

SITE AREA PLAN

DATE: JUNE 2017
PROJECT: 061.01184
FIGURE: 2

\\maserver\projects\2006\061184\RA0\061184-SITE AREA-2017.dwg Jun 07, 2017 - 8:53am

ATTACHMENT A

On-line Data Sources

Endangered Species Consultation
Ipswich Utilities Electric Power Plant
276 High Street
Ipswich, Massachusetts

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To: June 07, 2017
Consultation Code: 05E1NE00-2017-SLI-1788
Event Code: 05E1NE00-2017-E-03916
Project Name: Ipswich Power Plant, 276 High St, Ipswich, MA, with discharge to the Egypt River

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1788

Event Code: 05E1NE00-2017-E-03916

Project Name: Ipswich Power Plant, 276 High St, Ipswich, MA, with discharge to the Egypt River

Project Type: LAND - DRAINAGE

Project Description: A sump operating in the circa 1900 Power Plant basement collects groundwater that infiltrates through the foundation walls and flows across the basement floor. Beginning prior to 2006 and continuing to the present, a sump pump discharged the collected water through an oil/water separator and outside of the Plant. A granular activated carbon (GAC) treatment system was added prior to the discharge circa 2007. The flow volume through the system for the past 6 months (i.e., from 12/20/16 through 6/6/17) was 291,975 gallons (i.e., average ~1,860 gallons per day). Under the new RGP, the treatment system will discharge to the Power Plant's existing manmade industrial cooling pond. (Note that the pond is used to cool the Power Plant engines when they operate, which is typically less than 10 days per year). The pond naturally overflows to the Egypt River through an emergency overflow pipe when the pond level exceeds the design capacity as a result of precipitation and/or high groundwater levels. The portion of the Egypt River into which the discharge flows is created by the flow over the spillways of the Dow Brook and Bull Brook Reservoirs. Note that the streambed is dry and no discharge occurs from the pond at certain times of the year and/or under drought conditions.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.69927186135294N70.86782467102981W

Counties: Essex, MA

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Northern Long-eared Bat *(Myotis septentrionalis)*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9045

Critical habitats

There are no critical habitats within your project area.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Project information

NAME

Ipswich Power Plant, 276 High St, Ipswich, MA, with discharge to the Egypt River

LOCATION

Essex County, Massachusetts

DESCRIPTION

A

sump operating in the circa 1900 Power Plant basement collects groundwater that infiltrates through the foundation walls and flows across the basement floor. Beginning prior to 2006 and continuing to the present, a sump pump discharged the collected water through an oil/water separator and outside of the Plant. A granular activated carbon (GAC) treatment system was added prior to the discharge circa 2007. The flow volume through the system for the past 6 months (i.e., from 12/20/16 through 6/6/17) was 291,975 gallons (i.e., average ~1,860 gallons per day). Under the new RGP, the treatment system will discharge to the Power Plant's existing manmade industrial cooling pond. (Note that the pond is used to cool the Power Plant engines when they operate, which is typically less than 10 days per year). The pond naturally overflows to the Egypt River through an emergency overflow pipe when the pond level exceeds the design capacity as a result of precipitation and/or high groundwater levels. The portion of the Egypt River into which the discharge flows is created by the flow over the spillways of the Dow Brook and Bull Brook Reservoirs. Note that the streambed is dry and no discharge occurs from the pond at certain times of the year and/or under drought conditions.

Local office

New England Ecological Services Field Office

(603) 223-2541
(603) 223-0104

70 Commercial Street, Suite 300
Concord, NH 03301-5094

http://www.fws.gov/newengland

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your *My Projects list.*
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species

[1] are managed by the Endangered Species Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service

[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
American Bittern Botaurus lentiginosus https://ecos.fws.gov/ecp/species/6582	On Land: Breeding
American Oystercatcher Haematopus palliatus https://ecos.fws.gov/ecp/species/8935	On Land: Breeding
Bald Eagle Haliaeetus leucocephalus https://ecos.fws.gov/ecp/species/1626	On Land: Year-round
Black-billed Cuckoo Coccyzus erythropthalmus https://ecos.fws.gov/ecp/species/9399	On Land: Breeding
Blue-winged Warbler Vermivora pinus	On Land: Breeding
Canada Warbler Wilsonia canadensis	On Land: Breeding
Hudsonian Godwit Limosa haemastica	At Sea: Migrating

Least Bittern *Ixobrychus exilis* https://ecos.fws.gov/ecp/species/6175	On Land: Breeding
Least Tern *Sterna antillarum*	On Land: Breeding
Olive-sided Flycatcher *Contopus cooperi* https://ecos.fws.gov/ecp/species/3914	On Land: Breeding
Peregrine Falcon *Falco peregrinus* https://ecos.fws.gov/ecp/species/8831	On Land: Breeding
Pied-billed Grebe *Podilymbus podiceps*	On Land: Breeding
Prairie Warbler *Dendroica discolor*	On Land: Breeding
Purple Sandpiper *Calidris maritima*	On Land: Wintering
Saltmarsh Sparrow *Ammodramus caudacutus*	On Land: Breeding
Seaside Sparrow *Ammodramus maritimus*	On Land: Breeding
Short-eared Owl *Asio flammeus* https://ecos.fws.gov/ecp/species/9295	On Land: Wintering
Snowy Egret *Egretta thula*	On Land: Breeding
Willow Flycatcher *Empidonax traillii* https://ecos.fws.gov/ecp/species/3482	On Land: Breeding
Wood Thrush *Hylocichla mustelina*	On Land: Breeding

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Facilities

Wildlife refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location overlaps the following wetlands:

ESTUARINE AND MARINE WETLAND

E2EM1P

FRESHWATER FORESTED/SHRUB WETLAND

PFO1E

FRESHWATER POND

PUBHh

A full description for each wetland code can be found at the National Wetlands Inventory website: https://ecos.fws.gov/ipac/wetlands/decoder

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Barnstable	Piping Plover	Threatened	Coastal Beaches	All Towns
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Chatham
	Sandplain gerardia	Endangered	Open areas with sandy soils.	Sandwich and Falmouth.
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Bourne (north of the Cape Cod Canal)
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Berkshire	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Bristol	Piping Plover	Threatened	Coastal Beaches	Fairhaven, Dartmouth, Westport
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Fairhaven, New Bedford, Dartmouth, Westport
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Taunton
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Dukes	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague, Warwick
	Dwarf wedgemussel	Endangered	Mill River	Whately
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hatfield, Amherst and Northampton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Plymouth	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Suffolk	Piping Plover	Threatened	Coastal Beaches	Revere, Winthrop
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Worcester	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

[1]Migratory only, scattered along the coast in small numbers

-Eastern cougar and gray wolf are considered extirpated in Massachusetts.
-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.
-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.

Updated 02/05/2016

ATTACHMENT F

Best Management Practices Certification

Transmittal of Notice of Intent
2017 Remediation General Permit
MAG 910000
Ipswich Power Plant
276 High Street
Ipswich, Massachusetts

Best Management Practices Certification
Ipswich Power Plant
276 High Street
Ipswich, Massachusetts

The Ipswich Municipal Light Department (IMLD) operates the power plant owned by the Town of Ipswich Power Company located at 276 High Street in Ipswich, Massachusetts. IMLD implements Best Management Practices (BMPs) that are described in a Spill Pollution Control and Countermeasure Plan and operations and maintenance procedures.

By my signature below, I attest that previously existing BMPs have been revised to meet the terms of the 2017 Remediation General Permit (RGP), and that the revised BMPs will be implemented at the power plant. The BMPs include conducting operation and maintenance activities, recording monitoring results, and maintaining records relative to the discharges permitted under the Remediation General Permit (RGP).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons 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.

Signature

Jonathan Blair, Electric Light Manager

Printed Name and Title

ATTACHMENT G

Massachusetts Department of Environmental Protection
Transmittal Form for Permit Application and Payment

Transmittal of Notice of Intent
2017 Remediation General Permit
MAG 910000
Ipswich Power Plant
276 High Street
Ipswich, Massachusetts

Enter your transmittal number → X275647 (Transmittal Number)

Your unique Transmittal Number can be accessed online: http://mass.gov/dep/service/online/trasmfrm.shtml

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. **Copy 2** must accompany your fee payment. **Copy 3** should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA
02211

*** Note:**
For BWSC Permits, enter the LSP.

A. Permit Information

BRPWM15 — 1. Permit Code: 4 to 7 character code from permit instructions
Surface Water Discharge (NPDES) Permitting — 2. Name of Permit Category
Remediation General Permit- Category VII. Collection Structure Dewatering/Remediation — 3. Type of Project or Activity

B. Applicant Information – Firm or Individual

Town of Ipswich Power Company — 1. Name of Firm - Or, if party needing this approval is an individual enter name below:

2. **Last Name** of Individual | 3. **First Name** of Individual | 4. MI

272 High Street — 5. Street Address

Ipswich	MA	01938	978-356-6635	2113
6. City/Town	7. State	8. Zip Code	9. Telephone #	10. Ext. #

Jon Blair — 11. Contact Person
jblair@ipswichutilities.org — 12. e-mail address

C. Facility, Site or Individual Requiring Approval

Ipswich Power Plant — 1. Name of Facility, Site Or Individual
276 High Street — 2. Street Address

Ipswich	MA	01938	978-356-6635	2113
3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #

		RTN 3-21793
8. DEP Facility Number (if Known)	9. Federal I.D. Number (if Known)	10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

Ransom Consulting, Inc. — 1. Name of Firm Or Individual
12 Kent Way, Suite 100 — 2. Address

Byfield	MA	01922	978-465-1822	112
3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #

Nancy E. Marshall, P.E. — 8. Contact Person
9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☒ no
If yes, enter the project's EOEA file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Special Provisions:

1. ☒ **Fee** Exempt (city, town or municipal housing authority)(state agency if fee is $100 or less).
There are no fee exemptions for BWSC permits, regardless of applicant status.
2. ☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. ☐ Homeowner (according to 310 CMR 4.02).

Check Number | Dollar Amount | Date