HALEY & ALDRICH, INC.
465 Medford St.
Suite 220
Boston, MA 02129
617.886.7400

04 August 2016
File No. 40181-033

US Environmental Protection Agency
Dewatering GP Processing
Industrial Permit Unit (OEP 06- 4)
5 Post Office Square – Suite 100
Boston, MA 02109-3912

Attention: Ms. Suzanne Warner

Subject: Notice of Intent (NOI)
Temporary Construction Dewatering
Government Center Garage - Enabling Phase
50 Sudbury Street
Boston, Massachusetts

Ladies and Gentlemen:

On behalf of our client, Bulfinch Congress Holdings, LLC, and in accordance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Dewatering Activities – Massachusetts General Permit, MAG070000, included herewith are the Notice of Intent (NOI) and applicable documentation as required by the US Environmental Protection Agency (USEPA) and Massachusetts Department of Environmental protection (MassDEP) for construction site dewatering under the General Permit.

Temporary dewatering is planned in support of the proposed renovations to the Government Center Garage in Boston, Massachusetts, as shown on Figure 1, Project Locus. We anticipate dewatering will be conducted, as necessary, during the proposed renovations.

SITE DESCRIPTION

Constructed in 1967, the nine-story precast concrete parking garage is supported on concrete-filled steel pipe piles bearing in glacial soils/bedrock. The structure has ground floor retail on the east and west sides of Congress Street and along a portion of Sudbury Street, and office space for the top two floors. The eastern portion of the structure, between Congress Street and the Surface Road, overhangs the below-grade MBTA Haymarket Subway Station.

PROPOSED CONTRUCTION AND MANAGEMENT OF DEWATERING EFFLUENT

Work will be performed in the western portion of the existing structure bounded by New Chardon, Bowker, Sudbury and Congress Streets to prepare the parking structure for subsequent building construction on the site, as shown on Figure 2. Based on conversations with project team members and review of project progress drawings dated 13 March 2015, installation and construction of certain key new structural elements will involve dewatering include the following:

- Deep foundation elements (drilled-in micropiles) for a new parking garage structural brace frame
- Support for new ramping and egress points from Bowker Street
- A below-grade police parking ramp accessed from Bowker Street, with associated cast-in-place concrete perimeter retaining walls

Where possible, the project will utilize on-site recharge of the dewatering effluent; however, where on-site recharge is not feasible, the project plans to direct the dewatering effluent to the existing storm drain system (CB No. 143), which drains to the Charles River (SDO No. 49), as shown in Figure 2, Proposed Discharge Route. Site work and associated dewatering are anticipated to begin in September 2016 and are estimated to be complete around January 2018.

The Site Contractor will design, operate, and maintain dewatering and sedimentation control systems for off-site discharge. The systems will be designed to meet the permit requirements for suspended solids, pH, and other constituents (as required) in the effluent stream prior to discharge into the nearby storm drain. See Figure 3 for the proposed initial treatment train. Once operations begin, a licensed wastewater treatment plant operator will conduct system monitoring as required.

The Environmental Consultant, Vertex Companies, Inc. (Vertex) will perform the required sampling and testing of the dewatering effluent and will report the results as required by the permit. The Site Contractor's sedimentation and treatment system and/or dewatering procedures will be designed as necessary to comply with the Permit Discharge Criteria.

CONTACT INFORMATION

Applicant:
Bulfinch Congress Holdings, LLC
c/o The HYM Investment Group LLC
One Congress Street, 10th floor
Boston, Massachusetts 02114
Attention: Paul Crisalli, Director of Operations
Tel: 617.248.8905

Representative preparing this application:
Haley & Aldrich, Inc.
465 Medford Street, Suite 2200
Boston, Massachusetts 02129-1400
Attention: Kelvin Wong, P.E.
Project Manager
Tel: 617.886.7465

ANALYTICAL TESTING

On 09 June 2016, Vertex collected one water sample from a frac tank located on the site; collected water was representative of water generated during micropile drilling. The sample was submitted to ESS Laboratories in Cranston, Rhode Island. Groundwater quality data are summarized in Table I. Vertex has

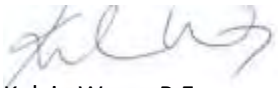
also reviewed other site-specific data and project information in their evaluation of the representativeness of this data.

CLOSING

Thank you very much for your consideration of this NOI. Please feel free to contact us should you wish to discuss the information contained herein or if you need additional information.

Sincerely yours,
HALEY & ALDRICH, INC.

Peter Zawadzkas
Technical Expert



Kelvin Wong, P.E.
Project Manager

Attachments:

Table I – Summary of Groundwater Quality Data

Figure 1 – Project Locus
Figure 2 – Proposed Discharge Route
Figure 3 – Proposed Initial Treatment Train

Appendix A - "Suggested Notice of Intent" (NOI) form as provided in Appendix V of the NPDES Dewatering General Permit
Appendix B - Boston Water and Sewer Commission – Dewatering Discharge Permit Application
Appendix C - Areas of Critical Environmental Concern
Appendix D - National Register of Historic Places and Massachusetts Historical Commission Documentation
Appendix E - Endangered Species Act Documentation
Appendix F - Laboratory Data Reports

TABLE 1
SUMMARY OF NPDES ANALYTICAL DATA
ONE CONGRESS STREET
BOSTON, MASSACHUSETTS

Sample Designation Laboratory Sample ID Sample Date	MassDEP RCGW-2	MassDEP GW-3	CAS Number	NPDES	Units	NPDES-T2-100 1606245-01 06/09/2016
1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane						
1,2-Dibromoethane	2	50,000	106-93-4	--	ug/L	ND(0.015)
Polychlorinated Biphenyls (PCB)						
Aroclor 1016	5	--	12674-11-2	--	ug/L	ND(0.09)
Aroclor 1221	5	--	11104-28-2	--	ug/L	ND(0.09)
Aroclor 1232	5	--	11141-16-5	--	ug/L	ND(0.09)
Aroclor 1242	5	--	53469-21-9	--	ug/L	ND(0.09)
Aroclor 1248	5	--	12672-29-6	--	ug/L	ND(0.09)
Aroclor 1254	5	--	11097-69-1	--	ug/L	ND(0.09)
Aroclor 1260	5	--	11096-82-5	--	ug/L	ND(0.09)
Aroclor 1262	5	--	37324-23-5	--	ug/L	ND(0.09)
Aroclor 1268	5	--	11100-14-4	--	ug/L	ND(0.09)
TOTAL PCBs	5	--	Multiple	0.000064 **	ug/L	ND(0.09)
Organochlorine Pesticides						
4,4´-DDD	50	50	72-54-8	--	ug/L	ND(0.05)
4,4´-DDE	400	400	72-55-9	--	ug/L	ND(0.05)
4,4´-DDT	1	1	50-29-3	--	ug/L	ND(0.05)
Aldrin	2	30	309-00-2	--	ug/L	ND(0.05)
alpha-BHC	5,000	--	319-84-6	--	ug/L	ND(0.05)
beta-BHC	1,000	--	319-85-7	--	ug/L	ND(0.05)
Chlordane (Total)	2	--	57-74-9	--	ug/L	ND(0.47)
delta-BHC	1,000	--	319-86-8	--	ug/L	ND(0.05)
Dieldrin	0.5	0.5	60-57-1	--	ug/L	ND(0.05)
Endosulfan I [2C]	2	--	959-98-8	--	ug/L	**0.12**
Endosulfan II	2	--	33213-65-9	--	ug/L	ND(0.05)
Endosulfan Sulfate	--	--	1031-07-8	--	ug/L	ND(0.05)
Endrin	5	5	72-20-8	--	ug/L	ND(0.05)
Endrin Aldehyde	1,000	--	7421-93-4	--	ug/L	ND(0.05)
gamma-BHC (Lindane)	4	4	58-89-9	--	ug/L	ND(0.05)
Heptachlor	1	1	76-44-8	--	ug/L	ND(0.05)
Heptachlor Epoxide	2	2	1024-57-3	--	ug/L	ND(0.05)
Methoxychlor	10	10	72-43-5	--	ug/L	ND(0.05)
Toxaphene	1,000	--	8001-35-2	--	ug/L	ND(1.21)
Volatile Organic Compounds						
1,1,1-Trichloroethane	4,000	20,000	71-55-6	200 **	ug/L	ND(1)
1,1,2,2-Tetrachloroethane	9	50,000	79-34-5	--	ug/L	ND(0.5)
1,1,2-Trichloroethane	900	50,000	79-00-5	5 **	ug/L	ND(1)
1,1-Dichloroethane	2,000	20,000	75-34-3	--	ug/L	ND(1)
1,1-Dichloroethene	80	30,000	75-35-4	3.2 **	ug/L	ND(1)
1,2-Dichlorobenzene	2,000	--	95-50-1	600 **	ug/L	ND(1)
1,2-Dichloroethane	5	20,000	107-06-2	--	ug/L	ND(1)
1,2-Dichloropropane	3	50,000	78-87-5	--	ug/L	ND(1)
1,3-Dichlorobenzene	6,000	--	541-73-1	320 **	ug/L	ND(1)
1,4-Dichlorobenzene	60	--	106-46-7	5 **	ug/L	ND(1)
2-Chloroethyl vinyl ether	50,000	--	110-75-8	--	ug/L	ND(10)
Acrolein - Screen	1,000	--	107-02-8	--	ug/L	ND(5)
Acrylonitrile - Screen	10,000	--	107-13-1	--	ug/L	ND(5)
Benzene	1,000	10,000	71-43-2	5**	ug/L	ND(1)
Bromodichloromethane	6	50,000	75-27-4	--	ug/L	**1.2**
Bromoform	700	50,000	75-25-2	--	ug/L	ND(1)
Bromomethane	7	800	74-83-9	--	ug/L	ND(2)
Carbon Tetrachloride	2	5,000	56-23-5	4.4 **	ug/L	ND(1)
Chlorobenzene	200	1,000	108-90-7	--	ug/L	ND(1)
Chloroethane	10,000	--	75-00-3	--	ug/L	ND(2)
Chloroform	50	20,000	67-66-3	--	ug/L	**3.9**
Chloromethane	10,000	--	74-87-3	--	ug/L	ND(2)
cis-1,2-Dichloroethene	20	50,000	156-59-2	70 **	ug/L	ND(1)
cis-1,3-Dichloropropene	5	--	10061-01-5	--	ug/L	ND(0.4)
Dibromochloromethane	20	50,000	124-48-1	--	ug/L	ND(1)
Ethylbenzene	5,000		100-41-4	100 **†	ug/L	ND(1)
Methylene Chloride	2,000	50,000	75-09-2	4.6 **	ug/L	ND(4)
Tetrachloroethene	50	30,000	127-18-4	5 **	ug/L	ND(1)
Toluene	40,000	40,000	108-88-3	100**†	ug/L	ND(1)
trans-1,2-Dichloroethene	80	50,000	156-60-5	--	ug/L	ND(1)
trans-1,3-Dichloropropene	5	--	10061-02-6	--	ug/L	ND(0.5)
Trichloroethene	5	5,000	79-01-6	5 **	ug/L	ND(1)
Trichlorofluoromethane	100,000	--	75-69-4	--	ug/L	ND(1)
Vinyl Chloride	2	50,000	75-01-4	2 **	ug/L	ND(1)
Semi-Volatile Organic Compounds						
1,2,4-Trichlorobenzene	200	50,000	120-82-1	--	ug/L	ND(9.7)
1,2-Dichlorobenzene	2,000	2,000	95-50-1	--	ug/L	ND(9.7)
1,3-Dichlorobenzene	6,000	50,000	541-73-1	--	ug/L	ND(9.7)
1,4-Dichlorobenzene	60	8,000	106-46-7	--	ug/L	ND(9.7)
2,4,5-Trichlorophenol	3,000	3,000	95-95-4	--	ug/L	ND(9.7)
2,4,6-Trichlorophenol	500	500	88-06-2	--	ug/L	ND(9.7)
2,4-Dichlorophenol	2,000	2,000	120-83-2	--	ug/L	ND(9.7)
2,4-Dimethylphenol	40,000	50,000	105-67-9	--	ug/L	ND(48.5)
2,4-Dinitrophenol	20,000	20,000	51-28-5	--	ug/L	ND(48.5)
2,4-Dinitrotoluene	20,000	50,000	121-14-2	--	ug/L	ND(9.7)
2,6-Dinitrotoluene	10,000	--	606-20-2	--	ug/L	ND(9.7)
2-Chloronaphthalene	100,000	--	91-58-7	--	ug/L	ND(9.7)
2-Chlorophenol	7,000	7,000	95-57-8	--	ug/L	ND(9.7)

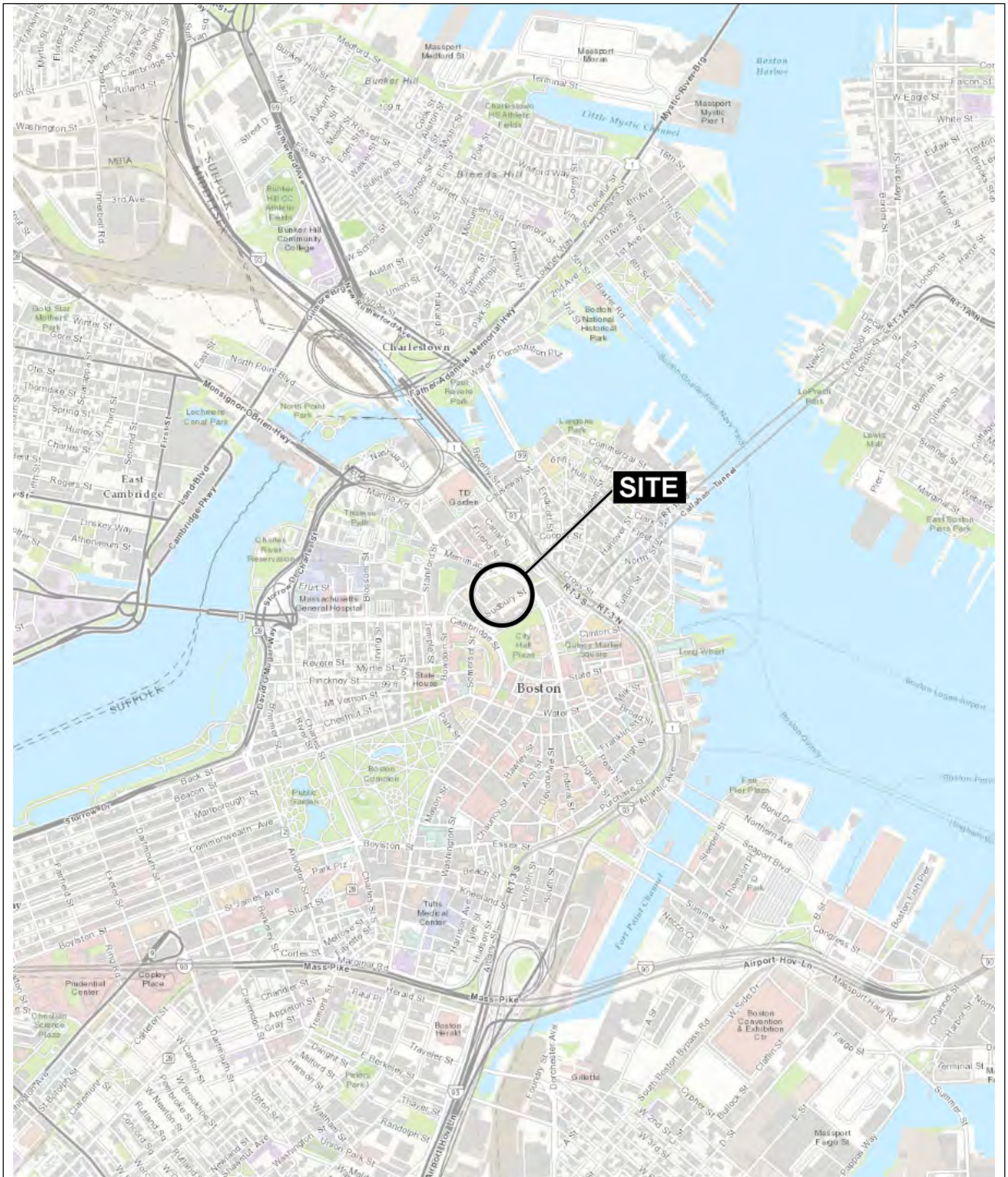
TABLE 1
SUMMARY OF NPDES ANALYTICAL DATA
ONE CONGRESS STREET
BOSTON, MASSACHUSETTS

Sample Designation Laboratory Sample ID Sample Date	MassDEP RCGW-2	MassDEP GW-3	CAS Number	NPDES	Units	NPDES-T2-100 1606245-01 06/09/2016
2-Methylphenol	50,000	--	95-48-7	--	ug/L	ND(9.7)
2-Nitrophenol	10,000	--	88-75-5	--	ug/L	ND(9.7)
3,3´-Dichlorobenzidine	2,000	2,000	91-94-1	--	ug/L	ND(19.4)
3+4-Methylphenol	50,000	--	106-44-5	--	ug/L	ND(19.4)
4-Bromophenyl-phenylether	10,000	--	101-55-3	--	ug/L	ND(9.7)
4-Chloroaniline	300	300	106-47-8	--	ug/L	ND(19.4)
4-Nitrophenol	10,000	--	100-02-7	--	ug/L	ND(48.5)
Acetophenone	100,000	--	98-86-2	--	ug/L	ND(9.7)
Aniline	100,000	--	62-53-3	--	ug/L	ND(9.7)
Azobenzene	--	--	103-33-3	--	ug/L	ND(19.4)
bis(2-Chloroethoxy)methane	50,000	--	111-91-1	--	ug/L	ND(9.7)
bis(2-Chloroethyl)ether	30	50,000	111-44-4	--	ug/L	ND(9.7)
bis(2-chloroisopropyl)Ether	--	--	39638-32-9	--	ug/L	ND(9.7)
bis(2-Ethylhexyl)phthalate	50,000	50,000	117-81-7	6 **	ug/L	**230**
Butylbenzylphthalate	10,000	--	85-68-7	--	ug/L	**11.7**
Dibenzofuran	10,000	--	132-64-9	--	ug/L	ND(9.7)
Diethylphthalate	9,000	9,000	84-66-2	--	ug/L	ND(9.7)
Dimethylphthalate	50,000	50,000	131-11-3	--	ug/L	ND(9.7)
Di-n-butylphthalate	5,000	--	84-74-2	--	ug/L	ND(9.7)
Di-n-octylphthalate	--	--	117-84-0	--	ug/L	ND(9.7)
Hexachlorobutadiene	50	3,000	87-68-3	--	ug/L	ND(9.7)
Hexachloroethane	100	50,000	67-72-1	--	ug/L	ND(4.9)
Isophorone	--	--	78-59-1	--	ug/L	ND(9.7)
Nitrobenzene	--	--	98-95-3	--	ug/L	ND(9.7)
N-Nitrosodimethylamine	--	--	62-75-9	--	ug/L	ND(9.7)
Phenol	2,000	2,000	108-95-2	--	ug/L	**14.5**
2-Methylnaphthalene	2,000	20,000	91-57-6	--	ug/L	ND(3.88)
Acenaphthene	6,000	10,000	83-32-9	--	ug/L	ND(3.88)
Acenaphthylene	40	40	208-96-8	--	ug/L	ND(3.88)
Anthracene	30	30	120-12-7	--	ug/L	ND(3.88)
Benzo(a)anthracene	1,000	1,000	56-55-3	0.0038 **	ug/L	ND(0.97)
Benzo(a)pyrene	500	500	50-32-8	0.0038 **	ug/L	ND(0.97)
Benzo(b)fluoranthene	400	400	205-99-2	0.0038 **	ug/L	ND(0.97)
Benzo(g,h,i)perylene	20	20	191-24-2	--	ug/L	ND(3.88)
Benzo(k)fluoranthene	100	100	207-08-9	0.0038 **	ug/L	ND(0.97)
Chrysene	70	70	218-01-9	0.0038 **	ug/L	ND(0.97)
Dibenzo(a,h)Anthracene	40	40	53-70-3	0.0038 **	ug/L	ND(0.97)
Fluoranthene	200	200	206-44-0	--	ug/L	ND(3.88)
Fluorene	40	40	86-73-7	--	ug/L	ND(3.88)
Hexachlorobenzene	1	6,000	118-74-1	--	ug/L	ND(3.88)
Indeno(1,2,3-cd)Pyrene	100	100	193-39-5	0.0038 **	ug/L	ND(0.97)
Naphthalene	700	20,000	91-20-3	20	ug/L	ND(3.88)
Pentachlorophenol	200	200	87-86-5	1 **	ug/L	ND(17.5)
Phenanthrene	1,000	10,000	85-01-8	--	ug/L	ND(3.88)
Pyrene	20	20	129-00-0	--	ug/L	ND(3.88)
Classical Chemistry						
Hexavalent Chromium	300	300	18540-29-9	--	ug/L	ND(10)
Phenols	--	--	PHEN	300 **	ug/L	ND(100)
Total Cyanide (LL)	30	30	57-12-5	--	ug/L	ND(5)
Total Petroleum Hydrocarbon	5	--	Multiple	5 **	mg/L	**169**
Total Residual Chlorine	--	--	--	7.5 to 19*	ug/L	**280**
Total Suspended Solids	--	--	TSS	50	mg/L	**178**
Total Metals						
Antimony	8,000	8,000	7440-36-0	5.6 ** ‡	ug/L	ND(10)
Arsenic	900	900	7440-38-2	10 ** ‡	ug/L	ND(10)
Cadmium	4	4	7440-43-9	0.2 ** ‡	ug/L	ND(1)
Chromium	300	300	7440-47-3	--	ug/L	ND(20)
Chromium III	600	600	16065-83-1	48.8 ** ‡	ug/L	ND(20)
Copper	100,000	--	7440-50-8	5.2 ** ‡	ug/L	**55.6**
Iron	--	--	7439-89-6	1,000 ** ‡	ug/L	**6,910**
Lead	10	10	7439-92-1	1.3 **‡	ug/L	**10**
Mercury	20	20	7439-97-6	0.9 **‡	ug/L	ND(0.2)
Nickel	200	200	7440-02-0	29 **‡	ug/L	ND(20)
Selenium	100	100	7782-49-2	5 **‡	ug/L	ND(10)
Silver	7	7	7440-22-4	1.2 **‡	ug/L	ND(0.5)
Zinc	900	900	7440-66-6	66.6 **‡	ug/L	ND(50)

TABLE 1
SUMMARY OF NPDES ANALYTICAL DATA
ONE CONGRESS STREET
BOSTON, MASSACHUSETTS

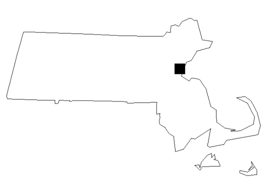
Sample Designation	MassDEP RCGW-2	MassDEP GW-3	CAS Number	NPDES	Units	NPDES-T2-100
Laboratory Sample ID						1606245-01
Sample Date						06/09/2016
Corrosivity						
pH	--	--	Field Measured	6.5 to 8.5	Standard Units	11.76

Notes:
1. ug/L = micrograms per liter
2. CAS = Chemical Abstract Service.
3. MassDEP = Massachusetts Department of Environmental Protection
4. RCGW-2 = MassDEP Groundwater 2 Reportable limit.
5. GW-3 - Massachusetts Contingency Plan GW-1 Method 1 risk based cahracterization standard
6. NPDES DGP = National Pollutant Discharge Elimination System Dewatering General Permit.
7. * = Effluent Limit is dependant on receiving waters
8. ** = Effluent limit taken from Remediation General Permit Appendix III (MAG910000)
   Category II Sub-Category A Non Petroleum Site Remediation Standards General Urban Fill.
   Category II Sub-Category B For volatile organic compounds (VOCs)
   Category II Sub-Category C For Metals
9. † = Cumulative Benzene, Toluene, Ethylbenzene, Xylene.
10. ‡ = Total Recoverable Metal Limit (freshwater) at 50 milligrams per liter calcium carbonate ($CaCo_3$)
11. Although the maximum values for TRC are 11ug/l and 7.5 ug/l for freshwater, and saltwater respectively, the compliance limits are equal to the minimum level
12. Limits for cyanide are based on EPA's water quality criteria expressed as micrograms (ug/L) of free cyanide per liter. There is currently no EPA approved test method for free cyanide. Therefore, total cyanide must be reported.
13. Although the maximum values for cyanide are 5.2 ug/l and 1.0 ug/l for freshwater and saltwater, respectively, the compliance limits are equal to the minimumlevel (ML) of the Method 335.4 as listed in Appendix VI (i.e., 10 ug/l).
14. Naphthalene can be reported as both a purgeable (VOC) and extractable (SVOC) organic compound. If both VOC and SVOC are analyzed, the highest value must be used unless the QC criteria for one of the analyses is not met. In such cases, the value from the analysis meeting the QC criteria must be used.
15. Although the maximum value for the individual PAH compounds is 0.0038 ug/l, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.
16. Although the maximum value for total PCBs is 0.000064 ug/l, the compliance limit is equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., 0.5 ug/l for Method 608 or 0.00005 ug/l when Method 1668a is approved).
20. Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.
21. For a Dilution Factor (DF) from 1 to 5, metals limits are calculated using DF times the base limit for the metal. See Appendix IV. For example, iron limits are calculated using DF x 1,000ug/L (the iron base limit). Therefore DF is 1.5, the iron limit will be 1,500 ug/L; DF 2, then iron limit =1,000 x 2 =2,000 ug/L., etc. not to exceed the DF=5.
22. Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).



MAP SOURCE: ESRI

SITE COORDINATES: 42°21'44"N, 71°3'35"W



HALEY ALDRICH

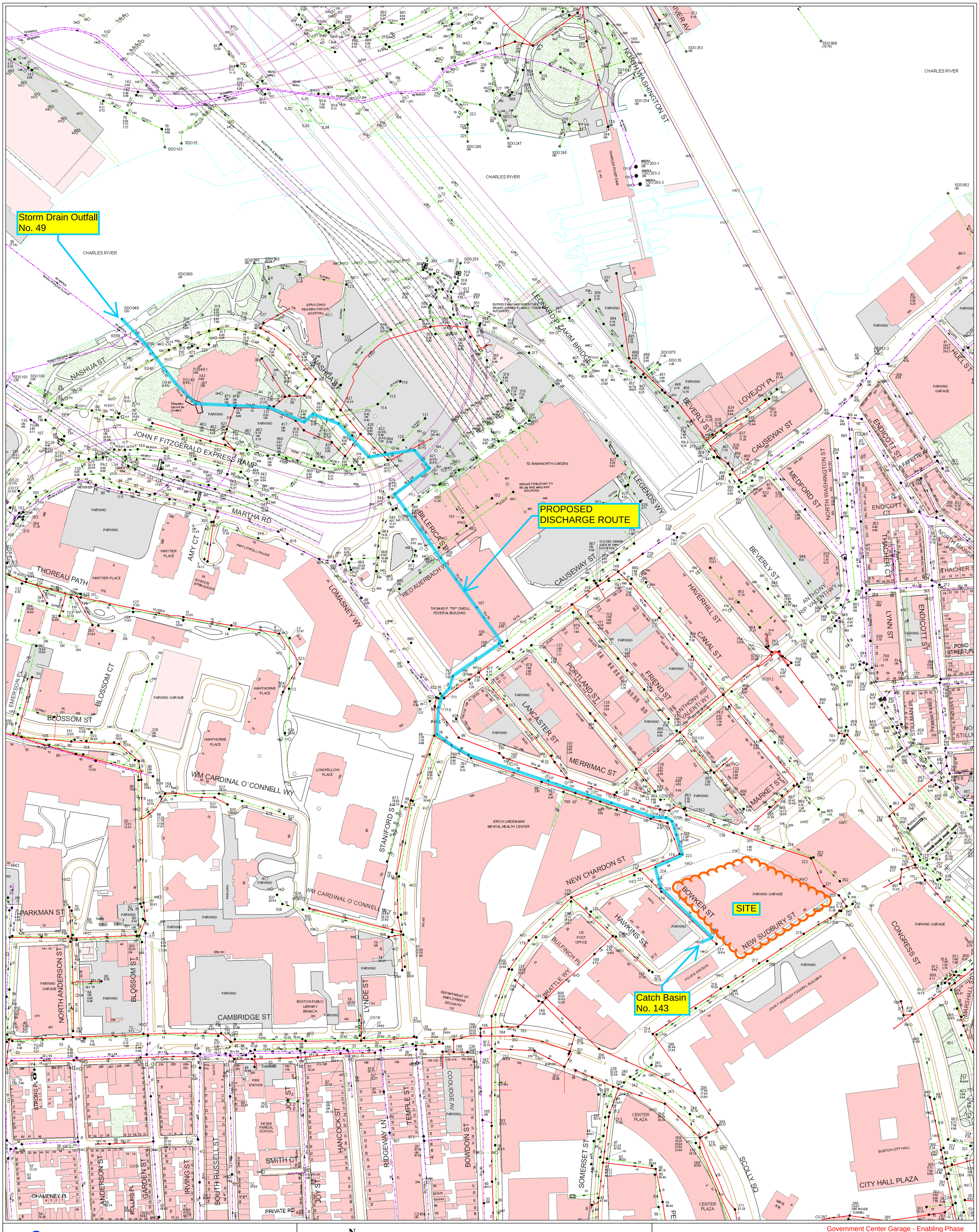
GOVERNMENT CENTER GARAGE - ENABLING PHASE
50 SUDBURY STREET
BOSTON, MASSACHUSETTS

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
AUGUST 2016

FIGURE 1

40181-030_1_LOCUS.PDF

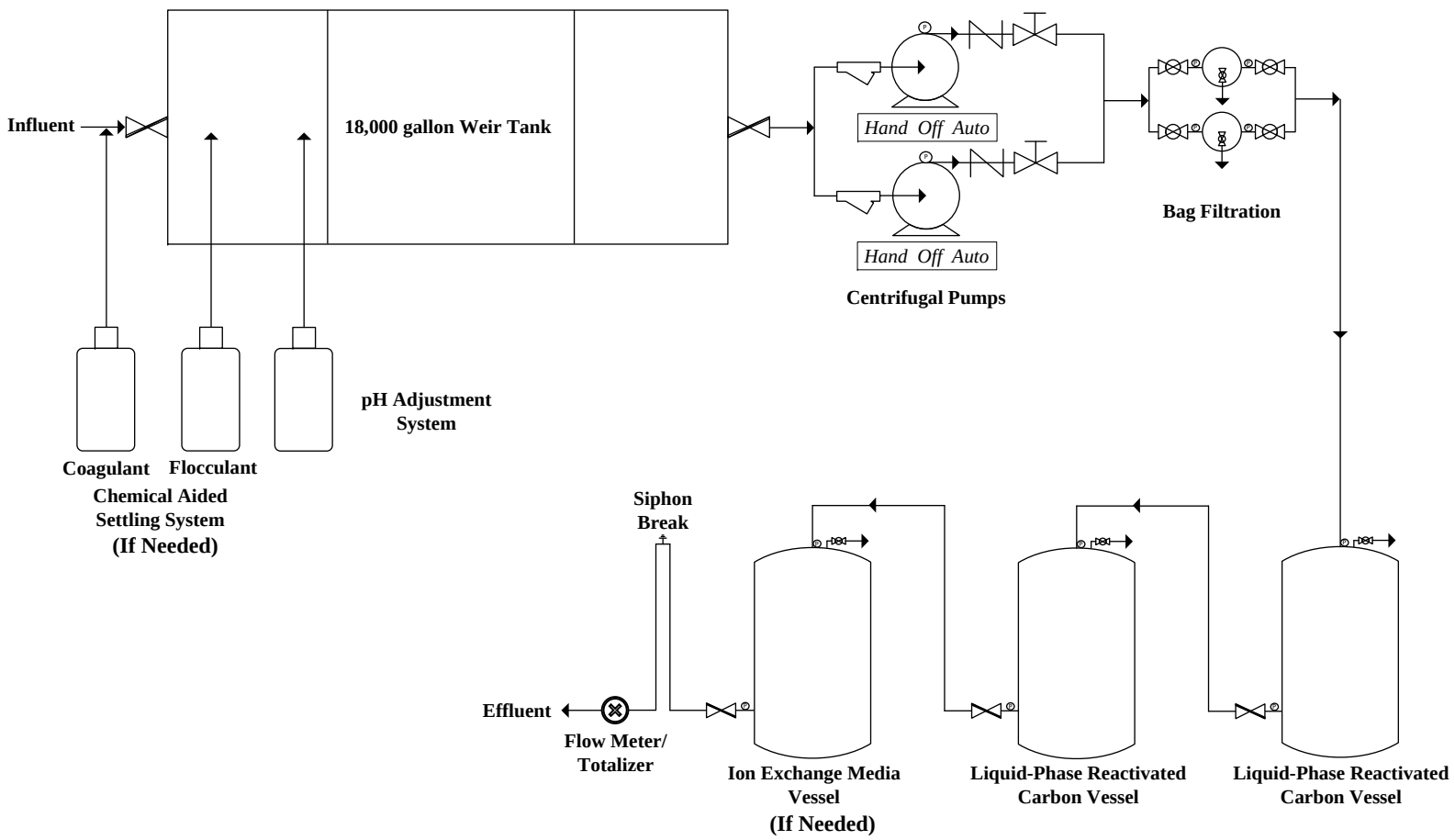


BOSTON WATER AND SEWER

Government Center Garage - Enabling Phase
50 Sudbury Street, Boston

Proposed Construction Dewatering Discharge Route

Haley & Aldrich, Inc. Figure 2



Notes:

1.) Figure is not to scale
2.) System rated for 125 GPM
3.) Sampling ports located on all treatment system components

Key:
Piping/Hose

Lockwood Remediation Technologies, LLC 89 Crawford Street Leominster, MA 01453 Office: 774-450-7177	**Water Treatment System Schematic**	Government Center Garage - Enabling Phase 50 Sudbury Street, Boston Haley & Aldrich, Inc. Figure 3
DESIGNED BY: LRT **DRAWN BY:** B. Watkins **CHECKED BY:** **DATE:**		

APPENDIX A

"Suggested Notice of Intent" (NOI) form as provided in Appendix IV of the NPDES Dewatering General Permit

II. Suggested Notice of Intent (NOI) Form

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

a) Name of facility: Government Center Garage	**Mailing Address for the Facility:** 50 Sudbury Street Boston, MA 02114	
b) Location Address of the Facility (if different from mailing address): NA	**Facility Location** **longitude:** 71.0605234 **latitude:** 42.362219	**Type of Business:** Commercial **Facility SIC codes:** NA

c) Name of facility owner: Paul Crisalli, Director of Operations **Owner's email:** pcrisalli@hyminvestments.com

Owner's Tel #: 617.248.8905 **Owner's Fax #:** _____

Address of owner (if different from facility address) BULFINCH CONGRESS HOLDINGS, LLC
c/o The HYM Investment Group, LLC
One Congress St, 10th floor, Boston, MA 02114

Owner is (check one): 1. Federal____ 2. State ____ 3.Tribal____ 4. Private__✔__ 4. Other _____(Describe)

Legal name of Operator, if not owner: Tishman Construction Corporation of Massachusetts

Operator Contact Name: Peter Sheehan

Operator Tel Number: (617) 549-3557 **Fax Number:** _____

Operator's email: peter.sheehan@aecom.com

Operator Address (if different from owner)

One Federal Street, Floor #9, Boston, MA 02110

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 discharge" as defined by 40 CFR Section 122.22? Yes__✔__ No_____**
3. **Is the facility covered by an individual NPDES permit? Yes_____ No__✔__ If Yes, Permit Number ____**
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: Charles River

State Water Quality Classification: Class B **Freshwater:** X **Marine Water:** _____

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 80,000 **GPD**
Average Monthly Flow 35,000 **GPD**

e) What is the maximum and minimum monthly pH of the discharge (in s.u.)? Max pH 8.3 **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. Groundwater

g) What treatment does the wastewater receive prior to discharge? Sedimentation tank and bag filters, other treatment as required, see Figure 3

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)** I
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 240
Is the discharge temporary? Yes ✔ **No** _____
If yes, approximate start date of dewatering September 2016 **approximate end date of dewatering** September 2018

i) Latitude and longitude of each discharge within 100 feet (See http://www.epa.gov/tri/report/siting_tool): Outfall 1: long. 71.061788 **lat.** 42.36772**;**
Outfall 2: long._____ **lat.**_____**; Outfall 3: long.**_____ **lat.**_____**.**

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 NA **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)). pH treatment, if necessary, to be determined.

b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge. No known remediation activities in vicinity of discharge.

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

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes____No_✔__
b) Has any consultation with the federal services been completed ? Yes_✔_ No__
c) Is consultation underway? Yes ____ No_✔__
d) What were the results of the consultation with the U.S. Fish and Wildlife Service and/or NOAA Fisheries Service (check one): a "no jeopardy" opinion __✔__or written concurrence____ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat.
e) Which of the five eligibility criteria listed in Appendix 2, Section B (A,B,C,D,or E) have you met? A
f) Please attach a copy of the most current federal listing of endangered and threatened species, found at USF&W website.

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

a) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility site or in proximity to the discharge? Yes __✔__ No ____
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 requirements listed in Appendix 3, Section C (1,2 o3) have you met? 2

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: Government Center Garage

Operator signature: Peter A Schuler

Title: SENIOR PROJECT MANAGER

Date: JULY 28, 2016

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.

APPENDIX B

Boston Water and Sewer Commission – Dewatering Discharge Permit Application

Boston Water and
Sewer Commission
980 Harrison Avenue
Boston, MA 02119-2540

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: *BULFINCH CONGRESS HOLDINGS, LLC c/o The HYM Investment Group, LLC* Address: *One Congress Street, 10th floor, Boston, MA 02114*

Phone Number: *617.248.8905* Fax number: NA

Contact person name: *Paul Crisalli* Title: *Director of Operations*

Cell number: *914.382.6205* Email address: *pcrisalli@hyminvestments.com*

Permit Request (check one): ☒ New Application ☐ Permit Extension ☐ Other (Specify): _____

Owner's Information (if different from above):

Owner of property being dewatered: _____

Owner's mailing address: _____ Phone number: _____

Location of Discharge & Proposed Treatment System(s):

Street number and name: *One Congress Street* Neighborhood BOSTON: GOVERNMENT CENTER

Discharge is to a: ☐ Sanitary Sewer ☐ Combined Sewer ☒ Storm Drain ☐ Other (specify): _____

Describe Proposed Pre-Treatment System(s): SEDIMENTATION TANK, BAG FILTER, AND OTHER COMPONENTS AS NECESSARY (REFER TO ATTACHED DGP APPLICATION)

BWSC Outfall No. SD049 Receiving Waters CHARLES RIVER

Temporary Discharges (Provide Anticipated Dates of Discharge): From SEPTEMBER 2016 To JANUARY 2018

- ☐ Groundwater Remediation
- ☐ Utility/Manhole Pumping
- ☐ Accumulated Surface Water
- ☐ Tank Removal/Installation
- ☐ Test Pipe
- ☐ Hydrogeologic Testing
- ☒ Foundation Excavation
- ☐ Trench Excavation
- ☐ Other _____

Permanent Discharges

- ☐ Foundation Drainage
- ☐ Accumulated Surface Water
- ☐ Non-contact/Uncontaminated Process
- ☐ Crawl Space/Footing Drain
- ☐ Non-contact/Uncontaminated Cooling
- ☐ Other; _____

---

1. Attach a Site Plan showing the source of the discharge and the location of the point of discharge (i.e. the sewer pipe or catch basin). Include meter type, meter number, size, make and start reading. Note: All discharges to the Commission's sewer system will be assessed current sewer charges.
2. If discharging to a sanitary or combined sewer, attach a copy of MWRA's Sewer Use Discharge permit or application.
3. If discharging to a separate storm drain, attach a copy of EPA's NPDES Permit or NOI application, or NPDES Permit exclusion letter for the discharge, as well as other relevant information.
4. Dewatering Drainage Permit will be denied or revoked if applicant fails to obtain the necessary permits from MWRA or EPA.

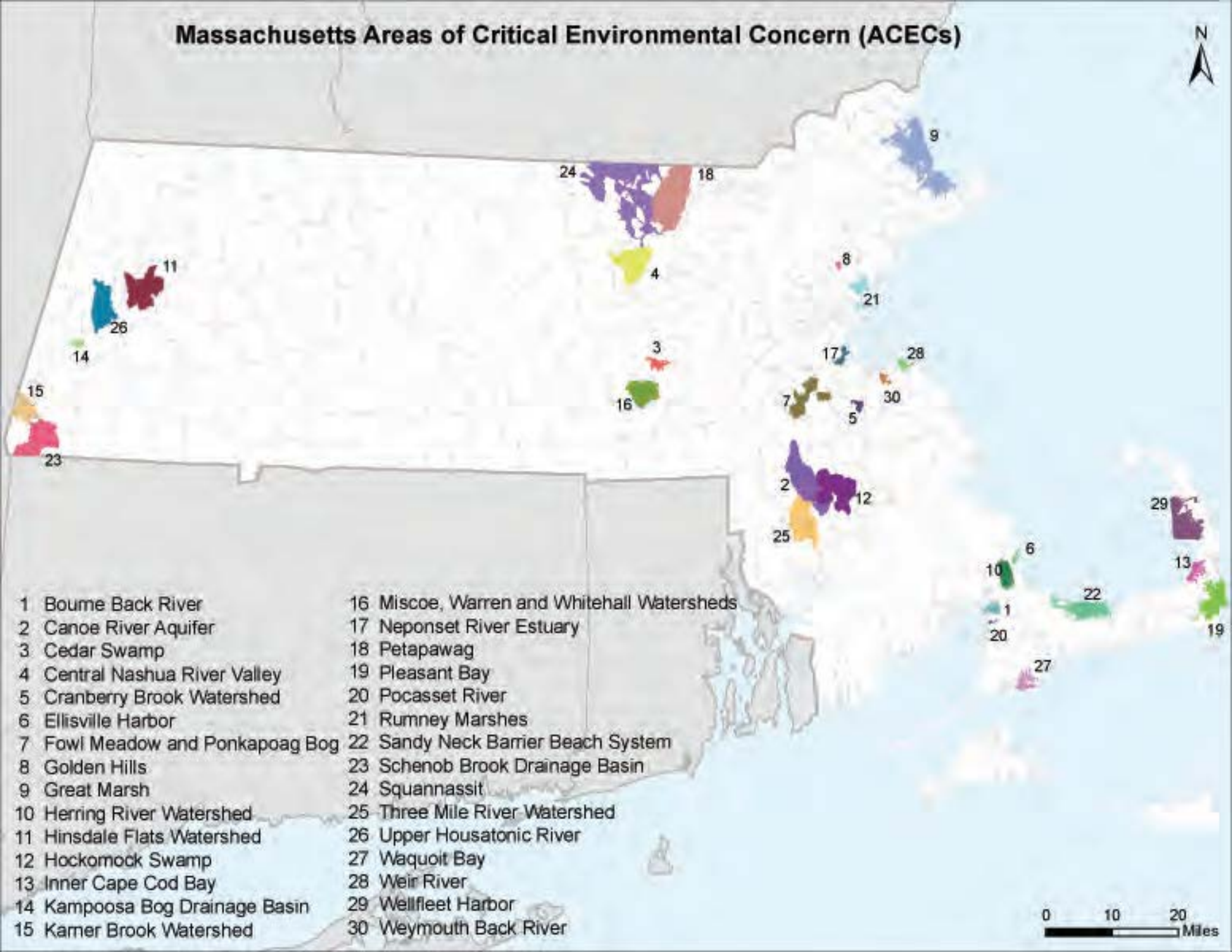
Submit Completed Application to: Boston Water and Sewer Commission
Engineering Customer Services
980 Harrison Avenue, Boston, MA 02119
Attn: Matthew Tuttle, Engineering Customer Service
E-mail: tuttlemp@bwsc.org
Phone: 617-989-7204 Fax: 617-989-7716

Signature of Authorized Representative for Property Owner: _____ Date: 8/17/16

APPENDIX C

Areas of Critical Environmental Concern

Massachusetts Areas of Critical Environmental Concern (ACECs)



1 Bourne Back River
2 Canoe River Aquifer
3 Cedar Swamp
4 Central Nashua River Valley
5 Cranberry Brook Watershed
6 Ellisville Harbor
7 Fowl Meadow and Ponkapoag Bog
8 Golden Hills
9 Great Marsh
10 Herring River Watershed
11 Hinsdale Flats Watershed
12 Hockomock Swamp
13 Inner Cape Cod Bay
14 Kampoosa Bog Drainage Basin
15 Karner Brook Watershed
16 Miscoe, Warren and Whitehall Watersheds
17 Neponset River Estuary
18 Petapawag
19 Pleasant Bay
20 Pocasset River
21 Rumney Marshes
22 Sandy Neck Barrier Beach System
23 Schenob Brook Drainage Basin
24 Squannassit
25 Three Mile River Watershed
26 Upper Housatonic River
27 Waquoit Bay
28 Weir River
29 Wellfleet Harbor
30 Weymouth Back River

MASSACHUSETTS AREAS OF CRITICAL ENVIRONMENTAL CONCERN
November 2010

Total Approximate Acreage: 268,000 acres
Approximate acreage and designation date follow ACEC names below.

Bourne Back River
(1,850 acres, 1989) Bourne

Canoe River Aquifer and Associated Areas (17,200 acres, 1991) Easton, Foxborough, Mansfield, Norton, Sharon, and Taunton

Cedar Swamp
(1,650 acres, 1975) Hopkinton and Westborough

Central Nashua River Valley
(12,900 acres, 1996) Bolton, Harvard, Lancaster, and Leominster

Cranberry Brook Watershed
(1,050 acres, 1983) Braintree and Holbrook

Ellisville Harbor
(600 acres, 1980) Plymouth

Fowl Meadow and Ponkapoag Bog
(8,350 acres, 1992) Boston, Canton, Dedham, Milton, Norwood, Randolph, Sharon, and Westwood

Golden Hills
(500 acres, 1987) Melrose, Saugus, and Wakefield

Great Marsh (originally designated as Parker River/Essex Bay)
(25,500 acres, 1979) Essex, Gloucester, Ipswich, Newbury, and Rowley

Herring River Watershed
(4,450 acres, 1991) Bourne and Plymouth

Hinsdale Flats Watershed
(14,500 acres, 1992) Dalton, Hinsdale, Peru, and Washington

Hockomock Swamp
(16,950 acres, 1990) Bridgewater, Easton, Norton, Raynham, Taunton, and West Bridgewater

Inner Cape Cod Bay
(2,600 acres, 1985) Brewster, Eastham, and Orleans

Kampoosa Bog Drainage Basin
(1,350 acres, 1995) Lee and Stockbridge

Karner Brook Watershed
(7,000 acres, 1992) Egremont and Mount Washington

Miscoe, Warren, and Whitehall Watersheds
(8,700 acres, 2000) Grafton, Hopkinton, and Upton

Neponset River Estuary
(1,300 acres, 1995) Boston, Milton, and Quincy

Petapawag
(25,680 acres, 2002) Ayer, Dunstable, Groton, Pepperell, and Tyngsborough

Pleasant Bay
(9,240 acres, 1987) Brewster, Chatham, Harwich, and Orleans

Pocasset River
(160 acres, 1980) Bourne

Rumney Marshes
(2,800 acres, 1988) Boston, Lynn, Revere, Saugus, and Winthrop

Sandy Neck Barrier Beach System
(9,130 acres, 1978) Barnstable and Sandwich

Schenob Brook Drainage Basin
(13,750 acres, 1990) Mount Washington and Sheffield

Squannassit
(37,420 acres, 2002) Ashby, Ayer, Groton, Harvard, Lancaster, Lunenburg, Pepperell, Shirley, and Townsend

Three Mile River Watershed
(14,280 acres, 2008) Dighton, Norton, Taunton

Upper Housatonic River
(12,280 acres, 2009) Lee, Lenox, Pittsfield, Washington

Waquoit Bay
(2,580 acres, 1979) Falmouth and Mashpee

Weir River
(950 acres, 1986) Cohasset, Hingham, and Hull

Wellfleet Harbor
(12,480 acres, 1989) Eastham, Truro, and Wellfleet

Weymouth Back River
(800 acres, 1982) Hingham and Weymouth

ACEC acreages above are based on MassGIS calculations and may differ from numbers originally presented in designation documents and other ACEC publications due to improvements in accuracy of GIS data and boundary clarifications. Listed acreages have been rounded to the nearest 50 or 10 depending on whether boundary clarification has occurred. For more information please see, http://www.mass.gov/dcr/stewardship/acec/aboutMaps.htm.

Towns with ACECs within their Boundaries — November 2010

TOWN	ACEC
Ashby	Squannassit
Ayer	Petapawag
	Squannassit
Barnstable	Sandy Neck Barrier Beach System
Bolton	Central Nashua River Valley
Boston	Rumney Marshes
	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary
Bourne	Pocasset River
	Bourne Back River
	Herring River Watershed
Braintree	Cranberry Brook Watershed
Brewster	Pleasant Bay
	Inner Cape Cod Bay
Bridgewater	Hockomock Swamp
Canton	Fowl Meadow and Ponkapoag Bog
Chatham	Pleasant Bay
Cohasset	Weir River
Dalton	Hinsdale Flats Watershed
Dedham	Fowl Meadow and Ponkapoag Bog
Dighton	Three Mile River Watershed
Dunstable	Petapawag
Eastham	Inner Cape Cod Bay
	Wellfleet Harbor
Easton	Canoe River Aquifer
	Hockomock Swamp
Egremont	Karner Brook Watershed
Essex	Great Marsh
Falmouth	Waquoit Bay
Foxborough	Canoe River Aquifer
Gloucester	Great Marsh
Grafton	Miscoe-Warren-Whitehall Watersheds
Groton	Petapawag
	Squannassit
Harvard	Central Nashua River Valley
	Squannassit
Harwich	Pleasant Bay
Hingham	Weir River
	Weymouth Back River
Hinsdale	Hinsdale Flats Watershed
Holbrook	Cranberry Brook Watershed
Hopkinton	Miscoe-Warren-Whitehall Watersheds
	Cedar Swamp
Hull	Weir River
Ipswich	Great Marsh
Lancaster	Central Nashua River Valley
	Squannassit
Lee	Kampoosa Bog Drainage Basin
	Upper Housatonic River
Lenox	Upper Housatonic River
Leominster	Central Nashua River Valley
Lunenburg	Squannassit
Lynn	Rumney Marshes
Mansfield	Canoe River Aquifer
Mashpee	Waquoit Bay
Melrose	Golden Hills
Milton	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary
Mt. Washington	Karner Brook Watershed
	Schenob Brook
Newbury	Great Marsh
Norton	Hockomock Swamp
	Canoe River Aquifer
	Three Mile River Watershed
Norwood	Fowl Meadow and Ponkapoag Bog
Orleans	Inner Cape Cod Bay
	Pleasant Bay
Pepperell	Petapawag
	Squannassit
Peru	Hinsdale Flats Watershed
Pittsfield	Upper Housatonic River
Plymouth	Herring River Watershed
	Ellisville Harbor
Quincy	Neponset River Estuary
Randolph	Fowl Meadow and Ponkapoag Bog
Raynham	Hockomock Swamp
Revere	Rumney Marshes
Rowley	Great Marsh
Sandwich	Sandy Neck Barrier Beach System
Saugus	Rumney Marshes
	Golden Hills
Sharon	Canoe River Aquifer
	Fowl Meadow and Ponkapoag Bog
Sheffield	Schenob Brook
Shirley	Squannassit
Stockbridge	Kampoosa Bog Drainage Basin
Taunton	Hockomock Swamp
	Canoe River Aquifer
	Three Mile River Watershed
Truro	Wellfleet Harbor
Townsend	Squannassit
Tyngsborough	Petapawag
Upton	Miscoe-Warren-Whitehall Watersheds
Wakefield	Golden Hills
Washington	Hinsdale Flats Watershed
	Upper Housatonic River
Wellfleet	Wellfleet Harbor
W Bridgewater	Hockomock Swamp
Westborough	Cedar Swamp
Westwood	Fowl Meadow and Ponkapoag Bog
Weymouth	Weymouth Back River
Winthrop	Rumney Marshes

.

APPENDIX D

National Register of Historic Places and
Massachusetts Historical Commission Documentation

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Government Center; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
BOS.AV	Sears' Crescent and Sears' Block		Boston	
BOS.1508	McCormack, John W. State Office Building	1 Ashburton Pl	Boston	1975
BOS.1509	Massachusetts Teachers Association Building	20 Ashburton Pl	Boston	c 1965
BOS.1551	One Beacon Street	1 Beacon St	Boston	c 1969
BOS.1552	Lawyers Building	9 Beacon St	Boston	1922
BOS.1553	Boston Transit Commission Building	15 Beacon St	Boston	1903
BOS.1554	Hotel Bellevue	19-21B Beacon St	Boston	1899
BOS.1579	Way, Samuel A. Carriage House	19 Beacon St	Boston	r 1870
BOS.1576	Beacon Hill Apartment House	126 Bowdoin St	Boston	c 1927
BOS.1577	Church of the New Jerusalem - Church On The Hill	140 Bowdoin St	Boston	1963
BOS.1578	Boston Society of the New Jerusalem Building	144 Bowdoin St	Boston	c 1925
BOS.1904	Temporary Home for Women	40-50 Bowker St	Boston	1924
BOS.1582	Bradlee, James Bowdoin Building	50-52 Broad St	Boston	1853
BOS.917	Bowdoin Street Subway Station	Cambridge St	Boston	1916
BOS.918	Scollay Square Under Subway Station	Cambridge St	Boston	1916
BOS.922	Scollay Square - Government Center Subway Station	1 Cambridge St	Boston	1898
BOS.1575	New England Telephone and Telegraph Company	65 Cambridge St	Boston	1930
BOS.1616	Saltonstall, Leverett State Office Building	100 Cambridge St	Boston	1965
BOS.1618	Massachusetts Health, Welfare and Education Center	115 Cambridge St	Boston	r 1965
BOS.1645	One, Two and Three Center Plaza	1-3 Center Plaza	Boston	r 1965
BOS.1656	Kirstein Memorial Library	20 City Hall Ave	Boston	1930
BOS.1657	Boston City Hall	1 City Hall Sq	Boston	r 1965
BOS.1672	Sears' Crescent	38-68 Cornhill St	Boston	1816
BOS.1673	Sears' Block	70-72 Cornhill St	Boston	1848

Inv. No.	Property Name	Street	Town	Year
BOS.1674		38 Court Sq	Boston	1914
BOS.1678	Ames Building, The	1 Court St	Boston	c 1889
BOS.1671	Old Colony Trust Company	17 Court St	Boston	1923
BOS.1679	Old Colony Trust Company Building	17 Court St	Boston	1908
BOS.1680	City Bank and Trust Company Building	25 Court St	Boston	1967
BOS.1676	Boston City Hall Annex	26 Court St	Boston	1912
BOS.1677	Scollay Building	30-40 Court St	Boston	1914
BOS.1614	Capital Bank Building	30 Hawkins St	Boston	1972
BOS.948	Edison Electric Illuminating Substation	33 Hawkins St	Boston	1927
BOS.1783	Overseers of Public Welfare Building	35 Hawkins St	Boston	1924
BOS.1782	R. K. O. General Building	40 Hawkins St	Boston	1967
BOS.1901	Bulfinch Building	15 New Chardon St	Boston	1968
BOS.1902	Royal Globe Insurance Company	25 New Chardon St	Boston	1967
BOS.1903	Jewish Family and Children's Service	31 New Chardon St	Boston	1967
BOS.1617	Kennedy, John F. Federal Office Building	15 New Sudbury St	Boston	1966
BOS.2023	Boston District #1 Police Station	40 New Sudbury St	Boston	1968
BOS.2024	Government Center Parking Garage	50 New Sudbury St	Boston	1966
BOS.938	Choate, Rufus Statue	Pemberton Sq	Boston	1898
BOS.1573	Suffolk County Courthouse Addition	1 Pemberton Sq	Boston	c 1936
BOS.1945	Adams, John Courthouse	1 Pemberton Sq	Boston	r 1885
BOS.1675	Thompson's Spa	15 Pie Alley	Boston	1922
BOS.1970	Boston Five Cents Savings Bank	10 School St	Boston	c 1972
BOS.1974	Hunnewell, Horatio Hollis Building	13-15 School St	Boston	1888
BOS.1975	Codman, Martha C. Building	19-21 School St	Boston	1917
BOS.1976	Niles Building	23-29 School St	Boston	1915
BOS.932	Franklin, Benjamin Statue	41-45 School St	Boston	1855
BOS.936	Quincy, Josiah Statue	41-45 School St	Boston	1879
BOS.1977	Old City Hall	41-45 School St	Boston	1862
BOS.1979	Boston City Club	12-14 Somerset St	Boston	1913
BOS.1980	Metropolitan District Commission Building	20 Somerset St	Boston	1932
BOS.919	Devonshire - State Street Subway Station	State St	Boston	1904
BOS.2107	Old State House	State St	Boston	1712
BOS.803	King's Chapel Burying Ground	Tremont St	Boston	1630
BOS.2064	Hemenway Building	2-16 Tremont St	Boston	1883
BOS.2065	Kimball Building	18-28 Tremont St	Boston	1902
BOS.2067	King's Chapel	58 Tremont St	Boston	r 1750
BOS.2068	Tremont Building	67-81 Tremont St	Boston	1895
BOS.2106	One Washington Mall	1 Washington Mall	Boston	1972

Inv. No.	Property Name	Street	Town	Year
BOS.2124	Boston Company Building, The	197-235 Washington St	Boston	1968
BOS.1569	Boston Company Building	201 Washington St	Boston	1970
BOS.2125	Coffman's Washington Street Garage	227-245 Washington St	Boston	1966
BOS.2126	Cunningham, Andrew House	277-279 Washington St	Boston	r 1725
BOS.2127	Old Corner Bookstore, The	277-285 Washington St	Boston	1718

APPENDIX E

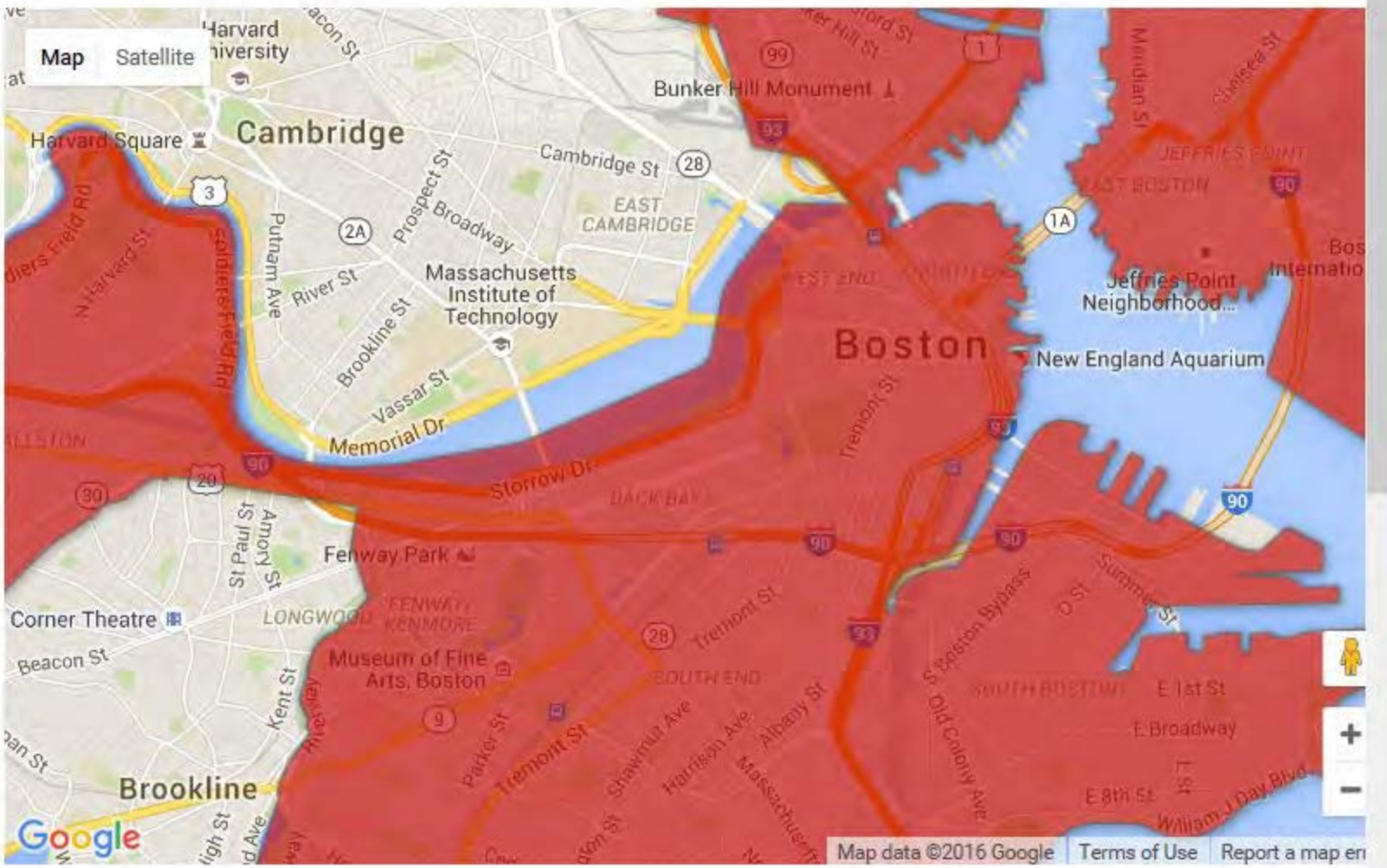
Endangered Species Act Documentation

Town Species Viewer

The Natural Heritage & Endangered Species Program maintains a list of all documented MESA-listed species observations in the Commonwealth. Please select a town if you would like to see a table showing which listed species have been observed in that town. The selected town will also be highlighted on the map. Alternatively you can specify either the Common Name or Scientific Name of a species to see it's distribution on the map and table showing the towns it has been observed in. Clicking on a column header in the table will sort the column. Clicking again on the same column heading will reverse the sort order.

The Town List and Species Viewer will be updated at regular intervals as new data is accepted and entered into the NHESP database.

Town: BOSTON or Species (Common Name): or Species (Scientific Name):



Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BOSTON	Butterfly/Moth	Abagrotis nefascia	Coastal Heathland Cutworm	SC		2001
BOSTON	Bird	Accipiter striatus	Sharp-shinned Hawk	SC		1898
BOSTON	Vascular Plant	Ageratina aromatica	Lesser Snakeroot	E		1896
BOSTON	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC		2013
BOSTON	Bird	Ammodramus savannarum	Grasshopper Sparrow	T		1993
BOSTON	Butterfly/Moth	Apodrepanulatrix liberaria	New Jersey Tea Inchworm	E		Historic
BOSTON	Vascular Plant	Aristida purpurascens	Purple Needlegrass	T		1800s
BOSTON	Vascular Plant	Aristida tuberculosa	Seabeach Needlegrass	T		1877
BOSTON	Vascular Plant	Asclepias verticillata	Linear-leaved Milkweed	T		1878
BOSTON	Bird	Bartramia longicauda	Upland Sandpiper	E		1993
BOSTON	Vascular Plant	Boechera missouriensis	Green Rock-cress	T		1930
BOSTON	Vascular Plant	Carex striata	Walter's Sedge	E		Historic
BOSTON	Bird	Charadrius melodus	Piping Plover	T	T	2011
BOSTON	Beetle	Cicindela duodecimguttata	Twelve-spotted Tiger Beetle	SC		1910
BOSTON	Beetle	Cicindela purpurea	Cow Path Tiger Beetle	SC		1928
BOSTON	Beetle	Cicindela rufiventris hentzii	Eastern Red-bellied Tiger Beetle	T		1927
BOSTON	Vascular Plant	Desmodium cuspidatum	Large-bracted Tick-trefoil	T		1896
BOSTON	Vascular Plant	Eriophorum gracile	Slender Cottongrass	T		1885
BOSTON	Bird	Falco peregrinus	Peregrine Falcon	E		2014
BOSTON	Fish	Gasterosteus aculeatus	Threespine Stickleback	T		2014
BOSTON	Bird	Gavia immer	Common Loon	SC		1824
BOSTON	Vascular Plant	Houstonia longifolia	Long-leaved Bluet	E		1918
BOSTON	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC		1933
BOSTON	Mussel	Ligumia nasuta	Eastern Pondmussel	SC		1841
BOSTON	Vascular Plant	Linum medium var. texanum	Rigid Flax	T		1909
BOSTON	Vascular Plant	Lycopus rubellus	Gypsywort	E		1896
BOSTON	Butterfly/Moth	Metarranthis apiciaria	Barrens Metarranthis	E		1934
BOSTON	Vascular Plant	Myriophyllum alterniflorum	Alternate-flowered Water-milfoil	E		Historic
BOSTON	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T		1884
BOSTON	Vascular Plant	Platanthera flava var. herbiola	Pale Green Orchis	T		1908
BOSTON	Bird	Pooecetes gramineus	Vesper Sparrow	T		1985
BOSTON	Butterfly/Moth	Pyrrhia aurantiago	Orange Sallow Moth	SC		1988
BOSTON	Vascular Plant	Ranunculus micranthus	Tiny-flowered Buttercup	E		1891
BOSTON	Vascular Plant	Rumex pallidus	Seabeach Dock	T		1984
BOSTON	Vascular Plant	Sanicula odorata	Long-styled Sanicle	T		Historic
BOSTON	Amphibian	Scaphiopus holbrookii	Eastern Spadefoot	T		1932
BOSTON	Vascular Plant	Scirpus longii	Long's Bulrush	T		1907
BOSTON	Vascular Plant	Setaria parviflora	Bristly Foxtail	SC		2001
BOSTON	Dragonfly/Damselfly	Somatochlora linearis	Mocha Emerald	SC		2009
BOSTON	Bird	Sterna hirundo	Common Tern	SC		2013
BOSTON	Bird	Sternula antillarum	Least Tern	SC		2013
BOSTON	Vascular Plant	Suaeda calceoliformis	American Sea-blite	SC		1909
BOSTON	Reptile	Terrapene carolina	Eastern Box Turtle	SC		1939
BOSTON	Bird	Tyto alba	Barn Owl	SC		1989
BOSTON	Bird	Vermivora chrysoptera	Golden-winged Warbler	E		Historic
BOSTON	Vascular Plant	Viola brittoniana	Britton's Violet	T		1909

MassDEP - Bureau of Waste Site Cleanup

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

Site Information:
ONE CONGRESS STREET
ONE CONGRESS STREET BOSTON, MA

NAD83 UTM Meters:
4692059mN , 330402mE (Zone: 19)
June 22, 2016

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection

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

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

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

Aquifers: Medium Yield, High Yield, EPA Sole Source

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

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

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

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

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

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

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

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

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

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

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

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

Updated 02/05/2016

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Code: 05E1NE00-2016-SLI-1668 June 22, 2016
Event Code: 05E1NE00-2016-E-02416
Project Name: One Congress Street Development

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: One Congress Street Development

Official Species List

Provided by:

New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
http://www.fws.gov/newengland

Consultation Code: 05E1NE00-2016-SLI-1668
Event Code: 05E1NE00-2016-E-02416

Project Type: DEVELOPMENT

Project Name: One Congress Street Development
Project Description: Renovation of the existing 11 story garage. The garage has 9 floors of parking and 2 floors of office space. The renovations in question will be the relocation of access ramps and drive lanes to provide access around future proposed construction.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-71.05850011110306 42.36325099040383, -71.06033205986023 42.36236906043124, -71.05977684259415 42.36196277391919, -71.05794221162796 42.36285858264135, -71.05850011110306 42.36325099040383)))

Project Counties: Suffolk, MA

Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Red Knot *(Calidris canutus rufa)*	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

APPENDIX F

Laboratory Reports

CERTIFICATE OF ANALYSIS

Jesse Freeman
The Vertex Companies
1 Congress St
Boston, MA 02114

RE: 1 Congress St - NPDES (20026)
ESS Laboratory Work Order Number: 1606245

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:28 pm, Jun 21, 2016

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

The test results present in this report are in compliance with NELAC Standards, A2LA and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES

ESS Laboratory Work Order: 1606245

SAMPLE RECEIPT

The following samples were received on June 09, 2016 for the analyses specified on the enclosed Chain of Custody Record.

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

Lab Number	Sample Name	Matrix	Analysis
1606245-01	NPDES-T2-100	Waste Water	1664A, 245.1, 2540D, 420.1, 4500 CN CE, 4500-Cl E, 504.1, 6010C, 608, 624, 7010, 7196A, 8270D, 8270D SIM

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES ESS Laboratory Work Order: 1606245

PROJECT NARRATIVE

608 Polychlorinated Biphenyls (PCB)

1606245-01 **Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).**
Decachlorobiphenyl (20% @ 30-150%), Decachlorobiphenyl [2C] (12% @ 30-150%)

608/6630C Organochlorine Pesticides

1606245-01 **Percent difference between primary and confirmation results exceeds 40% (P).**
Endosulfan I [2C]

1606245-01 **Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).**
Decachlorobiphenyl (11% @ 30-150%)

CF61439-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Endrin Aldehyde (22% @ 20%)

CZF0252-CCV3 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Decachlorobiphenyl [2C] (16% @ 15%), delta-BHC [2C] (18% @ 15%), Endosulfan Sulfate [2C] (17% @ 15%), Methoxychlor [2C] (36% @ 15%)

624 Volatile Organic Compounds

CF61028-BSD1 **Blank Spike recovery is below lower control limit (B-).**
Acrolein - Screen (29% @ 70-130%)

CF61028-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Acrolein - Screen (88% @ 25%), Tetrachloroethene (32% @ 25%)

8270C Semi-Volatile Organic Compounds

CZF0245-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (88% @ 80-120%), Di-n-octylphthalate (92% @ 80-120%)

CZF0247-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (98% @ 80-120%), Di-n-octylphthalate (89% @ 80-120%)

8270D(SIM) Semi-Volatile Organic Compounds

CZF0248-CCV1 **Calibration required quadratic regression (Q).**
Pentachlorophenol (120% @ 80-120%)

CZF0248-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4,6-Tribromophenol (32% @ 20%)

Classical Chemistry

1606245-01 **The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.**

CF61020-BLK1 **The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.**

CF61020-BS1 **The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.**

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES

ESS Laboratory Work Order: 1606245

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES

ESS Laboratory Work Order: 1606245

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES
Client Sample ID: NPDES-T2-100
Date Sampled: 06/09/16 12:00
Percent Solids: N/A

ESS Laboratory Work Order: 1606245
ESS Laboratory Sample ID: 1606245-01
Sample Matrix: Waste Water
Units: ug/L

Extraction Method: 3005A
All methods used are in accordance with 40 CFR 136.

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (10.0)		7010		1	KJK	06/15/16 12:26	50	50	CF61019
Arsenic	ND (10.0)		7010		1	KJK	06/16/16 16:52	50	50	CF61019
Cadmium	ND (1.0)		7010		1	KJK	06/17/16 14:34	50	50	CF61019
Chromium	ND (20.0)		6010C		1	KJK	06/10/16 19:28	50	50	CF61019
Chromium III	ND (20)		6010C		1	MJV	06/10/16 19:28	1	1	[CALC]
Copper	**55.6** (10.0)		6010C		1	KJK	06/10/16 19:28	50	50	CF61019
Iron	**6910** (100)		6010C		1	KJK	06/10/16 19:28	50	50	CF61019
Lead	**10.0** (5.0)		7010		1	KJK	06/15/16 2:03	50	50	CF61019
Mercury	ND (0.20)		245.1		1	AA	06/10/16 12:26	20	40	CF60908
Nickel	ND (20.0)		6010C		1	KJK	06/10/16 19:28	50	50	CF61019
Selenium	ND (10.0)		7010		1	KJK	06/14/16 21:35	50	50	CF61019
Silver	ND (0.5)		7010		1	DEL	06/20/16 13:37	50	50	CF61019
Zinc	ND (50.0)		6010C		1	KJK	06/10/16 19:28	50	50	CF61019

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES
Client Sample ID: NPDES-T2-100
Date Sampled: 06/09/16 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 1606245
ESS Laboratory Sample ID: 1606245-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: TJ
Prepared: 6/10/16 11:10

All methods used are in accordance with 40 CFR 136.

608 Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.09)		608		1	06/10/16 17:33		CF61011
Aroclor 1221	ND (0.09)		608		1	06/10/16 17:33		CF61011
Aroclor 1232	ND (0.09)		608		1	06/10/16 17:33		CF61011
Aroclor 1242	ND (0.09)		608		1	06/10/16 17:33		CF61011
Aroclor 1248	ND (0.09)		608		1	06/10/16 17:33		CF61011
Aroclor 1254	ND (0.09)		608		1	06/10/16 17:33		CF61011
Aroclor 1260	ND (0.09)		608		1	06/10/16 17:33		CF61011
Aroclor 1262	ND (0.09)		608		1	06/10/16 17:33		CF61011
Aroclor 1268	ND (0.09)		608		1	06/10/16 17:33		CF61011

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*20 %*	*SC*	*30-150*
Surrogate: Decachlorobiphenyl [2C]	*12 %*	*SC*	*30-150*
Surrogate: Tetrachloro-m-xylene	*66 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*97 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES
Client Sample ID: NPDES-T2-100
Date Sampled: 06/09/16 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 1606245
ESS Laboratory Sample ID: 1606245-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: TJ
Prepared: 6/14/16 15:32

All methods used are in accordance with 40 CFR 136.

608/6630C Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
4,4´-DDE	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
4,4´-DDT	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Aldrin	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
alpha-BHC	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
beta-BHC	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Chlordane (Total)	ND (0.47)		608		1	06/14/16 22:42	CZF0252	CF61439
delta-BHC	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Dieldrin	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Endosulfan I [2C]	**P 0.12** (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Endosulfan II	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Endosulfan Sulfate	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Endrin	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Endrin Aldehyde	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
gamma-BHC (Lindane)	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Heptachlor	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Heptachlor Epoxide	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Methoxychlor	ND (0.05)		608		1	06/14/16 22:42	CZF0252	CF61439
Toxaphene	ND (1.21)		608		1	06/14/16 22:42	CZF0252	CF61439

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*11 %*	*SC*	*30-150*
Surrogate: Tetrachloro-m-xylene	*59 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES
Client Sample ID: NPDES-T2-100
Date Sampled: 06/09/16 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1606245
ESS Laboratory Sample ID: 1606245-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: GEM

All methods used are in accordance with 40 CFR 136.

624 Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1-Trichloroethane	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
1,1,2,2-Tetrachloroethane	ND (0.5)		624		1	06/10/16 14:35	CZF0192	CF61028
1,1,2-Trichloroethane	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
1,1-Dichloroethane	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
1,1-Dichloroethene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
1,2-Dichlorobenzene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
1,2-Dichloroethane	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
1,2-Dichloropropane	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
1,3-Dichlorobenzene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
1,4-Dichlorobenzene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
2-Chloroethyl vinyl ether	ND (10.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Acrolein - Screen	ND (5.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Acrylonitrile - Screen	ND (5.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Benzene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Bromodichloromethane	**1.2** (0.6)		624		1	06/10/16 14:35	CZF0192	CF61028
Bromoform	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Bromomethane	ND (2.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Carbon Tetrachloride	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Chlorobenzene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Chloroethane	ND (2.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Chloroform	**3.9** (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Chloromethane	ND (2.0)		624		1	06/10/16 14:35	CZF0192	CF61028
cis-1,2-Dichloroethene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
cis-1,3-Dichloropropene	ND (0.4)		624		1	06/10/16 14:35	CZF0192	CF61028
Dibromochloromethane	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Ethylbenzene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Methylene Chloride	ND (4.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Tetrachloroethene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Toluene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
trans-1,2-Dichloroethene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
trans-1,3-Dichloropropene	ND (0.5)		624		1	06/10/16 14:35	CZF0192	CF61028
Trichloroethene	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES
Client Sample ID: NPDES-T2-100
Date Sampled: 06/09/16 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1606245
ESS Laboratory Sample ID: 1606245-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: GEM

All methods used are in accordance with 40 CFR 136.

624 Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Trichlorofluoromethane	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028
Vinyl Chloride	ND (1.0)		624		1	06/10/16 14:35	CZF0192	CF61028

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*98 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*107 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*93 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES
Client Sample ID: NPDES-T2-100
Date Sampled: 06/09/16 12:00
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 1606245
ESS Laboratory Sample ID: 1606245-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: IBM
Prepared: 6/13/16 19:04

All methods used are in accordance with 40 CFR 136.

8270C Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
1,2-Dichlorobenzene	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
1,3-Dichlorobenzene	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
1,4-Dichlorobenzene	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
2,4,5-Trichlorophenol	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
2,4,6-Trichlorophenol	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
2,4-Dichlorophenol	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
2,4-Dimethylphenol	ND (48.5)		8270D		1	06/15/16 8:29	CZF0247	CF61340
2,4-Dinitrophenol	ND (48.5)		8270D		1	06/15/16 8:29	CZF0247	CF61340
2,4-Dinitrotoluene	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
2,6-Dinitrotoluene	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
2-Chloronaphthalene	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
2-Chlorophenol	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
2-Methylphenol	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
2-Nitrophenol	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
3,3´-Dichlorobenzidine	ND (19.4)		8270D		1	06/15/16 8:29	CZF0247	CF61340
3+4-Methylphenol	ND (19.4)		8270D		1	06/15/16 8:29	CZF0247	CF61340
4-Bromophenyl-phenylether	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
4-Chloroaniline	ND (19.4)		8270D		1	06/15/16 8:29	CZF0247	CF61340
4-Nitrophenol	ND (48.5)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Acetophenone	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Aniline	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Azobenzene	ND (19.4)		8270D		1	06/15/16 8:29	CZF0247	CF61340
bis(2-Chloroethoxy)methane	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
bis(2-Chloroethyl)ether	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
bis(2-chloroisopropyl)Ether	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
bis(2-Ethylhexyl)phthalate	**230** (5.8)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Butylbenzylphthalate	**11.7** (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Dibenzofuran	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Diethylphthalate	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Dimethylphthalate	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Di-n-butylphthalate	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES
Client Sample ID: NPDES-T2-100
Date Sampled: 06/09/16 12:00
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 1606245
ESS Laboratory Sample ID: 1606245-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: IBM
Prepared: 6/13/16 19:04

All methods used are in accordance with 40 CFR 136.

8270C Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Di-n-octylphthalate	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Hexachlorobutadiene	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Hexachloroethane	ND (4.9)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Isophorone	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Nitrobenzene	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
N-Nitrosodimethylamine	ND (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340
Phenol	**14.5** (9.7)		8270D		1	06/15/16 8:29	CZF0247	CF61340

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*49 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*43 %*		*15-110*
Surrogate: 2-Chlorophenol-d4	*45 %*		*15-110*
Surrogate: 2-Fluorobiphenyl	*47 %*		*30-130*
Surrogate: 2-Fluorophenol	*35 %*		*15-110*
Surrogate: Nitrobenzene-d5	*51 %*		*30-130*
Surrogate: Phenol-d6	*46 %*		*15-110*
Surrogate: p-Terphenyl-d14	*55 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES
Client Sample ID: NPDES-T2-100
Date Sampled: 06/09/16 12:00
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 0.25
Extraction Method: 3520C

ESS Laboratory Work Order: 1606245
ESS Laboratory Sample ID: 1606245-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: IBM
Prepared: 6/13/16 19:04

All methods used are in accordance with 40 CFR 136.

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	ND (3.88)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Acenaphthene	ND (3.88)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Acenaphthylene	ND (3.88)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Anthracene	ND (3.88)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Benzo(a)anthracene	ND (0.97)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Benzo(a)pyrene	ND (0.97)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Benzo(b)fluoranthene	ND (0.97)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Benzo(g,h,i)perylene	ND (3.88)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Benzo(k)fluoranthene	ND (0.97)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Chrysene	ND (0.97)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Dibenzo(a,h)Anthracene	ND (0.97)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Fluoranthene	ND (3.88)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Fluorene	ND (3.88)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Hexachlorobenzene	ND (3.88)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Indeno(1,2,3-cd)Pyrene	ND (0.97)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Naphthalene	ND (3.88)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Pentachlorophenol	ND (17.5)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Phenanthrene	ND (3.88)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340
Pyrene	ND (3.88)		8270D SIM		20	06/15/16 14:57	CZF0248	CF61340

%Recovery	Qualifier	Limits

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES
Client Sample ID: NPDES-T2-100
Date Sampled: 06/09/16 12:00
Percent Solids: N/A

ESS Laboratory Work Order: 1606245
ESS Laboratory Sample ID: 1606245-01
Sample Matrix: Waste Water

All methods used are in accordance with 40 CFR 136.

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Hexavalent Chromium	ND (10)		7196A		1	MJV	06/09/16 18:55	ug/L	CF60951
Phenols	ND (100)		420.1		1	EEM	06/16/16 13:35	ug/L	CF61630
Total Cyanide (LL)	ND (5.00)		4500 CN CE		1	EEM	06/16/16 11:40	ug/L	CF61628
Total Petroleum Hydrocarbon	**169** (5)		1664A		1	CRR	06/15/16 14:52	mg/L	CF61440
Total Residual Chlorine	**280** (10)		4500-Cl E		1	EEM	06/10/16 11:20	ug/L	CF61020
Total Suspended Solids	**178** (10)		2540D		1	JLK	06/14/16 21:07	mg/L	CF61427

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES
Client Sample ID: NPDES-T2-100
Date Sampled: 06/09/16 12:00
Percent Solids: N/A
Initial Volume: 35
Final Volume: 2
Extraction Method: 504/8011

ESS Laboratory Work Order: 1606245
ESS Laboratory Sample ID: 1606245-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: JXS
Prepared: 6/13/16 11:00

All methods used are in accordance with 40 CFR 136.

504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2-Dibromoethane	ND (0.015)		504.1		1	06/13/16 14:03		CF61311

	%Recovery	Qualifier	Limits
Surrogate: Pentachloroethane	*107 %*		*30-150*
Surrogate: Pentachloroethane [2C]	*107 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES

ESS Laboratory Work Order: 1606245

Quality Control Data

Total Metals

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CF60908 - 245.1/7470A										
Blank										
Mercury	ND	0.20	ug/L							
Blank										
Mercury	ND	0.20	ug/L							
Blank										
Mercury	ND	0.20	ug/L							
LCS										
Mercury	5.92	0.20	ug/L	6.000		99	85-115			
LCS Dup										
Mercury	5.85	0.20	ug/L	6.000		97	85-115	1	20	
Batch CF60951 - [CALC]										
Blank										
Chromium III	ND	10	ug/L							
LCS										
Chromium III	ND		ug/L							
LCS Dup										
Chromium III	ND		ug/L							
Batch CF61019 - 3005A										
Blank										
Antimony	ND	10.0	ug/L							
Arsenic	ND	10.0	ug/L							
Cadmium	ND	1.0	ug/L							
Chromium	ND	20.0	ug/L							
Chromium III	ND	20	ug/L							
Copper	ND	10.0	ug/L							
Iron	ND	100	ug/L							
Lead	ND	5.0	ug/L							
Nickel	ND	20.0	ug/L							
Selenium	ND	10.0	ug/L							
Silver	ND	0.5	ug/L							
Silver	ND	5.0	ug/L							
Zinc	ND	50.0	ug/L							
LCS										
Antimony	464	250	ug/L	500.0		93	80-120			
Arsenic	578	250	ug/L	500.0		116	80-120			
Cadmium	253	500	ug/L	250.0		101	80-120			
Chromium	503	20.0	ug/L	500.0		101	80-120			
Chromium III	503	20	ug/L							
Copper	479	10.0	ug/L	500.0		96	80-120			
Iron	2510	100	ug/L	2500		100	80-120			
Lead	493	125	ug/L	500.0		99	80-120			
Nickel	496	20.0	ug/L	500.0		99	80-120			
Selenium	1030	250	ug/L	1000		103	80-120			

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES

ESS Laboratory Work Order: 1606245

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CF61019 - 3005A										
Silver	249	5.0	ug/L	250.0		100	80-120			
Silver	271	50.0	ug/L	250.0		108	80-120			
Zinc	563	50.0	ug/L	500.0		113	80-120			
LCS Dup										
Antimony	469	250	ug/L	500.0		94	80-120	1	20	
Arsenic	586	250	ug/L	500.0		117	80-120	1	20	
Cadmium	263	500	ug/L	250.0		105	80-120	4	20	
Chromium	492	20.0	ug/L	500.0		98	80-120	2	20	
Chromium III	492	20	ug/L							
Copper	473	10.0	ug/L	500.0		95	80-120	1	20	
Iron	2470	100	ug/L	2500		99	80-120	2	20	
Lead	496	125	ug/L	500.0		99	80-120	0.5	20	
Nickel	489	20.0	ug/L	500.0		98	80-120	2	20	
Selenium	1060	250	ug/L	1000		106	80-120	2	20	
Silver	244	5.0	ug/L	250.0		98	80-120	2	20	
Silver	268	50.0	ug/L	250.0		107	80-120	1	20	
Zinc	493	50.0	ug/L	500.0		99	80-120	13	20	
608 Polychlorinated Biphenyls (PCB)										
Batch CF61011 - 3510C										
Blank										
Aroclor 1016	ND	0.10	ug/L							
Aroclor 1221	ND	0.10	ug/L							
Aroclor 1232	ND	0.10	ug/L							
Aroclor 1242	ND	0.10	ug/L							
Aroclor 1248	ND	0.10	ug/L							
Aroclor 1254	ND	0.10	ug/L							
Aroclor 1260	ND	0.10	ug/L							
Aroclor 1262	ND	0.10	ug/L							
Aroclor 1268	ND	0.10	ug/L							
Surrogate: Decachlorobiphenyl	*0.0300*		ug/L	*0.05000*		*60*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0401*		ug/L	*0.05000*		*80*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0181*		ug/L	*0.05000*		*36*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0210*		ug/L	*0.05000*		*42*	*30-150*			
LCS										
Aroclor 1016	0.62	0.10	ug/L	1.000		62	40-140			
Aroclor 1260	0.71	0.10	ug/L	1.000		71	40-140			
Surrogate: Decachlorobiphenyl	*0.0346*		ug/L	*0.05000*		*69*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0395*		ug/L	*0.05000*		*79*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0211*		ug/L	*0.05000*		*42*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0229*		ug/L	*0.05000*		*46*	*30-150*			
LCS Dup										
Aroclor 1016	0.65	0.10	ug/L	1.000		65	40-140	4	50	

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
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ESS Laboratory Work Order: 1606245

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
608 Polychlorinated Biphenyls (PCB)										
Batch CF61011 - 3510C										
Aroclor 1260	0.72	0.10	ug/L	1.000		72	40-140	2	50	
Surrogate: Decachlorobiphenyl	*0.0343*		ug/L	*0.05000*		*69*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0410*		ug/L	*0.05000*		*82*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0211*		ug/L	*0.05000*		*42*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0231*		ug/L	*0.05000*		*46*	*30-150*			
608/6630C Organochlorine Pesticides										
Batch CF61439 - 3510C										
Blank										
4,4´-DDD	ND	0.05	ug/L							
4,4´-DDD [2C]	ND	0.05	ug/L							
4,4´-DDE	ND	0.05	ug/L							
4,4´-DDE [2C]	ND	0.05	ug/L							
4,4´-DDT	ND	0.05	ug/L							
4,4´-DDT [2C]	ND	0.05	ug/L							
Aldrin	ND	0.05	ug/L							
Aldrin [2C]	ND	0.05	ug/L							
alpha-BHC	ND	0.05	ug/L							
alpha-BHC [2C]	ND	0.05	ug/L							
beta-BHC	ND	0.05	ug/L							
beta-BHC [2C]	ND	0.05	ug/L							
Chlordane (Total)	ND	0.50	ug/L							
Chlordane (Total) [2C]	ND	0.50	ug/L							
delta-BHC	ND	0.05	ug/L							
delta-BHC [2C]	ND	0.05	ug/L							
Dieldrin	ND	0.05	ug/L							
Dieldrin [2C]	ND	0.05	ug/L							
Endosulfan I	ND	0.05	ug/L							
Endosulfan I [2C]	ND	0.05	ug/L							
Endosulfan II	ND	0.05	ug/L							
Endosulfan II [2C]	ND	0.05	ug/L							
Endosulfan Sulfate	ND	0.05	ug/L							
Endosulfan Sulfate [2C]	ND	0.05	ug/L							
Endrin	ND	0.05	ug/L							
Endrin [2C]	ND	0.05	ug/L							
Endrin Aldehyde	ND	0.05	ug/L							
Endrin Aldehyde [2C]	ND	0.05	ug/L							
gamma-BHC (Lindane)	ND	0.05	ug/L							
gamma-BHC (Lindane) [2C]	ND	0.05	ug/L							
Heptachlor	ND	0.05	ug/L							
Heptachlor [2C]	ND	0.05	ug/L							
Heptachlor Epoxide	ND	0.05	ug/L							
Heptachlor Epoxide [2C]	ND	0.05	ug/L							
Methoxychlor	ND	0.05	ug/L							

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
608/6630C Organochlorine Pesticides										
Batch CF61439 - 3510C										
Methoxychlor [2C]	ND	0.05	ug/L							
Toxaphene	ND	1.30	ug/L							
Toxaphene [2C]	ND	1.30	ug/L							
Surrogate: Decachlorobiphenyl	*0.182*		ug/L	*0.2500*		*73*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.253*		ug/L	*0.2500*		*101*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0957*		ug/L	*0.2500*		*38*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0935*		ug/L	*0.2500*		*37*	*30-150*			
LCS										
4,4´-DDD	0.24	0.05	ug/L	0.2500		98	40-140			
4,4´-DDD [2C]	0.22	0.05	ug/L	0.2500		87	40-140			
4,4´-DDE	0.23	0.05	ug/L	0.2500		92	40-140			
4,4´-DDE [2C]	0.24	0.05	ug/L	0.2500		94	40-140			
4,4´-DDT	0.23	0.05	ug/L	0.2500		93	40-140			
4,4´-DDT [2C]	0.25	0.05	ug/L	0.2500		102	40-140			
Aldrin	0.14	0.05	ug/L	0.2500		56	40-140			
Aldrin [2C]	0.14	0.05	ug/L	0.2500		56	40-140			
alpha-BHC	0.24	0.05	ug/L	0.2500		94	40-140			
alpha-BHC [2C]	0.23	0.05	ug/L	0.2500		92	40-140			
beta-BHC	0.23	0.05	ug/L	0.2500		93	40-140			
beta-BHC [2C]	0.25	0.05	ug/L	0.2500		101	40-140			
delta-BHC	0.23	0.05	ug/L	0.2500		93	40-140			
delta-BHC [2C]	0.26	0.05	ug/L	0.2500		105	40-140			
Dieldrin	0.25	0.05	ug/L	0.2500		100	40-140			
Dieldrin [2C]	0.28	0.05	ug/L	0.2500		110	40-140			
Endosulfan I	0.24	0.05	ug/L	0.2500		94	40-140			
Endosulfan I [2C]	0.25	0.05	ug/L	0.2500		99	40-140			
Endosulfan II	0.23	0.05	ug/L	0.2500		93	40-140			
Endosulfan II [2C]	0.25	0.05	ug/L	0.2500		100	40-140			
Endosulfan Sulfate	0.24	0.05	ug/L	0.2500		95	40-140			
Endosulfan Sulfate [2C]	0.31	0.05	ug/L	0.2500		122	40-140			
Endrin	0.26	0.05	ug/L	0.2500		104	40-140			
Endrin [2C]	0.28	0.05	ug/L	0.2500		110	40-140			
Endrin Aldehyde	0.24	0.05	ug/L	0.2500		95	40-140			
Endrin Aldehyde [2C]	0.23	0.05	ug/L	0.2500		92	40-140			
gamma-BHC (Lindane)	0.24	0.05	ug/L	0.2500		97	40-140			
gamma-BHC (Lindane) [2C]	0.26	0.05	ug/L	0.2500		105	40-140			
Heptachlor	0.16	0.05	ug/L	0.2500		64	40-140			
Heptachlor [2C]	0.17	0.05	ug/L	0.2500		67	40-140			
Heptachlor Epoxide	0.25	0.05	ug/L	0.2500		99	40-140			
Heptachlor Epoxide [2C]	0.26	0.05	ug/L	0.2500		104	40-140			
Methoxychlor	0.26	0.05	ug/L	0.2500		103	40-140			
Methoxychlor [2C]	0.31	0.05	ug/L	0.2500		125	40-140			
Surrogate: Decachlorobiphenyl	*0.185*		ug/L	*0.2500*		*74*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.225*		ug/L	*0.2500*		*90*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
608/6630C Organochlorine Pesticides										
Batch CF61439 - 3510C										
Surrogate: Tetrachloro-m-xylene	*0.139*		ug/L	*0.2500*		*55*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.126*		ug/L	*0.2500*		*50*	*30-150*			
LCS Dup										
4,4´-DDD	0.22	0.05	ug/L	0.2500		86	40-140	13	20	
4,4´-DDD [2C]	0.20	0.05	ug/L	0.2500		80	40-140	9	20	
4,4´-DDE	0.21	0.05	ug/L	0.2500		82	40-140	12	20	
4,4´-DDE [2C]	0.20	0.05	ug/L	0.2500		81	40-140	15	20	
4,4´-DDT	0.20	0.05	ug/L	0.2500		80	40-140	15	20	
4,4´-DDT [2C]	0.22	0.05	ug/L	0.2500		86	40-140	17	20	
Aldrin	0.14	0.05	ug/L	0.2500		57	40-140	2	20	
Aldrin [2C]	0.14	0.05	ug/L	0.2500		56	40-140	0.2	20	
alpha-BHC	0.21	0.05	ug/L	0.2500		83	40-140	13	20	
alpha-BHC [2C]	0.20	0.05	ug/L	0.2500		79	40-140	15	20	
beta-BHC	0.20	0.05	ug/L	0.2500		81	40-140	14	20	
beta-BHC [2C]	0.22	0.05	ug/L	0.2500		87	40-140	15	20	
delta-BHC	0.20	0.05	ug/L	0.2500		81	40-140	15	20	
delta-BHC [2C]	0.22	0.05	ug/L	0.2500		88	40-140	18	20	
Dieldrin	0.21	0.05	ug/L	0.2500		86	40-140	16	20	
Dieldrin [2C]	0.23	0.05	ug/L	0.2500		92	40-140	18	20	
Endosulfan I	0.20	0.05	ug/L	0.2500		79	40-140	18	20	
Endosulfan I [2C]	0.21	0.05	ug/L	0.2500		82	40-140	19	20	
Endosulfan II	0.20	0.05	ug/L	0.2500		81	40-140	13	20	
Endosulfan II [2C]	0.21	0.05	ug/L	0.2500		85	40-140	16	20	
Endosulfan Sulfate	0.20	0.05	ug/L	0.2500		78	40-140	19	20	
Endosulfan Sulfate [2C]	0.26	0.05	ug/L	0.2500		103	40-140	17	20	
Endrin	0.22	0.05	ug/L	0.2500		89	40-140	16	20	
Endrin [2C]	0.23	0.05	ug/L	0.2500		92	40-140	18	20	
Endrin Aldehyde	0.19	0.05	ug/L	0.2500		77	40-140	22	20	D+
Endrin Aldehyde [2C]	0.19	0.05	ug/L	0.2500		77	40-140	18	20	
gamma-BHC (Lindane)	0.21	0.05	ug/L	0.2500		84	40-140	15	20	
gamma-BHC (Lindane) [2C]	0.22	0.05	ug/L	0.2500		89	40-140	17	20	
Heptachlor	0.16	0.05	ug/L	0.2500		62	40-140	3	20	
Heptachlor [2C]	0.16	0.05	ug/L	0.2500		64	40-140	5	20	
Heptachlor Epoxide	0.21	0.05	ug/L	0.2500		86	40-140	14	20	
Heptachlor Epoxide [2C]	0.22	0.05	ug/L	0.2500		87	40-140	17	20	
Methoxychlor	0.22	0.05	ug/L	0.2500		89	40-140	15	20	
Methoxychlor [2C]	0.27	0.05	ug/L	0.2500		106	40-140	16	20	
Surrogate: Decachlorobiphenyl	*0.136*		ug/L	*0.2500*		*54*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.171*		ug/L	*0.2500*		*68*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.116*		ug/L	*0.2500*		*47*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.110*		ug/L	*0.2500*		*44*	*30-150*			
624 Volatile Organic Compounds										

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
624 Volatile Organic Compounds										
Batch CF61028 - 5030B										
Blank										
1,1,1-Trichloroethane	ND	1.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L							
1,1,2-Trichloroethane	ND	1.0	ug/L							
1,1-Dichloroethane	ND	1.0	ug/L							
1,1-Dichloroethene	ND	1.0	ug/L							
1,2-Dichlorobenzene	ND	1.0	ug/L							
1,2-Dichloroethane	ND	1.0	ug/L							
1,2-Dichloropropane	ND	1.0	ug/L							
1,3-Dichlorobenzene	ND	1.0	ug/L							
1,4-Dichlorobenzene	ND	1.0	ug/L							
2-Chloroethyl vinyl ether	ND	10.0	ug/L							
Acrolein - Screen	ND	5.0	ug/L							
Acrylonitrile - Screen	ND	5.0	ug/L							
Benzene	ND	1.0	ug/L							
Bromodichloromethane	ND	0.6	ug/L							
Bromoform	ND	1.0	ug/L							
Bromomethane	ND	2.0	ug/L							
Carbon Tetrachloride	ND	1.0	ug/L							
Chlorobenzene	ND	1.0	ug/L							
Chloroethane	ND	2.0	ug/L							
Chloroform	ND	1.0	ug/L							
Chloromethane	ND	2.0	ug/L							
cis-1,2-Dichloroethene	ND	1.0	ug/L							
cis-1,3-Dichloropropene	ND	0.4	ug/L							
Dibromochloromethane	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Methylene Chloride	ND	4.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.5	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*23.6*		ug/L	*25.00*		*94*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*26.6*		ug/L	*25.00*		*106*	*70-130*			
Surrogate: Dibromofluoromethane	*24.7*		ug/L	*25.00*		*99*	*70-130*			
Surrogate: Toluene-d8	*23.3*		ug/L	*25.00*		*93*	*70-130*			
LCS										
1,1,1-Trichloroethane	10.1		ug/L	10.00		101	70-130			
1,1,2,2-Tetrachloroethane	8.6		ug/L	10.00		86	70-130			
1,1,2-Trichloroethane	8.5		ug/L	10.00		85	70-130			
1,1-Dichloroethane	9.1		ug/L	10.00		91	70-130			
1,1-Dichloroethene	10.4		ug/L	10.00		104	70-130			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
624 Volatile Organic Compounds										
Batch CF61028 - 5030B										
1,2-Dichlorobenzene	10.6		ug/L	10.00		106	70-130			
1,2-Dichloroethane	9.8		ug/L	10.00		98	70-130			
1,2-Dichloropropane	8.3		ug/L	10.00		83	70-130			
1,3-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,4-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
2-Chloroethyl vinyl ether	46.2		ug/L	50.00		92	70-130			
Acrolein - Screen	7.5		ug/L	10.00		75	70-130			
Acrylonitrile - Screen	8.3		ug/L	10.00		83	70-130			
Benzene	9.6		ug/L	10.00		96	70-130			
Bromodichloromethane	9.4		ug/L	10.00		94	70-130			
Bromoform	9.1		ug/L	10.00		91	70-130			
Bromomethane	11.9		ug/L	10.00		119	70-130			
Carbon Tetrachloride	10.2		ug/L	10.00		102	70-130			
Chlorobenzene	11.0		ug/L	10.00		110	70-130			
Chloroethane	8.7		ug/L	10.00		87	70-130			
Chloroform	9.5		ug/L	10.00		95	70-130			
Chloromethane	8.4		ug/L	10.00		84	70-130			
cis-1,2-Dichloroethene	10.2		ug/L	10.00		102	70-130			
cis-1,3-Dichloropropene	9.9		ug/L	10.00		99	70-130			
Dibromochloromethane	10.8		ug/L	10.00		108	70-130			
Ethylbenzene	10.1		ug/L	10.00		101	70-130			
Methylene Chloride	9.2		ug/L	10.00		92	70-130			
Tetrachloroethene	10.0		ug/L	10.00		100	70-130			
Toluene	10.3		ug/L	10.00		103	70-130			
trans-1,2-Dichloroethene	9.9		ug/L	10.00		99	70-130			
trans-1,3-Dichloropropene	9.2		ug/L	10.00		92	70-130			
Trichloroethene	9.2		ug/L	10.00		92	70-130			
Trichlorofluoromethane	9.4		ug/L	10.00		94	70-130			
Vinyl Chloride	9.7		ug/L	10.00		97	70-130			
Surrogate: 1,2-Dichloroethane-d4	*25.2*		ug/L	*25.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.7*		ug/L	*25.00*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*25.4*		ug/L	*25.00*		*102*	*70-130*			
Surrogate: Toluene-d8	*24.6*		ug/L	*25.00*		*98*	*70-130*			
LCS Dup										
1,1,1-Trichloroethane	9.6		ug/L	10.00		96	70-130	5	25	
1,1,2,2-Tetrachloroethane	9.8		ug/L	10.00		98	70-130	13	25	
1,1,2-Trichloroethane	9.4		ug/L	10.00		94	70-130	10	25	
1,1-Dichloroethane	9.7		ug/L	10.00		97	70-130	7	25	
1,1-Dichloroethene	9.7		ug/L	10.00		97	70-130	7	25	
1,2-Dichlorobenzene	10.4		ug/L	10.00		104	70-130	2	25	
1,2-Dichloroethane	9.8		ug/L	10.00		98	70-130	0.7	25	
1,2-Dichloropropane	8.8		ug/L	10.00		88	70-130	7	25	
1,3-Dichlorobenzene	10.3		ug/L	10.00		103	70-130	0.6	25	
1,4-Dichlorobenzene	10.1		ug/L	10.00		101	70-130	3	25	
2-Chloroethyl vinyl ether	52.2		ug/L	50.00		104	70-130	12	25	

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
624 Volatile Organic Compounds										
Batch CF61028 - 5030B										
Acrolein - Screen	2.9		ug/L	10.00		29	70-130	88	25	B-, D+
Acrylonitrile - Screen	9.4		ug/L	10.00		94	70-130	12	20	
Benzene	10.2		ug/L	10.00		102	70-130	6	25	
Bromodichloromethane	9.8		ug/L	10.00		98	70-130	4	25	
Bromoform	9.9		ug/L	10.00		99	70-130	8	25	
Bromomethane	10.1		ug/L	10.00		101	70-130	16	25	
Carbon Tetrachloride	9.9		ug/L	10.00		99	70-130	3	25	
Chlorobenzene	10.4		ug/L	10.00		104	70-130	5	25	
Chloroethane	8.5		ug/L	10.00		85	70-130	2	25	
Chloroform	9.4		ug/L	10.00		94	70-130	2	25	
Chloromethane	8.2		ug/L	10.00		82	70-130	3	25	
cis-1,2-Dichloroethene	10.1		ug/L	10.00		101	70-130	1	25	
cis-1,3-Dichloropropene	9.9		ug/L	10.00		99	70-130	0.6	25	
Dibromochloromethane	10.0		ug/L	10.00		100	70-130	8	25	
Ethylbenzene	10.0		ug/L	10.00		100	70-130	0.3	25	
Methylene Chloride	10.4		ug/L	10.00		104	70-130	13	25	
Tetrachloroethene	7.3		ug/L	10.00		73	70-130	32	25	D+
Toluene	9.6		ug/L	10.00		96	70-130	7	25	
trans-1,2-Dichloroethene	10.1		ug/L	10.00		101	70-130	2	25	
trans-1,3-Dichloropropene	9.4		ug/L	10.00		94	70-130	2	25	
Trichloroethene	9.7		ug/L	10.00		97	70-130	5	25	
Trichlorofluoromethane	9.0		ug/L	10.00		90	70-130	5	25	
Vinyl Chloride	9.3		ug/L	10.00		93	70-130	4	25	
Surrogate: 1,2-Dichloroethane-d4	*24.7*		ug/L	*25.00*		*99*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*24.7*		ug/L	*25.00*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*24.7*		ug/L	*25.00*		*99*	*70-130*			
Surrogate: Toluene-d8	*24.6*		ug/L	*25.00*		*98*	*70-130*			
8270C Semi-Volatile Organic Compounds										
Batch CF61340 - 3520C										
Blank										
1,2,4-Trichlorobenzene	ND	10.0	ug/L							
1,2-Dichlorobenzene	ND	10.0	ug/L							
1,3-Dichlorobenzene	ND	10.0	ug/L							
1,4-Dichlorobenzene	ND	10.0	ug/L							
2,4,5-Trichlorophenol	ND	10.0	ug/L							
2,4,6-Trichlorophenol	ND	10.0	ug/L							
2,4-Dichlorophenol	ND	10.0	ug/L							
2,4-Dimethylphenol	ND	50.0	ug/L							
2,4-Dinitrophenol	ND	50.0	ug/L							
2,4-Dinitrotoluene	ND	10.0	ug/L							
2,6-Dinitrotoluene	ND	10.0	ug/L							
2-Chloronaphthalene	ND	10.0	ug/L							
2-Chlorophenol	ND	10.0	ug/L							
2-Methylphenol	ND	10.0	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES

ESS Laboratory Work Order: 1606245

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270C Semi-Volatile Organic Compounds										
Batch CF61340 - 3520C										
2-Nitrophenol	ND	10.0	ug/L							
3,3´-Dichlorobenzidine	ND	20.0	ug/L							
3+4-Methylphenol	ND	20.0	ug/L							
4-Bromophenyl-phenylether	ND	10.0	ug/L							
4-Chloroaniline	ND	20.0	ug/L							
4-Nitrophenol	ND	50.0	ug/L							
Acetophenone	ND	10.0	ug/L							
Aniline	ND	10.0	ug/L							
Azobenzene	ND	20.0	ug/L							
bis(2-Chloroethoxy)methane	ND	10.0	ug/L							
bis(2-Chloroethyl)ether	ND	10.0	ug/L							
bis(2-chloroisopropyl)Ether	ND	10.0	ug/L							
bis(2-Ethylhexyl)phthalate	ND	6.0	ug/L							
Butylbenzylphthalate	ND	10.0	ug/L							
Dibenzofuran	ND	10.0	ug/L							
Diethylphthalate	ND	10.0	ug/L							
Dimethylphthalate	ND	10.0	ug/L							
Di-n-butylphthalate	ND	10.0	ug/L							
Di-n-octylphthalate	ND	10.0	ug/L							
Hexachlorobutadiene	ND	10.0	ug/L							
Hexachloroethane	ND	5.0	ug/L							
Isophorone	ND	10.0	ug/L							
Nitrobenzene	ND	10.0	ug/L							
N-Nitrosodimethylamine	ND	10.0	ug/L							
Phenol	ND	10.0	ug/L							
Surrogate: 1,2-Dichlorobenzene-d4	*78.0*		ug/L	*100.0*		*78*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*113*		ug/L	*150.0*		*75*	*15-110*			
Surrogate: 2-Chlorophenol-d4	*116*		ug/L	*150.0*		*77*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*79.9*		ug/L	*100.0*		*80*	*30-130*			
Surrogate: 2-Fluorophenol	*99.1*		ug/L	*150.0*		*66*	*15-110*			
Surrogate: Nitrobenzene-d5	*85.7*		ug/L	*100.0*		*86*	*30-130*			
Surrogate: Phenol-d6	*121*		ug/L	*150.0*		*81*	*15-110*			
Surrogate: p-Terphenyl-d14	*91.5*		ug/L	*100.0*		*91*	*30-130*			
LCS										
1,2,4-Trichlorobenzene	75.1	10.0	ug/L	100.0		75	40-140			
1,2-Dichlorobenzene	70.1	10.0	ug/L	100.0		70	40-140			
1,3-Dichlorobenzene	66.6	10.0	ug/L	100.0		67	40-140			
1,4-Dichlorobenzene	66.6	10.0	ug/L	100.0		67	40-140			
2,4,5-Trichlorophenol	99.2	10.0	ug/L	100.0		99	30-130			
2,4,6-Trichlorophenol	89.8	10.0	ug/L	100.0		90	30-130			
2,4-Dichlorophenol	82.4	10.0	ug/L	100.0		82	30-130			
2,4-Dimethylphenol	77.3	50.0	ug/L	100.0		77	30-130			
2,4-Dinitrophenol	98.1	50.0	ug/L	100.0		98	30-130			
2,4-Dinitrotoluene	102	10.0	ug/L	100.0		102	40-140			
2,6-Dinitrotoluene	91.6	10.0	ug/L	100.0		92	40-140			

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES

ESS Laboratory Work Order: 1606245

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270C Semi-Volatile Organic Compounds										
Batch CF61340 - 3520C										
2-Chloronaphthalene	73.2	10.0	ug/L	100.0		73	40-140			
2-Chlorophenol	66.2	10.0	ug/L	100.0		66	30-130			
2-Methylphenol	75.6	10.0	ug/L	100.0		76	30-130			
2-Nitrophenol	77.8	10.0	ug/L	100.0		78	30-130			
3,3´-Dichlorobenzidine	98.6	20.0	ug/L	100.0		99	40-140			
3+4-Methylphenol	169	20.0	ug/L	200.0		85	30-130			
4-Bromophenyl-phenylether	90.4	10.0	ug/L	100.0		90	40-140			
4-Chloroaniline	78.9	20.0	ug/L	100.0		79	40-140			
4-Nitrophenol	91.9	50.0	ug/L	100.0		92	30-130			
Acetophenone	78.5	10.0	ug/L	100.0		79	40-140			
Aniline	59.1	10.0	ug/L	100.0		59	40-140			
Azobenzene	83.2	20.0	ug/L	100.0		83	40-140			
bis(2-Chloroethoxy)methane	75.1	10.0	ug/L	100.0		75	40-140			
bis(2-Chloroethyl)ether	70.7	10.0	ug/L	100.0		71	40-140			
bis(2-chloroisopropyl)Ether	74.6	10.0	ug/L	100.0		75	40-140			
bis(2-Ethylhexyl)phthalate	93.4	6.0	ug/L	100.0		93	40-140			
Butylbenzylphthalate	92.5	10.0	ug/L	100.0		92	40-140			
Dibenzofuran	85.9	10.0	ug/L	100.0		86	40-140			
Diethylphthalate	103	10.0	ug/L	100.0		103	40-140			
Dimethylphthalate	95.8	10.0	ug/L	100.0		96	40-140			
Di-n-butylphthalate	94.0	10.0	ug/L	100.0		94	40-140			
Di-n-octylphthalate	91.2	10.0	ug/L	100.0		91	40-140			
Hexachlorobutadiene	70.2	10.0	ug/L	100.0		70	40-140			
Hexachloroethane	63.3	5.0	ug/L	100.0		63	40-140			
Isophorone	77.6	10.0	ug/L	100.0		78	40-140			
Nitrobenzene	76.6	10.0	ug/L	100.0		77	40-140			
N-Nitrosodimethylamine	62.0	10.0	ug/L	100.0		62	40-140			
Phenol	66.5	10.0	ug/L	100.0		66	30-130			
Surrogate: 1,2-Dichlorobenzene-d4	*70.6*		ug/L	*100.0*		*71*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*131*		ug/L	*150.0*		*87*	*15-110*			
Surrogate: 2-Chlorophenol-d4	*102*		ug/L	*150.0*		*68*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*80.3*		ug/L	*100.0*		*80*	*30-130*			
Surrogate: 2-Fluorophenol	*78.7*		ug/L	*150.0*		*52*	*15-110*			
Surrogate: Nitrobenzene-d5	*79.7*		ug/L	*100.0*		*80*	*30-130*			
Surrogate: Phenol-d6	*107*		ug/L	*150.0*		*72*	*15-110*			
Surrogate: p-Terphenyl-d14	*96.2*		ug/L	*100.0*		*96*	*30-130*			
LCS Dup										
1,2,4-Trichlorobenzene	79.0	10.0	ug/L	100.0		79	40-140	5	20	
1,2-Dichlorobenzene	75.1	10.0	ug/L	100.0		75	40-140	7	20	
1,3-Dichlorobenzene	71.7	10.0	ug/L	100.0		72	40-140	7	20	
1,4-Dichlorobenzene	72.1	10.0	ug/L	100.0		72	40-140	8	20	
2,4,5-Trichlorophenol	95.8	10.0	ug/L	100.0		96	30-130	4	20	
2,4,6-Trichlorophenol	88.5	10.0	ug/L	100.0		88	30-130	1	20	
2,4-Dichlorophenol	85.0	10.0	ug/L	100.0		85	30-130	3	20	
2,4-Dimethylphenol	85.4	50.0	ug/L	100.0		85	30-130	10	20	

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES

ESS Laboratory Work Order: 1606245

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270C Semi-Volatile Organic Compounds										
Batch CF61340 - 3520C										
2,4-Dinitrophenol	92.3	50.0	ug/L	100.0		92	30-130	6	20	
2,4-Dinitrotoluene	100	10.0	ug/L	100.0		100	40-140	2	20	
2,6-Dinitrotoluene	87.6	10.0	ug/L	100.0		88	40-140	4	20	
2-Chloronaphthalene	72.8	10.0	ug/L	100.0		73	40-140	0.5	20	
2-Chlorophenol	74.7	10.0	ug/L	100.0		75	30-130	12	20	
2-Methylphenol	81.0	10.0	ug/L	100.0		81	30-130	7	20	
2-Nitrophenol	84.7	10.0	ug/L	100.0		85	30-130	8	20	
3,3´-Dichlorobenzidine	102	20.0	ug/L	100.0		102	40-140	3	20	
3+4-Methylphenol	177	20.0	ug/L	200.0		88	30-130	4	20	
4-Bromophenyl-phenylether	87.6	10.0	ug/L	100.0		88	40-140	3	20	
4-Chloroaniline	78.2	20.0	ug/L	100.0		78	40-140	0.9	20	
4-Nitrophenol	92.2	50.0	ug/L	100.0		92	30-130	0.3	20	
Acetophenone	81.6	10.0	ug/L	100.0		82	40-140	4	20	
Aniline	59.4	10.0	ug/L	100.0		59	40-140	0.6	20	
Azobenzene	80.0	20.0	ug/L	100.0		80	40-140	4	20	
bis(2-Chloroethoxy)methane	76.9	10.0	ug/L	100.0		77	40-140	2	20	
bis(2-Chloroethyl)ether	74.4	10.0	ug/L	100.0		74	40-140	5	20	
bis(2-chloroisopropyl)Ether	78.7	10.0	ug/L	100.0		79	40-140	5	20	
bis(2-Ethylhexyl)phthalate	92.4	6.0	ug/L	100.0		92	40-140	1	20	
Butylbenzylphthalate	91.4	10.0	ug/L	100.0		91	40-140	1	20	
Dibenzofuran	82.6	10.0	ug/L	100.0		83	40-140	4	20	
Diethylphthalate	99.5	10.0	ug/L	100.0		100	40-140	3	20	
Dimethylphthalate	92.5	10.0	ug/L	100.0		92	40-140	3	20	
Di-n-butylphthalate	94.1	10.0	ug/L	100.0		94	40-140	0.1	20	
Di-n-octylphthalate	90.2	10.0	ug/L	100.0		90	40-140	1	20	
Hexachlorobutadiene	74.7	10.0	ug/L	100.0		75	40-140	6	20	
Hexachloroethane	69.1	5.0	ug/L	100.0		69	40-140	9	20	
Isophorone	78.7	10.0	ug/L	100.0		79	40-140	1	20	
Nitrobenzene	80.1	10.0	ug/L	100.0		80	40-140	4	20	
N-Nitrosodimethylamine	65.7	10.0	ug/L	100.0		66	40-140	6	20	
Phenol	72.4	10.0	ug/L	100.0		72	30-130	8	20	
Surrogate: 1,2-Dichlorobenzene-d4	*74.5*		ug/L	*100.0*		*75*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*127*		ug/L	*150.0*		*85*	*15-110*			
Surrogate: 2-Chlorophenol-d4	*114*		ug/L	*150.0*		*76*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*79.2*		ug/L	*100.0*		*79*	*30-130*			
Surrogate: 2-Fluorophenol	*94.3*		ug/L	*150.0*		*63*	*15-110*			
Surrogate: Nitrobenzene-d5	*81.6*		ug/L	*100.0*		*82*	*30-130*			
Surrogate: Phenol-d6	*117*		ug/L	*150.0*		*78*	*15-110*			
Surrogate: p-Terphenyl-d14	*92.8*		ug/L	*100.0*		*93*	*30-130*			
8270D(SIM) Semi-Volatile Organic Compounds										
Batch CF61340 - 3520C										
Blank										
2-Methylnaphthalene	ND	0.20	ug/L							
Acenaphthene	ND	0.20	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES

ESS Laboratory Work Order: 1606245

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D(SIM) Semi-Volatile Organic Compounds										
Batch CF61340 - 3520C										
Acenaphthylene	ND	0.20	ug/L							
Anthracene	ND	0.20	ug/L							
Benzo(a)anthracene	ND	0.05	ug/L							
Benzo(a)pyrene	ND	0.05	ug/L							
Benzo(b)fluoranthene	ND	0.05	ug/L							
Benzo(g,h,i)perylene	ND	0.20	ug/L							
Benzo(k)fluoranthene	ND	0.05	ug/L							
Chrysene	ND	0.05	ug/L							
Dibenzo(a,h)Anthracene	ND	0.05	ug/L							
Fluoranthene	ND	0.20	ug/L							
Fluorene	ND	0.20	ug/L							
Hexachlorobenzene	ND	0.20	ug/L							
Indeno(1,2,3-cd)Pyrene	ND	0.05	ug/L							
Naphthalene	ND	0.20	ug/L							
Pentachlorophenol	ND	0.90	ug/L							
Phenanthrene	ND	0.20	ug/L							
Pyrene	ND	0.20	ug/L							
LCS										
2-Methylnaphthalene	80.2	4.00	ug/L	100.0		80	40-140			
Acenaphthene	84.0	4.00	ug/L	100.0		84	40-140			
Acenaphthylene	83.4	4.00	ug/L	100.0		83	40-140			
Anthracene	85.2	4.00	ug/L	100.0		85	40-140			
Benzo(a)anthracene	88.8	1.00	ug/L	100.0		89	40-140			
Benzo(a)pyrene	93.6	1.00	ug/L	100.0		94	40-140			
Benzo(b)fluoranthene	92.6	1.00	ug/L	100.0		93	40-140			
Benzo(g,h,i)perylene	96.7	4.00	ug/L	100.0		97	40-140			
Benzo(k)fluoranthene	90.4	1.00	ug/L	100.0		90	40-140			
Chrysene	88.9	1.00	ug/L	100.0		89	40-140			
Dibenzo(a,h)Anthracene	98.2	1.00	ug/L	100.0		98	40-140			
Fluoranthene	91.8	4.00	ug/L	100.0		92	40-140			
Fluorene	91.4	4.00	ug/L	100.0		91	40-140			
Hexachlorobenzene	109	4.00	ug/L	100.0		109	40-140			
Indeno(1,2,3-cd)Pyrene	109	1.00	ug/L	100.0		109	40-140			
Naphthalene	73.2	4.00	ug/L	100.0		73	40-140			
Pentachlorophenol	124	18.0	ug/L	100.0		124	30-130			
Phenanthrene	87.0	4.00	ug/L	100.0		87	40-140			
Pyrene	94.8	4.00	ug/L	100.0		95	40-140			
LCS Dup										
2-Methylnaphthalene	79.4	4.00	ug/L	100.0		79	40-140	1	20	
Acenaphthene	80.8	4.00	ug/L	100.0		81	40-140	4	20	
Acenaphthylene	81.0	4.00	ug/L	100.0		81	40-140	3	20	
Anthracene	82.8	4.00	ug/L	100.0		83	40-140	3	20	
Benzo(a)anthracene	84.0	1.00	ug/L	100.0		84	40-140	6	20	
Benzo(a)pyrene	92.1	1.00	ug/L	100.0		92	40-140	2	20	
Benzo(b)fluoranthene	91.4	1.00	ug/L	100.0		91	40-140	1	20	

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
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ESS Laboratory Work Order: 1606245

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D(SIM) Semi-Volatile Organic Compounds										
Batch CF61340 - 3520C										
Benzo(g,h,i)perylene	96.3	4.00	ug/L	100.0		96	40-140	0.5	20	
Benzo(k)fluoranthene	89.1	1.00	ug/L	100.0		89	40-140	2	20	
Chrysene	84.5	1.00	ug/L	100.0		85	40-140	5	20	
Dibenzo(a,h)Anthracene	95.7	1.00	ug/L	100.0		96	40-140	3	20	
Fluoranthene	88.6	4.00	ug/L	100.0		89	40-140	4	20	
Fluorene	86.7	4.00	ug/L	100.0		87	40-140	5	20	
Hexachlorobenzene	104	4.00	ug/L	100.0		104	40-140	4	20	
Indeno(1,2,3-cd)Pyrene	103	1.00	ug/L	100.0		103	40-140	6	20	
Naphthalene	74.2	4.00	ug/L	100.0		74	40-140	1	20	
Pentachlorophenol	119	18.0	ug/L	100.0		119	30-130	4	20	
Phenanthrene	83.5	4.00	ug/L	100.0		83	40-140	4	20	
Pyrene	89.9	4.00	ug/L	100.0		90	40-140	5	20	
Classical Chemistry										
Batch CF60951 - General Preparation										
Blank										
Hexavalent Chromium	ND	10	ug/L							
LCS										
Hexavalent Chromium	0.5		mg/L	0.4998		98	90-110			
LCS Dup										
Hexavalent Chromium	0.5		mg/L	0.4998		99	90-110	0.1	20	
Batch CF61020 - General Preparation										
Blank										**HT**
Total Residual Chlorine	ND	10	ug/L							
LCS										**HT**
Total Residual Chlorine	1		mg/L	1.360		101	85-115			
Batch CF61427 - General Preparation										
Blank										
Total Suspended Solids	ND	5	mg/L							
LCS										
Total Suspended Solids	60		mg/L	60.60		99	80-120			
Batch CF61440 - General Preparation										
Blank										
Total Petroleum Hydrocarbon	ND	5	mg/L							
LCS										
Total Petroleum Hydrocarbon	14	5	mg/L	19.38		71	66-114			
Batch CF61628 - TCN Prep										
Blank										
Total Cyanide (LL)	ND	5.00	ug/L							
LCS										
Total Cyanide (LL)	21.0	5.00	ug/L	20.06		105	90-110			

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES

ESS Laboratory Work Order: 1606245

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch CF61628 - TCN Prep										
LCS										
Total Cyanide (LL)	150	5.00	ug/L	150.4		100	90-110			
LCS Dup										
Total Cyanide (LL)	149	5.00	ug/L	150.4		99	90-110	0.4	20	
Batch CF61630 - General Preparation										
Blank										
Phenols	ND	100	ug/L							
LCS										
Phenols	99	100	ug/L	100.0		99	80-120			
LCS										
Phenols	972	100	ug/L	1000		97	80-120			
504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane										
Batch CF61311 - 504/8011										
Blank										
1,2-Dibromoethane	ND	0.015	ug/L							
1,2-Dibromoethane [2C]	ND	0.015	ug/L							
Surrogate: Pentachloroethane	*0.193*		ug/L	*0.2000*		*96*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.189*		ug/L	*0.2000*		*95*	*30-150*			
LCS										
1,2-Dibromoethane	0.194	0.015	ug/L	0.2000		97	70-130			
1,2-Dibromoethane [2C]	0.187	0.015	ug/L	0.2000		94	70-130			
Surrogate: Pentachloroethane	*0.177*		ug/L	*0.2000*		*88*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.173*		ug/L	*0.2000*		*87*	*30-150*			
LCS										
1,2-Dibromoethane	0.087	0.015	ug/L	0.08000		109	70-130			
1,2-Dibromoethane [2C]	0.085	0.015	ug/L	0.08000		106	70-130			
Surrogate: Pentachloroethane	*0.0690*		ug/L	*0.08000*		*86*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.0666*		ug/L	*0.08000*		*83*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES ESS Laboratory Work Order: 1606245

Notes and Definitions

U	Analyte included in the analysis, but not detected
SC	Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).
Q	Calibration required quadratic regression (Q).
P	Percent difference between primary and confirmation results exceeds 40% (P).
HT	The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
B-	Blank Spike recovery is below lower control limit (B-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report

CERTIFICATE OF ANALYSIS

Client Name: The Vertex Companies
Client Project ID: 1 Congress St - NPDES

ESS Laboratory Work Order: 1606245

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

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

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

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

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

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

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

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

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

Pennsylvania: 68-01752
http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

ESS Laboratory Sample and Cooler Receipt Checklist

Client: The Vertex Companies - TB/CMT

Shipped/Delivered Via: ESS Courier

ESS Project ID: 1606245
Date Received: 6/9/2016
Project Due Date: 6/16/2016
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 2.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / (No)
    b. Does methanol cover soil completely? Yes / No / (NA)

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOAs brought to freezer: Date: Time: By:

Sample Receiving Notes:

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	42331	Yes	NA	Yes	1L Amber - Unpres	NP	test pH=9 W 6/9/16 1730
01	42332	Yes	NA	Yes	1L Amber - Unpres	NP	
01	42333	Yes	NA	Yes	1L Amber - Unpres	NP	
01	42334	Yes	NA	Yes	1L Amber - Unpres	NP	
01	42335	Yes	NA	Yes	1L Amber - Unpres	NP	
01	42336	Yes	NA	Yes	1L Amber - Unpres	NP	
01	42337	Yes	NA	Yes	1L Amber - H2SO4	H2SO4	
01	42338	Yes	NA	Yes	1L Amber - H2SO4	H2SO4	
01	42339	Yes	NA	Yes	1L Poly - Unpres	NP	
01	42340	Yes	NA	Yes	250 mL Poly - Unpres	NP	
01	42341	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
01	42342	Yes	NA	Yes	250 mL Poly - NaOH	NaOH	pH>12 W 6/9/16 1730
01	42343	Yes	No	Yes	VOA Vial - HCl	HCL	
01	42344	Yes	No	Yes	VOA Vial - HCl	HCL	
01	42345	Yes	No	Yes	VOA Vial - HCl	HCL	
01	42346	Yes	No	Yes	VOA Vial - HCl	HCL	
01	42347	Yes	No	Yes	VOA Vial - HCl	HCL	
01	42348	Yes	No	Yes	VOA Vial - HCl	HCL	

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

ESS Laboratory Sample and Cooler Receipt Checklist

Client: The Vertex Companies - TB/CMT

ESS Project ID: 1606245

Date Received: 6/9/2016

Completed By: _____ Date & Time: 6/9/16 1731

Reviewed By: _____ Date & Time: 6/9/16 1740

Delivered By: _____ 6/9/16 1740

ESS Laboratory

Division of Thielsch Engineering, Inc.

185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 1606245

Turn Time X Standard Other______

Regulatory State: (MA) RI CT NH NJ NY ME Other______

Is this project for any of the following:(please circle)
MA-MCP Navy USACE CT DEP (Other NPDES)

Reporting Limits - NPDES

Electonic Deliverables (Excel) Access (PDF)

Co. Name: The Vertex Companies		Project #: 20026	Project Name: 1 Congress St
Contact Person: Jesse Freeman		Address: 1 Congress St	
City: Boston	State: MA	Zip: 02114	PO #: 20026
Tel.: 617-275-5407	Fax.	email: JFreeman@vertexeng.com	

Analysis

ESS Lab ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sample ID	Pres Code	# of Containers	Type of Container	Vol of Container	VOA-624	SVOA w/ PAH	PCB + Pest-608	EDB	Total Metals Hex Cr	TCN	TPH-1664	Phenols	TRC TSS	
1	6/9/2016	12:00	G	WW	NPDES-T2-100	1,2,4,3	18	V, AG, P	250mL, 1L	X	X	X	X	X	X	X	X	X	

Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present ✓ Yes ____ No

Seals Intact ____ Yes ____ No NA: ✓

Cooler Temperature: 2.1 ICE W

Internal Use Only

[✓] Pickup

[ ] Technician___

Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-______

Sampled by: Nicole Perlot

Comments:

Relinquished by: (Signature, Date & Time)	Received by: (Signature, Date & Time)	Relinquished by: (Signature, Date & Time) COOLER 6/8/16 1423	Received by: (Signature, Date & Time) K Hallahan 6/9/16 1423
Relinquished by: (Signature, Date & Time) K Hallahan 6/9/16 1714	Received by: (Signature, Date & Time) [signature] 6/9/16 1727	Relinquished by: (Signature, Date & Time)	Received by: (Signature, Date & Time)

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VIIA

Please fax to the laboratory all changes to Chain of Custody

1 (White) Lab Copy
2 (Yellow) Client Receipt