UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

CERTIFIED MAIL RECEIPT REQUESTED

AUG 03 2011

Jeff Fishbone
Cranshaw Construction
2310 Washington Street
Newton Lower Falls, MA 02462

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Assemble Row site located at 100 Sturtevant Street, Somerville, MA 02145, Middlesex County; Authorization # MAG910496

Dear Mr. Fishbone:

Based on the review of a Notice of Intent (NOI) submitted on behalf of Street Retail Inc. by your firm Cranshaw Construction for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Operator, to discharge in accordance with the provisions of the RGP at that site.

This letter and authorization terminate any and all authorization letters that EPA issued for this discharge at your site or facility prior to this date, including the previous RGP # MAG910444. Your authorization number is listed above.

The checklist enclosed with this RGP authorization indicates the pollutants which you are required to monitor. Also indicated on the checklist are the effluent limits, test methods and minimum levels (MLs) for each pollutant. Please note that the check list does not represent the complete requirements of the RGP. Operators must comply with all of the applicable requirements of this permit, including influent and effluent monitoring, narrative water quality standards, record keeping, and reporting requirements, found in Parts I and II, and Appendices I – VIII of the RGP. See EPA's website for the complete RGP and other information at: http://www.epa.gov/region1/npdes/mass.html#dgp.

Please note the enclosed checklist includes the parameters which you have marked "Believed Present". The checklist also includes parameters which your laboratory reports indicated there was insufficient sensitivity to detect this parameter at the minimum level established in Appendix VI of the RGP. In addition we have included in the checklist

polyaromatic hydrocarbons (PAHs) and metals based on your description that these pollutants have been identified at various places on the remediated site.

Also, please note that the metals antimony, zinc and iron included on the list are dilution dependent pollutants and subject to limitations based on a dilution factor range (DFR). With the absence of dilution for tidal water, EPA determined that the DFR for each parameter is in the one to five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities) Therefore, the limits for antimony of 5.6ug/L, zinc of 85.6ug/L and iron of 1,000ug/L, are required to achieve permit compliance at your site.

Finally, please note the list of pollutants attached to this authorization is subject to a recertification if the operations at the site result in a discharge lasting longer than six months. A recertification can be submitted to EPA within six (6) to twelve (12) months of operations in accordance with the 2010 RGP regulations.

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on June 1, 2012. You are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 30 days of project completion.

Thank you in advance for your cooperation in this matter. Please contact Victor Alvarez at 617-918-1572 or Alvarez.Victor@epa.gov, if you have any questions.

Sincerely,

David M. Webster, Chief
Industrial Permits Branch

Enclosure

cc: Kathleen Keohane, MassDEP

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910496 - New**
Authorization Issued:	July, 2011
Facility/Site Name:	Assembly Row
Facility/Site Address:	100 Sturtevant Street, Somerville, MA 02145, Middlesex County
	Email address of owner:DWebster@federalrealty.com; Phone n: 3019988100
Legal Name of Operator:	Jeff Fishbone
Operator contact name, title, and Address:	Cranshaw Construction
	Email:JFishbone@cranshaw.com
Estimated Date of Completion:	06/01/2012
Category and Sub-Category:	Category I- Petroleum Related Site Remediation. Sub-category C. Petroleum Sites with Additional Contamination and Category III- Contaminated Construction Dewatering. Subcategory A and B. General Urban Fill Sites & Known Contaminates Sites, Respectively.
Receiving Water:	Mystic River below the Amelia Earhart Dam

Monitoring & Limits are applicable if checked. All samples are to be collected as grab samples

	Parameter	**Effluent Limit/Method#/ML** (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
√	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/L) **, 50 mg/L for hydrostatic testing **, Me#60.2/ML 5ug/L
√	2. Total Residual Chlorine (TRC) [1]	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
√	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L/ Me# 1664A/ML 5.0mg/L
	4. Cyanide (CN) [2, 3]	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/L **/ Me#335.4/ML 5ug/L
	5. Benzene (B)	5ug/L /50.0 ug/L for hydrostatic testing only/ Me#8260C/ML 2 ug/L
	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
	7. Ethylbenzene (E)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L

	Parameter	Effluent Limit/Method#/ML (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
√	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) [4]	100 ug/L/ Me#8260C/ ML 2ug/L
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l /Me#8260C/ ML 10ug/L
	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only (ug/L)/ Me#8260C/ ML 10ug/L
	13. tert-Amyl Methyl Ether (TAME)	Monitor Only (ug/L) /Me#8260C/ ML 10ug/L
	14. Naphthalene [5]	20 ug/L /Me#8260C/ ML 2ug/L
	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/L /Me#8260C/ ML 5ug/L
	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/L /Me#8260C/ ML 5ug/L
	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
	24. Tetrachloroethene (PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
√	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML5ug/L,Me#604 &625/ML 10ug/L
	33. Total Phthalates (Phthalate esters) [6]	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L& Me#625/ML 5ug/L
	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML 5ug/L

	Parameter	Effluent Limit/Method#/ML (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L
√	a. Benzo(a) Anthracene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	b. Benzo(a) Pyrene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	c. Benzo(b)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	d. Benzo(k)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	e. Chrysene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	f. Dibenzo(a,h)anthracene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	g. Indeno(1,2,3-cd) Pyrene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML5ug/L
√	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
√	h. Acenaphthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	i. Acenaphthylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	j. Anthracene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	l. Fluoranthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	m. Fluorene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	n. Naphthalene [5]	20 ug/l / Me#8270/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	o. Phenanthrene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	p. Pyrene	X/Me#8270D/ML5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	37. Total Polychlorinated Biphenyls (PCBs) [8, 9]	0.000064 ug/L/Me# 608/ ML 0.5 ug/L
√	38. Chloride	Monitor only/Me# 300.0/ ML 0.1ug/L

	Metal parameter	Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11]	

			Saltwater		
√	39. Antimony	5.6/10mL			
	40. Arsenic **		36/20mL		
	41. Cadmium **		8.9/10mL		
	42. Chromium III (trivalent) **		100/15mL		
	43. Chromium VI (hexavalent) **		50.3/10mL		
	44. Copper **		3.7/15mL		
	45. Lead **		8.5/20mL		
	46. Mercury **		1.1/0.2mL		
	47. Nickel **		8.2/20mL		
	48. Selenium **		71/20mL		
	49. Silver		2.2/10mL		
√	50. Zinc **		85.6/15mL		
√	51. Iron	1,000/20mL			

	Other Parameters	Limit
√	52. Instantaneous Flow	Site specific in CFS
√	53. Total Flow	Site specific in CFS
	54. pH Range for Class A & Class B Waters in MA	6.5-8.3; 1/Month/Grab[13]
√	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.3; 1/Month/Grab[13]
	56. pH Range for Class B Waters in NH	6.5-8; 1/Month/Grab[13]
	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab[14]
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab[14]
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab[14]
	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab[14]
	61. Maximum Change in Temperature in MA – Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab[14]
	62. Maximum Change in Temperature in MA – Any Class SA water body - Coastal	1.5°F; 1/Month/Grab[14]
	63. Maximum Change in Temperature in MA – Any Class SB water body - July to September	1.5°F; 1/Month/Grab[14]
	64. Maximum Change in Temperature in MA – Any Class SB water body - October to June	4°F; 1/Month/Grab[14]

Footnotes:

[1] 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 (ML) of the test method used as listed in Appendix VI (i.e., Method 330.5, 20 ug/l).
[2] Limits for cyanide are based on EPA's water quality criteria expressed as micrograms per liter. There is currently no EPA approved test method for free cyanide. Therefore, total cyanide must be reported.
[3] 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 minimum level (ML) of the Method 335.4 as listed in Appendix VI (i.e., 10 ug/l).
[4] BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.
[5] 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.
[6] The sum of individual phthalate compounds(not including the #34, Bis (2-Ethylhexyl) Phthalate . The compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.
Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measurement of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.
[7] 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.
[8] In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as total PCBs is the sum of all homologue, all isomer, all congener, or all "Oroclor analyses."Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measure of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.
[9]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).
[10] Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.
[11] 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.
[12] 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).
[13] pH sampling for compliance with permit limits may be performed using field methods as provided for in EPA test Method 150.1.
[14] Temperature sampling per Method 170.1

CRANSHAW
CONSTRUCTION

NEW

MAG910496

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

July 8, 2011
File No. 3175.00

Re: Notice of Intent for the Remediation General Permit
Temporary Construction Dewatering at Assembly Row for
72-inch Storm Drain Outfall, Infrastructure and Site Remediation
Assembly Square, Somerville, Massachusetts

Dear Sir/Madam:

On behalf of Street Retail, Inc. (in its individual capacity, and as attorney in fact for the site owners FR Sturtevant Street, LLC, SRI Assembly Row B2, LLC, SRI Assembly Row B3, LLC, SRI Assembly Row B5, LLC, SRI Assembly Row B6, LLC, SRI Assembly Row B7, LLC, SRI Assembly Row B8, LLC, and SRI Assembly Row B9, LLC, collectively as tenants in common), Cranshaw Construction (Cranshaw) is submitting this Notice of Intent (NOI) for coverage under the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) MAG910000. This letter and supporting documentation were prepared in accordance with the U.S. EPA guidance for construction dewatering under the RGP program. Cranshaw is the Construction Manager for the project and will have direct contracting responsibilities with the earthwork contractors performing the dewatering activities within various sub-areas of the Project Site. Subcontractors working on the project will be required to meet the requirements of this NOI and the RGP. The location of storm drain outfall is shown on Figure 1 and the extent of the Project Site is shown on Figure 2.

An NOI was submitted Woodard & Curran (W&C) in December 2009 for the initial phase of this project, which involved similar work and a discharge to the same outfall (MAG910444, 01/13/2010). There was a period of no discharge activity at the Project Site and given the issuance of the revised RGP in September 2010, we have prepared this new NOI for the project. The information previously submitted by W&C has been used where appropriate in this submittal.

Construction activities associated with the installation of a 72-inch storm drain outfall, installation of other infrastructure improvements and remediation excavations on several properties are planned for the Assembly Row development, which is located to the east of the Assembly Square Mall in Somerville, Massachusetts (Figure 1). The proposed outfall is being installed to reduce the flows to an existing 84-inch storm drain (the Somerville Marginal Conduit), which currently discharges to the Mystic River downstream of the Amelia Earhart Dam. The proposed 72-inch storm drain outfall will also discharge to the Mystic River below the Amelia Earhart Dam. Both the proposed and existing stormwater drains are shown on Figure 2. Groundwater encountered during the proposed utility

installation and remediation efforts will be conveyed through the existing 84-inch storm drain to the river. After installation of the 72-inch storm drain, additional site redevelopment construction activities are planned for the project. We anticipate that a second NOI will be submitted once the 72-inch storm drain is installed since the dewatering activities after that point in time, which will be required for later phases of the project construction, will discharge to the river via the newly installed 72-inch storm drain outfall.

The 72-inch storm drain installation and the associated secondary drains or other utilities will cross multiple properties where concentrations of oil and/or hazardous material (OHM) have been identified. The Massachusetts Department of Environmental Protection (DEP) has assigned Release Tracking Numbers (RTNs) to these properties under the Massachusetts Contingency Plan (310 CMR 40.0000). Soil remediation excavations are planned on three properties in the vicinity of the proposed drain/outfall installation. The Project Area is shown on Figure 2. The proposed infrastructure construction and/or remediation activities will occur at the following properties:

- 85 Foley Street (RTN 3-28781),
- Yard 21 between 85 and 99 Foley Street (RTN 3-28993),
- 99 Foley Street (RTNs 3-18995, 3-19163, and 3-19164),
- Yard 21 (RTN 3-4082),
- 130 Foley Street (RTN 3-29665), and
- Draw Seven Park (RTN 3-3908),
- 43 Foley Street (RTNs 3-3937 and 3-25033),
- 74 Foley Street (RTN 3-0649),
- 100 Foley Street (RTN 3-0434),
- 133 Middlesex Avenue (RTNs 3-21217 and 3-28904),
- 100 Sturtevant Street (RTN 3-11886).

In general, the OHM observed at these sites has been attributed to a former oil storage terminal at 100 Sturtevant Street, rail yard operations at Yard 21 and at 130 Foley Street, industrial activities at 74 Foley Street, 100 Foley Street, and 100 Middlesex Avenue, and a history of urban fill in the area. Concentrations of extractable petroleum hydrocarbons (EPH), both petroleum-related and coal-related polyaromatic hydrocarbons (PAHs), and metals have been identified at the various sites.

According to the Massachusetts Geographical Information System (MassGIS), the excavation activities will not impact Areas of Critical Environmental Concern (ACEC) or Habitats of Rare Wetland Wildlife. A review of the information on the U.S. Fish and Wildlife Service website, led to the conclusion that the project will not impact federally-listed threatened or endangered species. A form letter from that agency is included in Appendix D. A letter requesting information regarding Oceanic Fisheries was sent to the National Oceanic and Atmospheric Administration (NOAA), and their response (Appendix D) states that no listed species are known to occur in the Mystic River.

The installation of the 72-inch outfall will require the excavation of soil to a depth of approximately 10 to 15 feet below ground surface (bgs) depending on the location. Groundwater is anticipated to be encountered between 7 and 15 feet bgs. Remediation excavations conducted at 130 Foley Street, Yard 21, and Yard 21 between 85 and 99 Foley Street are anticipated to be up to approximately 12 feet bgs, with groundwater encountered at approximately 5 to 10 feet bgs. Groundwater that flows into trenches or excavations during construction activities will either be recharged in close proximity to active excavation or be treated prior to discharge to a storm drain such that the discharged effluent meets the effluent limitations established by Appendix III and Appendix IV of the RGP Application. Figure 3 includes a schematic of the proposed dewatering treatment system.

The completed Notice of Intent for the Remediation General Permit form is included as Appendix A. We note that the presence of chloride in the groundwater has not been analyzed. We do not anticipate that chloride will be present in groundwater to the west of the railroad right of way (see Figure 2). To the east of the railroad, the groundwater is influenced by the tidal fluctuations in the Mystic River estuary, located downstream from the Amelia Earhart Dam. While chloride may be present in groundwater due to tide driven flow from the estuary, it is our opinion that the influent concentrations of chloride will be less than the concentrations already present in the estuary's receiving water.

Street Retail, Inc. (in its individual capacity, and as attorney in fact for the site owners) requests to be listed on the Permit as the Owner and Cranshaw requests to be listed on the Permit as the Operator. Discharge of treated water is scheduled to begin as early as June 1, 2011, pending authorization from the EPA and other agencies.

Thank you for your consideration of this NOI. Please feel free to contact us if you wish to discuss the information contained in this application, or if any additional information is needed.

Very truly yours,

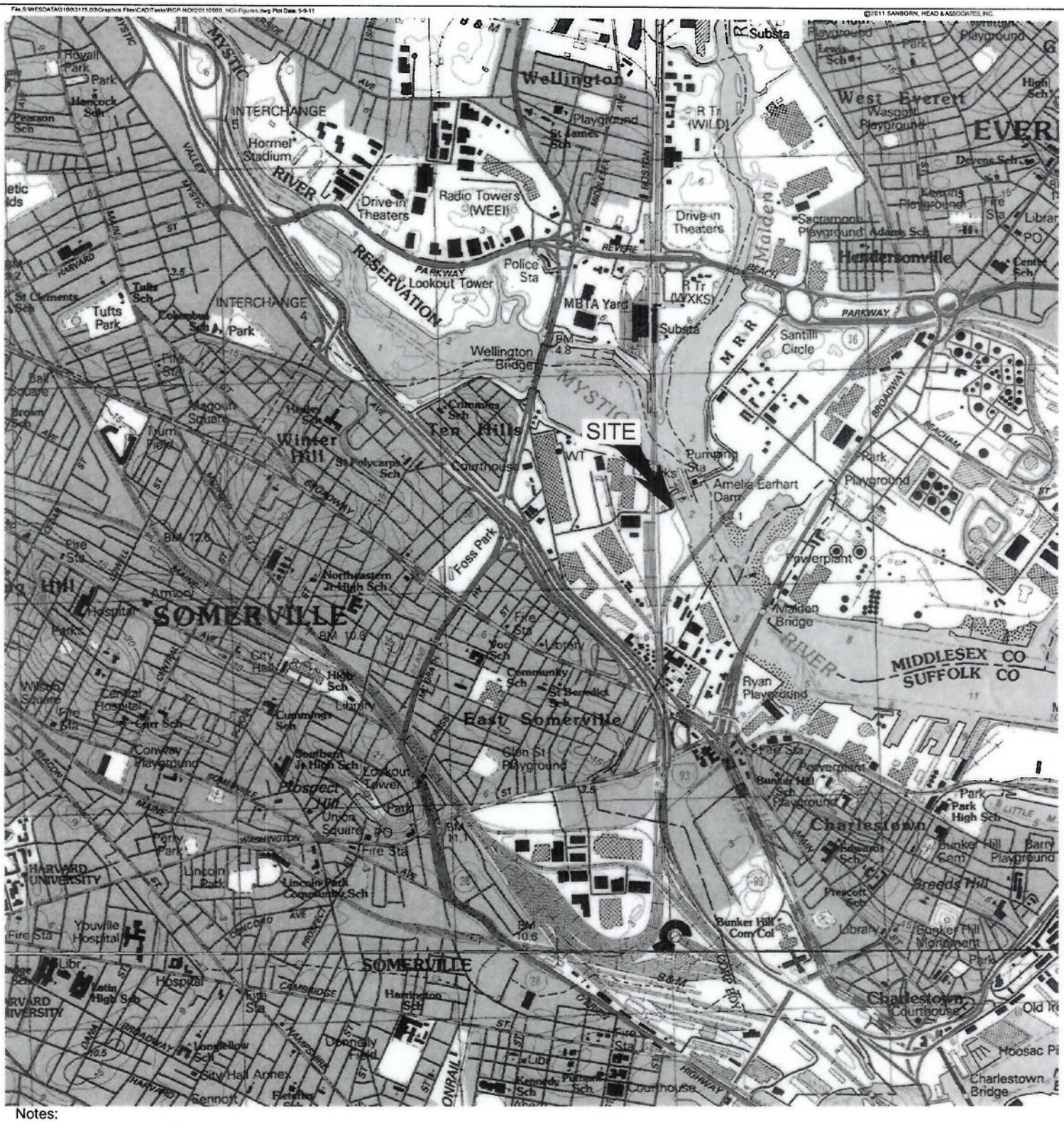
CRANSHAW CONSTRUCTION

Jeffrey Fishbone
Senior Project Manager

Encl. Figure 1 – Locus Plan
Figure 2 – Location of Proposed Storm Drain
Figure 3 – Proposed Groundwater Treatment Schematic
Appendix A – Notice of Intent Form
Appendix B – Analytical Data
Appendix C – Mystic River Calculations
Appendix D – Federal Correspondence
Appendix E – National Register of Historic Places, Somerville, Massachusetts

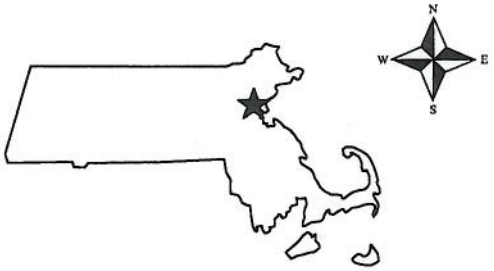
Appendix F – Best Management Practices Plan

cc: City of Somerville Health Department (via FRIT)
FRIT – David Webster
Sanborn, Head & Associates – Patricia Pinto, Duncan Wood
Cranshaw Construction – Dan Feidler, File Permits 01



Notes:
Base map taken from "Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs"
7.5 minute USGS Quadrangle Maps:
Boston North, Massachusetts,Revised 1985

DRAFT



Drawn By: R.Hirtle
Designed By: R.Cook
Reviewed By: P.Pinto
Project No: 3175.00
Date: May 2011

SCALE: 1:25,000

SANBORN HEAD

FIGURE 1

Locus Plan

Notice of Intent for Remediation General Permit

Assembly Row
Somerville, Massachusetts

B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General facility/site information. Please provide the following information about the site:

a) Name of **facility/site:** Assembly Row			**Facility/site** mailing address:		
Location of **facility/site:** longitude: 71.0759 latitude: 42.3940	Facility SIC code(s): N/A		Street: Facility: 100 Sturtevant Street, Somerville, MA Mailing: FRIT, 4th Floor, 5 Middlesex Avenue Somerville, MA 02145		
b) Name of **facility/site owner:** Street Retail, Inc.			Town: Somerville		
Email address of facility/site owner: DWebster@federalrealty.com			State: MA	Zip: 02145	County: Middlesex
Telephone no. of facility/site **owner:** (301)998-8100					
Fax no. of facility/site **owner:** (301)998-3722			**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ◉ 4. Other ○ if so, describe:		
Address of **owner** (if different from site):					
Street: 1626 East Jefferson Street					
Town: Rockville	State: MD	Zip: 20852	County: Montgomery		
c) Legal name of **operator:** Cranshaw Construction			**Operator** telephone no: 617-965-7300		
			Operator fax no.: 617-527-1977		**Operator** email: JFishbone@cranshaw.com
Operator contact name and title: Jeff Fishbone					
Address of **operator** (if different from owner):	Street: 2310 Washington Street				
Town: Newton Lower Falls	State: MA	Zip: 02462	County: Middlesex		

d) Check Y for "yes" or N for "no" for the following:
1. Has a prior NPDES permit exclusion been granted for the discharge? Y ○ N ◉, if Y, number:
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge?
Y ◉ N ○, if Y, date and tracking #: January 13, 2010, MAG910444
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Y ◉ N ○
4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y ◉ N ○

e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y ○ N ◉
If Y, please list:
1. site identification # assigned by the state of NH or MA:
2. permit or license # assigned:
3. state agency contact information: name, location, and telephone number:

f) Is the site/facility covered by any other EPA permit, including:
1. Multi-Sector General Permit? Y ○ N ◉, if Y, number:
2. Final Dewatering General Permit? Y ○ N ◉, if Y, number:
3. EPA Construction General Permit? Y ◉ N ○, if Y, number: ?????????
4. Individual NPDES permit? Y ○ N ◉, if Y, number:
5. any other water quality related individual or general permit? Y ○ N ◉, if Y, number:

g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y ○ N ◉

h) Based on the facility/site information and any historical sampling data, identify the sub-category into which the potential discharge falls.

Activity Category	**Activity Sub-Category**
I - Petroleum Related Site Remediation	A. Gasoline Only Sites ☐ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) ☐ C. Petroleum Sites with Additional Contamination ☒
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites ☐ B. VOC Sites with Additional Contamination ☐ C. Primarily Heavy Metal Sites ☐
III - Contaminated Construction Dewatering	A. General Urban Fill Sites ☒ B. Known Contaminated Sites ☒

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites ☐ B. Well Development/Rehabilitation at Contaminated/Formerly Contaminated Sites ☐ C. Hydrostatic Testing of Pipelines and Tanks ☐ D. Long-Term Remediation of Contaminated Sumps and Dikes ☐ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ☐

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

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

Temporary construction dewatering in support of storm drain outfall installation, other utility installations, and MCP remediation efforts required to prepare site for the redevelopment construction.

b) Provide the following information about each discharge:

1) Number of discharge points: 1

2) What is the **maximum** and **average flow rate** of discharge (in cubic feet per second, ft^3/s)?
Max. flow 0.56 Is maximum flow a **design value**? Y ○ N ◉
Average flow (include units) 0.22 Is average flow a design value or estimate? Estimate

3) Latitude and longitude of each discharge within 100 feet:

pt.1: lat	42.394	long	71.076	pt.2: lat.		long.	;
pt.3: lat		long		pt.4: lat.		long.	;
pt.5: lat		long		pt.6: lat.		long.	;
pt.7: lat		long		pt.8: lat.		long.	; etc.

4) If hydrostatic testing, total volume of the discharge (gals):

5) Is the discharge intermittent ◉ or seasonal ○ ?
Is discharge ongoing? Y ○ N ◉

c) Expected dates of discharge (mm/dd/yy): start 06/01/2011 end 06/01/2012

d) Please attach a line drawing or flow schematic showing water flow through the facility including:
1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).

3. Contaminant information.

a) Based on the sub-category selected (see Appendix III), indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids (TSS)		☐	☒	2	Grab	160.2	--	37,000			
2. Total Residual Chlorine (TRC)		☒	☐	2	Grab	4500	50	ND			
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	2	Grab	1664	515	ND			
4. Cyanide (CN)	57125	☒	☐	2	Grab	335.2	5.0	ND			
5. Benzene (B)	71432	☒	☐	2	Grab	8260B	0.5	ND			
6. Toluene (T)	108883	☒	☐	2	Grab	8260B	0.75	ND			
7. Ethylbenzene (E)	100414	☒	☐	2	Grab	8260B	0.5	ND			
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐	2	Grab	8260B	1.0	ND			
9. Total BTEX [2]	n/a	☒	☐	2	Grab	8260B	0.5	ND			
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☒	☐	2	Grab	8260B	2.0	ND			
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐	2	Grab	8260B	1.0	ND			
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	0	--	--	--	--			

* Numbering system is provided to allow cross-referencing to Effluent Limits and Monitoring Requirements by Sub-Category included in Appendix III, as well as the Test Methods and Minimum Levels associated with each parameter provided in Appendix VI.

[2] BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

[3] EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
13. tert-Amyl Methyl Ether (TAME)	9940508	☒	☐	2	Grab	8260B	2.0	ND			
14. Naphthalene	91203	☒	☐	2	Grab	8260B	2.5	ND			
15. Carbon Tetrachloride	56235	☒	☐	2	Grab	8260B	0.5	ND			
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	2	Grab	8260B	2.5	ND			
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	2	Grab	8260B	2.5	ND			
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	2	Grab	8260B	2.5	ND			
18a. Total dichlorobenzene		☒	☐	2	Grab	8260B	2.5	ND			
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	2	Grab	8260B	0.75	ND			
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	2	Grab	8260B	0.5	ND			
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	2	Grab	8260B	0.5	ND			
22. cis-1,2 Dichloroethene (DCE)	156592	☒	☐	2	Grab	8260B	0.5	ND			
23. Methylene Chloride	75092	☒	☐	2	Grab	8260B	5.0	ND			
24. Tetrachloroethene (PCE)	127184	☒	☐	2	Grab	8260B	0.5	ND			
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	2	Grab	8260B	0.5	ND			
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	2	Grab	8260B	0.75	ND			
27. Trichloroethene (TCE)	79016	☒	☐	2	Grab	8260B	0.5	ND			

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
28. Vinyl Chloride (Chloroethene)	75014	☒	☐	2	Grab	8260B	1.0	ND			
29. Acetone	67641	☒	☐	2	Grab	8260B	5.0	ND			
30. 1,4 Dioxane	123911	☒	☐	2	Grab	8260B	250	ND			
31. Total Phenols	108952	☒	☐	2	Grab	8270C	29	ND			
32. Pentachlorophenol (PCP)	87865	☒	☐	2	Grab	8270C	9.6	ND			
33. Total Phthalates (Phthalate esters) [4]		☒	☐	2	Grab	8270C	4.8	ND			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	2	Grab	8270C	4.8	ND			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	2	Grab	8270C-SIM	0.19	ND			
a. Benzo(a) Anthracene	56553	☒	☐	2	Grab	8270C-SIM	0.19	ND			
b. Benzo(a) Pyrene	50328	☒	☐	2	Grab	8270C-SIM	0.19	ND			
c. Benzo(b)Fluoranthene	205992	☒	☐	2	Grab	8270C-SIM	0.19	ND			
d. Benzo(k)Fluoranthene	207089	☒	☐	2	Grab	8270C-SIM	0.19	ND			
e. Chrysene	21801	☒	☐	2	Grab	8270C-SIM	0.19	ND			
f. Dibenzo(a,h)anthracene	53703	☒	☐	2	Grab	8270C-SIM	0.19	ND			
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	2	Grab	8270C-SIM	0.19	ND			
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	2	Grab	8270C-SIM	0.19	ND			

[4] The sum of individual phthalate compounds.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
h. Acenaphthene	83329	☒	☐	2	Grab	8270C-SIM	0.19	ND			
i. Acenaphthylene	208968	☒	☐	2	Grab	8270C-SIM	0.19	ND			
j. Anthracene	120127	☒	☐	2	Grab	8270C-SIM	0.19	ND			
k. Benzo(ghi) Perylene	191242	☒	☐	2	Grab	8270C-SIM	0.19	ND			
l. Fluoranthene	206440	☒	☐	2	Grab	8270C-SIM	0.19	ND			
m. Fluorene	86737	☒	☐	2	Grab	8270C-SIM	0.19	ND			
n. Naphthalene	91203	☒	☐	2	Grab	8270C-SIM	0.19	ND			
o. Phenanthrene	85018	☒	☐	2	Grab	8270C-SIM	0.19	ND			
p. Pyrene	129000	☒	☐	2	Grab	8270C-SIM	0.19	ND			
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	2	Grab	8082	0.264	ND			
38. Chloride	16887006	☒	☐	0	--	--	--	--			
39. Antimony	7440360	☒	☐	2	Grab	MCP-6000/7000	50	ND			
40. Arsenic	7440382	☒	☐	2	Grab	MCP-6000/7000	5.0	ND			
41. Cadmium	7440439	☒	☐	2	Grab	MCP-6000/7000	4.0	ND			
42. Chromium III (trivalent)	16065831	☒	☐	2	Grab	3500	10	ND			
43. Chromium VI (hexavalent)	18540299	☒	☐	2	Grab	7196A	10	ND			
44. Copper	7440508	☒	☐	2	Grab	MCP-6000/7000	10	ND			
45. Lead	7439921	☒	☐	2	Grab	MCP-6000/7000	10	ND			
46. Mercury	7439976	☒	☐	2	Grab	MCP-6000/7000	0.2	ND			
47. Nickel	7440020	☒	☐	2	Grab	MCP-6000/7000	25	ND			
48. Selenium	7782492	☒	☐	2	Grab	MCP-6000/7000	10	ND			
49. Silver	7440224	☒	☐	2	Grab	MCP-6000/7000	7	ND			
50. Zinc	7440666	☒	☐	2	Grab	MCP-6000/7000	50	ND			
51. Iron	7439896	☐	☒	2	Grab	MCP-6000/7000	50	500			
Other (describe):		☐	☐								

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
		☐	☐								
		☐	☐								

b) For discharges where **metals** are believed present, please fill out the following (attach results of any calculations):

Step 1: Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y ○ N ◉	If yes, which metals?
Step 2: For any metals which exceed the **Appendix III** limits, calculate the **dilution factor (DF)** using the formula in Part I.A.3.c (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metal: DF: Metal: DF: Metal: DF: Metal: DF: Etc.	Look up the limit calculated at the corresponding dilution factor in **Appendix IV.** Do any of the metals in the **influent** have the potential to exceed the corresponding **effluent** limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y ○ N ◉ If Y, list which metals:

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:

Groundwater encountered during construction activities will be pumped to a fractionalization tank where solids will settle out. The effluent will then be passed through the following as necessary: an oil/water separator, a bag filter, a granular activated carbon filter, and a precipitation system/metals treatment. The effluent will then be discharged to the existing storm drain system.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank ☒	Air stripper ☐	Oil/water separator ☒	Equalization tanks ☐	Bag filter ☒	GAC filter ☒
	Chlorination ☐	De-chlorination ☐	Other (please describe):	Precipitation system/metals treatment (as needed)		

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate**(s) (gallons per minute) of the treatment system:
Average flow rate of discharge 100 gpm Maximum flow rate of treatment system 250 gpm
Design flow rate of treatment system N/A gpm

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

None

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct to receiving water ☐	Within facility (sewer) ☐	Storm drain ☒	Wetlands ☐	Other (describe):

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:

Dewatering effluent will discharge at existing storm drains on-site. All storm drains lead to the Somerville Marginal Conduit, then the Mystic River below A.E. Dam.

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:
1. For multiple discharges, number the discharges sequentially.
2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water
The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water B

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 18.37 cfs from upstream river cfs
Please attach any calculation sheets used to support stream flow and dilution calculations.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Y ◉ N ○ If yes, for which pollutant(s)?
Priority organics, metals, unionized ammonia, other inorganics, organic enrichment/Low DO, pathogens, oil & grease, taste/odor/color.
Is there a final TMDL? Y ○ N ◉ If yes, for which pollutant(s)?

6. ESA and NHPA Eligibility.

Please provide the following information according to requirements of Permit Parts I.A.4 and I.A.5 Appendices II and VII.

a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?

A ◉ B ○ C ○ D ○ E ○ F ○

b) If you selected Criterion D or F, has consultation with the federal services been completed? Y ○ N ○ Underway ○

c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received? Y ◉ N ○

d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.

e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit?

1 ◉ 2 ○ 3 ○

f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

7. 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.

Appendix B includes the analytical data collected by Woodard & Curran in September 2008, which was submitted with a previous NOI for this site.
Appendix C includes calculations for the 7Q10 flows.
Appendix D includes correspondence from the National Oceanic and Atmospheric Administration and the US Fish and Wildlife Service.
Appendix E includes a list of Historic Places in Somerville, Massachusetts.
Appendix F includes the Best Management Practices Plan.

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, 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/Site Name:	Assembly Row
Operator signature:	
Printed Name &Title:	Jeff Fishbone, Cranshaw Construction
Date:	July 8, 2011

Table 1
Summary of Groundwater Analytical Data
Assembly Square PUD
Somerville, Massachusetts

Analysis	MCP GW-2 Criteria	MCP GW-3 Criteria	WC-210 9/12/2008	WC-209 9/15/2008
Hexavalent Chromium by MCP 7196A				
Chromium, Hexavalent		300	< 10	< 10
Miscellaneous				
Solids, Total Suspended			37,000	< 5000
Chlorine, Total Residual			< 50	< 50
Petroleum Hydrocarbon Quantitation by GC-FID				
TPH	5000	5000	< 532	< 515
Polychlorinated Biphenyls by MCP 8082				
Aroclor 1016	5	10	< 0.264	< 0.266
Aroclor 1221	5	10	< 0.264	< 0.266
Aroclor 1232	5	10	< 0.264	< 0.266
Aroclor 1242	5	10	< 0.264	< 0.266
Aroclor 1248	5	10	< 0.264	< 0.266
Aroclor 1254	5	10	< 0.264	< 0.266
Aroclor 1260	5	10	< 0.264	< 0.266
Aroclor 1262	5	10	< 0.264	< 0.266
Aroclor 1268	5	10	< 0.264	< 0.266
Semivolatile Organics by MCP 8270C				
1,2,4-Trichlorobenzene	2,000	50,000	< 4.9	< 4.8
1,2-Dichlorobenzene	2,000	2,000	< 4.9	< 4.8
1,3-Dichlorobenzene	2,000	50,000	< 4.9	< 4.8
1,4-Dichlorobenzene	200	8,000	< 4.9	< 4.8
2,4,5-Trichlorophenol	50,000	3,000	< 4.9	< 4.8
2,4,6-Trichlorophenol	5,000	500	< 4.9	< 4.8
2,4-Dichlorophenol	30,000	2,000	< 9.8	< 9.6
2,4-Dimethylphenol	40,000	50,000	< 4.9	< 4.8
2,4-Dinitrophenol	50,000	20,000	< 29	< 29
2,4-Dinitrotoluene	20,000	50,000	< 4.9	< 4.8
2,6-Dinitrotoluene			< 4.9	< 4.8
2-Chloronaphthalene			< 4.9	< 4.8
2-Chlorophenol	20,000	7,000	< 5.9	< 5.7
2-Methylnaphthalene	2,000	20,000	< 4.9	< 4.8
2-Methylphenol			< 5.9	< 5.7
2-Nitrophenol			< 20	< 19
3,3'-Dichlorobenzidine		2,000	< 9.8	< 9.6
3-Methylphenol/4-Methylphenol			< 5.9	< 5.7
4-Bromophenyl phenyl ether			< 4.9	< 4.8
4-Chloroaniline	50,000	300	< 4.9	< 4.8
4-Nitrophenol			< 9.8	< 9.6
Acenaphthene		6,000	< 4.9	< 4.8
Acenaphthylene	10,000	40	< 4.9	< 4.8
Acetophenone			< 20	< 19
Aniline			< 20	< 19
Anthracene		30	< 4.9	< 4.8
Azobenzene			< 4.9	< 4.8
Benzo(a)anthracene		1,000	< 4.9	< 4.8
Benzo(a)pyrene		500	< 4.9	< 4.8
Benzo(b)fluoranthene		400	< 4.9	< 4.8
Benzo(ghi)perylene		20	< 4.9	< 4.8
Benzo(k)fluoranthene		100	< 4.9	< 4.8

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Somerville, Massachusetts

Analysis	MCP GW-2 Criteria	MCP GW-3 Criteria	WC-210 9/12/2008	WC-209 9/15/2008
Bis(2-chloroethoxy)methane			< 4.9	< 4.8
Bis(2-chloroethyl)ether	30	50,000	< 4.9	< 4.8
Bis(2-chloroisopropyl)ether	100	50,000	< 4.9	< 4.8
Bis(2-Ethylhexyl)phthalate		50,000	< 4.9	< 4.8
Butyl benzyl phthalate			< 4.9	< 4.8
Chrysene		70	< 4.9	< 4.8
Dibenzo(a,h)anthracene		40	< 4.9	< 4.8
Dibenzofuran			< 4.9	< 4.8
Diethyl phthalate	50,000	9,000	< 4.9	< 4.8
Dimethyl phthalate	50,000	50,000	< 4.9	< 4.8
Di-n-butylphthalate			< 4.9	< 4.8
Di-n-octylphthalate			< 4.9	< 4.8
Fluoranthene		200	< 4.9	< 4.8
Fluorene		40	< 4.9	< 4.8
Hexachlorobenzene	1	6,000	< 4.9	< 4.8
Hexachlorobutadiene	1	3,000	< 9.8	< 9.6
Hexachloroethane	100	50,000	< 4.9	< 4.8
Indeno(1,2,3-cd)Pyrene		100	< 4.9	< 4.8
Isophorone			< 4.9	< 4.8
Naphthalene	1,000	20,000	< 4.9	< 4.8
Nitrobenzene			< 4.9	< 4.8
Pentachlorophenol		200	< 9.8	< 9.6
Phenanthrene		10,000	< 4.9	< 4.8
Phenol	50,000	2,000	< 6.8	< 6.7
Pyrene		20	< 4.9	< 4.8
Semivolatile Organics by MCP 8270C-SIM				
2-Chloronaphthalene			< 0.2	< 0.19
2-Methylnaphthalene	2,000	20,000	< 0.2	< 0.19
Acenaphthene		6,000	< 0.2	< 0.19
Acenaphthylene	10,000	40	< 0.2	< 0.19
Anthracene		30	< 0.2	< 0.19
Benzo(a)anthracene		1,000	< 0.2	< 0.19
Benzo(a)pyrene		500	< 0.2	< 0.19
Benzo(b)fluoranthene		400	< 0.2	< 0.19
Benzo(ghi)perylene		20	< 0.2	< 0.19
Benzo(k)fluoranthene		100	< 0.2	< 0.19
Chrysene		70	< 0.2	< 0.19
Dibenzo(a,h)anthracene		40	< 0.2	< 0.19
Fluoranthene		200	< 0.2	< 0.19
Fluorene		40	< 0.2	< 0.19
Hexachlorobenzene	1	6,000	< 0.78	< 0.76
Hexachlorobutadiene	1	3,000	< 0.49	< 0.48
Hexachloroethane	100	50,000	< 0.78	< 0.76
Indeno(1,2,3-cd)Pyrene		100	< 0.2	< 0.19
Naphthalene	1,000	20,000	< 0.2	< 0.19
Pentachlorophenol		200	< 0.78	< 0.76
Phenanthrene		10,000	< 0.2	< 0.19
Pyrene		20	< 0.2	< 0.19

Table 1
Summary of Groundwater Analytical Data
Assembly Square PUD
Somerville, Massachusetts

Analysis	MCP GW-2 Criteria	MCP GW-3 Criteria	WC-210 9/12/2008	WC-209 9/15/2008
Total Cyanide by MCP 9014				
Cyanide, Total		30	< 5	< 5
Total Metals by MCP 6000/7000 series				
Antimony, Total		8,000	< 50	< 50
Arsenic, Total		900	< 5	< 5
Cadmium, Total		4	< 4	< 4
Chromium, Total		300	< 10	< 10
Copper, Total			< 10	< 10
Iron, Total			500	< 50
Lead, Total		10	< 10	< 10
Mercury, Total		20	< 0.2	< 0.2
Nickel, Total		200	< 25	< 25
Selenium, Total		100	< 10	< 10
Silver, Total		7	< 7	< 7
Zinc, Total		900	< 50	< 50
Volatile Organics by MCP 8260B				
1,1,1,2-Tetrachloroethane	10	50,000	< 0.5	< 0.5
1,1,1-Trichloroethane	4,000	20,000	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	9	50,000	< 0.5	< 0.5
1,1,2-Trichloroethane	900	50,000	< 0.75	< 0.75
1,1-Dichloroethane	1,000	20,000	< 0.75	< 0.75
1,1-Dichloroethene	80	30,000	< 0.5	< 0.5
1,1-Dichloropropene			< 2.5	< 2.5
1,2,3-Trichlorobenzene			< 2.5	< 2.5
1,2,3-Trichloropropane			< 5	< 5
1,2,4-Trichlorobenzene	2,000	50,000	< 2.5	< 2.5
1,2,4-Trimethylbenzene			< 2.5	< 2.5
1,2-Dibromo-3-chloropropane			< 2.5	< 2.5
1,2-Dibromoethane	2	50,000	< 2	< 2
1,2-Dichlorobenzene	2,000	2,000	< 2.5	< 2.5
1,2-Dichloroethane	5	20,000	< 0.5	< 0.5
1,2-Dichloropropane	3	50,000	< 1.8	< 1.8
1,3,5-Trimethylbenzene			< 2.5	< 2.5
1,3-Dichlorobenzene	2,000	50,000	< 2.5	< 2.5
1,3-Dichloropropane			< 2.5	< 2.5
1,4-Dichlorobenzene	200	8,000	< 2.5	< 2.5
1,4-Dioxane	6,000	50,000	< 250	< 250
2,2-Dichloropropane			< 2.5	< 2.5
2-Butanone	50,000	50,000	< 5	< 5
2-Hexanone			< 5	< 5
4-Methyl-2-pentanone	50,000	50,000	< 5	< 5
Acetone	50,000	50,000	< 5	< 5
Benzene	2,000	10,000	< 0.5	< 0.5
Bromobenzene			< 2.5	< 2.5
Bromochloromethane			< 2.5	< 2.5
Bromodichloromethane	6	50,000	< 0.5	< 0.5
Bromoform	700	50,000	< 2	< 2
Bromomethane	7	800	< 1	< 1
Carbon disulfide			< 5	< 5
Carbon tetrachloride	2	5,000	< 0.5	< 0.5

Table 1
Summary of Groundwater Analytical Data
Assembly Square PUD
Somerville, Massachusetts

Analysis	MCP GW-2 Criteria	MCP GW-3 Criteria	WC-210 9/12/2008	WC-209 9/15/2008
Chlorobenzene	200	1,000	< 0.5	< 0.5
Chloroethane			< 1	< 1
Chloroform	50	20,000	< 0.75	< 0.75
Chloromethane			< 2.5	< 2.5
cis-1,2-Dichloroethene	100	50,000	< 0.5	< 0.5
cis-1,3-Dichloropropene	10	200	< 0.5	< 0.5
Dibromochloromethane	20	50,000	< 0.5	< 0.5
Dibromomethane			< 5	< 5
Dichlorodifluoromethane			< 5	< 5
Ethyl ether			< 2.5	< 2.5
Ethylbenzene	20,000	5,000	< 0.5	< 0.5
Ethyl-Tert-Butyl-Ether			< 2	< 2
Hexachlorobutadiene	1	3,000	< 0.6	< 0.6
Isopropyl Ether			< 2	< 2
Isopropylbenzene			< 0.5	< 0.5
Methyl tert butyl ether	50,000	50,000	< 1	< 1
Methylene chloride	10,000	50,000	< 5	< 5
Naphthalene	1,000	20,000	< 2.5	< 2.5
n-Butylbenzene			< 0.5	< 0.5
n-Propylbenzene			< 0.5	< 0.5
o-Chlorotoluene			< 2.5	< 2.5
o-Xylene	9,000	5,000	< 1	< 1
p/m-Xylene	9,000	5,000	< 1	< 1
p-Chlorotoluene			< 2.5	< 2.5
p-Isopropyltoluene			< 0.5	< 0.5
sec-Butylbenzene			< 0.5	< 0.5
Styrene	100	6,000	< 1	< 1
tert-Butylbenzene			< 2.5	< 2.5
Tertiary-Amyl Methyl Ether			< 2	< 2
Tetrachloroethene	50	30,000	< 0.5	< 0.5
Tetrahydrofuran			< 10	< 10
Toluene	50,000	40,000	< 0.75	< 0.75
trans-1,2-Dichloroethene	90	50,000	< 0.75	< 0.75
trans-1,3-Dichloropropene	10	200	< 0.5	< 0.5
Trichloroethene	30	5,000	< 0.5	< 0.5
Trichlorofluoromethane			< 2.5	< 2.5
Vinyl chloride	2	50,000	< 1	< 1

All units are presented as ug/l

APPENDIX C: Mystic River Calculations

Notice of Intent for the NPDES Remediation General Permit
Construction Dewatering at Assembly Row, Somerville, Massachusetts

$7Q_{10}$ Calculations

The $7Q_{10}$ value is the average of one continuous gauging station and eight low-flow measurement stations in the Aberjona and Mystic River sub-basins, as documented by "Hydrology and Water Resources of the Coastal Drainage Basin of Northeastern Massachusetts, From Castle Neck, Ipswich, to Mystic River, Boston," by Delaney and Gay, Hydrologic Investigations Atlas HA-589, dated 1980. The watershed area is 62.70 square miles, according to the USGS (the station ID at Amelia Earhart Dam is 01103050).

$7Q_{10}$ flows on the Mystic River and its tributaries (in cubic feet per second per square mile [cfs/mi^2]):

0.22, 0.21, 0.18, <0.10, 0.57, 0, 0.53, 0.40, and 0.43

Average = **0.293 cfs/mi^2** *(assuming a value of 0.10 for the <0.10 station)*

Area of watershed (from USGS):

62.70 mi^2

7Q10 flow = 0.293 cfs/mi^2 * 62.70 mi^2 = **18.37 cfs**

Note:

The discharge is into the tidal reach of the Mystic River estuary, where the twice daily tidal flux of seawater is much larger than the 7Q10 from the upstream freshwater river.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

MAY - 9 2011

Patricia Pinto, PE
Sanborn, Head & Associates, Inc.
1 Technology Park Drive
Westford, MA 01886

Re: Application for NPDES RGP Permit in Somerville, MA

Dear Ms. Pinto,

The following is in response to your May 3, 2011 letter regarding the proposal for the Assembly Row project to be included under the Environmental Protection Agency's (EPA) Remediation General Permit (RGP) authorized by the National Pollution Discharge Elimination System (NPDES) program. The receiving water for the discharge is the Mystic River in Somerville, MA. These comments are offered by the Protected Resources Division of NOAA's National Marine Fisheries Service (NMFS).

While several species of listed whales and sea turtles occur seasonally in waters off the Massachusetts coast and populations of the federally endangered shortnose sturgeon occur in the Connecticut and Merrimack Rivers, no listed species are known to occur in the Mystic River. As such, no further coordination with NMFS PRD is necessary. Should you have any questions regarding these comments, please contact Chris Vaccaro at (978)281-9167 or by email (Christine.Vaccaro@noaa.gov).

Sincerely,

for Mary A. Colligan
Assistant Regional Administrator
for Protected Resources

File Code: Sec 7 no species 2011

United States Department of the Interior

FISH AND WILDLIFE SERVICE

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

January 3, 2011

To Whom It May Concern:

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

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

Based on the information currently available, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (Service) are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required.

This concludes the review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

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

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

Appendix E
National Register of Historic Places
Research Documentation
Assembly Row, Somerville, Massachusetts

Site Name	Address	Date Listed
Adams, Charles--Woodbury Locke House	178 Central St.	9/18/1989
Adams--Magoun House	438 Broadway	9/18/1989
Bacon, Clifton, House	27 Chester St.	9/18/1989
Barnes, Walter S. and Melissa E., House	140 Highland Ave.	3/8/1990
Bow Street Historic District	Bow St.	3/26/1976
Brackett, S. E., House	63 Columbus Ave.	9/18/1989
Broadway Winter Hill Congregational Church	404 Broadway	9/18/1989
Brooks, James H., House	61 Columbus Ave.	9/18/1989
Carr, Martin W., School	25 Atherton St.	7/5/1984
Central Library	79 Highland Ave.	9/18/1989
Cliff, Z. E., House	29 Powderhouse Terr.	9/18/1989
Cook, Thomas, House	21 College Hill Rd.	9/18/1989
Cooper--Davenport Tavern Wing	81 Eustis St.	9/18/1989
Crowell, C. C., House	85 Benton Rd.	9/18/1989
Downer Rowhouses (Adams Street)	55 Adams St.	9/18/1989
Downer Rowhouses (Central Street)	192--200 Central St.	9/18/1989
First Unitarian Church	130 Highland Ave.	9/18/1989
First Universalist Church	125 Highland St.	9/18/1989
Foster, Alexander, House	45 Laurel St.	9/18/1989
Gaut, Samuel, House	137 Highland Ave.	9/18/1989
Grandview, The	82 Munroe St.	9/18/1989
Highland, The	66 Highland St.	9/18/1989
Hollander Blocks	Walnut St. and Pleasant Ave.	9/18/1989
Hopkins, Elisha, House	237 School St.	9/18/1989
House at 10 Arlington Street	10 Arlington St.	9/18/1989
House at 14 Chestnut Street	14 Chestnut St.	9/18/1989
House at 16--18 Preston Road	16--18 Preston Rd.	9/18/1989
House at 197 Morrison Avenue	197 Morrison Ave.	9/18/1989
House at 21 Dartmouth Street	21 Dartmouth St.	9/18/1989
House at 25 Clyde Street	25 Clyde St.	9/18/1989
House at 29 Mt. Vernon Street	29 Mt. Vernon St.	9/18/1989
House at 343 Highland Avenue	343 Highland Ave.	9/18/1989
House at 35 Temple Street	35 Temple St.	9/18/1989
House at 42 Vinal Avenue	42 Vinal Ave.	9/18/1989
House at 49 Vinal Avenue	49 Vinal Ave.	9/18/1989
House at 5 Prospect Hill	5 Prospect Hill	9/18/1989
House at 6 Kent Court	6 Kent Ct.	9/18/1989
House at 72R Dane Street	72R Dane St.	9/18/1989
House at 81 Pearl Street	81 Pearl St.	9/18/1989
Houses at 28--36 Beacon Street	28--36 Beacon St.	9/18/1989
Ireland, Samuel, House	117 Washington	9/18/1989
James, Joseph K., House	83 Belmont St.	2/11/1998
Keyes, Amos, House	12 Adams St.	9/18/1989
Knight, R. A.--Eugene Lacount House	34 Day St.	9/18/1989
Langmaid Building	48--52 Highland Ave.	9/18/1989

Appendix E
National Register of Historic Places
Research Documentation
Assembly Row, Somerville, Massachusetts

Site Name	Address	Date Listed
Langmaid Terrace	359--365 Broadway	9/18/1989
Lockhardt, Charles H., House	88 College Ave.	9/18/1989
Loring, George, House	76 Highland Ave.	9/18/1989
Lovejoy, A. L., House	30 Warren Ave.	9/18/1989
Mt. Vernon Street Historic District	8--24 Mt. Vernon St.	9/18/1989
Munroe, Robert, House	37 Walnut St.	9/18/1989
Mystic Pumping Station	Alewife Brook Pkwy.	9/18/1989
Mystic Water Works	Alewife Brook Pkwy. and Capen St.	9/18/1989
Nichols, John F., House	17 Summit St.	9/18/1989
Niles, Louville V., House	97 Munroe St.	9/18/1989
Niles, Louville, House	45 Walnut St.	9/18/1989
Old Cemetery	Somerville Ave. and School St.	9/18/1989
Otis--Wyman House	67 Thurston St.	9/18/1989
Parker--Burnett House	48 Vinal Ave.	9/18/1989
Powder House Park	Powder House Circle	4/21/1975
Prescott, Gustavus G., House	65--67 Perkins St.	9/18/1989
Rosebud, The	381 Summer St.	9/22/1990
Russell, Philemon, House	25 Russell St.	9/18/1989
Russell, Susan, House	58 Sycamore St.	9/18/1989
Schuebeler, Charles, House	384 Washington St.	9/18/1989
Snow, Lemuel, Jr., House	81 Benton Rd.	9/18/1989
Somerville High School	93 Highland St.	9/18/1989
Somerville Journal Building	8--10 Walnut St.	9/18/1989
Somerville Theatre	55 Davis Sq.	1/26/1990
Spring Hill Historic District	Roughly bounded by Summer, Central, Atherton, and Spring	9/18/1989
Tufts, Peter and Oliver, House	78 Sycamore St.	9/18/1989
US Post Office--Somerville Main	237 Washington St.	5/30/1986
Warren, H., House	205 School St.	9/18/1989
West Somerville Branch Library	40 College Ave.	9/18/1989
Westwood Road Historic District	Roughly bounded by Summer St., Benton Rd., Westwood Rd., and Central St.	9/18/1989
Williams, Charles, House	108 Cross St.	9/18/1989
Williams, Charles, Jr., House	1 Arlington St.	9/18/1989
Williams, F. G., House	37 Albion St.	9/18/1989
Worthen, Daniel, House	8 Mt. Pleasant St.	9/18/1989
Wright House	54 Vinal Ave.	9/18/1989
Wyatt, George, House	33 Beacon St.	9/18/1989

Notes:
Sanborn, Head & Associates, Inc. (Sanborn Head) conducted a review of the National Register of Historic Places within Somerville, Massachusetts. The search returned 81 resutls, none of which are located at or abutting the site.

APPENDIX F: Best Management Practices Plan

Notice of Intent for the NPDES Remediation General Permit
Utility Construction and Remediation Dewatering at Assembly Row
Somerville, Massachusetts

This Best Management Practices Plan (BMPP) has been prepared in accordance with the requirements of the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) for Massachusetts (MAG910000). This BMPP is in support of an RGP application for dewatering during utility construction and remedial activities in the Assembly Square area of Somerville, Massachusetts. The dewatering discharge will be conveyed through the existing 84-inch storm drain outfall (the Somerville Marginal Conduit) and discharged to the Mystic River downstream from the Amelia Earhart Dam.

The following practices will be adhered to during the construction dewatering at the site.

Site Security

During construction activities, the dewatering system will be secured using standard construction practices. The fractionalization tank will be located in a fenced area to limit access. All associated piping will be secured and checked regularly. Any system failure, vandalism, or other incidents will be addressed in a timely manner to prevent the discharge of oil or hazardous materials from exceeding the limits of the RGP.

Minimizing Sediment in Influent

Crushed stone sumps constructed as far as possible from the active excavation area will be used as the suction points for the dewatering system intakes. Efforts will be made to manage the pumping such that the amount of sediment in the influent to the treatment is minimized.

Management of Generated Wastes

Portions of the utility construction excavations and the remediation excavations will be conducted within the limits of Massachusetts Contingency Plan (MCP) release sites. As such the wastes that are generated during the operation of the dewatering treatment system will be managed as MCP wastes. The anticipated wastes are sediment sludge that accumulates in the fractionalization tank, used bag filters, spent activated carbon, free phase petroleum that is separated in the oil water separator, and miscellaneous wastes associated with water quality sampling activities. The sediment sludge will be tested and disposed of at licensed facility that is permitted to accept material with the documented physical and chemical characteristics of the sludge. The used bag filters and the miscellaneous sampling wastes will be appropriately disposed of as solid or contaminated wastes, based on their characteristics. The spent activated carbon will be processed and recycled by the company providing the fresh carbon. Free phase product that is collected as a liquid will be transported to a licensed waste oil processing facility for characterization and disposal.

Prohibition of Discharge Exceeding Design Flow

The subcontractor providing the treatment system will provide the Operator with information on the design capacity of the treatment system and the features included in the design to monitor the flow rate to ensure that the capacity is not exceeded. The system will be monitored with a continuous flow meter such that the overall system flow does not exceed the lowest design capacity of an individual treatment system unit.

Preventative Maintenance Required

The treatment system will likely include two activated carbon units in series with a monitoring point between the tanks. Systematic sampling will take place at the intermediate sampling point. If the data at that point indicates that "breakthrough" has occurred, the downstream carbon tank will be moved to the upstream position and the carbon in the upstream unit will be changed out and then placed in service at the downstream side. The bag filters will be replaced whenever the pressure drop across the filters exceeds the system's design criteria. The subcontractor will be responsible for developing and implementing a preventative maintenance plan and schedule based on the specific design of the treatment system.

Employee Training

The field staff of the Operator and the subcontractor will be instructed regarding the water quality limits contained in the RGP and the critical need to operate the treatment system as designed. The staff will also be provided guidance on how to reduce the sediment content and minimize the volume of free product that is pumped into the treatment system. Personnel who have responsibilities related to the dewatering efforts will be informed of the contents of the RGP, this BMPP and the NOI.

Management of Run-on and Runoff

The overburden soil and fill material that that is located above the contaminated layer will be used to construct a berm around the perimeter of the excavation area to prevent rainfall runoff from migrating into the excavation. The stockpiles of the contaminated soils will be placed on plastic sheets and then covered with sheeting and bermed with hay bales until the off-site transport occurs.

Erosion, Scouring and Sediment Control

Considering the design flow of the system and the planned duration of the discharge relative to the size and flow of the storm drain where it discharges to the Mystic River, it is not anticipated that the dewatering discharge will cause erosion, stream scouring at the discharge point, or additional sedimentation in the Mystic River.