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October 2, 2020

Ref: 72462.01

U.S. Environmental Protection Agency
Office of Eco System Protection
EPA/OEP Application Coordinator
5 Post Office Square - Suite 100 (OEP06-01)
Boston, MA 02109-3912

Re: Notice of Intent - Remediation General Permit for Dewatering
Former Central Steam Plant
465 Westminster Street
Fitchburg, MA 01420
MassDEP RTN: 2-18609, 2-21182

Dear Sir / Madam,

Vanasse Hangen Brustlin, Inc. (VHB) is pleased to provide supporting documentation for the Notice of Intent (NOI) for the Remediation General Permit (RGP) on behalf of the City of Fitchburg (the CIty), for the above-referenced property (the "Site"). This NOI is being submitted to obtain approval for the discharge of treated groundwater at the Site. The discharge and dewatering is necessary to allow for the excavation of soil to make repairs to the retaining wall. A Site Locus is provided as **Figure 1** and a Site Plan depicting the excavation/dewatering and discharge area is provided as **Figure 2**. A copy of the NOI form is provided as **Attachment A**.

Site Background:

In June 2012, a release of oil identified at the Site that had resulted in a sheen to a nearby surface water body was reported to the Massachusetts Department of Environmental Protection (MassDEP) Bureau of Waste Site Cleanup (BWSC) who assigned Release Tracking Number (RTN) 2-18609 to this condition. Since that time, periodic petroleum sheens have been documented within the branch of the North Nashua River that abuts the area where the former Central Steam Plant (CSP) building had been previously located. The petroleum is believed to be seeping into the river, at varying times and rates, through cracks in the existing concrete/stone retaining wall the separates the former CSP building area and the river branch. Since the discovery of the release, various assessment and remedial activities have been conducted by the City of Fitchburg under an Immediate Response Action (IRA) Plan in accordance with the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000), and oil-absorbent booms are currently deployed and inspected/changed periodically to capture ongoing seepage. The IRA Plan was submitted to MassDEP in 2012, and subsequent IRA Status Reports have been submitted every 6 months as required per the MCP. A separate release notification was made to MassDEP in March 2020 due to the

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identification of heavy metals (lead and vanadium) and polycyclic aromatic hydrocarbons (PAHs) not previously identified at the Site. The metals/PAH release is identified by MassDEP under RTN 2-21182. If more information is desired, copies of the IRA Plan, Status Reports, Release Notification Forms, and other MassDEP submittals relative to the Site and these two RTNs can be downloaded by entering the RTNs at: https://eeaonline.eea.state.ma.us/portal#!/search/wastesite.

Previous environmental investigations at the Site have not revealed the presence of ongoing sources of petroleum such as abandoned underground tanks or other specific source areas. Therefore, it is believed that historical releases of petroleum at the Site over time have resulted in the accumulation of petroleum along the inside of the retaining wall, which has seeped into the river branch at varying rates based upon fluctuations in the seasonal groundwater table. The goal of the proposed remedial work is to physically remove residual petroleum that likely resides along the land side of a section of the retaining wall and attempt to seal cracks that likely serve as preferential pathways for groundwater and petroleum migration to prevent future seepage of petroleum and sheens within the river branch.

The work will be monitored on a full-time basis by a professional environmental scientist and/or a Massachusetts Licensed Site Professional (LSP). The work plan has been developed by the LSP-of-Record for the Site, and will be completed in accordance with an IRA Plan Modification. Prior to or concurrent with the submittal of the IRA Plan Modification, the two RTNs listed above, along with a third RTN issued in 2009 (RTN 2-17405) will be linked so as to consolidate the regulatory compliance response actions and documentation while efforts to obtain a Permanent Solution continue to be pursued.

The soil excavation and residual oil removal project is expected to be completed over the course of a 4 to 8 weeks in early-mid fall 2020, including mobilization and demobilization of equipment, on-Site treatment of impacted dewatering effluent, and off-Site disposal of contaminated soils (if any). A remediation contractor has not yet been selected, but a Request for Proposals and a competitive bidding process will be implemented by the City in the late summer of 2020.

Proposed Work Description:

Excavation equipment of appropriate size and capabilities will be mobilized to the Site. The length of wall along which soils are proposed to be excavated is approximately 60 to 75 feet in total length. The soil excavation is to be completed in three or four segments, each only being approximately 15 to 25 feet in length. The proposed length of each segment of excavation corresponds with previous historical exploratory test pitting completed in 2015 at the conclusion of building demolition activities. The depth of each segment of the excavation is expected to be approximately 8 to 10 feet below ground surface, corresponding to the estimated depth to bedrock identified during recent geotechnical investigations.

The depth to groundwater at the Site in the vicinity of the proposed excavation is approximately 5 to 7 feet below the existing ground surface. Through the use of an existing sump (previously installed by the United States Environmental Protection Agency (EPA) during response actions in July 2012, and/or additional temporary dewatering sumps, the excavation will be dewatered to facilitate remedial activities.

The groundwater will be pumped via overland hoses running along the access bridge that connects the former CSP portion of the Site on the southeastern side of the river branch to a proposed equipment staging area on the northwestern side of the river branch to a fractionation/settling tank equipped with weirs to separate petroleum from the groundwater removed from the subsurface. The groundwater will be filtered via bag filtration and other treatment components as needed (e.g., granular carbon filters), and discharged to the North Nashua River branch in accordance with a NPDES Remediation General Permit (application pending with MassDEP/EPA). The anticipated maximum discharge flow rate is expected to be 50 gallons per minute (GPM) of treated dewatering effluent; However, the discharge rate is expected to vary as needed to support the remediation activities and the average flow rate of the discharge is expected to be less than 50 GPM. The treatment system and the discharge will be monitored and sampled for compliance in accordance with the RGP Permit until dewatering activities are completed. The frac tank will be emptied and cleaned prior to demobilization, with any sediments and cleaning liquids drummed for off-Site disposal or otherwise appropriately removed (i.e., via vacuum truck) .

The excavations will be appropriately sloped/banked or physically shored (e.g., via trench box) for safety. Upon removal of the overburden soils and lowering of the water table in the first excavation segment, physical removal of residual petroleum observed along the inside of the wall via a combination of manual techniques (e.g., deployment of oil absorbent pads, hand tooling, etc.), pressure/steam cleaning, and pumping will be performed.

Oil absorbent booms will remain in place on the river side of the retaining wall and will continue to be monitored/replaced as needed based upon visual observations during the remedial work.

Once residual petroleum has been removed to the highest extent practical, and as an additional means to prevent the future seepage of petroleum sheens into the river, the interior of the exposed section of wall will either be prepared (e.g., filling/smoothing of any large gaps or voids with concrete or other suitable substrate) and then sealed with an in-situ adhered waterproofing system consisting of a polyurethane-based adhesive and a flexible polyolefin-based sheet membrane or a Permeable Reactive Barrier (PRB) will be installed. The PRB, if selected as part of the remedial action, will consist of the placement of granular media in the subsurface to adsorb organic compounds and non-aqueous phase liquids at the base of the excavation followed by the installation of a permeable reactive geotextile designed to adsorb oils carried by advective flow. Upon installation of the waterproofing system or PRB within the first excavation segment, the segment area will be backfilled and compacted, and the process described above will be repeated in the next 15 to 25 foot excavation segment, and then again in the third and final excavation segments once the second segment is completed.

The majority of excavated Site soils are expected to remain on-Site and be reused as backfill. However, in the event that visibly petroleum-contaminated soils or soils unsuitable for backfill are removed from the subsurface, said soils will be placed upon two layers of poly sheeting, covered and secured by poly sheeting, and protected with straw waddles pending characterization and proper off-Site disposal.

No more than 25 tons of petroleum impacted soils are expected to be generated for off-Site disposal. Off-site soil shipment, if any, will be performed under applicable shipping documentation such as MassDEP Bills of Lading.

It is important to note that all work proposed above will be completed from the landside of the Site and no steam/heated water, petroleum, adhesive products, or untreated water removed from the excavation during dewatering operations will be introduced into the river and no physical alterations or impacts to natural river banks are anticipated. No diverting of stream water flow (e.g., sandbags, shoring, etc.) is included in the proposed work plans.

A Discharge Monitoring Report (DMR) and Notice of Termination of Discharge for the NPDES RGP will be prepared in accordance with the NPDES RGP Permit.

All work performed will be summarized and supported by appropriate documentation (copies of permits, approvals, photographic documentation, disposal paperwork, if any, etc.) to the Conservation Commission and in an IRA Status Report to be submitted to MassDEP in accordance with the MCP timelines outlined in 310 CMR 40.0425. The next IRA Status Report is expected to be completed in late October 2020, followed by a subsequent IRA Status Report in April 2021, unless an IRA Completion Report is submitted prior to the April 2021 deadline.

Influent Sample Analysis

Groundwater samples were collected from the raw water/influent location (VHB-203) and receiving water location (SW RGP; i.e. the North Nashua River) in June 2020 and submitted to Contest Analytical Laboratory of East Longmeadow, Massachusetts for laboratory analysis via methodologies described in the laboratory report included as **Appendix B.** Both samples were also monitored in the field for pH and temperature. A summary of the sampling data is provided on **Table 1**.

Based on the location of the outfall and receiving waters and the proposed design discharge flow, the seven day-ten year low flow (7Q10) of the receiving waters was determined to be 1.85 MGD and the calculated dilution factor was determined to be 26.7. MassDEP reviewed and approved the 7Q10 low flow determination and the calculated dilution factor (**Attachment C**).

Groundwater analytical results were compared to *Table 2: Chemical-Specific Effluent Limitations and Monitor-Only Requirements* in the NPDES RGP. These results indicate that various parameters were detected in the samples and the following parameters were detected at concentrations that exceed the applicable EPA effluent limitations:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Chrysene

- Indeno(1,2,3-cd)pyrene

Semivolatile organic compounds are expected to be reduced by pretreatment via granular activated carbon.

Evaluation of Threatened or Endangered Species or Critical Habitat Located within Receiving Waters

According to Massachusetts Geographic Information Systems (MassGIS) online maps for the Natural Heritage Endangered Species Program (NHESP) (2008), no Priority Habitat of Rare Species or Estimated Habitats of Rare Wildlife are located within the work area. No NHESP Estimated Habitats of Rare Wildlife in Wetland Areas Protected Open Spaces are located within 500 feet of the Site. Based on this information, the potential discharge will not have an adverse affect on the NHESP Estimated Habitats of Rare Wildlife. A copy of the MassGIS Resource Priority and NHESP Maps of the Site area is included in **Attachment D**.

Review of National Register of Historic Places

Listings of Historic Places within the City of Fitchburg were obtained from the Massachusetts Cultural Resources Information System (MACRIS) online database at: http://mhc-macris.net/towns.aspx. A copy of the MACRIS report is provided as **Attachment E**. The database indicated that there are no historic places located in close proximity to the Site and proposed discharge area. Additionally, this project does not involve the demolition or rehabilitation of historic properties.

Should you have any questions or concerns regarding the contents of this letter or the NOI for the RGP, please do not hesitate to contact the undersigned at (401) 536-5226.

Sincerely,

Vanasse Hangen Brustlin, Inc.

Fred T. Bevans

Environmental Scientist
fbevans@vhb.com

Attachments

Figure 1: Site Locus

Figure 2: Site Plan

Figure 3: Treatment System Schematic

Table 1: Summary of Influent/Receiving Water Sampling Data

Attachment A: NOI for the RGP

Attachment B: Laboratory Analytical Report

Attachment C: MassDEP Approval of 7Q10 Low Flow Determination & Dilution Factor Calculation

Attachment D: MassGIS Resource Priority and NHESP Map

Attachment E: MACRIS Database Search Results, PNF

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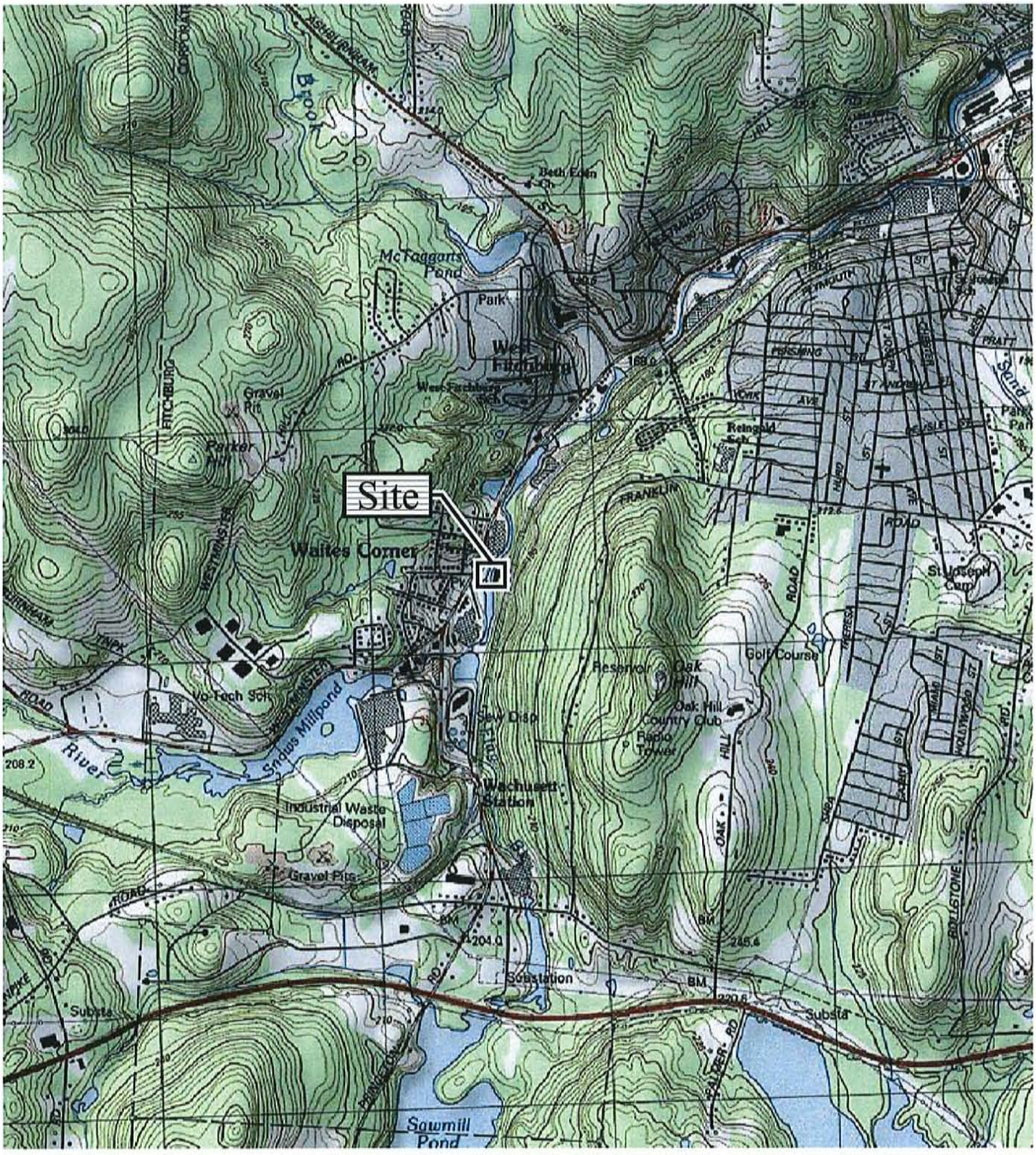


Source: USGS Quadrangles

0 1000 2000 Feet

Vanasse Hangen Brustlin, Inc.

Site Location Map
Fitchburg Central Steam Plant
Fitchburg, Massachusetts

Figure 1

\\vhb\gis\proj\Providence\72462.01\Project\Fitchburg.aprx

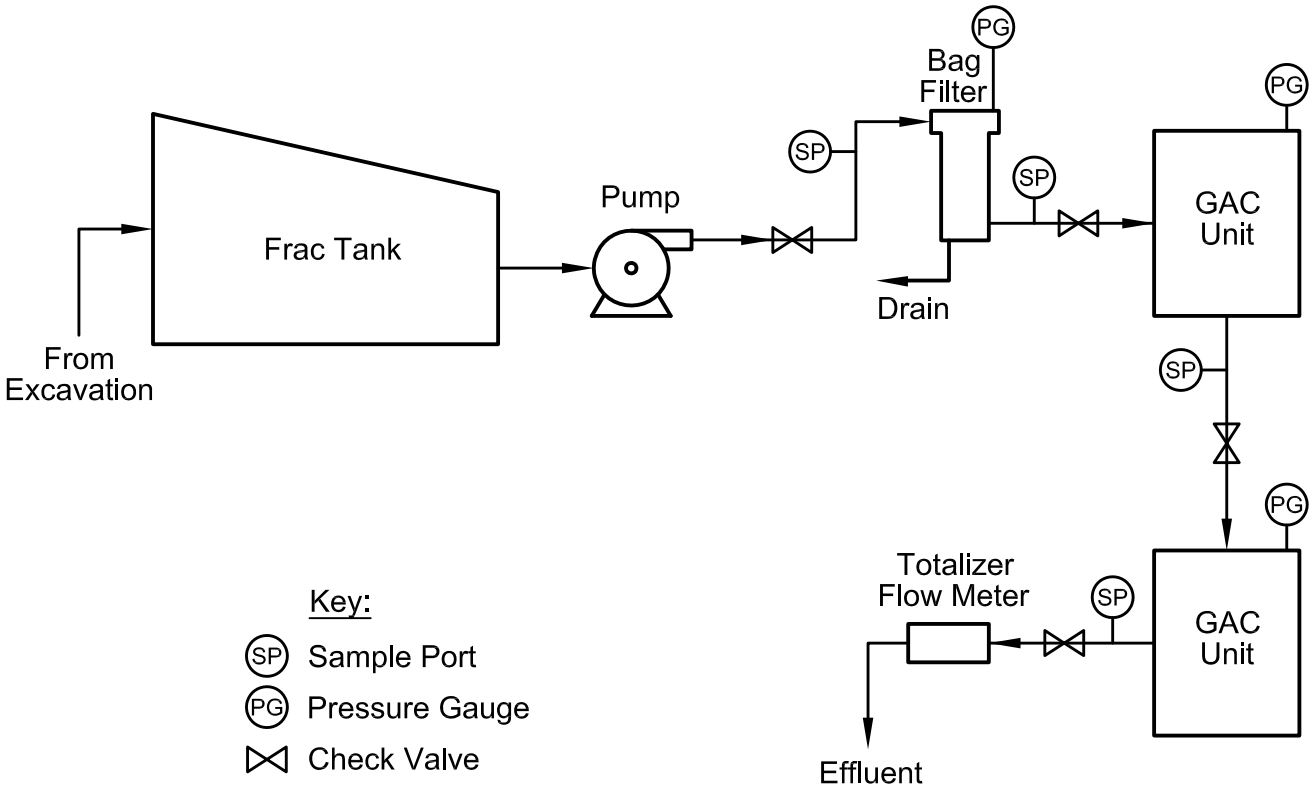
0 50 100 200 Feet

- Stream Centerline
- Stream Top of Bank
- Stream Top of Bank/ OHW
- OHW
- Delineated Wetland Edge
- Open Water
- Wetland
- ? Culvert
- 100' Buffer to Wetland
- 100' Buffer to Bank
- 200' RFA
- Approximate Excavation Area
- Temporary Soil Stockpile
- Temporary Frac-Tank

Fitchburg Central Steam Plant | Fitchburg, Massachusetts

Wetland Resources

Source: MassGIS, VHB, ArcGIS Online



Temporary Treatment System

(50 GPM Max Flow Rate)

50 GPM Temporary Treatment System
Fitchburg Former Central Steam Plan
RGP NOI
Fitchburg, Massachusetts

Figure 3

Table 1: Summary of Influent/Receiving Water Sampling Data

Sample ID:	Effluent Limitation		Units	VHB-203 RGP	SW RGP
Laboratory ID:	TBEL	WQBEL		20F0289-01	20F0289-02
Date Sampled:				6/5/2020	6/6/2020
Inorganics (Total)					
Ammonia as N	Report mg/L		mg/L	**0.134**	**0.056**
Chloride	Report ug/L		ug/L	**73,000**	**70,000**
Total Residual Chlorine	0.2 mg/L	11 ug/L	mg/L	NS	NS
Antimony	206 ug/L	640 ug/L	µg/L	<1.0	<1.0
Arsenic	104 ug/L	10 ug/L	µg/L	**4.9**	<0.80
Cadmium	10.2 ug/L	0.25 ug/L	µg/L	<0.20	<0.20
Chromium, Trivalent	323 ug/L	74 ug/L	µg/L	**1.1**	**1.3**
Hexavalent Chromium	323 ug/L	11 ug/L	µg/L	<4.0	<4.0
Copper	242 ug/L	9 ug/L	µg/L	**1.7**	**2.6**
Iron	5000 ug/L	1000 ug/L	µg/L	**810**	**710**
Lead	160 ug/L	2.5 ug/L	µg/L	**0.74**	**1.4**
Mercury	0.739 ug/L	0.77 ug/L	µg/L	<0.10	<0.10
Nickel	1450 ug/L	52 ug/L	µg/L	**5.1**	<5.0
Selenium	235.8 ug/L	5.0 ug/L	µg/L	<1.6	<1.6
Silver	35.1 ug/L	120 ug/L	µg/L	<0.20	<0.20
Zinc	420 ug/L	120 ug/L	µg/L	**14**	<10
Cyanide	178 ug/L	5.2 ug/L	µg/L	<1.0	<1.0
Non-Halogenated VOC					
Total BTEX [1]	100 ug/L		µg/L	<0.300	<0.300
Benzene	5.0 ug/L		µg/L	<0.180	<0.180
1,4-Dioxane	200 ug/L		µg/L	<22.5	<22.5
Acetone	7.97 ug/L		µg/L	<3.79	<3.79
Phenol	1080 ug/L	300 ug/L	µg/L	**50**	<50.0
Halogenated VOC					
Carbon Tetrachloride	4.4 ug/L	1.6 ug/L	µg/L	<0.110	<0.110
1,2-Dichlorobenzene	600 ug/L		µg/L	<0.454	<0.459
1,3-Dichlorobenzene	320 ug/L		µg/L	<0.458	<0.463
1,4-Dichlorobenzene	5.0 ug/L		µg/L	<0.379	<0.383
1,1-Dichloroethane	70 ug/L		µg/L	<0.160	<0.160
1,2-Dichloroethane	5.0 ug/L		µg/L	<0.410	<0.410
1,1-Dichloroethylene	3.2 ug/L		µg/L	<0.320	<0.320
1,2-Dibromoethane (EDB; Ethylene Dibromide)	0.05 ug/L		µg/L	<0.020	<0.020
Methylene Chloride	4.6 ug/L		µg/L	<0.340	<0.340
1,1,1-Trichloroethane	200 ug/L		µg/L	<0.200	<0.200
1,1,2-Trichloroethane	5.0 ug/L		µg/L	<0.160	<0.160
Trichloroethylene	5.0 ug/L		µg/L	<0.240	<0.240
Tetrachloroethylene	5.0 ug/L	3.3 ug/L	µg/L	<0.180	<0.180
cis-1,2 Dichloroethylene	70 ug/L		µg/L	NS	NS
Vinyl Chloride	2.0 ug/L		µg/L	<0.450	<0.450
Non-Halogenated SVOC					
Total Phthalates [2]	190 ug/L	N/A	µg/L	<0.517	**0.46**
Bis(2-Ethylhexyl)phthalate	101 ug/ L	2.2 ug/L	µg/L	<0.514	<0.519
Total Group I Polycyclic Aromatic Hydrocarbons [3]	1.0 ug/L	As Individual PAHs	µg/L	**0.125**	**0.047**
Benzo(a)anthracene (SIM)	As Total Group I PAH's	0.0038 ug/L	µg/L	**0.025**	*<0.016*
Benzo(a)pyrene (SIM)		0.0038 ug/L	µg/L	**0.024**	**0.013**
Benzo(b)fluoranthene (SIM)		0.0038 ug/L	µg/L	**0.032**	**0.019**
Benzo(k)fluoranthene (SIM)		0.0038 ug/L	µg/L	*<0.012*	*<0.012*
Chrysene (SIM)		0.0038 ug/L	µg/L	**0.025**	**0.015**
Dibenz(a,h)anthracene (SIM)		0.0038 ug/L	µg/L	*<0.017*	*<0.017*
Indeno(1,2,3-cd)pyrene (SIM)		0.0038 ug/L	µg/L	**0.019**	*<0.018*
Total Group II Polycyclic Aromatic Hydrocarbons [4]	100 ug/L		µg/L	**0.233**	**0.088**
Naphthalene (SIM)	20 ug/L		µg/L	<0.25	<0.26
Halogenated SVOC					
Total Polychlorinated Biphenyls [5]	0.000064 ug/L		µg/L	*<0.102*	*<0.0985*
Pentachlorophenol (SIM)	1.0 ug/L		µg/L	<0.33	<0.33
Fuels Parameters					
Silica Gel Treated HEM (SGT-HEM) (TPH via EPA 1664B)	5.0 mg/L		mg/L	<1.4	<1.6
Ethanol	Report mg/L		mg/L	<0.0105	<0.0106
Methyl tert-Butyl Ether (MTBE)	7.0 ug/L	20 ug/L	µg/L	<0.250	<0.250
tert-Butyl Alcohol (TBA)	120 ug/L		µg/L	<4.17	<4.17
tert-Amyl Methyl Ether (TAME)	90 ug/L		µg/L	<0.140	<0.140
General Chemistry					
Total Suspended Solids	30 mg/L		mg/L	**9**	**2.5**
Hardness	N/A		mg/L	210	25
pH	N/A		s. u.	7.36	8.92
Temp	N/A		Deg. F.	11.9	20.9

Notes:

NS = not sampled

Results that are greater than or equal to the laboratory's detection limits are shown in **bold**.

Results that are less than the laboratory's detection limits and above either TBEL and/or WQBEL are shown in *italics.*

Results that are greater than or equal to TBEL are shown underlined.

Results that are greater than or equal to WQBEL or otherwise not sampled are shown in grey shading.

TBEL = technology-based effluent limitation

WQBEL = water quality-based effluent limitation

mg/L = milligrams per liter or parts per million (ppm)

µg/L - micrograms per liter or parts per billion (ppb)

All WQBEL standards are compared to the applicable freshwater standards as the Site is entirely freshwater.

The limitation type for all paramters is monthly average.

[1] Total BTEX is the sum of: benzene, toluene, ethylbenzene and xylene.

[2] Total phthalates is the sum of: diethylhexyl phthalate, butyl benzyl phthalate, di-n-butyl phthalate, diethyl phthalate, dimethyl phthalate and di-n-octyl phthalate.

[3] Total Group I PAHs is the sum of: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

[4] Total Group II PAHs is the sum of: acenaphthene, acnenaphthylene, anthracene, benzo(g,hi)perylene, fluoranthene, fluorene, naphthalene, phenanthrene and pyrene.

[5] Total PCBs is the sum of the following aroclors: PCB-1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254 and PCB-1260.

All values that are calculated with the sum of other parameters are calculated by the sum of values greater than or equal to the laborary's detection limit and the single maximum value of all parameters that are less than the laboratory's detection limit.

Enter number values in green boxes based on the instructions to the right

Enter values in the units specified

↓		
1.85	Q_R = Enter upstream flow in **MGD**	Freshwater: leave 0 unless 7Q10 or alternate Q_R AND a dilution factor >1 approved by the State;
0.072	Q_P = Enter discharge flow in **MGD**	Saltwater (estuarine and marine): leave 0 unless QR approved by the State
1.85	Downstream 7Q10	Enter the design flow or 1 MGD, whichever is less (100 gpm design flow = 0.144 MGD and is entered by default)
		Leave 0 unless Q_R approved by the State

Enter a dilution factor for saltwater receiving water (this box does not apply to freshwater receiving waters)

↓	
0	Freshwater: leave 0 Saltwater (estuarine and marine): leave 0 unless DF approved by the State

Enter values in the units specified

↓		
210	C_d = Enter influent hardness in **mg/L** $CaCO_3$	Applies to freshwater receiving waters only
25	C_s = Enter receiving water hardness in **mg/L** $CaCO_3$	

Enter **receiving water** concentrations in the units specified

↓		Impaired for metals?
7.36	pH in **Standard Units**	↓
20.9	Temperature in **°C**	
0.056	Ammonia in **mg/L**	
25	Hardness in **mg/L** $CaCO_3$	
0	Salinity in **ppt**	
1	Antimony in **µg/L**	no
0.8	Arsenic in **µg/L**	no
0.2	Cadmium in **µg/L**	yes
1.3	Chromium III in **µg/L**	yes
4	Chromium VI in **µg/L**	yes
2.6	Copper in **µg/L**	yes
710	Iron in **µg/L**	yes
1.4	Lead in **µg/L**	yes
0.1	Mercury in **µg/L**	yes
5	Nickel in **µg/L**	yes
1.6	Selenium in **µg/L**	yes
0.2	Silver in **µg/L**	yes
10	Zinc in **µg/L**	yes

pH, temperature, and ammonia required for all discharges
Hardness required for freshwater
Salinity required for saltwater (estuarine and marine)
Metals required for all discharges if detected in the influent and if dilution factor approved by State
Enter 0 if non-detect or testing not required
If receiving water is not listed as impaired for metals in State 303(d) List, change to "no" using dropdown

Enter **influent** concentrations in the units specified

↓	
0	TRC in **µg/L**
0.134	Ammonia in **mg/L**
1	Antimony in **µg/L**
4.9	Arsenic in **µg/L**
0.2	Cadmium in **µg/L**
1.1	Chromium III in **µg/L**
4	Chromium VI in **µg/L**
1.7	Copper in **µg/L**
810	Iron in **µg/L**
0.74	Lead in **µg/L**
0.1	Mercury in **µg/L**
5.1	Nickel in **µg/L**
1.6	Selenium in **µg/L**
0.2	Silver in **µg/L**
14	Zinc in **µg/L**
1	Cyanide in **µg/L**
50	Phenol in **µg/L**
0.11	Carbon Tetrachloride in **µg/L**
0.18	Tetrachloroethylene in **µg/L**
0.517	Total Phthalates in **µg/L**
0.514	Diethylhexylphthalate in **µg/L**
0.025	Benzo(a)anthracene in **µg/L**
0.024	Benzo(a)pyrene in **µg/L**
0.032	Benzo(b)fluoranthene in **µg/L**
0.012	Benzo(k)fluoranthene in **µg/L**
0.025	Chrysene in **µg/L**
0.017	Dibenzo(a,h)anthracene in **µg/L**
0.019	Indeno(1,2,3-cd)pyrene in **µg/L**
0.25	Methyl-tert butyl ether in **µg/L**

if >1 sample, enter maximum influent measurement
if >10 samples, may enter 95th percentile of influent measurements using
EPA's *Technical Support Document for Water Quality-based Toxics Control*
Enter 0 if non-detect or testing not required

Notes: Revised 1-24-20

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

A. General site information:

1. Name of site: Former Central Steamplant	Site address: 465 Westminter St. Street:		
	City: Fitchburg	State: MA	Zip: 01420
2. Site owner City of Fitchburg	Contact Person: Amy Leblanc		
	Telephone: 978-829-1893	Email: aleblanc@fitchburgma.org	
	Mailing address: 166 Boulder Drive Street:		
Owner is (check one): ☐ Federal ■ State/Tribal ☐ Private ☐ Other; if so, specify:	City: Fitchburg	State: MA	Zip: 01420
3. Site operator, if different than owner	Contact Person:		
	Telephone:	Email:	
	Mailing address: Street:		
	City:	State:	Zip:
4. NPDES permit number assigned by EPA: NPDES permit is (check all that apply: ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	5. Other regulatory program(s) that apply to the site (check all that apply): ■ MA Chapter 21e; list RTN(s): 2- 18609, 2-21182 ☐ NH Groundwater Management Permit or Groundwater Release Detection Permit: ☐ CERCLA ☐ UIC Program ☐ POTW Pretreatment ☐ CWA Section 404		

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
North Nashua River	North Nashua River (MA81-01) within Nashua River Watershed	B

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

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

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

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

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	1.85
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	26.7

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ■ Yes ☐ No
If yes, indicate date confirmation received: 9/23/2020

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

C. Source water information:

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

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

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

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): Western bank of North Nashua River	Outfall location(s): (Latitude, Longitude) 42°33'59.7"N 71°50'36.9"W 42.566584, -71.843582 (UTM)
Discharges enter the receiving water(s) via (check any that apply): ■ Direct discharge to the receiving water ☐ Indirect discharge, if so, specify: ☐ A private storm sewer system ☐ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ■ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ■ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ■ No	
Provide the expected start and end dates of discharge(s) (month/year): September 2020 Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="4">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
■ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✓	1	350.1		0.134		Report mg/L	---
Chloride		✓	1	350.1		73000		Report µg/l	---
Total Residual Chlorine								0.2 mg/L	
Total Suspended Solids		✓	1	2540		9		30 mg/L	---
Antimony	✓		1	6010	1	<1		206 µg/L	
Arsenic		✓	1	6010		4.9		104 µg/L	
Cadmium	✓		1	6010	0.2	<0.2		10.2 µg/L	
Chromium III		✓	1	6010		1.1		323 µg/L	
Chromium VI	✓		1	6010	4.0	<4.0		323 µg/L	
Copper		✓	1	6010		1.7		242 µg/L	
Iron		✓	1	6010		810		5,000 µg/L	
Lead		✓	1	6010		0.74		160 µg/L	
Mercury	✓		1	7470	0.1	<0.1		0.739 µg/L	
Nickel		✓	1	6010		5.1		1,450 µg/L	
Selenium	✓		1	6010	1.6	<1.6		235.8 µg/L	
Silver	✓		1	6010	0.2	<0.2		35.1 µg/L	
Zinc		✓	1	6010		14		420 µg/L	
Cyanide	✓		1	335.4	1.0	<1.0		178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✓		1	524.2	0.3	<0.3		100 µg/L	---
Benzene	✓		1	524.2	0.18	<0.18		5.0 µg/L	---
1,4 Dioxane	✓		1	625	22.5	<22.5		200 µg/L	---
Acetone	✓		1	524.2	3.79	<3.79		7.97 mg/L	---
Phenol		✓	1	625		50		1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✓		1	624	0.110	<0.110		4.4 µg/L	1.6
1,2 Dichlorobenzene	✓		1	624	0.454	<0.454		600 µg/L	---
1,3 Dichlorobenzene	✓		1	624	0.358	<0.458		320 µg/L	---
1,4 Dichlorobenzene	✓		1	624	0.379	<0.379		5.0 µg/L	---
Total dichlorobenzene	✓							763 µg/L in NH	---
1,1 Dichloroethane			1	624	0.160	<0.160		70 µg/L	---
1,2 Dichloroethane	✓		1	624	0.140	<0.410		5.0 µg/L	---
1,1 Dichloroethylene	✓		1	624	0.320	<0.320		3.2 µg/L	---
Ethylene Dibromide	✓		1	624	0.02	<0.020		0.05 µg/L	---
Methylene Chloride	✓		1	624	0.34	<0.340		4.6 µg/L	---
1,1,1 Trichloroethane	✓		1	624	0.2	<0.200		200 µg/L	---
1,1,2 Trichloroethane	✓		1	624	0.16	<0.160		5.0 µg/L	---
Trichloroethylene	✓			624	0.24	<0.240		5.0 µg/L	---
Tetrachloroethylene	✓		1	624	0.18	<0.180		5.0 µg/L	
cis-1,2 Dichloroethylene	✓							70 µg/L	---
Vinyl Chloride	✓		1	624	0.45	<0.450		2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✓		1	625	0.517	<0.517		190 µg/L	
Diethylhexyl phthalate	✓		1	625	0.514	<0.514		101 µg/L	
Total Group I PAHs		✓	1	625		0.125		1.0 µg/L	---
Benzo(a)anthracene		✓	1	625		0.025		As Total PAHs	
Benzo(a)pyrene		✓	1	625		0.024			
Benzo(b)fluoranthene		✓	1	625		0.032			
Benzo(k)fluoranthene	✓		1	625	0.012	<0.012			
Chrysene		✓	1	625		0.025			
Dibenzo(a,h)anthracene	✓		1	625	0.012	<0.012			
Indeno(1,2,3-cd)pyrene		✓	1	625		0.019			

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		✓	1	625		0.233		100 µg/L	---
Naphthalene	✓		1	625	0.25	<0.25		20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✓			608	0.102	<0.102		0.000064 µg/L	---
Pentachlorophenol	✓			625	0.33	<0.33		1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✓			1664	1.4	<1.4		5.0 mg/L	---
Ethanol	✓			8260	0.0105	<0.0105		Report mg/L	---
Methyl-tert-Butyl Ether	✓			524.2	0.25	<0.250		70 µg/L	
tert-Butyl Alcohol	✓			524.2	4.17	<4.17		120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✓			524.2	0.14	<0.140		90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
Hardness		✓	1	E200.7		210			
Temp		✓		N/A	N/A	11.9 deg. C			
pH		✓		N/A	N/A	7.36			

E. Treatment system information

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

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ■ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption
☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ■ Separation/Filtration ☐ Other; if so, specify:

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.
GAC implemented for removal of SVOCs and bag filtration as precautionary measure for any sediments.

Identify each major treatment component (check any that apply):
■ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter
☐ Chemical feed tank ☐ Air stripping unit ■ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):
☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: 50 gpm Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	
Provide the proposed maximum effluent flow in gpm.	50 gpm
Provide the average effluent flow in gpm.	50 gpm
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	

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

F. Chemical and additive information

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

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

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

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

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

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

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

H. National Historic Preservation Act eligibility determination

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

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

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

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

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

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

I. Supplemental information

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

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

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

J. Certification requirement

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

BMPP certification statement:	A BMPP meeting the requirements of this general permit will be developed and implemented upon initiation of discharge.
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ☐ No ☐ NA ■
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ☐ NA ■
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ■
Signature: Tom R.	Date: 10/2/2020
Print Name and Title:	Tom Skwierawski, ED of Planning & Com Development, City of Fitchburg

Bevans, Fred

From: Ruan, Xiaodan (DEP) <xiaodan.ruan@state.ma.us>
Sent: Wednesday, September 23, 2020 5:00 PM
To: Bevans, Fred
Cc: Grivers, Peter
Subject: [External] RE: 465 Westminster St. Fitchburg MA - RGP
Attachments: StreamStats_465 Westminster Fitchburg.pdf

Hi Fred,

It was nice talking to you over the phone.

To calculate the DF, I first run the StreamStats for the outfall location provided in the NOI, and received a 7Q10 of 2.86 cfs (see the attached report).

7Q10 = 2.86 cfs = 1.85 MGD
Design flow (maximum flow rate) = 50 gpm = 0.072 MGD
DF = (1.85 + 0.072) /0.072 = **26.7**

Here is water quality information in assisting you in filling out the NOI:

Waterbody and ID: North Nashua River (MA81-01) within Nashua River Watershed
Classification: B
Outstanding Resource Water?: no
State's most recent Integrated List located here: https://www.epa.gov/sites/production/files/2020-01/documents/2016-ma-303d-list-report.pdf, search for "MA81-01" to see the causes of impairments. For this segment, only *Escherichia Coli* is listed as an impairment.
TMDLs: no final TMDL for this segment

As this is a *current* MCP site, you do not need to apply with MassDEP but still need to submit the NOI to EPA. Please contact Shauna Little for the rest of your questions.

Please let me know if you have any questions.

Thanks,
Xiaodan

From: Bevans, Fred <FBevans@VHB.com>
Sent: Tuesday, September 22, 2020 3:18 PM
To: Ruan, Xiaodan (DEP) <xiaodan.ruan@mass.gov>
Cc: Grivers, Peter <PGrivers@VHB.com>
Subject: MA - RGP

Hi Xiaodan,

Just circling back on this, could you take a quick look at the attached RGP calculations, RGP NOI letter and Appendix IV for the RGP application for the above-referenced property? Wondering if OK to conservatively assume 0 for the dilution factor and 7Q10? Please give me a call to discuss if you have a chance.

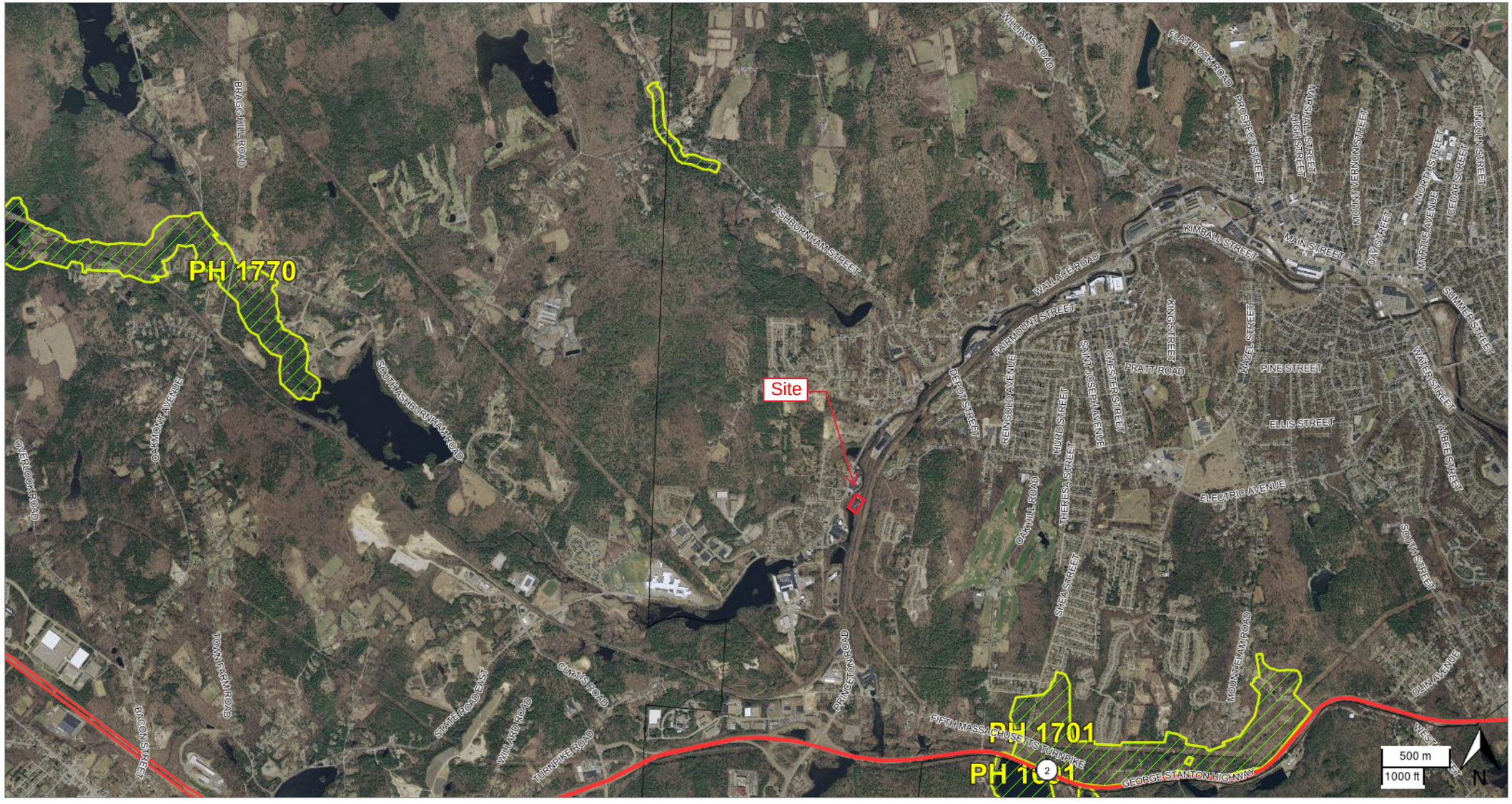
Thanks,

Fred

Fred Bevans
Environmental Scientist

1 Cedar Street
Suite 400
Providence, RI 02903-1023
P 401.457.2029 **| F** 401.277.8400
fbevans@vhb.com

MassGIS Resource Priority Map



MassDOT Roads Street Names

Major MassDOT Routes
- Interstate Highways
- US Roads
- State

Massachusetts Towns

NHESP Estimated Habitats of Rare Wildlife

NHESP Priority Habitats of Rare Species

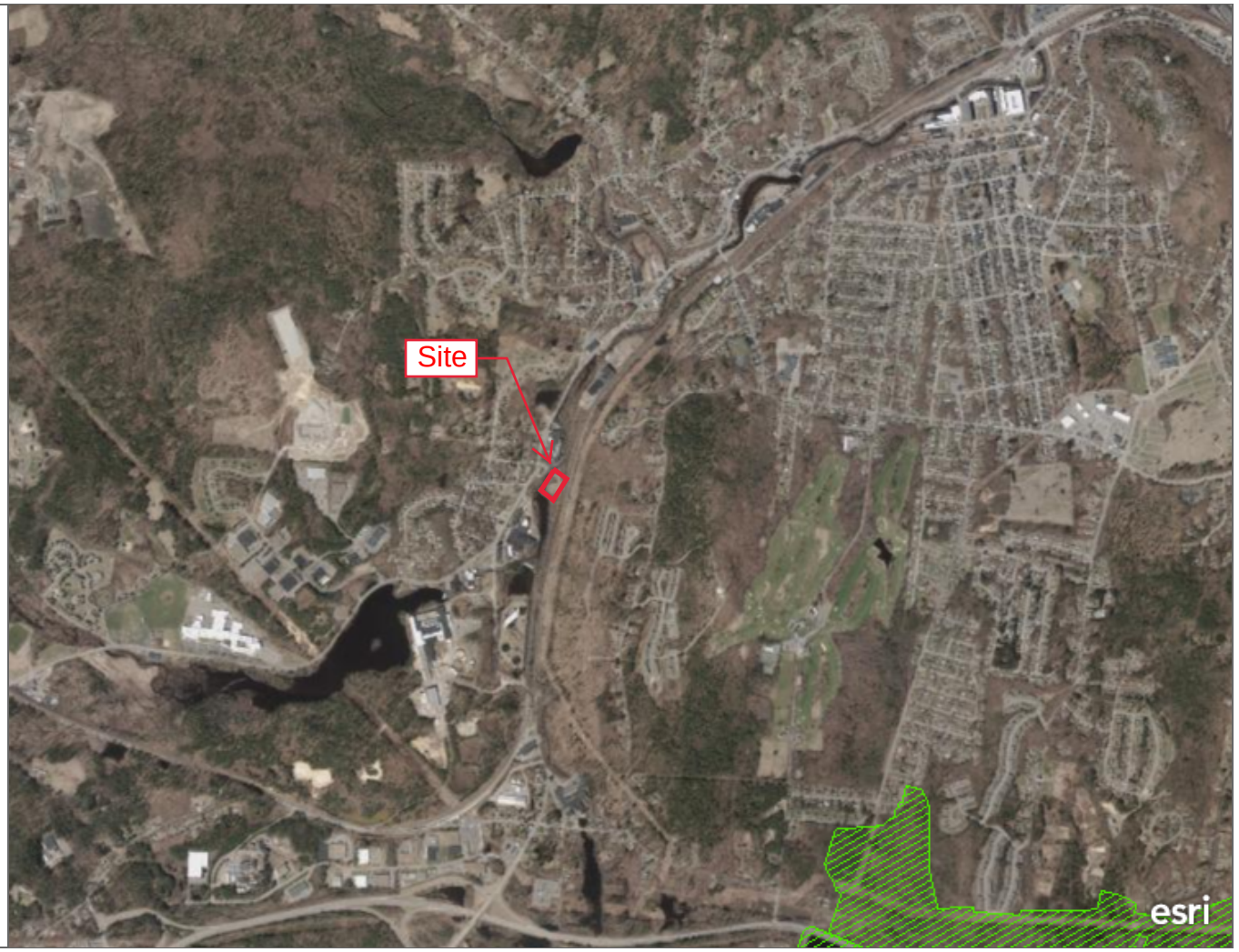
2013-2014 Color Orthos (USGS)

Orthos 2019
2019 Color Orthos (USGS)

NHESP Estimated Habitats of Rare Wildlife

NHESP Estimated Habitats of Rare Wildlife

NHESP Estimated Habitats of Rare Wildlife



Estimated Habitats of Rare Wildlife in Massachusetts

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Fitchburg; Street No: 465; Street Name: westminster; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year