OHI Engineering, Inc.
Engineers and Environmental Scientists

44 Wood Avenue
Mansfield, MA 02048
Tel (508) 339 – 3929
Fax (508) 339 – 3140

May 1, 2016

U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912
ATTN: Dewatering General Permit NOI Processing – Industrial permit Unit

Massachusetts Department of Environmental Protection
Division of Watershed Management
8 New Bond Street
Worcester, MA 01606

Reference: MWRA Clinton WWTP Phosphorus Reduction Facility Project,
667 High Street Extension, Clinton, Massachusetts 01510
Notice of Intent for Construction Dewatering Discharge under Massachusetts Dewatering General Permit MAG070000

To Whom it May Concern

This letter report provides a summary of the site and groundwater quality information in support of an application for permission from the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) for the temporary dewatering discharge of groundwater into the South Branch of the Nashua River in Clinton, Massachusetts, which is classified by Massachusetts as a Class B waterbody, during construction at the above referenced project under the Dewatering General Permit MAG070000. This NOI is being filed on behalf of the operator: Daniel O'Connell's Sons, Inc. located at 1000 Franklin Village Drive # 106, Franklin, MA 02038 (Phone: 508-520-8900). The discharge meets the applicable requirements of the permit. Refer to **Figure 1** for a Site Locus and **Figure 2** for a Project Plan.

Project Narrative

The Clinton Wastewater Treatment Plant is owned and operated by the Massachusetts Water Resources Authority (MWRA) to provide advanced wastewater treatment, including nutrient removal, for the Towns of Clinton and Lancaster, Massachusetts prior to discharging the treated effluent to the South Branch Nashua River. Clinton WWTP (SIC code: 4952) is located at 667 High Street Ext in Clinton, Massachusetts at 42.4315^{o} N latitude and 71.6788^{o} W longitude. The facility currently discharges under NPDES permit number MA0100404 and an eNOI was filed for the Construction General Permit relating to site activities (MAR12BG93); however, the dewatering discharge will be covered under a separate permit. MWRA is headquartered at

Charlestown Navy Yard, 100 First Avenue, Boston, Massachusetts 02129 and can be reached at (617) 242-6000.

The Clinton WWTP Phosphorus Reduction Facility Project is part of the MWRA's on-going efforts to improve treatment processes and water quality standards for the South Branch Nashua River. This application applies to the dewatering associated with construction of a new phosphorus reduction building foundation, superstructure, and associated infrastructure. Refer to **Figure 3** for plans of existing conditions, limits of work, outfall location, and receiving waters. The project area is approximately 0.5-acres. Currently, the site includes a wastewater treatment facility which is designed to treat an average daily flow of 3.01 million gallons per day (mgd). The treatment facility includes preliminary treatment in the form of grit removal, and screening/comminution followed by primary settling, trickling filtration, aeration tanks, secondary clariflocculators for nutrient removal, and chlorination prior to discharge to the river. The facility also includes an anaerobic digestion system consisting of primary and secondary digester tanks followed by digested sludge storage and sludge dewatering facilities. The facility will remain operational for the duration of the construction.

Excavation within the foundation footprint and associated infrastructure will extend to depths of approximately 15-feet corresponding to design specifications. Groundwater encountered will be discharged via strategically located submersible pumps to maintain a dry excavation. The groundwater encountered across the site is anticipated to be trapped within surficial fill, which is underlain by relatively impermeable firm to very stiff, grey silt. Soil borings were advanced to a maximum depth of 57 feet below graded surface; bedrock was not encountered. Based on sieve and percolation tests, it is estimated that groundwater discharge during the excavations will be on the order of one gallon per minute (GPM).

Groundwater Analytical Results

OHI Engineering, Inc. collected a groundwater sample from groundwater monitoring well OW-1 (Sample identification: Dewatering), located approximately five yards south of the proposed excavation area. The laboratory report is attached as **Appendix A**. A table displaying the results is attached as **Table 1**. Total Suspended Solids (TSS) was detected in the groundwater at levels above the effluent limits set forth in Appendix III of the NPDES Remediation & Miscellaneous Contaminated Sites General Permit (RGP) for freshwater. Arsenic, copper, iron, lead, mercury, nickel, and silver were detected in the groundwater below the effluent limits noted in Appendix III. Chloride was detected; however no effluent limit for chloride is noted in Appendix III.

Treatment for TSS will be provided for on all dewatering effluent.

Treatment System Information

In order to maintain the concentration of TSS below Appendix III effluent limits, groundwater will be pumped out of a ¾" crushed stone lined pit, through a silt sack, and into a 21,000-gallon sedimentation and fractionation (frac) tank before being discharged through one outfall overland across newly installed rip-rap prior to entering the South Branch Nashua River. Refer to **Figure 4** for a line diagram of the treatment system. The anticipated discharge will be intermittent

pumping to the frac tank with and discharged from the tank at one outfall location with a maximum daily flow of approximately 5,000 gallons per day (GPD), and an average flow of 1,500 GPD. Based on groundwater sampling results, groundwater at the site has a pH of 6.8. In order to document the effectiveness of the groundwater treatment, samples of discharge water will be obtained and analyzed for TSS. Should the results of testing indicate an exceedance of the DGP effluent limits, appropriate treatment steps will be implemented to address the exceedances.

Historic and Archaeological Properties

Historic and archaeological properties do not exist within the project area. The project is not listed on or adjacent to properties listed in the National Historic Register of Historic Properties. Therefore the discharges do not have the potential to cause effects on historic properties. Please refer to **Appendix B** for documentation.

Endangered Species Habitat

Based on information obtained from the Natural Heritage and Endangered Species Program (NHESP) Database of Massachusetts and the Information, Planning, and Conservation (IPaC) online system report, the proposed project will not adversely impact national heritage areas, Areas of Critical Environmental Concern, Essential Fish Habitats, or endangered species. Pursuant to the NPDES Dewatering General Permit requirements, documentation received from the NHESP and IPaC online system are provided as **Appendix B**.

Conclusions

Sampling and analysis of the effluent will be carried out in accordance with the terms of the DGP. An Erosion and Sediment Control Plan (ESCP) and Storm Water Pollution Prevention Plan (SWPPP) have been developed and will be maintained by the on-Site Environmental Compliance Manager. In conclusion, it is our opinion that groundwater at the site is acceptable for discharge into the South Branch of the Nashua River under a DGP. Please do not hesitate to contact us if you have any questions or concerns.

Sincerely,

OHI ENGINEERING, INC.

James R. Borrebach, P.E., L.S.P.
Principal

Signature Requirements

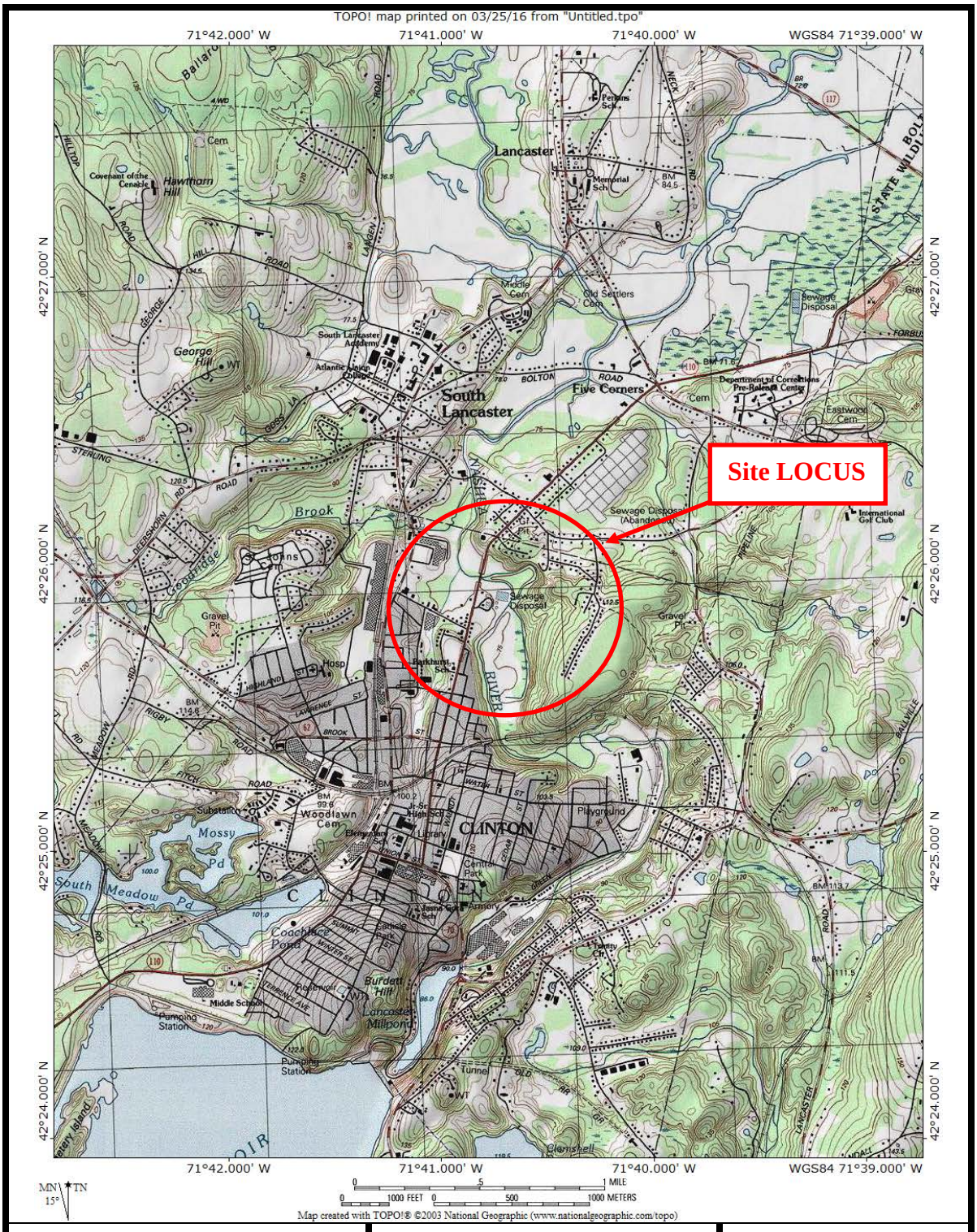
I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the dewatering system; (2) the discharge consists solely of dewatering and authorized pH adjustment and/or dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, waste product or finished product; (4) if the discharge of dewatering subsequently mixes with other wastewater (i.e. stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for dewatering discharges; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and the National Historic Preservation Act; and (6) 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, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Paul Rubin Date: 5/2/16

OHI Engineering, Inc.
Engineers and Environmental Scientists

FIGURES



Site LOCUS

Figure 1

Clinton WWTP
Phosphorus Reduction Facility
Clinton, Massachusetts

CONTRACTOR STAGING AREA

Griffin Electric
Temp office

CONTRACTORS FIELD OFFICE

DOC Field Office

Temp U/G Comcast
Temp U/G Electric

Temp Power & Comcast conduit for DOC office trailer installed on tank

Ericson e-cart distribution system for construction use.

NGRID - Temp O/H Electrical Service drop

Temp U/G Comcast

HIGH STREET

HIGH STREET

SOUTH NASHUA RIVER

0 30 60 150 FEET

1"= 30'-0"

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 7411	CAD FILE NO. : 7411-G-4.dwg
ACCESSION NO. : 700544	SECTION NO. : –
DATE: DECEMBER 2015	DESIGNED BY: DNM
	DRAWN BY: HBF
	CHECKED BY: DNM
SCALE: 1" = 30'	APPROVED BY: EJH

COMMONWEALTH OF MASSACHUSETTS
MICHAEL A. SORRENTINO
No. 34769
REGISTERED PROFESSIONAL ENGINEER
12/11/15

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY :

Stantec
5 BURLINGTON WOODS
BURLINGTON, MA 01803
www.stantec.com

CLINTON WASTEWATER TREATMENT PLANT
PHOSPHORUS REDUCTION FACILITY

GENERAL EXISTING SITE PLAN

DRAWING NO.
G-4
4 OF 121

FILE NAME: S:\JM-097 Clinton WWTP Phosphorus Reduction\1.3.2 Contract Documents\CADD\01_General\7411-G-4.dwg LAYOUT NAME: 7411-G-4 PLOTTED: Friday, December 11, 2015 - 11:33am USER: Fricer_H

7411-G-4.dwg

SILT FENCE
W/ STRAW WATTLES
SEE 1/ESCP-01

CONTRACTOR STAGING AREA

EXISTING FENCE

CONTRACTOR'S FIELD OFFICE

PROVIDE INLET PROTECTION
AT CATCH BASIN (TYP)
SEE 2/ESCP-02

TEMP. CONSTRUCTION
FENCE

SILT FENCE
W/ STRAW WATTLES
SEE 1/ESCP-01

CONSTRUCTION
GATE

STABILIZED CONSTRUCTION
ENTRANCE

TERMINATE SILT FENCE
AT CONSTRUCTION ENTRANCE

EXT. GATE

EXT. GATE

HIGH STREET

ESTABLISHED 1879

Daniel O'Connell's Sons
480 Hampden Street
Holyoke, MA 01040

No.	Description	Date

MWRA

Clinton WWTP Phosphorus
Reduction Facility

Erosion and Sediment Control Plan

Project Number	2016-103
Date	3/21/2016
Drawn By	EA
Checked By	JW

ESCP-01

Scale 1" = 30'-0"

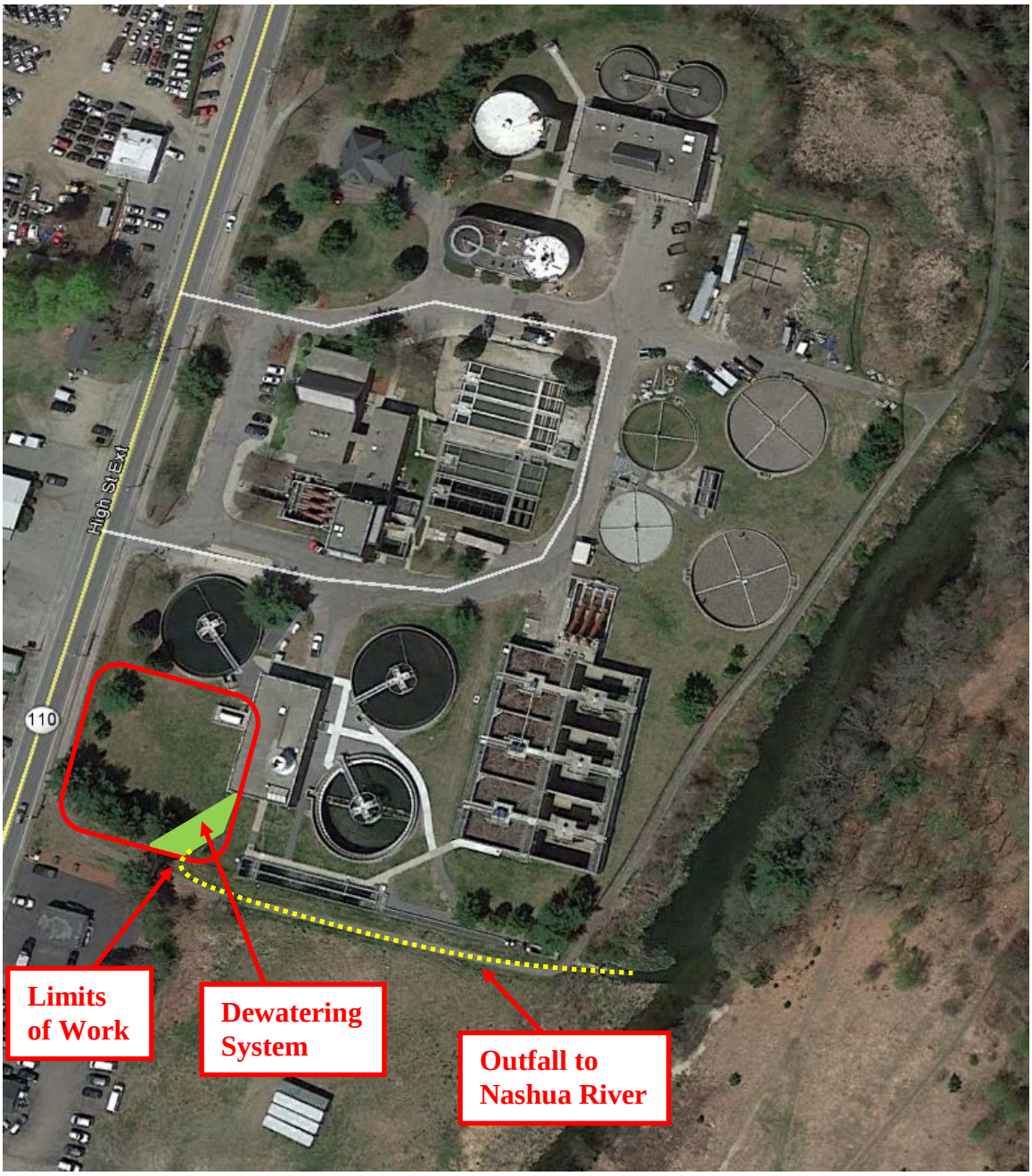
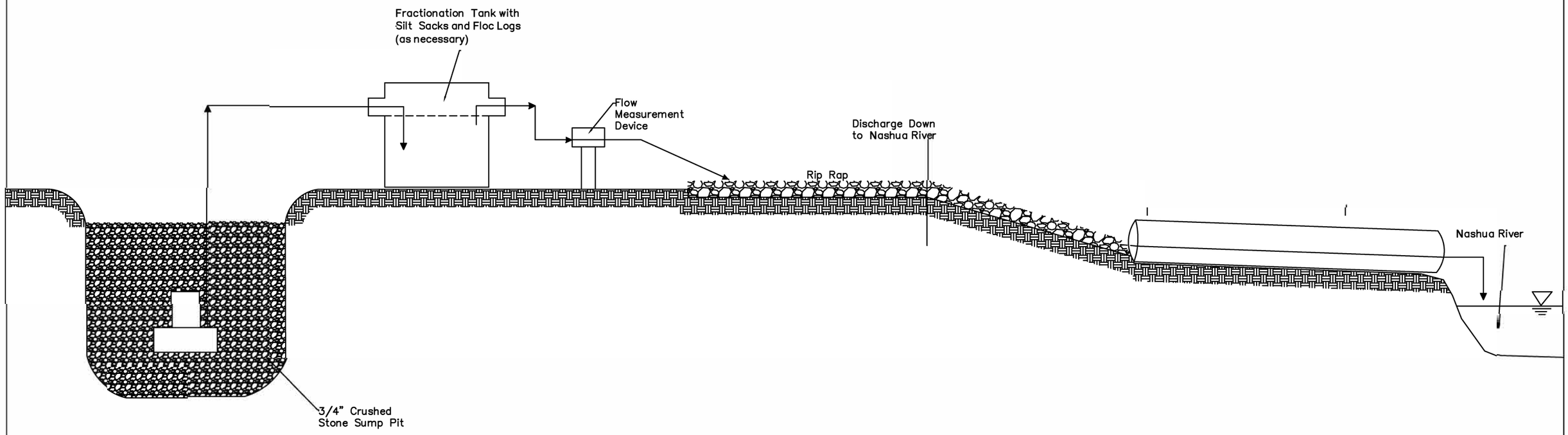


Figure 3
EXISTING CONDITIONS

Clinton WWTP
Phosphorus Reduction Facility
Clinton, MA

DOC

N
W E
S



Schematic of Water Flow

NOT TO SCALE

NO.	DATE	CHKD	REMARKS

DESIGNED BY:
DRAWN BY: J. Kelly
SHEET CHK'D BY:
CROSS CHK'D BY:
APPROVED BY:
DATE: 5/2/2016

DOC

Figure 4:
Schematic of Water Flow

Job Number: 16-1721

SHEET #: 1

1 of 1

OHI Engineering, Inc.
Engineers and Environmental Scientists

TABLES

Table 1: Groundwater Lab Analysis Summary for DGP Criteria

MWRA Clinton WWTP Proposed Phosporus Reduction Facility

677 High Street Ext
Clinton, Massachusetts
Daniel O'Connell's Sons, Inc.

SAMPLE ID			DEWATERING
	DGP/RGP Effluent Limit	Units	
Anions by Ion Chromatography			
Chloride		mg/l	12.2
General Chemistry			
Cyanide, Total	0.0052	mg/l	*ND*
Chlorine, Total Residual	0.011	mg/l	*ND*
Solids, Total Suspended	100	mg/l	1600
TPH, SGT-HEM	5	mg/l	*ND*
Phenolics, Total		mg/l	*ND*
pH	6 - 9		6.8
Chromium, Hexavalent	0.0114	mg/l	*ND*
Total Metals			
Antimony, Total	0.0056	mg/l	*ND*
Arsenic, Total	0.01	mg/l	0.00199
Cadmium, Total	0.0002	mg/l	*ND*
Chromium, Total	0.0488	mg/l	*ND*
Copper, Total	0.0052	mg/l	0.00228
Iron, Total	1	mg/l	0.38
Lead, Total	0.0013	mg/l	0.00104
Mercury, Total	0.0009	mg/l	0.00031
Nickel, Total	0.029	mg/l	0.00288
Selenium, Total	0.005	mg/l	0.005
Silver, Total	0.0012	mg/l	*ND*
Zinc, Total	0.0666	mg/l	*ND*
Microextractables by GC			
1,2-Dibromo-3-chloropropane		mg/l	*ND*
1,2-Dibromoethane		mg/l	*ND*
Volatile Organics by GC/MS			
1,1,1,2-Tetrachloroethane		mg/l	*ND*
1,1,1-Trichloroethane		mg/l	*ND*
1,1,2,2-Tetrachloroethane		mg/l	*ND*
1,1,2-Trichloroethane		mg/l	*ND*
1,1-Dichloroethane		mg/l	*ND*
1,1-Dichloroethene		mg/l	*ND*
1,1-Dichloropropene		mg/l	*ND*
1,2,3-Trichlorobenzene		mg/l	*ND*

1,2,3-Trichloropropane		**mg/l**	*ND*
1,2,4-Trichlorobenzene		**mg/l**	*ND*
1,2,4-Trimethylbenzene		**mg/l**	*ND*
1,2-Dibromo-3-chloropropane		**mg/l**	*ND*
1,2-Dibromoethane		**mg/l**	*ND*
1,2-Dichlorobenzene		**mg/l**	*ND*
1,2-Dichloroethane		**mg/l**	*ND*
1,2-Dichloroethene, Total		**mg/l**	*ND*
1,2-Dichloropropane		**mg/l**	*ND*
1,3,5-Trimethylbenzene		**mg/l**	*ND*
1,3-Dichlorobenzene		**mg/l**	*ND*
1,3-Dichloropropane		**mg/l**	*ND*
1,3-Dichloropropene, Total		**mg/l**	*ND*
1,4-Dichlorobenzene		**mg/l**	*ND*
1,4-Dichlorobutane		**mg/l**	*ND*
2,2-Dichloropropane		**mg/l**	*ND*
2-Butanone		**mg/l**	*ND*
2-Hexanone		**mg/l**	*ND*
4-Methyl-2-pentanone		**mg/l**	*ND*
Acetone		**mg/l**	*ND*
Acrylonitrile		**mg/l**	*ND*
Benzene		**mg/l**	*ND*
Bromobenzene		**mg/l**	*ND*
Bromochloromethane		**mg/l**	*ND*
Bromodichloromethane		**mg/l**	*ND*
Bromoform		**mg/l**	*ND*
Bromomethane		**mg/l**	*ND*
Carbon disulfide		**mg/l**	*ND*
Carbon tetrachloride		**mg/l**	*ND*
Chlorobenzene		**mg/l**	*ND*
Chloroethane		**mg/l**	*ND*
Chloroform		**mg/l**	*ND*
Chloromethane		**mg/l**	*ND*
cis-1,2-Dichloroethene		**mg/l**	*ND*
cis-1,3-Dichloropropene		**mg/l**	*ND*
Dibromochloromethane		**mg/l**	*ND*
Dibromomethane		**mg/l**	*ND*
Dichlorodifluoromethane		**mg/l**	*ND*
Ethyl ether		**mg/l**	*ND*
Ethyl methacrylate		**mg/l**	*ND*
Ethylbenzene		**mg/l**	*ND*
Hexachlorobutadiene		**mg/l**	*ND*
Isopropylbenzene		**mg/l**	*ND*
Methyl tert butyl ether		**mg/l**	*ND*
Methylene chloride		**mg/l**	*ND*
n-Butylbenzene		**mg/l**	*ND*
n-Propylbenzene		**mg/l**	*ND*
Naphthalene		**mg/l**	*ND*
o-Chlorotoluene		**mg/l**	*ND*
o-Xylene		**mg/l**	*ND*
p-Chlorotoluene		**mg/l**	*ND*
p-Isopropyltoluene		**mg/l**	*ND*
p/m-Xylene		**mg/l**	*ND*

sec-Butylbenzene		**mg/l**	*ND*
Styrene		**mg/l**	*ND*
Tert-Butyl Alcohol		**mg/l**	*ND*
tert-Butylbenzene		**mg/l**	*ND*
Tertiary-Amyl Methyl Ether		**mg/l**	*ND*
Tetrachloroethene		**mg/l**	*ND*
Tetrahydrofuran		**mg/l**	*ND*
Toluene		**mg/l**	*ND*
trans-1,2-Dichloroethene		**mg/l**	*ND*
trans-1,3-Dichloropropene		**mg/l**	*ND*
trans-1,4-Dichloro-2-butene		**mg/l**	*ND*
Trichloroethene		**mg/l**	*ND*
Trichlorofluoromethane		**mg/l**	*ND*
Vinyl acetate		**mg/l**	*ND*
Vinyl chloride		**mg/l**	*ND*
Xylenes, Total		**mg/l**	*ND*
Volatile Organics by GC/MS-SIM			
1,4-Dioxane		**mg/l**	*ND*
Semivolatile Organics by GC/MS			
1,2,4-Trichlorobenzene		**mg/l**	*ND*
1,2-Dichlorobenzene		**mg/l**	*ND*
1,3-Dichlorobenzene		**mg/l**	*ND*
1,4-Dichlorobenzene		**mg/l**	*ND*
2,4,5-Trichlorophenol		**mg/l**	*ND*
2,4,6-Trichlorophenol		**mg/l**	*ND*
2,4-Dichlorophenol		**mg/l**	*ND*
2,4-Dimethylphenol		**mg/l**	*ND*
2,4-Dinitrophenol		**mg/l**	*ND*
2,4-Dinitrotoluene		**mg/l**	*ND*
2,6-Dinitrotoluene		**mg/l**	*ND*
2-Chlorophenol		**mg/l**	*ND*
2-Methylphenol		**mg/l**	*ND*
2-Nitroaniline		**mg/l**	*ND*
2-Nitrophenol		**mg/l**	*ND*
3,3'-Dichlorobenzidine		**mg/l**	*ND*
3-Methylphenol/4-Methylphenol		**mg/l**	*ND*
3-Nitroaniline		**mg/l**	*ND*
4,6-Dinitro-o-cresol		**mg/l**	*ND*
4-Bromophenyl phenyl ether		**mg/l**	*ND*
4-Chloroaniline		**mg/l**	*ND*
4-Chlorophenyl phenyl ether		**mg/l**	*ND*
4-Nitroaniline		**mg/l**	*ND*
4-Nitrophenol		**mg/l**	*ND*
Aniline		**mg/l**	*ND*
Azobenzene		**mg/l**	*ND*
Benzidine		**mg/l**	*ND*
Benzoic Acid		**mg/l**	*ND*
Benzyl Alcohol		**mg/l**	*ND*
Bis(2-chloroethoxy)methane		**mg/l**	*ND*
Bis(2-chloroethyl)ether		**mg/l**	*ND*
Bis(2-chloroisopropyl)ether		**mg/l**	*ND*

Bis(2-ethylhexyl)phthalate		**mg/l**	*ND*
Butyl benzyl phthalate		**mg/l**	*ND*
Carbazole		**mg/l**	*ND*
Di-n-butylphthalate		**mg/l**	*ND*
Di-n-octylphthalate		**mg/l**	*ND*
Dibenzofuran		**mg/l**	*ND*
Diethyl phthalate		**mg/l**	*ND*
Dimethyl phthalate		**mg/l**	*ND*
Hexachlorocyclopentadiene		**mg/l**	*ND*
Isophorone		**mg/l**	*ND*
n-Nitrosodimethylamine		**mg/l**	*ND*
NDPA/DPA		**mg/l**	*ND*
Nitrobenzene		**mg/l**	*ND*
p-Chloro-m-cresol		**mg/l**	*ND*
Phenol		**mg/l**	*ND*
Pyridine		**mg/l**	*ND*
Semivolatile Organics by GC/MS-SIM			
1-Methylnaphthalene		**mg/l**	*ND*
2-Chloronaphthalene		**mg/l**	*ND*
2-Methylnaphthalene		**mg/l**	*ND*
Acenaphthene		**mg/l**	*ND*
Acenaphthylene		**mg/l**	*ND*
Anthracene		**mg/l**	*ND*
Benzo(a)anthracene		**mg/l**	*ND*
Benzo(a)pyrene		**mg/l**	*ND*
Benzo(b)fluoranthene		**mg/l**	*ND*
Benzo(ghi)perylene		**mg/l**	*ND*
Benzo(k)fluoranthene		**mg/l**	*ND*
Chrysene		**mg/l**	*ND*
Dibenzo(a,h)anthracene		**mg/l**	*ND*
Fluoranthene		**mg/l**	*ND*
Fluorene		**mg/l**	*ND*
Hexachlorobenzene		**mg/l**	*ND*
Hexachlorobutadiene		**mg/l**	*ND*
Hexachloroethane		**mg/l**	*ND*
Indeno(1,2,3-cd)Pyrene		**mg/l**	*ND*
Naphthalene		**mg/l**	*ND*
Pentachlorophenol		**mg/l**	*ND*
Phenanthrene		**mg/l**	*ND*
Pyrene		**mg/l**	*ND*
Polychlorinated Biphenyls by GC			
Aroclor 1016		**mg/l**	*ND*
Aroclor 1221		**mg/l**	*ND*
Aroclor 1232		**mg/l**	*ND*
Aroclor 1242		**mg/l**	*ND*
Aroclor 1248		**mg/l**	*ND*
Aroclor 1254		**mg/l**	*ND*
Aroclor 1260		**mg/l**	*ND*

ND = Not Detected

OHI Engineering, Inc.
Engineers and Environmental Scientists

APPENDIX A

Laboratory Reports

ANALYTICAL REPORT

Lab Number:	L1610909
Client:	OHI Engineering Incorporated 44 Wood Avenue Mansfield, MA 02048
ATTN:	Jared Kelly
Phone:	(508) 339-3929
Project Name:	O'CONNELLS CLINTON WWTP
Project Number:	16-1721
Report Date:	04/22/16

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721

Lab Number: L1610909
Report Date: 04/22/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1610909-01	DEWATERING	WATER	CLINTON, MA	04/13/16 14:00	04/13/16
L1610909-02	TRIP BLANK		CLINTON, MA	04/13/16 00:00	04/13/16

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909
Project Number: 16-1721 **Report Date:** 04/22/16

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: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909
Project Number: 16-1721 **Report Date:** 04/22/16

Case Narrative (continued)

Report Submission

The sample collection date was provided by the client.

Sample Receipt

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

Semivolatile Organics

The WG885173-2/-3 LCS/LCSD recoveries, associated with L1610909-01, are below the acceptance criteria for benzidine (1%/1%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

PCBs

WG885081: An LCS/LCSD was performed in lieu of a Matrix Spike and Laboratory Duplicate due to insufficient sample volume available for analysis.

Metals

The WG883710-4 MS recovery for iron (0%), performed on L1610909-01, does not apply because the sample concentration is greater than four times the spike amount added.

The WG883711-4 MS recoveries, performed on L1610909-01, are outside the acceptance criteria for nickel (42%) and zinc (18%). A post digestion spike was performed and yielded unacceptable recoveries for nickel (165%) and zinc (168%). This has been attributed to sample matrix.

The WG883711-4 MS recoveries, performed on L1610909-01, are outside the acceptance criteria for antimony (64%), arsenic (191%), cadmium (137%), chromium (169%), copper (156%), lead (152%) and selenium (201%). A post digestion spike was performed and yielded unacceptable recoveries for arsenic (126%), copper (124%),selenium (129%); all other compounds were within acceptance criteria. This has been attributed to sample matrix.

Chlorine, Total Residual

Project Name:	O'CONNELLS CLINTON WWTP	**Lab Number:**	L1610909
Project Number:	16-1721	**Report Date:**	04/22/16

Case Narrative (continued)

L1610909-01: The sample has an elevated detection limit due to the dilution required by the sample matrix.

Chromium, Hexavalent

L1610909-01: The sample has an elevated detection limit due to the dilution required by the sample matrix.

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: Cristin Walker

Title: Technical Director/Representative Date: 04/22/16

ORGANICS

VOLATILES

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

SAMPLE RESULTS

Lab ID: L1610909-01
Client ID: DEWATERING
Sample Location: CLINTON, MA
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 04/18/16 13:35
Analyst: MM

Date Collected: 04/13/16 14:00
Date Received: 04/13/16
Field Prep: Not Specified

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
Chloroform	ND		ug/l	0.75	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.8	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.75	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.5	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	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
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	--	1
1,2-Dichloroethene, Total	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

SAMPLE RESULTS

Lab ID: L1610909-01 Date Collected: 04/13/16 14:00

Client ID: DEWATERING Date Received: 04/13/16

Sample Location: CLINTON, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
Dibromomethane	ND		ug/l	5.0	--	1
1,4-Dichlorobutane	ND		ug/l	5.0	--	1
1,2,3-Trichloropropane	ND		ug/l	5.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	5.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Ethyl methacrylate	ND		ug/l	5.0	--	1
Acrylonitrile	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.5	--	1
Tetrahydrofuran	ND		ug/l	5.0	--	1
2,2-Dichloropropane	ND		ug/l	2.5	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.5	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	2.5	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	2.5	--	1
o-Chlorotoluene	ND		ug/l	2.5	--	1
p-Chlorotoluene	ND		ug/l	2.5	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Isopropylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	2.5	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

SAMPLE RESULTS

Lab ID: L1610909-01 Date Collected: 04/13/16 14:00

Client ID: DEWATERING Date Received: 04/13/16

Sample Location: CLINTON, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--	1
Ethyl ether	ND		ug/l	2.5	--	1
Tert-Butyl Alcohol	ND		ug/l	10	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	101		70-130

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

SAMPLE RESULTS

Lab ID: L1610909-01
Client ID: DEWATERING
Sample Location: CLINTON, MA
Matrix: Water
Analytical Method: 1,8260C-SIM(M)
Analytical Date: 04/18/16 13:35
Analyst: MM

Date Collected: 04/13/16 14:00
Date Received: 04/13/16
Field Prep: Not Specified

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: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

SAMPLE RESULTS

Lab ID: L1610909-01
Client ID: DEWATERING
Sample Location: CLINTON, MA
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 04/18/16 17:40
Analyst: AM

Date Collected: 04/13/16 14:00
Date Received: 04/13/16
Field Prep: Not Specified
Extraction Method: EPA 8011
Extraction Date: 04/18/16 09:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.024	--	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.024	--	1	A

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721
Lab Number: L1610909
Report Date: 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 04/18/16 14:30
Analyst: AM

Extraction Method: EPA 8011
Extraction Date: 04/18/16 09:08

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG884648-1						
1,2-Dibromoethane	ND		ug/l	0.020	--	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.020	--	A

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C-SIM(M)
Analytical Date: 04/18/16 07:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG884894-3					
1,4-Dioxane	ND		ug/l	3.0	--

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/18/16 07:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG884895-3					
Methylene chloride	ND		ug/l	3.0	--
1,1-Dichloroethane	ND		ug/l	0.75	--
Chloroform	ND		ug/l	0.75	--
Carbon tetrachloride	ND		ug/l	0.50	--
1,2-Dichloropropane	ND		ug/l	1.8	--
Dibromochloromethane	ND		ug/l	0.50	--
1,1,2-Trichloroethane	ND		ug/l	0.75	--
2-Chloroethylvinyl ether	ND		ug/l	10	--
Tetrachloroethene	ND		ug/l	0.50	--
Chlorobenzene	ND		ug/l	0.50	--
Trichlorofluoromethane	ND		ug/l	2.5	--
1,2-Dichloroethane	ND		ug/l	0.50	--
1,1,1-Trichloroethane	ND		ug/l	0.50	--
Bromodichloromethane	ND		ug/l	0.50	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,3-Dichloropropene, Total	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.5	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	0.75	--
Ethylbenzene	ND		ug/l	0.50	--
Chloromethane	ND		ug/l	2.5	--
Bromomethane	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	0.50	--
trans-1,2-Dichloroethene	ND		ug/l	0.75	--

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/18/16 07:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG884895-3					
1,2-Dichloroethene, Total	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	--
Dibromomethane	ND		ug/l	5.0	--
1,4-Dichlorobutane	ND		ug/l	5.0	--
1,2,3-Trichloropropane	ND		ug/l	5.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	5.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	5.0	--
2-Butanone	ND		ug/l	5.0	--
Vinyl acetate	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Ethyl methacrylate	ND		ug/l	5.0	--
Acrylonitrile	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.5	--
Tetrahydrofuran	ND		ug/l	5.0	--
2,2-Dichloropropane	ND		ug/l	2.5	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.5	--
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/18/16 07:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG884895-3					
Bromobenzene	ND		ug/l	2.5	--
n-Butylbenzene	ND		ug/l	0.50	--
sec-Butylbenzene	ND		ug/l	0.50	--
tert-Butylbenzene	ND		ug/l	2.5	--
o-Chlorotoluene	ND		ug/l	2.5	--
p-Chlorotoluene	ND		ug/l	2.5	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	--
Hexachlorobutadiene	ND		ug/l	0.50	--
Isopropylbenzene	ND		ug/l	0.50	--
p-Isopropyltoluene	ND		ug/l	0.50	--
Naphthalene	ND		ug/l	2.5	--
n-Propylbenzene	ND		ug/l	0.50	--
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--
1,3,5-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--
Ethyl ether	ND		ug/l	2.5	--
Methyl Acetate	ND		ug/l	10	--
Ethyl Acetate	ND		ug/l	10	--
Isopropyl Ether	ND		ug/l	2.0	--
Cyclohexane	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	10	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	10	--
Methyl cyclohexane	ND		ug/l	10	--
p-Diethylbenzene	ND		ug/l	2.0	--

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/18/16 07:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG884895-3					
4-Ethyltoluene	ND		ug/l	2.0	--
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP

Project Number: 16-1721

Lab Number: L1610909

Report Date: 04/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab Associated sample(s): 01 Batch: WG884648-2 WG884648-3									
1,2-Dibromoethane	109		80		70-130	**31**	Q	20	A
1,2-Dibromo-3-chloropropane	99		102		70-130	3		20	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP

Project Number: 16-1721

Lab Number: L1610909

Report Date: 04/22/16

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: WG884894-1 WG884894-2								
1,4-Dioxane	87		93		70-130	7		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP

Project Number: 16-1721

Lab Number: L1610909

Report Date: 04/22/16

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: WG884895-1 WG884895-2								
Methylene chloride	110		104		70-130	6		20
1,1-Dichloroethane	113		106		70-130	6		20
Chloroform	108		103		70-130	5		20
Carbon tetrachloride	108		103		63-132	5		20
1,2-Dichloropropane	109		107		70-130	2		20
Dibromochloromethane	101		96		63-130	5		20
1,1,2-Trichloroethane	120		109		70-130	10		20
2-Chloroethylvinyl ether	102		102		70-130	0		20
Tetrachloroethene	106		101		70-130	5		20
Chlorobenzene	107		99		75-130	8		25
Trichlorofluoromethane	108		100		62-150	8		20
1,2-Dichloroethane	114		104		70-130	9		20
1,1,1-Trichloroethane	110		102		67-130	8		20
Bromodichloromethane	106		103		67-130	3		20
trans-1,3-Dichloropropene	98		93		70-130	5		20
cis-1,3-Dichloropropene	104		100		70-130	4		20
1,1-Dichloropropene	107		101		70-130	6		20
Bromoform	95		86		54-136	10		20
1,1,2,2-Tetrachloroethane	118		104		67-130	13		20
Benzene	111		104		70-130	7		25
Toluene	108		105		70-130	3		25

Lab Control Sample Analysis
Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721

Lab Number: L1610909
Report Date: 04/22/16

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: WG884895-1 WG884895-2								
Ethylbenzene	111		104		70-130	7		20
Chloromethane	103		100		64-130	3		20
Bromomethane	101		108		39-139	7		20
Vinyl chloride	113		112		55-140	1		20
Chloroethane	100		96		55-138	4		20
1,1-Dichloroethene	108		103		61-145	5		25
trans-1,2-Dichloroethene	110		102		70-130	8		20
Trichloroethene	109		104		70-130	5		25
1,2-Dichlorobenzene	113		104		70-130	8		20
1,3-Dichlorobenzene	108		102		70-130	6		20
1,4-Dichlorobenzene	110		103		70-130	7		20
Methyl tert butyl ether	116		102		63-130	13		20
p/m-Xylene	107		102		70-130	5		20
o-Xylene	108		101		70-130	7		20
cis-1,2-Dichloroethene	114		106		70-130	7		20
Dibromomethane	108		102		70-130	6		20
1,4-Dichlorobutane	117		108		70-130	8		20
1,2,3-Trichloropropane	116		107		64-130	8		20
Styrene	109		104		70-130	5		20
Dichlorodifluoromethane	108		99		36-147	9		20
Acetone	122		104		58-148	16		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP

Project Number: 16-1721

Lab Number: L1610909

Report Date: 04/22/16

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: WG884895-1 WG884895-2								
Carbon disulfide	104		98		51-130	6		20
2-Butanone	128		112		63-138	13		20
Vinyl acetate	117		106		70-130	10		20
4-Methyl-2-pentanone	108		97		59-130	11		20
2-Hexanone	108		87		57-130	**22**	Q	20
Ethyl methacrylate	112		96		70-130	15		20
Acrylonitrile	116		113		70-130	3		20
Bromochloromethane	109		104		70-130	5		20
Tetrahydrofuran	124		102		58-130	19		20
2,2-Dichloropropane	117		107		63-133	9		20
1,2-Dibromoethane	112		100		70-130	11		20
1,3-Dichloropropane	118		113		70-130	4		20
1,1,1,2-Tetrachloroethane	111		102		64-130	8		20
Bromobenzene	112		103		70-130	8		20
n-Butylbenzene	113		102		53-136	10		20
sec-Butylbenzene	109		100		70-130	9		20
tert-Butylbenzene	107		101		70-130	6		20
o-Chlorotoluene	105		100		70-130	5		20
p-Chlorotoluene	105		100		70-130	5		20
1,2-Dibromo-3-chloropropane	122		112		41-144	9		20
Hexachlorobutadiene	128		125		63-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721

Lab Number: L1610909
Report Date: 04/22/16

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: WG884895-1 WG884895-2								
Isopropylbenzene	108		101		70-130	7		20
p-Isopropyltoluene	108		100		70-130	8		20
Naphthalene	124		112		70-130	10		20
n-Propylbenzene	106		100		69-130	6		20
1,2,3-Trichlorobenzene	123		112		70-130	9		20
1,2,4-Trichlorobenzene	119		114		70-130	4		20
1,3,5-Trimethylbenzene	106		102		64-130	4		20
1,3,5-Trichlorobenzene	121		111		70-130	9		20
1,2,4-Trimethylbenzene	107		100		70-130	7		20
trans-1,4-Dichloro-2-butene	102		105		70-130	3		20
Ethyl ether	111		101		59-134	9		20
Methyl Acetate	120		106		70-130	12		20
Ethyl Acetate	118		100		70-130	17		20
Isopropyl Ether	111		101		70-130	9		20
Cyclohexane	107		102		70-130	5		20
Tert-Butyl Alcohol	114		91		70-130	**22**	Q	20
Ethyl-Tert-Butyl-Ether	112		101		70-130	10		20
Tertiary-Amyl Methyl Ether	113		97		66-130	15		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	114		112		70-130	2		20
Methyl cyclohexane	110		103		70-130	7		20
p-Diethylbenzene	116		106		70-130	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP

Project Number: 16-1721

Lab Number: L1610909

Report Date: 04/22/16

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: WG884895-1 WG884895-2								
4-Ethyltoluene	107		100		70-130	7		20
1,2,4,5-Tetramethylbenzene	122		108		70-130	12		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		95		70-130
Toluene-d8	97		98		70-130
4-Bromofluorobenzene	97		93		70-130
Dibromofluoromethane	99		97		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721

Lab Number: L1610909
Report Date: 04/22/16

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: WG884648-4 QC Sample: L1610606-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.275	0.306	111		-	-		70-130	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.275	0.279	102		-	-		70-130	-		20	A

SEMIVOLATILES

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

SAMPLE RESULTS

Lab ID:	L1610909-01	Date Collected:	04/13/16 14:00
Client ID:	DEWATERING	Date Received:	04/13/16
Sample Location:	CLINTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	04/19/16 15:41
Analytical Date:	04/21/16 23:24		
Analyst:	JB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/l	20	--	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	--	1
1,2-Dichlorobenzene	ND		ug/l	2.0	--	1
1,3-Dichlorobenzene	ND		ug/l	2.0	--	1
1,4-Dichlorobenzene	ND		ug/l	2.0	--	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	--	1
2,4-Dinitrotoluene	ND		ug/l	5.0	--	1
2,6-Dinitrotoluene	ND		ug/l	5.0	--	1
Azobenzene	ND		ug/l	2.0	--	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	--	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	--	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	--	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--	1
Hexachlorocyclopentadiene	ND		ug/l	20	--	1
Isophorone	ND		ug/l	5.0	--	1
Nitrobenzene	ND		ug/l	2.0	--	1
NDPA/DPA	ND		ug/l	2.0	--	1
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
Aniline	ND		ug/l	2.0	--	1
4-Chloroaniline	ND		ug/l	5.0	--	1
2-Nitroaniline	ND		ug/l	5.0	--	1
3-Nitroaniline	ND		ug/l	5.0	--	1
4-Nitroaniline	ND		ug/l	5.0	--	1
Dibenzofuran	ND		ug/l	2.0	--	1

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

SAMPLE RESULTS

Lab ID: L1610909-01 Date Collected: 04/13/16 14:00

Client ID: DEWATERING Date Received: 04/13/16

Sample Location: CLINTON, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
n-Nitrosodimethylamine	ND		ug/l	2.0	--	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	--	1
p-Chloro-m-cresol	ND		ug/l	2.0	--	1
2-Chlorophenol	ND		ug/l	2.0	--	1
2,4-Dichlorophenol	ND		ug/l	5.0	--	1
2,4-Dimethylphenol	ND		ug/l	5.0	--	1
2-Nitrophenol	ND		ug/l	10	--	1
4-Nitrophenol	ND		ug/l	10	--	1
2,4-Dinitrophenol	ND		ug/l	20	--	1
4,6-Dinitro-o-cresol	ND		ug/l	10	--	1
Phenol	ND		ug/l	5.0	--	1
2-Methylphenol	ND		ug/l	5.0	--	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	--	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	--	1
Benzoic Acid	ND		ug/l	50	--	1
Benzyl Alcohol	ND		ug/l	2.0	--	1
Carbazole	ND		ug/l	2.0	--	1
Pyridine	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		21-120
Phenol-d6	33		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	84		15-120
2,4,6-Tribromophenol	84		10-120
4-Terphenyl-d14	100		41-149

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

SAMPLE RESULTS

Lab ID: L1610909-01
Client ID: DEWATERING
Sample Location: CLINTON, MA
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 04/20/16 22:00
Analyst: KV

Date Collected: 04/13/16 14:00
Date Received: 04/13/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 04/19/16 15:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	--	1
2-Chloronaphthalene	ND		ug/l	0.20	--	1
Fluoranthene	ND		ug/l	0.20	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	0.20	--	1
Benzo(a)anthracene	ND		ug/l	0.20	--	1
Benzo(a)pyrene	ND		ug/l	0.20	--	1
Benzo(b)fluoranthene	ND		ug/l	0.20	--	1
Benzo(k)fluoranthene	ND		ug/l	0.20	--	1
Chrysene	ND		ug/l	0.20	--	1
Acenaphthylene	ND		ug/l	0.20	--	1
Anthracene	ND		ug/l	0.20	--	1
Benzo(ghi)perylene	ND		ug/l	0.20	--	1
Fluorene	ND		ug/l	0.20	--	1
Phenanthrene	ND		ug/l	0.20	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	--	1
Pyrene	ND		ug/l	0.20	--	1
1-Methylnaphthalene	ND		ug/l	0.20	--	1
2-Methylnaphthalene	ND		ug/l	0.20	--	1
Pentachlorophenol	ND		ug/l	0.80	--	1
Hexachlorobenzene	ND		ug/l	0.80	--	1
Hexachloroethane	ND		ug/l	0.80	--	1

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

SAMPLE RESULTS

Lab ID: L1610909-01 Date Collected: 04/13/16 14:00

Client ID: DEWATERING Date Received: 04/13/16

Sample Location: CLINTON, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	99		23-120
2-Fluorobiphenyl	106		15-120
2,4,6-Tribromophenol	91		10-120
4-Terphenyl-d14	121		41-149

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721
Lab Number: L1610909
Report Date: 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 04/21/16 19:36
Analyst: JB

Extraction Method: EPA 3510C
Extraction Date: 04/19/16 15:41

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG885173-1					
Acenaphthene	ND		ug/l	2.0	--
Benzidine	ND		ug/l	20	--
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--
Hexachlorobenzene	ND		ug/l	2.0	--
Bis(2-chloroethyl)ether	ND		ug/l	2.0	--
2-Chloronaphthalene	ND		ug/l	2.0	--
1,2-Dichlorobenzene	ND		ug/l	2.0	--
1,3-Dichlorobenzene	ND		ug/l	2.0	--
1,4-Dichlorobenzene	ND		ug/l	2.0	--
3,3'-Dichlorobenzidine	ND		ug/l	5.0	--
2,4-Dinitrotoluene	ND		ug/l	5.0	--
2,6-Dinitrotoluene	ND		ug/l	5.0	--
Azobenzene	ND		ug/l	2.0	--
Fluoranthene	ND		ug/l	2.0	--
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	--
4-Bromophenyl phenyl ether	ND		ug/l	2.0	--
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	--
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--
Hexachlorobutadiene	ND		ug/l	2.0	--
Hexachlorocyclopentadiene	ND		ug/l	20	--
Hexachloroethane	ND		ug/l	2.0	--
Isophorone	ND		ug/l	5.0	--
Naphthalene	ND		ug/l	2.0	--
Nitrobenzene	ND		ug/l	2.0	--
NDPA/DPA	ND		ug/l	2.0	--
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	--
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	--

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721
Lab Number: L1610909
Report Date: 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 04/21/16 19:36
Analyst: JB

Extraction Method: EPA 3510C
Extraction Date: 04/19/16 15:41

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG885173-1					
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--
Benzo(a)anthracene	ND		ug/l	2.0	--
Benzo(a)pyrene	ND		ug/l	2.0	--
Benzo(b)fluoranthene	ND		ug/l	2.0	--
Benzo(k)fluoranthene	ND		ug/l	2.0	--
Chrysene	ND		ug/l	2.0	--
Acenaphthylene	ND		ug/l	2.0	--
Anthracene	ND		ug/l	2.0	--
Benzo(ghi)perylene	ND		ug/l	2.0	--
Fluorene	ND		ug/l	2.0	--
Phenanthrene	ND		ug/l	2.0	--
Dibenzo(a,h)anthracene	ND		ug/l	2.0	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	--
Pyrene	ND		ug/l	2.0	--
Biphenyl	ND		ug/l	2.0	--
Aniline	ND		ug/l	2.0	--
4-Chloroaniline	ND		ug/l	5.0	--
1-Methylnaphthalene	ND		ug/l	2.0	--
2-Nitroaniline	ND		ug/l	5.0	--
3-Nitroaniline	ND		ug/l	5.0	--
4-Nitroaniline	ND		ug/l	5.0	--
Dibenzofuran	ND		ug/l	2.0	--
2-Methylnaphthalene	ND		ug/l	2.0	--
Acetophenone	ND		ug/l	5.0	--
n-Nitrosodimethylamine	ND		ug/l	2.0	--
2,4,6-Trichlorophenol	ND		ug/l	5.0	--
p-Chloro-m-cresol	ND		ug/l	2.0	--

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721
Lab Number: L1610909
Report Date: 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 04/21/16 19:36
Analyst: JB

Extraction Method: EPA 3510C
Extraction Date: 04/19/16 15:41

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG885173-1					
2-Chlorophenol	ND		ug/l	2.0	--
2,4-Dichlorophenol	ND		ug/l	5.0	--
2,4-Dimethylphenol	ND		ug/l	5.0	--
2-Nitrophenol	ND		ug/l	10	--
4-Nitrophenol	ND		ug/l	10	--
2,4-Dinitrophenol	ND		ug/l	20	--
4,6-Dinitro-o-cresol	ND		ug/l	10	--
Pentachlorophenol	ND		ug/l	10	--
Phenol	ND		ug/l	5.0	--
2-Methylphenol	ND		ug/l	5.0	--
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	--
2,4,5-Trichlorophenol	ND		ug/l	5.0	--
Benzoic Acid	ND		ug/l	50	--
Benzyl Alcohol	ND		ug/l	2.0	--
Carbazole	ND		ug/l	2.0	--
Pyridine	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	55		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	89		23-120
2-Fluorobiphenyl	92		15-120
2,4,6-Tribromophenol	92		10-120
4-Terphenyl-d14	98		41-149

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721
Lab Number: L1610909
Report Date: 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 04/20/16 18:23
Analyst: KV

Extraction Method: EPA 3510C
Extraction Date: 04/19/16 15:47

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG885175-1					
Acenaphthene	ND		ug/l	0.10	--
2-Chloronaphthalene	ND		ug/l	0.20	--
Fluoranthene	ND		ug/l	0.20	--
Hexachlorobutadiene	ND		ug/l	0.50	--
Naphthalene	ND		ug/l	0.20	--
Benzo(a)anthracene	ND		ug/l	0.20	--
Benzo(a)pyrene	ND		ug/l	0.20	--
Benzo(b)fluoranthene	ND		ug/l	0.20	--
Benzo(k)fluoranthene	ND		ug/l	0.20	--
Chrysene	ND		ug/l	0.20	--
Acenaphthylene	ND		ug/l	0.20	--
Anthracene	ND		ug/l	0.20	--
Benzo(ghi)perylene	ND		ug/l	0.20	--
Fluorene	ND		ug/l	0.20	--
Phenanthrene	ND		ug/l	0.20	--
Dibenzo(a,h)anthracene	ND		ug/l	0.20	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	--
Pyrene	ND		ug/l	0.20	--
1-Methylnaphthalene	ND		ug/l	0.20	--
2-Methylnaphthalene	ND		ug/l	0.20	--
Pentachlorophenol	ND		ug/l	0.80	--
Hexachlorobenzene	ND		ug/l	0.80	--
Hexachloroethane	ND		ug/l	0.80	--

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721
Lab Number: L1610909
Report Date: 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 04/20/16 18:23
Analyst: KV

Extraction Method: EPA 3510C
Extraction Date: 04/19/16 15:47

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG885175-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		21-120
Phenol-d6	42		10-120
Nitrobenzene-d5	105		23-120
2-Fluorobiphenyl	109		15-120
2,4,6-Tribromophenol	93		10-120
4-Terphenyl-d14	118		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP

Project Number: 16-1721

Lab Number: L1610909

Report Date: 04/22/16

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: WG885173-2 WG885173-3								
Acenaphthene	90		89		37-111	1		30
Benzidine	**1**	Q	**1**	Q	10-75	8		30
1,2,4-Trichlorobenzene	81		78		39-98	4		30
Hexachlorobenzene	95		91		40-140	4		30
Bis(2-chloroethyl)ether	85		83		40-140	2		30
2-Chloronaphthalene	89		89		40-140	0		30
1,2-Dichlorobenzene	75		72		40-140	4		30
1,3-Dichlorobenzene	71		70		40-140	1		30
1,4-Dichlorobenzene	72		69		36-97	4		30
3,3'-Dichlorobenzidine	54		51		40-140	6		30
2,4-Dinitrotoluene	**106**	Q	**106**	Q	24-96	0		30
2,6-Dinitrotoluene	101		101		40-140	0		30
Azobenzene	93		92		40-140	1		30
Fluoranthene	98		98		40-140	0		30
4-Chlorophenyl phenyl ether	93		92		40-140	1		30
4-Bromophenyl phenyl ether	96		92		40-140	4		30
Bis(2-chloroisopropyl)ether	86		84		40-140	2		30
Bis(2-chloroethoxy)methane	90		88		40-140	2		30
Hexachlorobutadiene	77		74		40-140	4		30
Hexachlorocyclopentadiene	64		65		40-140	2		30
Hexachloroethane	71		68		40-140	4		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721

Lab Number: L1610909
Report Date: 04/22/16

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: WG885173-2 WG885173-3								
Isophorone	93		89		40-140	4		30
Naphthalene	84		82		40-140	2		30
Nitrobenzene	87		87		40-140	0		30
NDPA/DPA	93		90		40-140	3		30
n-Nitrosodi-n-propylamine	92		91		29-132	1		30
Bis(2-ethylhexyl)phthalate	99		98		40-140	1		30
Butyl benzyl phthalate	98		100		40-140	2		30
Di-n-butylphthalate	97		97		40-140	0		30
Di-n-octylphthalate	103		104		40-140	1		30
Diethyl phthalate	96		93		40-140	3		30
Dimethyl phthalate	96		93		40-140	3		30
Benzo(a)anthracene	94		94		40-140	0		30
Benzo(a)pyrene	103		101		40-140	2		30
Benzo(b)fluoranthene	98		97		40-140	1		30
Benzo(k)fluoranthene	98		100		40-140	2		30
Chrysene	94		92		40-140	2		30
Acenaphthylene	92		91		45-123	1		30
Anthracene	93		93		40-140	0		30
Benzo(ghi)perylene	96		97		40-140	1		30
Fluorene	94		93		40-140	1		30
Phenanthrene	93		92		40-140	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721

Lab Number: L1610909
Report Date: 04/22/16

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: WG885173-2 WG885173-3								
Dibenzo(a,h)anthracene	101		99		40-140	2		30
Indeno(1,2,3-cd)pyrene	100		102		40-140	2		30
Pyrene	96		96		26-127	0		30
Biphenyl	91		89		40-140	2		30
Aniline	41		**31**	Q	40-140	28		30
4-Chloroaniline	68		62		40-140	9		30
1-Methylnaphthalene	87		86		41-103	1		30
2-Nitroaniline	105		106		52-143	1		30
3-Nitroaniline	75		70		25-145	7		30
4-Nitroaniline	99		96		51-143	3		30
Dibenzofuran	93		90		40-140	3		30
2-Methylnaphthalene	88		86		40-140	2		30
1,2,4,5-Tetrachlorobenzene	87		85		2-134	2		30
Acetophenone	96		93		39-129	3		30
n-Nitrosodimethylamine	52		53		22-74	2		30
2,4,6-Trichlorophenol	97		95		30-130	2		30
p-Chloro-m-cresol	97		97		23-97	0		30
2-Chlorophenol	83		83		27-123	0		30
2,4-Dichlorophenol	94		94		30-130	0		30
2,4-Dimethylphenol	76		74		30-130	3		30
2-Nitrophenol	97		92		30-130	5		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721

Lab Number: L1610909
Report Date: 04/22/16

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: WG885173-2 WG885173-3								
4-Nitrophenol	64		64		10-80	0		30
2,4-Dinitrophenol	89		90		20-130	1		30
4,6-Dinitro-o-cresol	100		96		20-164	4		30
Pentachlorophenol	94		96		9-103	2		30
Phenol	43		42		12-110	2		30
2-Methylphenol	77		75		30-130	3		30
3-Methylphenol/4-Methylphenol	77		75		30-130	3		30
2,4,5-Trichlorophenol	96		96		30-130	0		30
Benzoic Acid	42		39		10-164	7		30
Benzyl Alcohol	78		76		26-116	3		30
Carbazole	96		96		55-144	0		30
Pyridine	12		14		10-66	15		30
Parathion, ethyl	116		112		40-140	4		30
Atrazine	111		109		40-140	2		30
Benzaldehyde	88		83		40-140	6		30
Caprolactam	30		30		10-130	0		30
2,3,4,6-Tetrachlorophenol	96		93		40-140	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP

Project Number: 16-1721

Lab Number: L1610909

Report Date: 04/22/16

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: WG885173-2 WG885173-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	58		57		21-120
Phenol-d6	42		42		10-120
Nitrobenzene-d5	91		88		23-120
2-Fluorobiphenyl	92		89		15-120
2,4,6-Tribromophenol	99		100		10-120
4-Terphenyl-d14	96		94		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721

Lab Number: L1610909
Report Date: 04/22/16

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: WG885175-2 WG885175-3								
Acenaphthene	94		94		37-111	0		40
2-Chloronaphthalene	99		99		40-140	0		40
Fluoranthene	111		112		40-140	1		40
Hexachlorobutadiene	87		84		40-140	4		40
Naphthalene	94		94		40-140	0		40
Benzo(a)anthracene	101		103		40-140	2		40
Benzo(a)pyrene	105		106		40-140	1		40
Benzo(b)fluoranthene	104		106		40-140	2		40
Benzo(k)fluoranthene	95		98		40-140	3		40
Chrysene	100		100		40-140	0		40
Acenaphthylene	105		104		40-140	1		40
Anthracene	96		97		40-140	1		40
Benzo(ghi)perylene	89		89		40-140	0		40
Fluorene	108		108		40-140	0		40
Phenanthrene	93		95		40-140	2		40
Dibenzo(a,h)anthracene	91		91		40-140	0		40
Indeno(1,2,3-cd)Pyrene	91		91		40-140	0		40
Pyrene	101		103		26-127	2		40
1-Methylnaphthalene	98		98		40-140	0		40
2-Methylnaphthalene	96		95		40-140	1		40
Pentachlorophenol	78		82		9-103	5		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP

Project Number: 16-1721

Lab Number: L1610909

Report Date: 04/22/16

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: WG885175-2 WG885175-3								
Hexachlorobenzene	79		80		40-140	1		40
Hexachloroethane	92		91		40-140	1		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	59		57		21-120
Phenol-d6	42		41		10-120
Nitrobenzene-d5	104		102		23-120
2-Fluorobiphenyl	113		111		15-120
2,4,6-Tribromophenol	99		103		10-120
4-Terphenyl-d14	125		125		41-149

PCBS

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

SAMPLE RESULTS

Lab ID:	L1610909-01	Date Collected:	04/13/16 14:00
Client ID:	DEWATERING	Date Received:	04/13/16
Sample Location:	CLINTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 608
Analytical Method:	5,608	Extraction Date:	04/19/16 11:56
Analytical Date:	04/20/16 12:19	Cleanup Method:	EPA 3665A
Analyst:	JW	Cleanup Date:	04/20/16
		Cleanup Method:	EPA 3660B
		Cleanup Date:	04/20/16

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	57		30-150	A

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 5,608
Analytical Date: 04/20/16 12:31
Analyst: JW

Extraction Method: EPA 608
Extraction Date: 04/19/16 11:56
Cleanup Method: EPA 3665A
Cleanup Date: 04/20/16
Cleanup Method: EPA 3660B
Cleanup Date: 04/20/16

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG885081-1						
Aroclor 1016	ND		ug/l	0.250	--	A
Aroclor 1221	ND		ug/l	0.250	--	A
Aroclor 1232	ND		ug/l	0.250	--	A
Aroclor 1242	ND		ug/l	0.250	--	A
Aroclor 1248	ND		ug/l	0.250	--	A
Aroclor 1254	ND		ug/l	0.250	--	A
Aroclor 1260	ND		ug/l	0.200	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	71		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP

Project Number: 16-1721

Lab Number: L1610909

Report Date: 04/22/16

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: WG885081-2 WG885081-3									
Aroclor 1016	80		81		40-140	1		50	A
Aroclor 1260	72		71		40-140	1		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		73		30-150	A
Decachlorobiphenyl	75		74		30-150	A

METALS

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1612461
Report Date: 04/29/16

SAMPLE RESULTS

Lab ID: L1612461-01
Client ID: DEWATERING (METALS)
Sample Location: Not Specified
Matrix: Water
Date Collected: 04/27/16 14:00
Date Received: 04/27/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	0.00199		mg/l	0.00050	--	1	04/27/16 15:40	04/28/16 12:09	EPA 3005A	1,6020A	KL
Cadmium, Total	ND		mg/l	0.00020	--	1	04/27/16 15:40	04/28/16 12:09	EPA 3005A	1,6020A	KL
Chromium, Total	ND		mg/l	0.00200	--	1	04/27/16 15:40	04/28/16 12:09	EPA 3005A	1,6020A	KL
Copper, Total	0.00228		mg/l	0.00100	--	1	04/27/16 15:40	04/28/16 12:09	EPA 3005A	1,6020A	KL
Iron, Total	0.38		mg/l	0.05	--	1	04/27/16 15:40	04/29/16 01:34	EPA 3005A	19,200.7	FB
Lead, Total	0.00104		mg/l	0.00050	--	1	04/27/16 15:40	04/28/16 12:09	EPA 3005A	1,6020A	KL
Nickel, Total	0.00288		mg/l	0.00200	--	1	04/27/16 15:40	04/28/16 12:09	EPA 3005A	1,6020A	KL
Selenium, Total	ND		mg/l	0.00500	--	1	04/27/16 15:40	04/28/16 12:09	EPA 3005A	1,6020A	KL
Zinc, Total	ND		mg/l	0.01000	--	1	04/27/16 15:40	04/28/16 12:09	EPA 3005A	1,6020A	KL

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1612461
Report Date: 04/29/16

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG887936-1										
Arsenic, Total	ND		mg/l	0.00050	--	1	04/27/16 15:40	04/28/16 11:50	1,6020A	KL
Cadmium, Total	ND		mg/l	0.00020	--	1	04/27/16 15:40	04/28/16 11:50	1,6020A	KL
Chromium, Total	ND		mg/l	0.00200	--	1	04/27/16 15:40	04/28/16 11:50	1,6020A	KL
Copper, Total	ND		mg/l	0.00100	--	1	04/27/16 15:40	04/28/16 11:50	1,6020A	KL
Lead, Total	ND		mg/l	0.00050	--	1	04/27/16 15:40	04/28/16 11:50	1,6020A	KL
Nickel, Total	ND		mg/l	0.00200	--	1	04/27/16 15:40	04/28/16 11:50	1,6020A	KL
Selenium, Total	ND		mg/l	0.00500	--	1	04/27/16 15:40	04/28/16 11:50	1,6020A	KL
Zinc, Total	ND		mg/l	0.01000	--	1	04/27/16 15:40	04/28/16 11:50	1,6020A	KL

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG888222-1										
Iron, Total	ND		mg/l	0.05	--	1	04/27/16 15:40	04/29/16 02:01	19,200.7	FB

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1612461

Report Date: 04/29/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG887936-2								
Arsenic, Total	103		-		80-120	-		
Cadmium, Total	106		-		80-120	-		
Chromium, Total	96		-		80-120	-		
Copper, Total	100		-		80-120	-		
Lead, Total	96		-		80-120	-		
Nickel, Total	101		-		80-120	-		
Selenium, Total	108		-		80-120	-		
Zinc, Total	105		-		80-120	-		
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG888222-2								
Iron, Total	97		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1612461
Report Date: 04/29/16

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG887936-4 QC Sample: L1612461-01 Client ID: DEWATERING (METALS)												
Arsenic, Total	0.00199	0.12	0.1196	98		-	-		75-125	-		20
Cadmium, Total	ND	0.051	0.05121	100		-	-		75-125	-		20
Chromium, Total	ND	0.2	0.1841	92		-	-		75-125	-		20
Copper, Total	0.00228	0.25	0.2420	96		-	-		75-125	-		20
Lead, Total	0.00104	0.51	0.4779	94		-	-		75-125	-		20
Nickel, Total	0.00288	0.5	0.4828	96		-	-		75-125	-		20
Selenium, Total	ND	0.12	0.124	103		-	-		75-125	-		20
Zinc, Total	ND	0.5	0.5012	100		-	-		75-125	-		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG888222-4 QC Sample: L1612461-01 Client ID: DEWATERING (METALS)												
Iron, Total	0.38	1	1.3	92		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1612461
Report Date: 04/29/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG887936-3 QC Sample: L1612461-01 Client ID: DEWATERING (METALS)						
Arsenic, Total	0.00199	0.00223	mg/l	11		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.00228	0.00214	mg/l	6		20
Lead, Total	0.00104	0.00098	mg/l	6		20
Nickel, Total	0.00288	0.00353	mg/l	20		20
Selenium, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG888222-3 QC Sample: L1612461-01 Client ID: DEWATERING (METALS)						
Iron, Total	0.38	0.32	mg/l	17		20

INORGANICS
&
MISCELLANEOUS

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721
Lab Number: L1610909
Report Date: 04/22/16

SAMPLE RESULTS

Lab ID: L1610909-01
Client ID: DEWATERING
Sample Location: CLINTON, MA
Matrix: Water

Date Collected: 04/13/16 14:00
Date Received: 04/13/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	--	1	04/14/16 21:00	04/15/16 15:25	121,4500CN-CE	JO
Chlorine, Total Residual	ND		mg/l	0.20	--	10	-	04/13/16 21:30	121,4500CL-D	ML
TPH, SGT-HEM	ND		mg/l	4.00	--	1	04/19/16 17:30	04/19/16 22:20	74,1664A	ML
Phenolics, Total	ND		mg/l	0.030	--	1	04/15/16 10:45	04/15/16 16:16	4,420.1	MP
Chromium, Hexavalent	ND		mg/l	0.050	--	5	04/14/16 00:05	04/14/16 00:23	121,3500CR-B	LH
Anions by Ion Chromatography - Westborough Lab										
Chloride	12.2		mg/l	0.500	--	1	-	04/14/16 23:52	44,300.0	AU

Project Name: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

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 Batch: WG883443-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	04/13/16 21:30	121,4500CL-D	ML
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG883453-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	04/14/16 00:05	04/14/16 00:23	121,3500CR-B	LH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG883843-1										
Cyanide, Total	ND		mg/l	0.005	--	1	04/14/16 21:00	04/15/16 15:09	121,4500CN-CE	JO
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG883976-1										
Phenolics, Total	ND		mg/l	0.030	--	1	04/15/16 10:45	04/15/16 15:43	4,420.1	MP
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG884196-1										
Chloride	ND		mg/l	0.500	--	1	-	04/15/16 02:04	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG885219-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	04/19/16 17:30	04/19/16 22:20	74,1664A	ML

Lab Control Sample Analysis

Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP

Project Number: 16-1721

Lab Number: L1610909

Report Date: 04/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG883443-2								
Chlorine, Total Residual	101		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG883453-2								
Chromium, Hexavalent	96		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG883843-2								
Cyanide, Total	99		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG883976-2								
Phenolics, Total	90		-		70-130	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG884196-2								
Chloride	101		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG885219-2								
TPH	80		-		64-132	-		34

Matrix Spike Analysis
Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721

Lab Number: L1610909
Report Date: 04/22/16

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 QC Batch ID: WG883453-4 QC Sample: L1610909-01 Client ID: DEWATERING												
Chromium, Hexavalent	ND	0.1	0.103	103		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG883843-4 WG883843-5 QC Sample: L1610904-03 Client ID: MS Sample												
Cyanide, Total	0.027	0.2	0.184	**78**	Q	0.215	94		90-110	16		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG883976-4 QC Sample: L1610606-01 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.42	104		-	-		70-130	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG884196-3 WG884196-4 QC Sample: L1610904-03 Client ID: MS Sample												
Chloride	49.4	100	155	106		155	106		40-151	0		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG885219-4 QC Sample: L1611242-01 Client ID: MS Sample												
TPH	ND	21.1	16.7	79		-	-		64-132	-		34

Lab Duplicate Analysis
Batch Quality Control

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721

Lab Number: L1610909
Report Date: 04/22/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG883443-3 QC Sample: L1610875-06 Client ID: DUP Sample						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG883453-3 QC Sample: L1610909-01 Client ID: DEWATERING						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG883843-3 QC Sample: L1610904-03 Client ID: DUP Sample						
Cyanide, Total	0.027	0.020	mg/l	**33**	Q	30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG883976-3 QC Sample: L1610606-01 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG885219-3 QC Sample: L1611242-01 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34

Project Name: O'CONNELLS CLINTON WWTP
Project Number: 16-1721

Lab Number: L1610909
Report Date: 04/22/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1610909-01A	Vial HCl preserved	A	N/A	4.8	Y	Absent	8260-SIM(14),8260(14)
L1610909-01B	Vial HCl preserved	A	N/A	4.8	Y	Absent	8260-SIM(14),8260(14)
L1610909-01C	Vial HCl preserved	A	N/A	4.8	Y	Absent	8260-SIM(14),8260(14)
L1610909-01D	Vial Na2S2O3 preserved	A	N/A	4.8	Y	Absent	504(14)
L1610909-01E	Vial Na2S2O3 preserved	A	N/A	4.8	Y	Absent	504(14)
L1610909-01F	Plastic 950ml unpreserved	A	7	4.8	Y	Absent	CL-300(28),HEXCR-3500(1),TRC-4500(1)
L1610909-01G	Plastic 250ml NaOH preserved	A	>12	4.8	Y	Absent	TCN-4500(14)
L1610909-01H	Plastic 250ml HNO3 preserved	A	<2	4.8	Y	Absent	SE-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),FE-UI(180),PB-6020T(180),HG-U(28),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180)
L1610909-01J	Amber 950ml H2SO4 preserved	A	<2	4.8	Y	Absent	TPHENOL-420(28)
L1610909-01K	Amber 1000ml Na2S2O3	A	7	4.8	Y	Absent	PCB-608(7)
L1610909-01L	Amber 1000ml Na2S2O3	A	7	4.8	Y	Absent	PCB-608(7)
L1610909-01M	Amber 1000ml unpreserved	A	7	4.8	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L1610909-01N	Amber 1000ml unpreserved	A	7	4.8	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L1610909-01O	Amber 1000ml HCl preserved	A	N/A	4.8	Y	Absent	TPH-1664(28)
L1610909-01P	Amber 1000ml HCl preserved	A	N/A	4.8	Y	Absent	TPH-1664(28)
L1610909-02A	Vial HCl preserved	A	N/A	4.8	Y	Absent	ARCHIVE(0)
L1610909-02B	Vial HCl preserved	A	N/A	4.8	Y	Absent	ARCHIVE(0)
L1610909-02C	Vial Na2S2O3 preserved	A	N/A	4.8	Y	Absent	ARCHIVE()
L1610909-02D	Vial Na2S2O3 preserved	A	N/A	4.8	Y	Absent	ARCHIVE()

*Values in parentheses indicate holding time in days

Project Name:	O'CONNELLS CLINTON WWTP	**Lab Number:**	L1610909
Project Number:	16-1721	**Report Date:**	04/22/16

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

Report Format: Data Usability Report

Project Name:	O'CONNELLS CLINTON WWTP	**Lab Number:**	L1610909
Project Number:	16-1721	**Report Date:**	04/22/16

Data Qualifiers

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: O'CONNELLS CLINTON WWTP **Lab Number:** L1610909

Project Number: 16-1721 **Report Date:** 04/22/16

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.

4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.

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 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene
EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene
EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.
EPA 1010A: NPW: Ignitability
EPA 6010C: NPW: Strontium; SCM: Strontium
EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation
EPA 9038: NPW: Sulfate
EPA 9050A: NPW: Specific Conductance
EPA 9056: NPW: Chloride, Nitrate, Sulfate
EPA 9065: NPW: Phenols
EPA 9251: NPW: Chloride
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam
EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane
SM 2540D: TSS
SM2540G: SCM: Percent Solids
EPA 1631E: SCM: Mercury
EPA 7474: SCM: Mercury
EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA 8270-SIM: NPW and SCM: Alkylated PAHs.
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, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.
Biological Tissue Matrix: ***8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:*** Lead***; 8270D:*** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
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.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, 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, SM9222D-MF**.

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

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL
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: 4/13/16

ALPHA Job #: 21610909

Client Information

Client: OHI Engineering
Address: 44 Wood Ave, Mansfield, MA
Phone:
Email: JKelly@OHIengineering.com

Project Information

Project Name: O'Connell's Clinton WWTP
Project Location: Clinton, MA
Project #: 16-1721
Project Manager: JARED KELLY
ALPHA Quote #:

Turn-Around Time

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

Additional Project Information:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

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 _____

ANALYSIS

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
RGP Package

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	RGP Package	Sample Comments	TOTAL # BOTTLES
10909-01	DEWATERING	4/12/16	1400	GW	JHK	X	TSS will be dropped off 4/13/16	

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

	Container Type	Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
	4/12/16 1535		4/12/16 1605
	4/13/16 15:05		4/13/16 1920
	4/13/16 2013		4/13/16 2013

4/13/16 15:05.

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

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

ANALYTICAL REPORT

Lab Number:	L1611999
Client:	OHI Engineering Incorporated 44 Wood Avenue Mansfield, MA 02048
ATTN:	Jared Kelly
Phone:	(508) 339-3929
Project Name:	O'CONNELL'S CLINTON WWTP
Project Number:	16-1721
Report Date:	04/27/16

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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

Project Name: O'CONNELL'S CLINTON WWTP
Project Number: 16-1721

Lab Number: L1611999
Report Date: 04/27/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1611999-01	DEWATERING	WATER	CLINTON, MA	04/22/16 12:00	04/22/16

Project Name: O'CONNELL'S CLINTON WWTP **Lab Number:** L1611999
Project Number: 16-1721 **Report Date:** 04/27/16

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: O'CONNELL'S CLINTON WWTP **Lab Number:** L1611999
Project Number: 16-1721 **Report Date:** 04/27/16

Case Narrative (continued)

Sample Receipt

The sample was received at the laboratory above the required temperature range. The sample was hand-delivered directly from the sampling site but was not on ice.

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: 04/27/16

INORGANICS
&
MISCELLANEOUS

Project Name: O'CONNELL'S CLINTON WWTP
Project Number: 16-1721
Lab Number: L1611999
Report Date: 04/27/16

SAMPLE RESULTS

Lab ID: L1611999-01
Client ID: DEWATERING
Sample Location: CLINTON, MA
Matrix: Water
Date Collected: 04/22/16 12:00
Date Received: 04/22/16
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	1600		mg/l	30	NA	6	-	04/27/16 02:00	121,2540D	RP

Project Name: O'CONNELL'S CLINTON WWTP
Project Number: 16-1721
Lab Number: L1611999
Report Date: 04/27/16

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 Batch: WG887624-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	04/27/16 02:00	121,2540D	RP

Lab Duplicate Analysis
Batch Quality Control

Project Name: O'CONNELL'S CLINTON WWTP
Project Number: 16-1721

Lab Number: L1611999
Report Date: 04/27/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG887624-2 QC Sample: L1611999-01 Client ID: DEWATERING						
Solids, Total Suspended	1600	1600	mg/l	0		29

Project Name: O'CONNELL'S CLINTON WWTP
Project Number: 16-1721

Lab Number: L1611999
Report Date: 04/27/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1611999-01A	Plastic 950ml unpreserved	A	7	18.8	Y	Absent	TSS-2540(7)

*Values in parentheses indicate holding time in days

Project Name:	O'CONNELL'S CLINTON WWTP	**Lab Number:**	L1611999
Project Number:	16-1721	**Report Date:**	04/27/16

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.

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

Report Format: Data Usability Report

Project Name:	O'CONNELL'S CLINTON WWTP	**Lab Number:**	L1611999
Project Number:	16-1721	**Report Date:**	04/27/16

Data Qualifiers

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:	O'CONNELL'S CLINTON WWTP	**Lab Number:**	L1611999
Project Number:	16-1721	**Report Date:**	04/27/16

REFERENCES

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 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene
EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene
EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.
EPA 1010A: NPW: Ignitability
EPA 6010C: NPW: Strontium; SCM: Strontium
EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation
EPA 9038: NPW: Sulfate
EPA 9050A: NPW: Specific Conductance
EPA 9056: NPW: Chloride, Nitrate, Sulfate
EPA 9065: NPW: Phenols
EPA 9251: NPW: Chloride
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam
EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane
SM 2540D: TSS
SM2540G: SCM: Percent Solids
EPA 1631E: SCM: Mercury
EPA 7474: SCM: Mercury
EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA 8270-SIM: NPW and SCM: Alkylated PAHs.
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, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.
Biological Tissue Matrix: ***8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:*** Lead***; 8270D:*** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
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.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, 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, SM9222D-MF**.

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: 4/22/16

ALPHA Job #: L1611999

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: OHI Engineering
Address: 44 Wood Ave, Mansfield, MA
Phone:
Email: JKelly@OHIengineering

Additional Project Information:

Project Information

Project Name: O'Connells Clinton WWTP
Project Location: Clinton, MA
Project #: 16-1721
Project Manager: JARED KELLY
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 #:

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 _____

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	ANALYSIS: 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 / TSS (part of RGP pack)	SAMPLE INFO: Filtration ☐ Field ☐ Lab to do; Preservation ☐ Lab to do / Sample Comments	TOTAL # BOTTLES
11999-01	Dewatering	4/22/16	1200	GW	JJK	x		

Container Type										P											
Preservative										A											

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
	4/22/16 1215		4/22/16 1215

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

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

OHI Engineering, Inc.
Engineers and Environmental Scientists

APPENDIX B

Supporting Documentation

1. General facility information. Please provide the following information about the facility.

a) Name of facility: MWRA Clinton WWTP	**Mailing Address for the Facility:** 677 High Street Ext, Clinton, MA 01510	
b) Location Address of the Facility (if different from mailing address):	**Facility Location** **longitude:** 71.6788 W **latitude:** 42.4315 N	**Type of Business:** Wastewater Treatment **Facility SIC codes:** 4952

c) Name of facility owner: Massachusetts Water Resources Authority **Owner's email:** _____

Owner's Tel #: (617) 242-6000 **Owner's Fax #:** _____

Address of owner (if different from facility address) Charlestown Navy Yard, 100 First Avenue, Boston, Massachusetts 02129

Owner is (check one): 1. Federal ____ 2. State __✔__ 3. Private _____ 4. Other _____(Describe)_____

Legal name of Operator, if not owner: Daniel O'Connell's Sons, Inc.

Operator Contact Name: Robert bailey

Operator Tel Number: (508) 520-8900 **Fax Number:** _____

Operator's email: rbailey@oconnells.com

Operator Address (if different from owner)

1000 Franklin Village Drive #106 Franklin, MA 02038

d) Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water. Map attached? __✔__

e) Check Yes or No for the following:

1. **Has a prior NPDES permit been granted for the discharge? Yes ____ No__✔__ If Yes, Permit Number: _____**
2. **Is the discharge a "new discharger" as defined by 40 CFR Section 122.2? Yes__✔__ No_____**
3. **Is the facility covered by an individual NPDES permit? Yes__✔__ No_____ If Yes, Permit Number** MA0100404
4. **Is there a pending application on file with EPA for this discharge? Yes _____ No __✔__ If Yes, date of submittal:**

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed)

a) Name of receiving water into which discharge will occur: South Branch Nashua River
State Water Quality Classification: Class B **Freshwater:** Yes **Marine Water:** No

b) Describe the discharge activities for which the owner/applicant is seeking coverage:

- ✔ **1. Construction dewatering of groundwater intrusion and/or storm water accumulation.**
- ☐ **2. Short-term or long-term dewatering of foundation sumps.**
- ☐ **3. Other.**

c) Number of outfalls 1

For each outfall:

d) Estimate the maximum daily and average monthly flow of the discharge (in gallons per day – GPD). Max Daily Flow 5000 **GPD**
Average Monthly Flow 1500 **GPD**

e.) What is the maximum and minimum monthly pH of the discharge (in s.u.)? Max pH 7.5 **Min pH** 6.5

f.) Identify the source of the discharge (i.e. potable water, surface water, or groundwater). If groundwater, the facility shall submit effluent test results, as required in Section 4.4.5 of the General Permit.

g.) What treatment does the wastewater receive prior to discharge?

h.) Is the discharge continuous? Yes ☐ **No** ✔ **If no, is the discharge periodic (P) (occurs regularly, i.e., monthly or seasonally, but is not continuous all year) or intermittent (I) (occurs sometimes but not regularly) or both (B)** Intermittent
If (P), number of days or months per year of the discharge _____ and the specific months of discharge _____;
If (I), number of days/year there is a discharge as needed
Is the discharge temporary? Yes ✔ **No** ☐
If yes, approximate start date of dewatering 05/15/2016 **approximate end date of dewatering _____**

i.) Latitude and longitude of each discharge within 100 feet (See http://www.epa.gov/tri/report/siting_tool): Outfall 1: long. 71.6788 W **lat.** 42.4315 N **; Outfall 2: long.** N/A **lat.** N/A **; Outfall 3: long.** N/A **lat.** N/A **.**

j.) If the source of the discharge is potable water, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water and attach any calculation sheets used to support stream flow and dilution calculations _____ cfs
(See Appendix VII for equations and additional information)

MASSACHUSETTS FACILITIES: See Section 3.4 and Appendix 1 of the General Permit for more information on Areas of Critical Environmental Concern (ACEC):

k.) Does the discharge occur in an ACEC? Yes _____ No __✔__
If yes, provide the name of the ACEC: _____

3. Contaminant Information

a) Are any pH neutralization and/or dechlorination chemicals used in the discharge? If so, include the chemical name and manufacturer; maximum and average daily quantity used as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and the vendor's reported aquatic toxicity (NOAEL and/or LC_{50} in percent for aquatic organism(s)).

b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge.

4. Determination of Endangered Species Act Eligibility: Provide documentation of ESA eligibility as required at Part 3.4 and Appendix IV. In addition, respond to the following questions.

a) Which of the three eligibility criteria listed in Appendix IV, Criterion (A, B, or C) have you met? A

b) Please attach documentation with your NOI supporting your response. Please see Appendix IV for acceptable documentation

5. Documentation of National Historic Preservation Act requirements: Please respond to the following questions:

a) See Screening Process in Appendix III and respond to questions regarding your site and any historic properties listed or eligible for listing on the National Register of Historic Places. Question 1: Yes __✔__ No ____ ; Question 2: No __✔__ Yes _____

b) Have any State or Tribal historic preservation officers been consulted in this determination? Yes _____ or No __✔__ If yes, attach the results of the consultation(s).

c) Which of the three National Historic Preservation Act eligibility criterion listed in Appendix III, Criterion (A, B, or C) have you met? A

d) Is the project located on property of religious or cultural significance to an Indian Tribe? Yes _____ or No __✔__ If yes, provide that name of the Indian Tribe associated with the property. _____

6. Supplemental Information: Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit

7. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22 (see below) including the following certification:

I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the dewatering system; (2) the discharge consists solely of dewatering and authorized pH adjustment and/or dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, water product or finished product; (4) if the discharge of dewatering subsequently mixes with other permitted wastewater (i.e. stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for dewatering discharge; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act; and (6) 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, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility Name: CLINTON WWTP - PHOSPHORUS REDUCTION FACILITY

Operator signature: Paul Pradera

Print Full Name and Title: PAUL PRADERIO - DIRECTOR OF FIELD OPERATIONS

Date: 5/2/16

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.


NATIONAL PARK SERVICE
NATIONAL REGISTER
OF HISTORIC PLACES
Jewett Ct
Ross St
Gorham Ave
Allen St
Fuller St
70
677 High St Ext
Megan Cir
Craig Dr
Martin St
Olive St
Worcester St
110
Roma St
Goss St
Stone St
Boynton St
Laurel St
Hamilton St
Adams Rd
NATIONAL PARK SERVICE

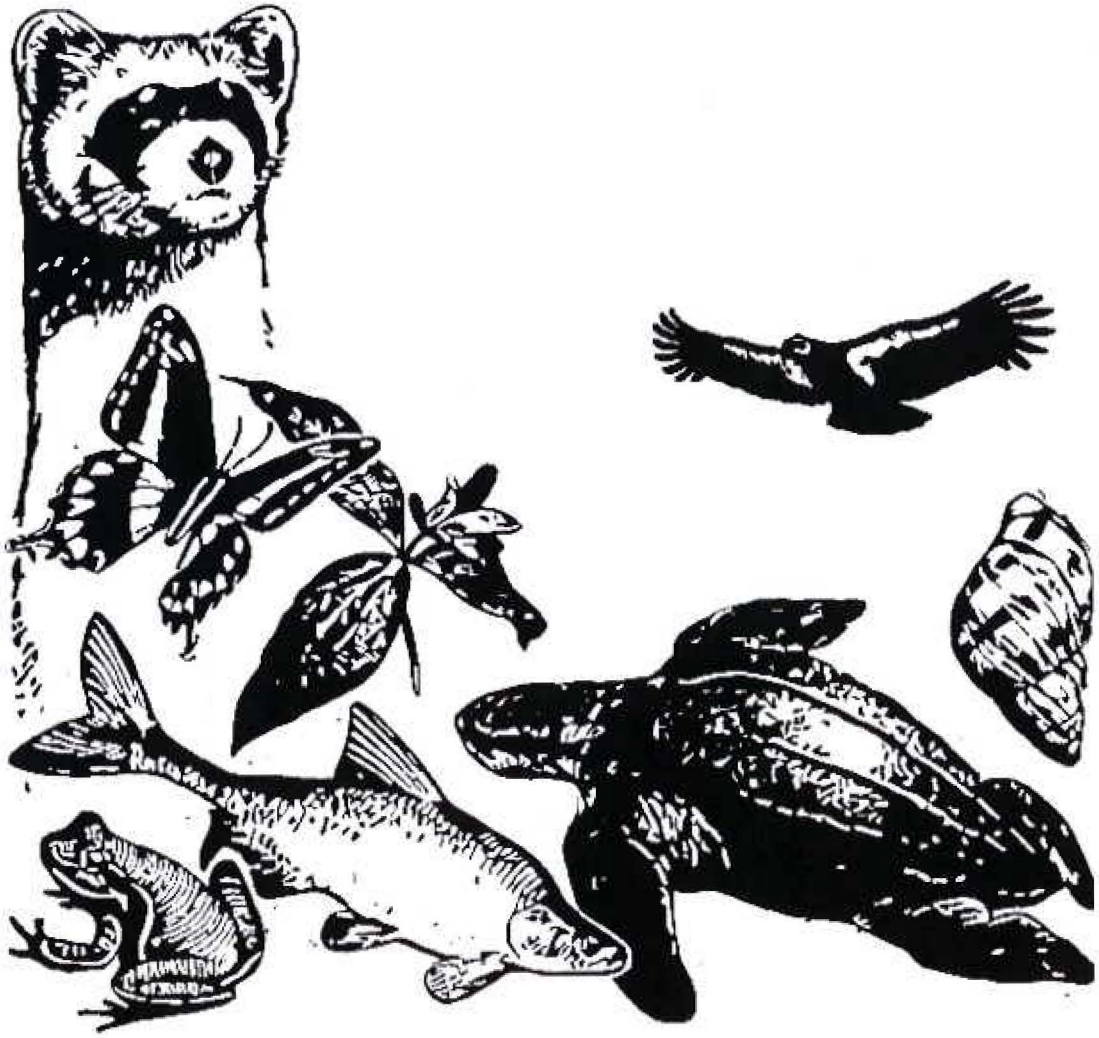
U.S. Fish & Wildlife Service

Clinton WWTP Phosphorus Reduction Facility

IPaC Trust Resources Report

Generated April 27, 2016 07:02 AM MDT, IPaC v3.0.2

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

Table of Contents

U.S. Fish & Wildlife Service

IPaC Trust Resources Report

NAME

Clinton WWTP Phosphorus Reduction Facility

LOCATION

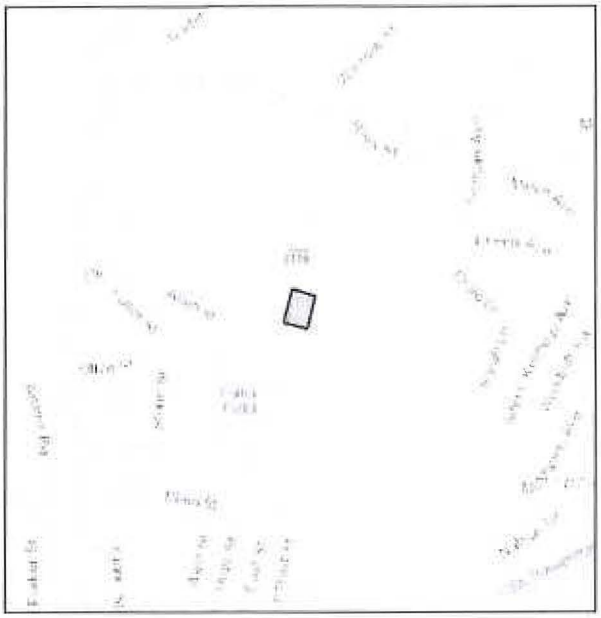
Worcester County, Massachusetts

DESCRIPTION

Upgrades to Clinton Wastewater Treatment Plant

IPAC LINK

https://ecos.fws.gov/ipac/project/JWMIU-5QXVN-GPRKR-E6FUD-IG74SQ



U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

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

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

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 either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Mammals

Northern Long-eared Bat Myotis septentrionalis — Threatened

CRITICAL HABITAT
No critical habitat has been designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A0JE

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.[1] 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.

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1. 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.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php

The following species of migratory birds could potentially be affected by activities in this location:

American Oystercatcher Haematopus palliatus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0G8

American Bittern Botaurus lentiginosus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F3

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Black-billed Cuckoo Coccyzus erythropthalmus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HI

Blue-winged Warbler Vermivora pinus — Bird of conservation concern
Season: Breeding

Canada Warbler Wilsonia canadensis — Bird of conservation concern
Season: Breeding

Least Bittern Ixobrychus exilis
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B092

Olive-sided Flycatcher Contopus cooperi — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0AN

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Pied-billed Grebe Podilymbus podiceps — Bird of conservation concern
Season: Breeding

Prairie Warbler Dendroica discolor — Bird of conservation concern
Season: Breeding

Purple Sandpiper Calidris maritima — Bird of conservation concern
Season: Wintering

Short-eared Owl Asio flammeus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Upland Sandpiper Bartramia longicauda — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HC

Willow Flycatcher Empidonax traillii — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F6

Wood Thrush Hylocichla mustelina — Bird of conservation concern
Season: Breeding

Worm Eating Warbler Helmitheros vermivorum — Bird of conservation concern
Season: Breeding

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in 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.

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

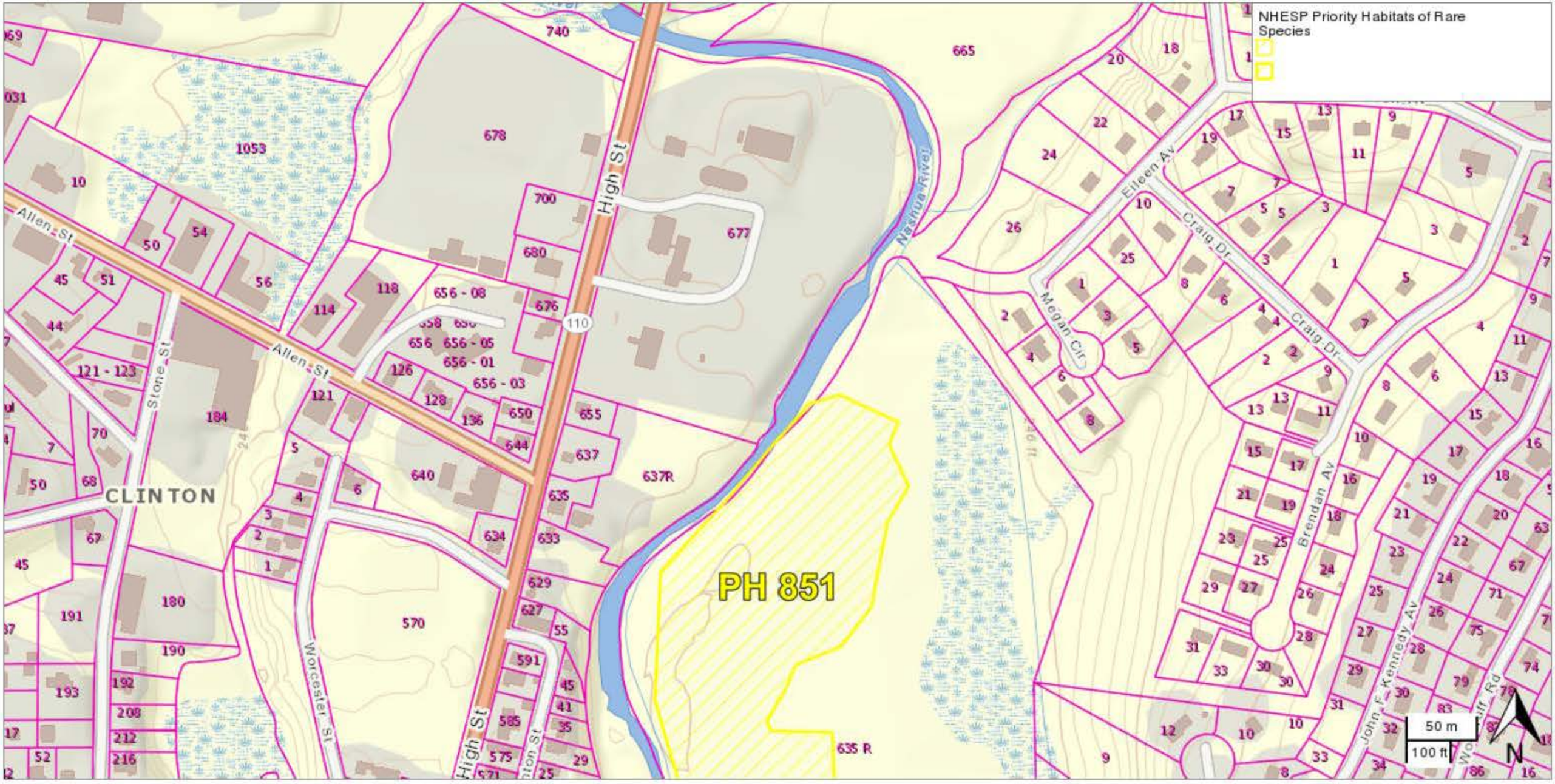
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and 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.

Wetland data is unavailable at this time.

Figure 2 - NHESP Priority habitat of Rare Species



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