

The permittee will be taking total hardness samples from the receiving stream and effluent of the remediation system in order to calculate site-specific metal limitations. If the site specific metal limitations calculated are higher than the Appendix IV limitations, which were calculated using a statewide average hardness of 50 mg/l CaCO₃, the permittee reserves the right to submit an individual NPDES application as specified in the *Response to Comments on the October 2004 Proposed Remediation General Permit ("Response to Comments")* document posted on the EPA website. In addition, an evaluation of the remaining laboratory analysis may warrant the submittal of an individual NPDES application.

The NPDES Remediation General Permit and associated *Response to Comments* document, allow the permittee to request revisions to the permit conditions based upon site-specific conditions. The following is a list of the requested revisions for this facility.

TEMPERATURE

In the *Response to Comments* document, the EPA agreed that "temperature limits should only apply if the water treatment contains a heating process that can alter the temperature of the discharge and therefore impact the receiving water body"....Therefore the EPA will review each NOI and determine whether the discharge has the potential to affect the temperature sufficiently enough to require monitoring". Since the existing groundwater treatment system does not, and will not, alter the temperature of the receiving waterbody, we are requesting that the EPA not impose monitoring and sampling requirements for temperature at the above referenced location.

PH

In the *Response to Comments* document, the EPA recognized that "in many cases, the pH will not be altered by the operation of the water treatment system." Thus Part I.C.2. of the RGP allows permittees in Massachusetts to request the pH range be widened to within 6.0 - 9.0 standard units (SU) or another range due to naturally occurring conditions in the receiving water. Similarly, permittees may request such a change if the naturally occurring source water is unaltered by the permittee's operation. The current pH limitation for Class B waters in Massachusetts is 6.5 - 8.3 SU. Since the pH of the groundwater will be unaltered by the permittee's operation, we are requesting the pH range be widened to 6.0 - 9.0 SU for this facility.

EXEMPTION FROM INITIAL START-UP SAMPLING REQUIREMENTS

In the *Response to Comments* document, the EPA agreed that "treatment systems operating under the EPA Permit Exclusion that have been discharging for several years, unless the system has been down for 45 days or more as of the date that the final RGP becomes effective, can be exempted from the initial start-up sampling requirements." Since the referenced remediation system has been discharging under an EPA Permit Exclusion, and has not been down for greater than 45 days as of the date the RGP became effective (September 9, 2005), we are requesting exemption from the initial start-up sampling requirements listed in the RGP.

COMPLIANCE PERIOD

In the *Response to Comments* document, the EPA stated they "will make every effort to provide existing dischargers with sufficient transition time to make any necessary changes to the treatment system in order to comply with the RGP." Based on the influent sampling results enclosed herein, the EPA may impose sampling for parameters not previously required (e.g. metals), or lower limitations on parameters currently required. In order to avoid ceasing operation of the groundwater remediation system due to the risk of Notice of Violations (NOVs) and monetary penalties, the EPA should permit a compliance period of 30 months. During this compliance period the EPA should waive the limitations on those parameters not previously required and maintain the existing limit on those parameters currently required to be sampled on a monthly basis under the EPA Permit Exclusion for a period of 30 months from the effective date of the permit. Regulation 40 CFR Part 122.47 allows a maximum compliance period of three years.

A compliance period of 30 months is requested for the following reasons:

- The permittee needs to collect additional influent, midpoint and effluent data from the existing remediation system over a period of 12 months in order to determine if a system modification is warranted; one year is needed to account for the temperature changes and groundwater table fluctuations.
- If the sampling results indicate a system modification is warranted, an additional 18 months is needed in order for the following activities to be performed: redesign of the treatment system by a professional engineer, research of various treatment options, obtain local permits, obtain access agreements, obtain capital dollars for equipment purchase, purchase equipment, install equipment, power drop modifications, existing treatment shed expansions and pilot testing the new treatment equipment.

APPROVAL OF ALTERNATE METHODOLOGIES

HEXAVALENT CHROMIUM

In the *Response to Comments* document, the EPA agreed that "Method 7196A is a possible substitute" for the hexavalent chromium methods 218.6 and 1636. To use this method, permittees were instructed to request it individually as an alternative test procedure. The permittee was unable to locate any labs able to run hexavalent chromium by method 218.6 or 1636 since they are considered outdated methods. Method 7196A is currently utilized. The required ML of 10 ug/l is achievable by this method. Thus we are requesting the EPA approve method 7196A for hexavalent chromium for this facility.

APPROVAL OF ALTERNATE MLs

TOTAL ZINC

The ML listed for Total Zinc using an ICP test method is 10 ug/l. A survey of laboratories showed that the lowest ML obtainable was 20 ug/l. Thus we are requesting the USEPA accept this alternate ML. The laboratory QA/QC data deliverable package has been enclosed for your convenience.

TOTAL COPPER

The ML listed for Total Copper using an ICP test method is 5 ug/l. A survey of laboratories showed that the lowest ML obtainable was 20-25 ug/l. Thus we are requesting the USEPA accept this alternate ML. The laboratory QA/QC data deliverable package has been enclosed for your convenience.

If you have any questions, or require any additional information, I may be contacted at (732) 224-7066 extension 17.

Respectfully,
NewFields Princeton LLC



Michelle L. Smith
Project Scientist

US Environmental Protection Agency
RGP-NOI Processing
Shell-Branded Service Station, 140 Cambridge Street, Burlington, MA
Rodriquez Residence, 137 Cambridge Street, Burlington, MA
October 24, 2005
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Enclosures: Notice of Intent Form
Figures
Dilution Factor Calculations
Approved Massachusetts Year 2002 Integrated List of Waters, September 2003 (303(d) list)
Natural Heritage & Endangered Species Program – MA Div of Fisheries & Wildlife – Rare
Species by Town
Laboratory Analytical (System Influent)

C: Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street, 2nd Floor
Worcester, MA 01608
(w/ enclosures)

Town of Burlington
61 Orchard Street
Burlington, MA 01803
(w/ enclosures)

David Weeks, Shell OPUS
(w/ enclosures) via electronic mail

Don Maggioli, LSP, Envirotrac Ltd.
(w/ enclosures) via electronic mail

NewFields File
(w/ enclosures)

NOI FORM

I. Suggested Notice of Intent (NOI) Form

In order to be covered by the remediation general permit (RGP), applicants must submit a written Notice of Intent (NOI) to EPA Region I and the appropriate state agency. **All parties meeting the definition of “operator” must fill out, sign, and submit separate NOIs.**

The “operator” is defined in Part I.B.1. as the person¹ who has operational control over plans and specifications, or the person who has day-to-day supervision and control of activities occurring at the site. For purposes of this permit, the operator is either:

- i. The owner² (e.g., title holder, developer, or easement holder of the property) if that entity is performing all work related to complying with this permit; **or**
- ii. Both the owner² (e.g., title holder, developer, or easement holder of the property) and contractor(s) if a contractor(s) has been hired to perform work related to complying with this permit.

This means that each party meeting the definition of operator should apply for coverage under the RGP if it has operational control over either the project site plans and specifications, including the ability to make modifications to those plans and specifications (e.g., the property owner), **or** has day-to-day operational control of those activities at a project which are necessary to ensure compliance with permit conditions (e.g., the contractor). Where a party’s activity is part of a larger common plan (e.g., for the development or sale of the property), that party is only responsible for applying for the portions of the project for which it meets the definition of “operator.” In many instances, there may be more than one party at a site performing tasks related to “operational control” and hence, more than one operator must submit an NOI. Depending on the site and the relationship between the parties (e.g., owner, contractor, etc.), there could be either a single party acting as site operator and consequently responsible for obtaining permit coverage, or there could be two or more operators all needing permit coverage.

The following are three general “**operator**” scenarios (variations on any of these three are possible, especially as the number of owners and contractors increases):

- ▶ *“Owner” as “Operator” - sole permittee.* The property owner designs the structures and control systems for the site, develops and implements the BMPP, and serves as general contractor (or has an on-site representative with full authority to direct day-to-day operations). Under the definition of operator, in this case, the “Owner” would be considered the “operator” and therefore the only party that needs permit coverage. Everyone else working on the site may be considered subcontractors and do not need to apply for permit coverage.

¹ Defined in 40 CFR 122.2.

²For purposes of this permit, the “owner” of a property is the person, as defined by 40 CFR 122.2, holding the title, deed, or legal document to the regulated property, facility, or activity, including a party working under an easement on the property.

- ▶ *“Contractor” as “Operator” - sole permittee.* The property owner hires a company (e.g., a contractor) to design the project and oversee all aspects, including preparation and implementation of the BMPP and compliance with the permit (e.g., a “turnkey” project). Here, the contractor would likely be the only party needing a permit. It is under this scenario that an individual having a personal residence built for his own use (e.g., not those to be sold for profit or used as rental property) would not be considered an operator. Similarly, EPA expects that property owners hiring a contractor or consultant to perform groundwater remediation work (e.g., due to a leaking fuel oil tank) would come under this type of scenario. EPA believes that the contractor, being a professional in the industry, should be the responsible entity rather than the individual. The contractor is better equipped to meet the requirements of both applying for permit coverage and developing and properly implementing the plans needed to comply with the permit. However, property owners would also meet the definition of “operator” and require permit coverage in instances where they perform any of the required tasks on their personal properties.

- ▶ *“Owner” and “Contractor” as “Operators” - co-permittees.* The owner retains control over any changes to site plans, BMPPs, or wastewater conveyance or control designs, but the contractor is responsible for conducting and overseeing the actual activities (e.g., excavation, installation and operation of treatment train, etc.) and daily implementation of BMPP and other permit conditions. In this case, **both** parties need to apply for coverage.

Generally, a person would not be considered an “operator,” and subsequently would not need permit coverage, if: 1) that person is a subcontractor hired by, and under the supervision of, the owner or a general contractor (e.g., if the contractor directs the subcontractor’s activities on-site, it is probably not an operator); or 2) the person’s activities would otherwise result in the need for coverage under the RGP but another operator has legally assumed responsibility for the impacts of project activities.

A. Instructions for the Suggested Notice of Intent (NOI) - At a minimum, the Notice of Intent must include the following for each individual facility or site. Additional information may be attached as needed.

1. General facility/site information.

- a) Provide the **facility/site** name, mailing address, and telephone and fax numbers. Provide the facility SIC code(s). Provide the site location, including longitude and latitude.
- b) Provide the property **owner’s** name, address, email address, telephone and fax numbers, if different from the site information. Indicate whether the owner is a Federal, State, Tribal, private, or other entity.
- c) Provide the site **operator’s** (e.g., contractor’s) name, mailing address, telephone and fax numbers, and email address if different from the owner’s information.
- d) For the site for which the application is being submitted, indicate whether:
 - 1) a prior NPDES permit exclusion has been granted for the discharge (if so, provide the tracking number of the exclusion letter);

- 2) a prior NPDES application (Form 1 & 2C) has ever been filed for the discharge (if so, provide the tracking number and date that the application was submitted to EPA);
 - 3) the discharge is a "new discharge" as defined by 40 CFR 122.2; and
 - 4) for sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting.
- e) Indicate whether there is any ongoing state permitting, licensing, or other action regarding the facility or site which is generating the discharge. If "yes," provide any site identification number assigned by the state of NH or MA, any permit or license number assigned, and the state agency contact information (e.g. name, location, telephone no.).
- f) Indicate whether or not the facility is covered by other EPA permits including: the multi-sector storm water general permit; the Phase I or II Construction Storm Water General Permit; an individual NPDES permit; or, any other water quality-related individual or general permit. If so, provide permit tracking number(s).

2. Discharge information.

- a) Describe the discharge activities to be covered by the permit. Attach additional sheets as needed.
- b) Provide the following information about each discharge:
 - 1) the number of discharge points;
 - 2) the **maximum** and **average flow rate** of the discharge in cubic feet per second. For the average flow magnitude, include the units and appropriate notation if this value is a calculated design value or estimate if technical/design information is not available;
 - 3) the latitude and longitude of each discharge with an accuracy of 100 feet (see EPA's siting tool at: http://www.epa.gov/tri/report/siting_tool/);
 - 4) the total volume of potential discharge (gal), only if hydrostatic testing;
 - 5) indication whether the discharge(s) is intermittent or seasonal and if ongoing.
- c) Provide the expected start and end dates of discharge (month/day/year)
- d) 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. In order to complete section I.3. of the NOI, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for **all** of the parameters listed in Appendix III. The applicant may use historical data as a substitute for the new sample if the data was collected no more than 2 years prior to the effective date of the permit and if collected pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, and was analyzed with the test methods required by this permit. Otherwise, a new sample shall be taken and analyzed.

- a) Based on the analysis of the sample(s) of the untreated influent, the applicant must indicate which of the sub-categories (listed in Table V of Part I.C of the permit) that the potential discharge falls within.
- b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge.

Based on the required sampling and analysis, the applicant must fill in the table, or provide a narrative description, with the following additional information for each chemical that is **believed present**:

- 1) the number of samples taken (minimum of one sample);
- 2) the type of sample (e.g. grab, composite, etc.);
- 3) the analytical method used, including the method number;
- 4) the minimum level (ML) of the method used (based on Appendix VI);
- 5) the maximum daily amount (concentration, ug/l, and mass, kg) of each pollutant, based on the sampling data (see Appendix VIII instructions for sample mass calculations); and
- 6) the average daily amount (concentration and mass) of each pollutant, based on the sampling data.

If the results of the required sampling indicate that pollutants exist in addition to those listed in Appendix III of the RGP of the permit, the applicant must also describe those contaminants on the NOI in boxes in section I.3.b) on the line marked "Other," or using additional sheets as needed. Subsequently, EPA will decide if the RGP can apply or if an individual permit is necessary.

c) Determination of Reasonable Potential and Allowable Dilution for Discharges of Metals: If any *metals* are believed present in the potential discharge to freshwater³, the applicant must follow the 2 step calculation procedures described below to determine the reasonable potential for exceedance of water quality standards and dilution factor for each metal.

Step 1: Initial Evaluation

- 1) The applicant must evaluate all metals believed present in the discharge subject to this permit, including "naturally occurring" metals such as dissolved and/or total Iron. Applicants must enter the highest detected concentration of the metal at zero dilution in the "Maximum value" column of the NOI.
- 2) Based on the maximum concentration of each metal, the applicant must perform an initial evaluation assuming zero dilution in the receiving water. The applicant must compare the metals concentrations in the untreated (intake) waters to the limits contained in Appendix III.
 - i. If potential discharges (untreated influent) with metals contain concentrations above the concentration limits listed in Appendix III , applicant must proceed to step 2.

³Dilution factors may be available for discharges to saline waters but only with approval of the flow modeling information from the State prior to the submission of the NOI.

ii. If potential discharges (untreated influent) with metals contain concentrations below the concentrations listed in Appendix III, the applicant may skip step 2 and those metals will **not** be subject to permit limitations or monitoring requirements.

Step 2: Calculation of Dilution Factor

1) **For applicants in NH:** If a metal concentration in a potential discharge (untreated influent) to **freshwater**³ exceeds the limits in Appendix III with zero dilution, the applicant shall evaluate the potential concentration considering a dilution factor (DF) using the formula below. **For sites in New Hampshire, the applicant must contact NH DES to determine the 7Q10 and dilution factor.**

$$DF = [(Qd + Qs)/Qd] \times 0.9$$

Where:

DF	= Dilution Factor
Qd	= Maximum flow rate of the discharge in cubic feet per second (cfs) (1.0 gpm = .00223 cfs)
Qs	= Receiving water 7Q10 flow, in cfs, where,
7Q10	= The annual minimum flow for 7 consecutive days with a recurrence interval of 10 years
0.9	= Allowance for reserving 10% of the assets in the receiving stream as per Chapter ENV-Ws 1700, Surface Water Quality Regulations

i. Using the DF calculated from the formula above, the applicant must refer to the corresponding DF range column in Appendix IV. The applicant then compares the maximum concentration of the metal entered on the NOI to the corresponding total recoverable metals limits listed in Appendix IV.

1. If a metal concentration in the potential discharge (untreated influent) is less than the corresponding limit in Appendix IV, the metal will **not** be subject to permit limitations or monitoring requirements.
2. If a metal concentration in the potential discharge (untreated influent) is equal to or exceeds the corresponding limit in Appendix IV, the applicant must reduce it in the effluent to a concentration below the applicable total recoverable metals limit in Appendix IV prior to discharge.

ii. In either case, the applicant must submit the results of this calculation as part of the NOI. EPA and NH DES will review the proposed effluent limitations for each metal and approve or disapprove the limits in the notification of coverage letter to the applicant.

2) **For applicants in MA:** If a metal concentration in a in a potential discharge (untreated influent) to **freshwater**³ exceeds the limits in Appendix III with zero dilution, the applicant must evaluate the potential concentration considering a dilution factor (DF) using the formula below.

$$DF = (Qd + Qs)/Qd$$

Where: **DF** = Dilution Factor
Qd = Maximum flow rate of the discharge in cubic feet per second (cfs)
(1.0 gpm = .00223 cfs)
Qs = Receiving water 7Q10 flow (cfs) where,
7Q10 = The minimum flow (cfs) for 7 consecutive days with a recurrence interval of 10 years

i. The applicant may estimate the 7Q10 for a receiving water by using available information such as nearby USGS stream gauging stations directly or by application of certain “flow factors,” using historic streamflow publication information, calculations based on drainage area, information from state water quality offices, or other means. In many cases the states of MA have calculated 7Q10 information using “flow factors” for a number of streams in the state. The source of the low flow value(s) used by the applicant must be included on NOI application form. Flow data can also be obtained from web applications such as STREAMSTATS located at: <http://ma.water.usgs.gov/streamstats/>.

ii. Using the DF calculated from the formula above, the applicant must refer to the corresponding DF range column in Appendix IV. The applicant then compares the maximum concentration of each metal entered on the NOI to the corresponding total recoverable metals limit listed in Appendix IV.

1. If a metal concentration in the potential discharge (untreated influent) is less than the corresponding limit in Appendix IV, the metal will **not** be subject to permit limitations or monitoring requirements.

2. If a metal concentration in a potential discharge (untreated influent) is equal to or exceeds the corresponding limit in Appendix IV, the applicant must reduce it in the effluent to a concentration below the applicable total recoverable metals limit in Appendix IV prior to discharge.

iii. The applicant must submit the results of this calculation as part of the NOI. EPA (and MA DEP where the discharge not covered by 310 CMR 40.0000) will review the proposed effluent limitations for each metal and approve or disapprove the limits in the notification of coverage letter to the applicant.

4. Treatment system information.

a) Describe the treatment train for each discharge and attach a schematic of the proposed or existing treatment system.

b) Identify each major treatment unit (e.g. frac tanks, filters, air stripper, liquid phase/vapor phase activated carbon, oil/water separators, etc.) by checking all that apply and describing any additional equipment not listed. Provide a written description of how the system train will be set up. Attach additional sheets as needed.

c) Provide the proposed **average** and **maximum flow** rates (in gallons per minute, gpm) for the discharge and the **design flow** rates (in gpm) of the treatment system. Clearly identify the component of the treatment with the most limited flow, i.e., the part of the treatment train that establishes the **design flow**.

d) Describe any chemical additives being used, or planned to be used, and attach MSDS sheets for each. EPA may request further information regarding the chemical composition of the additive, potential toxic effects, or other information to insure that approval of the use of the additive will not cause or contribute to a violation of State water quality standards. Approval of coverage under the RGP will constitute approval of the use of the chemical additive(s). If coverage of the discharge under the RGP has already been granted and the use of a chemical additive becomes necessary, the permittee must submit a Notice of Change (NOC).

5. Receiving surface water(s) information.

a) Identify the discharge pathway by checking whether it is discharged: directly to the receiving water, within the facility (e.g., through a sewer drain), to a storm drain, to a river or brook, to a wetland, or other receiving body.

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters into which discharge will occur.

c) Provide a detailed map(s) indicating the location of the site and outfall to the receiving water:

1) For multiple discharges, the discharges should be numbered sequentially.

2) In the case of indirect dischargers (to municipal storm sewer, etc) the map(s) must be sufficient to indicate the location of the discharge to the indirect conveyance and the discharge to the state classified 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 and the basin;

e) Specify the reported seven day-ten year low flow (7Q10) of the receiving water (see Section I.A.3)c. above). In New Hampshire, the 7Q10 must be provided by to the applicant by the New Hampshire Department of Environmental Services.

f) Indicate whether the receiving water is a listed 303(d) water quality impaired or limited water and if so, for which pollutants (see Section VII.H. of the Fact Sheet for additional information). Also, indicate if there is a TMDL for any of the listed pollutants. For MA, the list of waters can be found at: <http://www.mass.gov/dep/brp/wm/tmdls.htm> and for NH:

<http://www.epa.gov/ne/eco/tmdl/impairedh2o.html>. For more information, contact the states at: New Hampshire Department of Environmental Services, Watershed Management Bureau at 603-271-3503 or the Massachusetts Department of Environmental Protection at 508-767-2796 or 508-767-2873;

6. Consultation with Federal Services - As required in Part I.A.4 and Appendix VII the operator of a site/facility must ensure that the potential discharge will not affect adversely endangered species, designated critical habitat, or essential fish habitat, or national historic places that are in proximity to the potential discharge. If the potential discharge is to certain water bodies, the applicant must also submit a formal certification with the NOI that indicates the consultation, with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (the Services), resulted in either a no jeopardy opinion or a written concurrence on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat. Facilities should begin the

consultation as early in the process as possible.

a) Indicate whether any listed threatened or endangered species, designated critical habitat, or essential fish habitat, are in proximity to the discharge to be covered by this permit and whether any consultation with the Services is complete or underway.

b) Indicate whether or not there are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge (see <http://www.cr.nps.gov/nr/research/nris.htm>), and whether any state or tribal historic preservation officer (SHPO or THPO) was consulted in such a determination (for Massachusetts sites only).

7. Supplemental information. Applicants should provide any supplemental information needed to meet the requirements of the permit, including, any analytical data used to support the application, and any certification(s) required.

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.

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

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

a) Name of facility/site: Rodriguez Residence		Facility/site address: Street: 137 Cambridge Street	
Location of facility/site: longitude: 71°11'35" latitude: 42° 30' 17"		Facility SIC code (s): N/A - Residence	
b) Name of facility/site owner: Enrique Rodriguez		Town: Burlington	
Email address of owner: N/A		State: MA	Zip: 01803
Telephone no. of facility/site owner: N/A		County: Middlesex	
Fax no. of facility/site owner: N/A		Owner is (check one) 1. Federal <input type="checkbox"/> 2. State/Tribal <input type="checkbox"/> 3. Private <input checked="" type="checkbox"/> 4. other, <input type="checkbox"/> if so, describe:	
Address of owner (if different from site):			
Street: 137 Cambridge Street			
Town: Burlington		State: MA	Zip: 01803
c.) Legal name of operator: Motiva Enterprises LLC		County: Middlesex	
Operator telephone no.:		Operator fax no.:	
845-462-5225		845-462-4999	
Operator email: David.Weeks@Shell.com			
Operator contact name and title: David Weeks, Senior Environmental Engineer			
Address of operator (if different from owner):			
Street: 1830 South Road, Unit 24, PMB 301			
Town: Wappingers Falls		State: NY	Zip: 12590
		County: Dutchess	
d) Check "yes" or "no" for the following:			
1. Has a prior NPDES permit exclusion been granted for the discharge? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> , if "yes," number: MA-031-071			
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> , if "yes," date and tracking #:			
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

<p>e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>.</p> <p>If "yes," please list:</p> <p>1. site identification # assigned by the state of NH or MA:</p> <p>2. permit or license # assigned:</p> <p>3. state agency contact information: name, location, and telephone number:</p>	<p>f) Is the site/facility covered by any other EP A permit, including:</p> <p>1. multi-sector storm water general permit? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>, if Y, number:</p> <p>2. phase I or II construction storm water general permit? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>, if Y, number:</p> <p>3. individual NPDES permit? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>, if Y, number:</p> <p>4. any other water quality related permit? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>, if Y, number:</p>
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2. **Discharge information.** Please provide information about the discharge, (attaching additional sheets as needed) including:

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

Groundwater remediation project at residential property associated with remediation of Shell Service Station at 140 Cambridge Street, Burlington, MA.

<p>b) Provide the following information about each discharge:</p>	<p>1) Number of discharge points: One (1)</p> <p>2) What is the maximum and average flow rate of discharge (in cubic feet per second, W/s)? Max. flow <u>0.027</u> ft³/sec Average flow <u>0.006</u> ft³/sec Is maximum flow a design value? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>, For average flow, include the units and appropriate notation if this value is a design value or estimate if not available. Average flow <u>0.006</u> ft³/sec (based on historical operations)</p>
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3) Latitude and longitude of each discharge within 100 feet: pt.1: long. 71° 11' 45" lat. 42° 30' 11"; pt.2: long. ___ lat. ___; pt.3: long. ___ lat. ___; pt.4: long. ___ lat. ___; pt.5: long. ___ lat. ___; pt.6: long. ___ lat. ___; pt.7: long. ___ lat. ___; pt.8: long. ___ lat. ___; etc.

<p>4) If hydrostatic testing, total volume of the discharge (gals):</p> <p style="text-align: center;">N/A</p>	<p>5) Is the discharge intermittent <input checked="" type="checkbox"/> Or seasonal <input type="checkbox"/> ?</p> <p>Is discharge ongoing Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> ?</p>
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c) Expected dates of discharge (mm/dd/yy): start 03/08/03 end unknown

d) Please attach a line drawing or flow schematic showing water flow through the facility including: See Figures.

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. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for all of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only <input checked="" type="checkbox"/>	VOC Only <input type="checkbox"/>	Primarily Metals <input type="checkbox"/>	Urban Fill Sites <input type="checkbox"/>	Contaminated Sumps <input type="checkbox"/>	Mixed Contaminants <input type="checkbox"/>	Aquifer Testing <input type="checkbox"/>
Fuel Oils (and Other Oils) only <input type="checkbox"/>	VOC with Other Contaminants <input type="checkbox"/>	Petroleum with Other Contaminants <input type="checkbox"/>	Listed Contaminated Sites <input type="checkbox"/>	Contaminated Dredge Condensates <input type="checkbox"/>	Hydrostatic Testing of Pipelines/Tanks <input type="checkbox"/>	Well Development or Rehabilitation <input type="checkbox"/>

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is believed present or believed absent in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	#of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg) (kg/day)	concentration (ug/l)	mass (kg) (kg/day)
1. Total Suspended Solids		√	1	GRAB	160.2	1000	4000	0.3275		
2. Total Residual Chlorine	√		1	GRAB	330.5	20	<20	<0.00164		
3. Total Petroleum Hydrocarbons	√		1	GRAB	1664	2000	<2000	<0.1638		
4. Cyanide			1	GRAB	335.3					
5. Benzene			1	GRAB	8260B					
6. Toluene			1	GRAB	8260B					
7. Ethylbenzene			1	GRAB	8260B					
8. (m,p,o) Xylenes			1	GRAB	8260B					
9. Total BTEX ⁴			1	GRAB	8260B	-----				

⁴ BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
10. Ethylene Dibromide (1,2-Dibromo-methane)			1	GRAB	504.1					
11. Methyl-tert-Butyl Ether (MTBE)			1	GRAB	8260B					
12. tert-Butyl Alcohol (TBA)			1	GRAB	8260B					
13. tert-Amyl Methyl Ether (TAME)			1	GRAB	8260B					
14. Naphthalene			1	GRAB	8270C SIM					
15. Carbon Tetrachloride			1	GRAB	8260B					
16. 1,4 Dichlorobenzene			1	GRAB	8260B					
17. 1,2 Dichlorobenzene			1	GRAB	8260B					
18. 1,3 Dichlorobenzene			1	GRAB	8260B					
19. 1,1 Dichloroethane			1	GRAB	8260B					
20. 1,2 Dichloroethane			1	GRAB	8260B					
21. 1,1 Dichloroethylene			1	GRAB	8260B					
22. cis-1,2 Dichloroethylene			1	GRAB	8260B					
23. Dichloromethane (Methylene Chloride)			1	GRAB	8260B					
24. Tetrachloroethylene			1	GRAB	8260B					

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
25. 1,1,1 Trichloroethane			1	GRAB	8260B					
26. 1,1,2 Trichloroethane			1	GRAB	8260B					
27. Trichloroethylene			1	GRAB	8260B					
28. Vinyl Chloride			1	GRAB	8260B					
29. Acetone			1	GRAB	8260B					
30. 1,4 Dioxane			1	GRAB	8260B					
31. Total Phenols			1	GRAB	8270C					
32. Pentachlorophenol			1	GRAB	8270C SIM					
33. Total Phthalates ⁶ (phthalate esters)			1	GRAB	8270C					
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]			1	GRAB	8270C					
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)			1	GRAB	8270C					
a. Benzo(a) Anthracene			1	GRAB	8270C					
b. Benzo(a) Pyrene			1	GRAB	8270C					
c. Benzo(b) Fluoranthene			1	GRAB	8270C					
d. Benzo(k) Fluoranthene			1	GRAB	8270C					
e. Chrysene			1	GRAB	8270C					

⁶The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	#of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
f. Dibenzo(a,h)anthracene			1	GRAB	8270C					
g. Indeno(1,2,3-cd)Pyrene			1	GRAB	8270C					
36. Total Group II Polycyclic Aromatic Hydrocarbons (pAR)			1	GRAB	8270C					
h. Acenaphthene			1	GRAB	8270C					
i. Acenaphthylene			1	GRAB	8270C					
j. Anthracene			1	GRAB	8270C					
k. Benzo(ghi) Perylene			1	GRAB	8270C					
l. Fluoranthene			1	GRAB	8270C					
m. Fluorene			1	GRAB	8270C					
n. Naphthalene-			1	GRAB	8270C					
o. Phenanthrene			1	GRAB	8270C					
p. Pyrene			1	GRAB	8270C					
37. Total Polychlorinated Biphenyls (PCBs)	√		1	GRAB	608	0.2 - 0.4	<0.2 - <0.4	<1.64 E-5 - <3.28 E-5		
38. Antimony	√		1	GRAB	3113B	5.0	<5.0	<4.09 E-4		
39. Arsenic			1	GRAB	3010A-6010B					
40. Cadmium	√		1	GRAB	3113B	0.5	<0.5	<4.09 E-5		
41. Chromium III (1)	√		1	GRAB	Calculated	-----	Non Detect	-----		
42. Chromium VI	√		1	GRAB	7196A	50	<50	<0.0041		

NOTES: (1) Chromium III = Total Chromium – Hexavalent Chromium

PARAMETER	Believe Absent	Believe Present	#of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
43. Copper	√		1	GRAB	200.7	20	<20	<0.0016		
44. Lead		√	1	GRAB	3113B	2	8	0.0007		
45. Mercury	√		1	GRAB	245.1	0.20	<0.20	<1.64 E-5		
46. Nickel	√		1	GRAB	200.7	5	<5	<4.09 E-4		
47. Selenium	√		1	GRAB	3113B	5	<5	<4.09 E-4		
48. Silver	√		1	GRAB	3113B	0.5	<0.5	<4.09 E-5		
49. Zinc		√	1	GRAB	200.7	20	110	0.0090		
50. Iron		√	1	GRAB	200.7	50	2000	0.1638		
Other (describe):	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

c. For discharges where metals are believed present, please fill out the following:

<p>Step 1: Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y <input checked="" type="checkbox"/> N <input type="checkbox"/></p>	<p>If yes, which metals? _____ Pb, Zn, Fe</p>
<p>Step 2: For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part L.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? Metals: _____ Pb, Zn, Fe</p>	<p>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 <input checked="" type="checkbox"/> N <input type="checkbox"/> If "Yes," list which metals: _____ Pb, Zn, Fe</p>
<p>DF: _____ 1.00</p>	

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 is extracted from one recovery well and a sump and treated by one equalization tank, three bag filters and three granular activated carbon units. See Figure 4.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank <input type="checkbox"/>	Air stripper <input type="checkbox"/>	Oil/water separator <input type="checkbox"/>	Equalization tanks <input checked="" type="checkbox"/>	Bag filter <input checked="" type="checkbox"/>	GAC filter <input checked="" type="checkbox"/>
	Chlorination <input type="checkbox"/>	Dechlorination <input type="checkbox"/>	Other (please describe):			

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 2.7 GPM Maximum flow rate of treatment system 12 GPM Design flow rate of treatment system 15 GPM

d) A description of chemical additives being used or planned to be used (attach MSDS sheets): Not Applicable

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

a) Identify the discharge pathway:	Direct <input type="checkbox"/>	Within facility <input type="checkbox"/>	Storm drain <input type="checkbox"/>	River/brook <input type="checkbox"/>	Wetlands <input checked="" type="checkbox"/>	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters: Discharge to an unnamed wetlands to Long Meadow Brook to unnamed wetlands to Shaker Glen Brook to Horn Pond to Wedge Pond to Aberjona River to Mystic Lake to Mystic River; Mystic River Class B.						

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 discharges, 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. See Figures.
d) Provide the state water quality classification of the receiving water Class B (Freshwater).

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 0.00 cfs
Please attach any calculation sheets used to support stream flow and dilution calculations. See attached.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes No If yes, for which pollutant(s)? State Impairment (see attached)
Is there a TMDL? Yes No If yes, for which pollutant(s)? There were no TMDLs reported to EPA by the state.

6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes No
Has any consultation with the federal services been completed? Yes No or is consultation underway? Yes No

What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one): Not applicable

a "no jeopardy" opinion? or written concurrence on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?

Yes No Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes No

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.

See cover letter.

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: <u>Rodriguez Residence, 137 Cambridge Street, Burlington, MA</u>
Operator signature: _____
Title: <u>David Weeks, Senior Environmental Engineer</u>
Date: _____

B. Submission of NOI to EPA - All operators applying for coverage under this General Permit must submit a written Notice of Intent (NOI) to EPA. Signed and completed NOI forms and attachments must be submitted to EPA-NE at:

US Environmental Protection Agency
RGP-NOC Processing
Municipal Assistance Unit (CMU),
1 Congress Street, Suite 1100
Boston, MA 02114-2023

or electronically mailed to NPDES.Generalpermits@epa.gov,
or faxed to the EPA Office at 617-918-0505.

If filling out the suggested NOI form electronically on EPA's website, the signature page must be signed and faxed or mailed to EPA at the phone number or address listed in Section I.B. below.

1. Filing with the states - A copy of any NOI form filed with EPA-NE must also be filed with state agencies. The state agency may elect to develop a state specific form or other information requirements.

a) Discharges in Massachusetts - In addition to the NOI, permit applicants must submit copies of the State Application Form BRPWM 12, Request for General Permit coverage for the RGP. The application form and the Transmittal Form for Permit Application and Payment, may be obtained from the Massachusetts Department of Environmental Protection (MA DEP) website at www.state.ma.us/dep. Municipalities are fee-exempt, but should send a copy of the transmittal form to that address for project tracking purposes. All applicants should keep a copy of the transmittal form and a copy of the application package for their records.

1) A copy of the NOI, the transmittal form, a copy of the check, and Form BRPWM 12 should be sent to:

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street, 2nd floor
Worcester, MA 01608

2) A copy of the transmittal form and the appropriate fee should be sent to:

Massachusetts Department of Environmental Protection
P.O. Box 4062
Boston, MA 02111

Please note: Applicants for discharges in Massachusetts should note that under 310 CMR 40.000, *as a matter of state law*, the general permit only applies to discharges that are **not** subject to the Massachusetts Contingency Plan (MCP) and 310 CMR 40.000. Therefore, discharges subject to the MCP are **not** required to fill out and submit the State Application Form BRPWM 12 or pay the state fees. However, they must submit a NOI to EPA.

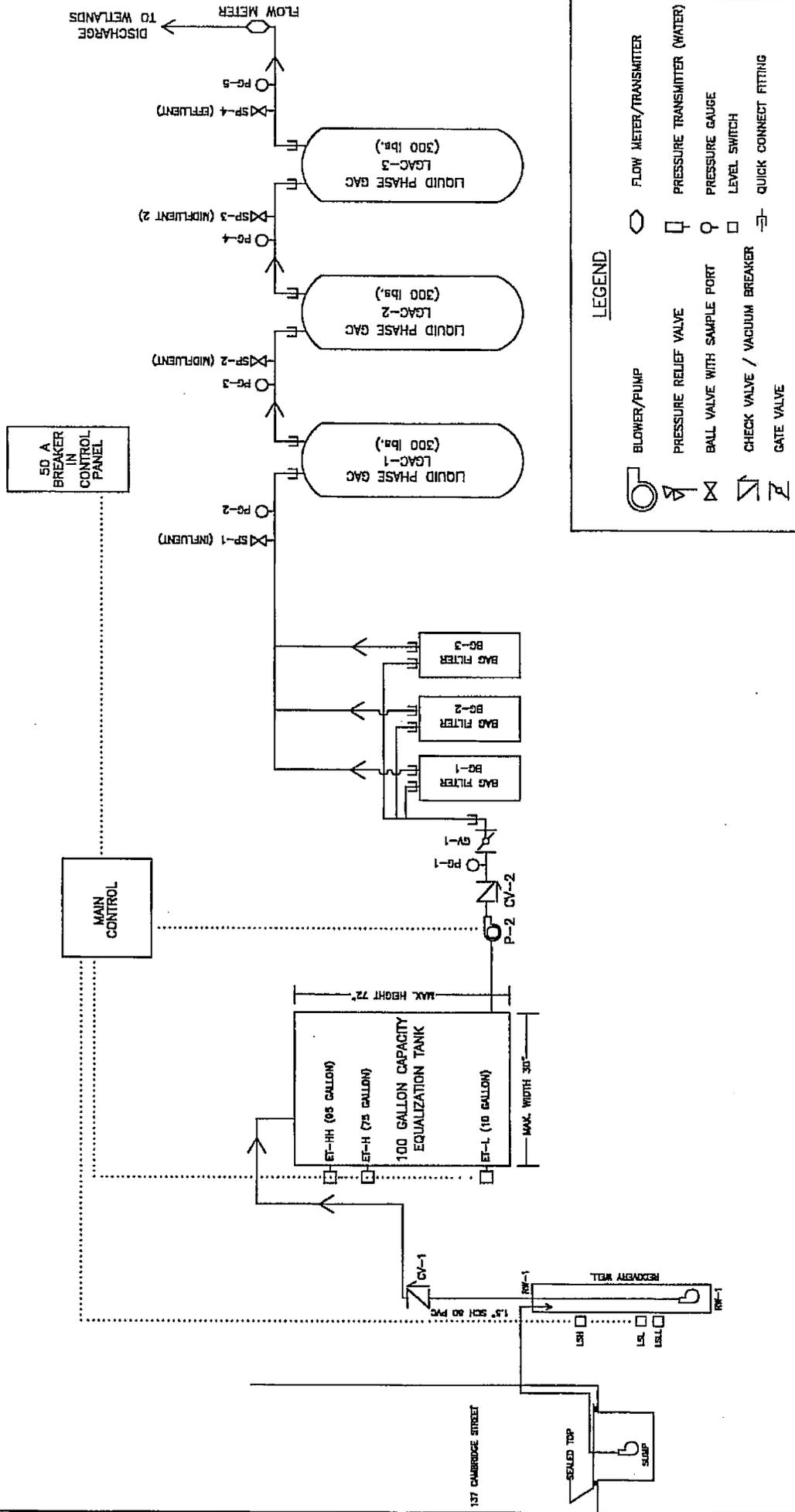
b) Discharges in New Hampshire - applicants must provide a copy of the Notice of Intent to:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
P.O. Box 95
Concord, New Hampshire 03302-0095.

2. Filing with Municipalities - A copy of the NOI must be submitted to the municipality in which the proposed discharge would be located.

FIGURES

GWRT SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM



LEGEND

- BLOWER/PUMP
- PRESSURE RELIEF VALVE
- BALL VALVE WITH SAMPLE PORT
- CHECK VALVE / VACUUM BREAKER
- GATE VALVE
- FLOW METER/TRANSMITTER
- PRESSURE TRANSMITTER (WATER)
- PRESSURE GAUGE
- LEVEL SWITCH
- QUICK CONNECT FITTING

EnviroTrac
 1400 PROVIDENCE HIGHWAY, SUITE 2100
 NORWOOD, MA 02062 (781) 789-5005

RESIDENTIAL TREATMENT SYSTEM
 137 CAMBRIDGE STREET
 BURLINGTON, MASSACHUSETTS

SYSTEM P&ID

DRAWING REVISED
 SEPTEMBER 15, 2005

FIGURE 4

NOT TO SCALE



LEGEND

- UNDERGROUND STORAGE TANK
- MAPPED WETLANDS
- MONITORING WELL
- BORING
- APPROXIMATE PROPERTY LINE
- SOIL GAS MONITORING POINT
- MONITORING WELL EXCEEDING METHOD 1 STANDARDS
- DESTROYED MONITORING WELL

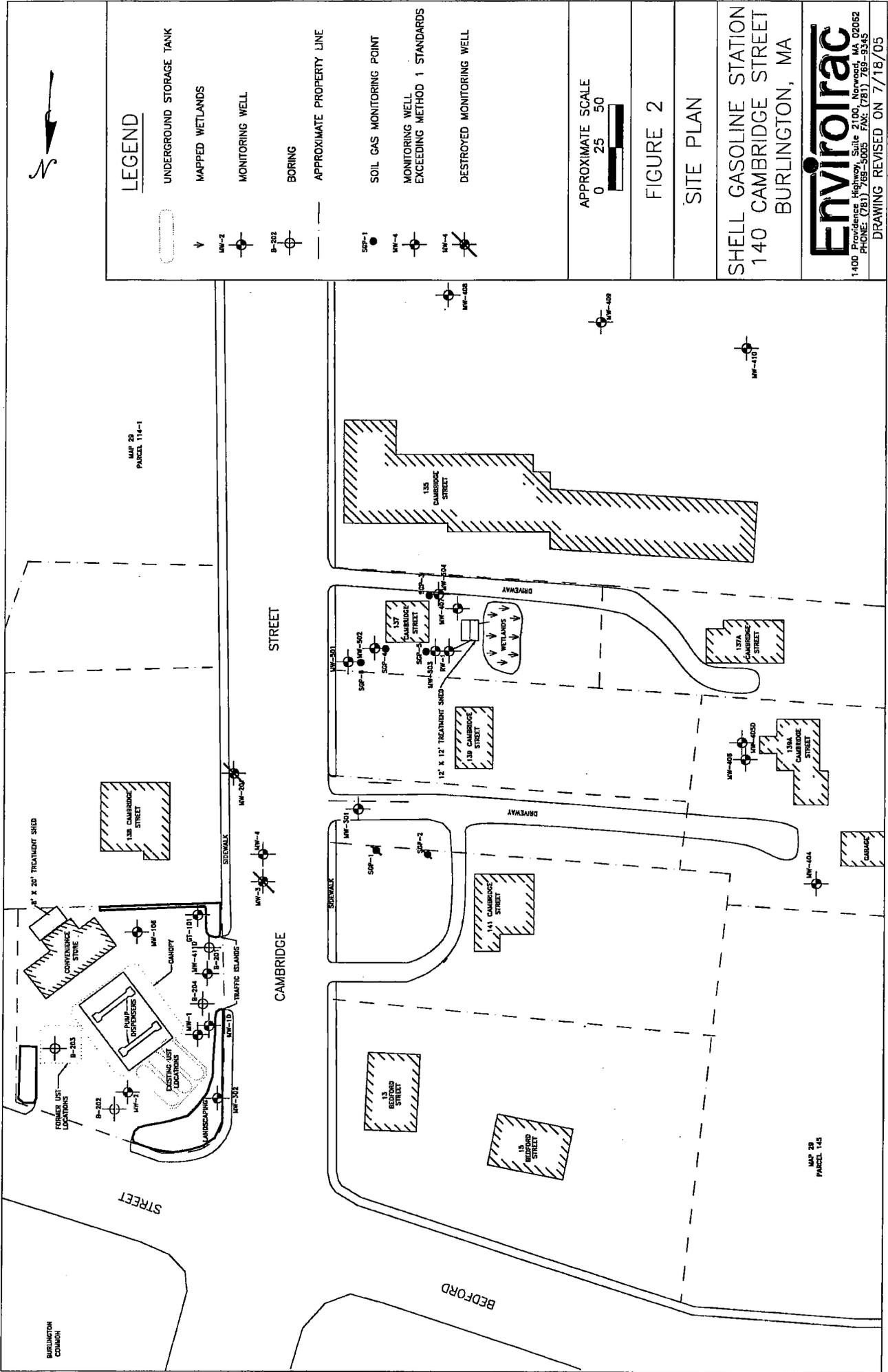


FIGURE 2
SITE PLAN

SHELL GASOLINE STATION
140 CAMBRIDGE STREET
BURLINGTON, MA

Envirotrac
1400 Providence Highway, Suite 2100, Norwood, MA 02062
PHONE: (781) 785-5005 FAX: (781) 785-5345

DRAWING REVISED ON 7/18/05



MAP 29
PARCEL 145

DILUTION FACTOR CALCULATIONS

**DILUTION FACTOR CALCULATION WORKSHEET
NPDES REMEDIATION GENERAL PERMIT - NOTICE OF INTENT FORM**

Site: Rodriguez Residence
Address: 137 Cambridge Street, Burlington, MA
Receiving Stream: Wetlands (Class B)

$$\frac{12}{0.02676} = \text{Maximum flow rate of the discharge (gpm)}$$
$$Qd = \frac{0.02676}{1.0} = \text{Maximum flow rate of the discharge in cubic feet per second (cfs), } 1.0 \text{ gpm} = 0.00223 \text{ cfs}$$

$$Qs = \frac{0.00}{7Q10} = \text{Receiving water } 7Q10 \text{ flow (cfs) where,}$$

7Q10 = The minimum flow (cfs) for 7 consecutive days with a recurrence interval of 10 years

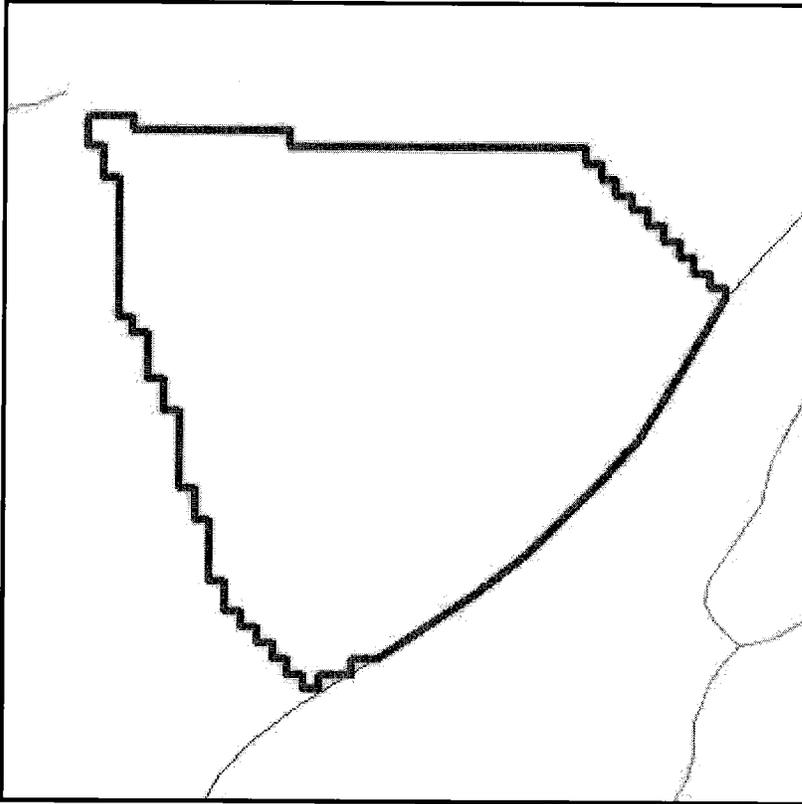
$$\text{MA Maximum DF} = (Qd + Qs) / Qd$$

$$\text{Maximum DF} = \text{Dilution Factor} = \boxed{1.0000}$$

NOTE: Source: USGS, Streamflow Statistics Report, <http://stdmaml.er.usgs.gov/streamstats/expert.htm>



Streamflow Statistics Report



Date: Fri Oct 21 09:30:29 2005

Warning! Drainage Area outside allowable range. Prediction intervals not calculated.

Latitude: 42.4988

Longitude: -71.1982

Measured Basin Characteristics:

Drainage Area (square miles): 0.04

Stratified Drift Area (square miles): 0.00

Stream Length (miles): 0.04

Slope (percent): 0.00

Region: 0

Statistic	Estimated streamflow, ft ³ /s	90% Prediction interval	
		Minimum	Maximum
99-percent duration flow	0.00		
98-percent duration flow	0.00		
95-percent duration flow	0.00		

90-percent duration flow	0.00		
85-percent duration flow	0.00		
80-percent duration flow	0.00		
75-percent duration flow	0.01		
70-percent duration flow	0.01		
60-percent duration flow	0.02		
50-percent duration flow	0.03		
7-day, 2-year low flow	0.00		
* 7-day, 10-year low flow	0.00		
August median flow	0.00		

U.S. Department of the Interior, U.S. Geological Survey
10 Bearfoot Road
Northborough, MA 01532
(508) 490-5000

Maintainer: webmaster@mass1.er.usgs.gov

**ENDANGERED SPECIES ACT
TOWN SPECIES LIST**

In accordance with Appendix VII of the NPDES Remediation General Permit, it was determined that the four species of concern (**shortnose sturgeon, dwarf wedge mussel, bog turtle** and the **northern redbelly cooter**) are not present at the facility pursuant to USEPA Endangered Species Act Review Procedures website (<http://cfpub.epa.gov/npdes/stormwater/esa.cfm>). See attached list.

Town		Taxonomic Group	Scientific Name	Common Name	State Rank	Federal Rank	Most Recent Obs
BURLINGTON	*	Fish	Notropis bifrenatus	Bridle Shiner	SC		1994
BURLINGTON	*	Reptile	Clemmys guttata	Spotted Turtle	SC		1988
BURLINGTON	*	Reptile	Terrapene carolina	Eastern Box Turtle	SC		1998
BURLINGTON	*	Vascular Plant	Carex polymorpha	Variable Sedge	E		2000
BURLINGTON		Vascular Plant	Prenanthes serpentaria	Lion's Foot	E		1906

**MASSACHUSETTS YEAR 2002
INTEGRATED LIST OF WATERS
(303 (d) LIST)**

Appendix 2 Waterbody Segments and Integrated List Categories by Major Watershed

NAME	SEGMENT ID	DESCRIPTION	ASSESS DATE	CATEGORY
Dorchester Bay (70903)	MA70-03_2002	From the mouth of the Neponset River, Boston/Quincy to the line between Head Island and the north side of Thompson Island and the line between the south point of Thompson Island and Chapel Rocks, Boston/Quincy.	Jan-02	5
Hingham Bay (70905)	MA70-06_2002	The area north of the Weymouth Fore River extending on the west along the line between Nut Island and the south point of West Head, and on the east side along a line from Prince Head just east of Pig Rock to the mouth of the Weymouth Fore River (midway between Lower Neck and Manot Beach), Quincy.	Jan-02	5
Hingham Bay (70905)	MA70-07_2002	The area defined between Peddocks Island and Windmill Point; from Windmill Point southeast to Bumkin Island; from Bumkin Island southeast to Sunset Point; from Sunset Point across the mouth of the Weir River to Worlds End; from Worlds End across the mouth of Hingham Harbor to Crow Point; from Beach Lane, Hingham across the mouth of the Weymouth Back River to Lower Neck; and from Lower Neck midway across the mouth of the Weymouth Fore River.	Jan-02	5
Hingham Harbor (70906)	MA70-08_2002	Hingham Harbor inside a line from Crows Point to Worlds End, Hingham.	Jan-02	5
Hull Bay (70907)	MA70-09_2002	The area defined east of a line from Windmill Point to Bumkin Island and from Bumkin Island to Sunset point, Hull.	Jan-02	5
Pleasure Bay (70909)	MA70-11_2002	A semi-enclosed bay, the flow restricted through two channels between Castle and Head Islands, Boston	Jan-02	5
Quincy Bay (70904)	MA70-04_2002	From Bromfield Street near the Wallaston Yacht Club, northeast to N42.2781 W70.9941, southeast to N42.2735 W70.9678, and south to Newton Street on the northerly shore of Houghs Neck, Quincy.	Jan-02	5
Quincy Bay (70904)	MA70-05_2002	Quincy Bay, north of the class SA waters (segment MA70-04), Quincy to the line between Moon Head and Nut Island, Quincy.	Jan-02	5
Winthrop Bay (70908)	MA70-10_2002	From the tidal flats at Coleridge Street, East Boston to a line between Logan International Airport and Point Shirley, East Boston/Winthrop.	Jan-02	5
Boston Harbor: Mystic				
Aberjona River (7138350)	MA71-01_2002	Source just south of Birch Meadow Drive, Reading to inlet Upper Mystic Lake at Mystic Valley Parkway, Winchester. Miles 18.4-9.2	Jan-02	5
Alewife Brook (7138250)	MA71-04_2002	Outlet of Little Pond, Belmont to confluence with Mystic River, Arlington/Somerville. Miles 2.25-0.00	Jan-02	5
Bellevue Pond (71004)	MA71004_2002	Medford	Sep-96	3
Blacks Nook (71005)	MA71005_2002	Cambridge	Sep-96	5
Chelsea River (7138100)	MA71-06_2002	Confluence with Mill Creek, Chelsea/Revere to confluence with Mystic River, Chelsea/East Boston/Charlestown.	Jan-02	5
Clay Pit Pond (71011)	MA71011_2002	Belmont	Jan-02	5
Elli Pond (71014)	MA71014_2002	Melrose	Sep-96	5
Hills Pond (71018)	MA71018_2002	Arlington	Dec-93	3
Horn Pond (71019)	MA71019_2002	Woburn	Dec-93	5
Judkins Pond (71021)	MA71021_2002	Winchester	Jan-02	5
Lower Mystic Lake (71027)	MA71027_2002	Arlington	Jan-02	5
Malden River (7138200)	MA71-05_2002	Headwaters south of Exchange St., Malden to confluence with Mystic River, Everett/Medford. Miles 2.25-0.00	Jan-02	5
Mill Brook (7138300)	MA71-07_2002	Outlet of Arlington Reservoir to inlet of Lower Mystic Lake, Arlington (portions culverted underground).	May-03	5
Mill Pond (71031)	MA71031_2002	Winchester	Jan-02	5
Mystic River (7138150)	MA71-02_2002	Outlet Lower Mystic Lake, Arlington/Medford to Amelia Earhart Dam, Somerville/Everett. Miles 7.4-2.0	Jan-02	5
Mystic River (7138150)	MA71-03_2002	Amelia Earhart Dam, Somerville/Everett to confluence with Chelsea River, Chelsea/Charlestown/East Boston (Includes Island End River).	Jan-02	5





U.S. Environmental Protection Agency

Total Maximum Daily Loads

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Listed Water Information

CYCLE : 2002

Click [here](#) to see metadata for this report.

Cycle: 2002 **State:** MA **List ID:** MA71-01

Waterbody Name: ABERJONA RIVER

State Basin Name: BOSTON HARBOR: MYSTIC

Listed Water Map Link: [MAP 303\(d\)](#)

Comments:

SOURCE JUST SOUTH OF BIRCH MEADOW DRIVE, READING TO INLET UPPER MYSTIC LAKE AT MYSTIC VALLEY PARKWAY, WINCHESTER. MILES 18.4-9.2

State List IDs:

Cycle	State List ID
2002	MA71-01_2002

State Impairments:

State Impairment	Parent Impairment	Priority	Rank	Targeted Flag	Anticipated TMDL Submittal
CAUSE UNKNOWN					
UNIONIZED AMMONIA					
NUTRIENTS					
ORGANIC ENRICHMENT/LOW DO					
PATHOGENS					

Potential Sources of Impairment:

There were no potential sources reported to EPA by the state.

Total Maximum Daily Load (TMDL) Information:

There were no TMDLs reported to EPA by the state.

Watershed Information:

Watershed Name	Watershed States
CHARLES	MASSACHUSETTS

**LABORATORY ANALYTICAL
(SYSTEM INFLUENT)**



REPORT OF ANALYTICAL RESULTS

NETLAB Case Number Q1007-12

Prepared for:

Attn: Eric Simpson
Envirotrac Ltd.
1400 Providence Hwy, Suite 2100
Norwood, MA 02062

Report Date: October 14, 2005

Lab # RI010

Electronic Copy

NEW ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue, North Providence, RI 02904
(401) 353-3420

ANALYTICAL METHOD REPORT CERTIFICATION FORM

Laboratory Name: New England Testing Laboratory, Inc.

Project #:

Project Location: ECI – Burlington 137

RTN¹:

This form provides certifications for the following data set: Q1007-12

Sample Matrices: Groundwater (X) Soil/Sediment () Drinking Water () Other:

SW-846 Methods Used	8260B ()	8151A ()	8330 ()	6010B ()	7470A/1A ()
	8270C ()	8081A ()	VPH ()	6020 ()	9014M ² ()
	8082 ()	8021B ()	EPH ()	7000 S ³ ()	Other: (X)
	¹ List Release Tracking Number (RTN), if known ² M – SW-846 Method 9014 or MADEP Physiologically Available Cyanide (PAC) Method ³ S – SW-846 Methods 7000 Series List individual method and analyte				

An affirmative response to questions A, B, and C is required for "Presumptive Certainty" status

A	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of Custody documentation for the data set?	Yes (X) No ¹ ()
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	Yes (X) No ¹ ()
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in Section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes (X) No ¹ () Not Applicable ()
D	<u>VPH and EPH Methods only:</u> Was the VPH and EPH Method conducted without significant modifications (see Section 11.3 of respective Methods)	Yes () No ¹ ()

A response to questions E and F below is required for "Presumptive Certainty" status

E	Were all QC performance standards and recommendations for the specified methods achieved?	Yes (X) No ¹ ()
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	Yes (X) No ¹ ()

¹All NO answers must be addressed in an attached Environmental Laboratory case narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature:

 ES

Position:

Laboratory Director

Printed Name:

Mark H. Bishop

Date:

10/14/2005

ANALYTICAL METHOD REPORT CERTIFICATION FORM

Laboratory Name: New England Testing Laboratory, Inc.

Project #:

Project Location: ECI Burlington 137

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SW-846 Methods Used	8260B ()	8151A ()	8330 ()	6010B ()	7470A/1A ()
	8270C ()	8081A ()	VPH ()	6020 ()	9014M ² ()
	8082 ()	8021B ()	EPH ()	7000 S ³ ()	Other: (X)
	¹ List Release Tracking Number (RTN), if known ² M – SW-846 Method 9014 or MADEP Physiologically Available Cyanide (PAC) Method ³ S – SW-846 Methods 7000 Series. List individual method and analyte				

An affirmative response to questions A, B, and C is required for "Presumptive Certainty" status

A	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of Custody documentation for the data set?	Yes (X) No ¹ ()
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	Yes (X) No ¹ ()
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in Section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes (X) No ¹ () Not Applicable ()
D	VPH and EPH Methods only: Was the VPH and EPH Method conducted without significant modifications (see Section 11.3 of respective Methods)	Yes () No ¹ ()

A response to questions E and F below is required for "Presumptive Certainty" status

E	Were all QC performance standards and recommendations for the specified methods achieved?	Yes (X) No ¹ ()
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	Yes (X) No ¹ ()

¹All NO answers must be addressed in an attached Environmental Laboratory case narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Jodi Lyons

Position: Director, Inorganics

Printed Name: Jodi Lyons

Date: 10/14/2005

STATEMENTS/CERTIFICATIONS REQUIRED BY THE NATIONAL ENVIRONMENTAL LABORATORY APPROVAL CONFERENCE (NELAC)

New England Testing Laboratory is certified under the National Environmental Laboratory Approval Program (NELAP). This certification requires the following statements and certifications be included in our report.

This report shall not be reproduced, except in full, without written approval of the laboratory.

New England Testing certifies that the test results contained within this report meet all NELAC requirements except as detailed in the Case Narrative section of this report.

SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:

The samples listed in Table I were submitted to New England Testing Laboratory on October 7, 2005. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. The case number for this sample submission is Q1007-12.

Custody records are included in this report.

Site: ECI Burlington 137

TABLE I, Samples Submitted

Sample ID	Date Sampled	Matrix	Analysis Requested
System Influent	10/6/05	Water	Table II
System Effluent	10/6/05	Water	Table III

TABLE II, Analysis and Methods

ANALYSIS	DETERMINATIVE METHOD
Total Petroleum Hydrocarbons	1664A
PCBs	608
Total Suspended Solids	160.2
Total Residual Chlorine	330.5
Hexavalent Chromium	7196A
Total Metals	
Antimony	3113B
Cadmium	3113B
Chromium	200.7
Copper	200.7
Iron	200.7
Lead	3113B
Mercury	245.1
Nickel	200.7
Selenium	3113B
Silver	3113B
Zinc	200.7

TABLE III, Analysis and Methods

ANALYSIS	DETERMINATIVE METHOD
Total Petroleum Hydrocarbons	8015B mod

These methods are documented in:

40 CFR 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act*, Office of Federal Register National Archives and Records Administration.

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

CASE NARRATIVE:

Sample Receipt:

No sample for ms/msd/duplicate analysis was supplied. No trip or field blank was supplied. (This does not qualify the analytical results but does prevent conducting these SW-846 {Chapter 1, Section 3.4} QA Audits.)

The samples were all appropriately cooled and preserved upon receipt.

The samples were received in the appropriate containers.

The chain of custody was adequately completed and corresponded to the samples submitted.

Metals:

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures.

A marginal concentration of Iron was detected in the water method blank. The concentration of Iron was at the reporting limit. This has no significance on the usefulness of the sample result, which was found to be considerably greater than the blank contamination.

PCBs:

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

GRO:

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

General Chemistry:

TSS: No anomalies or excursions from QC limits.

Residual Chlorine: No anomalies or excursions from QC limits.

Total Petroleum Hydrocarbons: No anomalies or excursions from QC limits.

Hexavalent Chromium: No anomalies or excursions from QC limits. As stated in Method 7196A, section 7.3, verification is required to ensure that there are no conditions interfering with the colorimetric process. This was not met with the sample, therefore a dilution was required.

Sample Results

System Influent

Parameter	Result, mg/l	Reporting Limit	Date Analyzed
Total Suspended Solids	4.0	1.0	10/11/05
Residual Chlorine	N.D.	0.02	10/7/05
Hexavalent Chromium	N.D.	0.05	10/7/05 @ 15:06
Total Petroleum Hydrocarbons	N.D.	2	10/13/05

N.D. = Not Detected

Sample: System Effluent		Analyst's Initials: MF
Case No. Q1007-12		
Date Collected: 10/6/05		
Sample Matrix: Water		
Subject: GRO		
Prep Method: EPA 5030B	Date Extracted	Date Analyzed
Analytical Method: EPA 8015B mod.	NA	10/13/05
Compound	Concentration, ug/l (ppb)	Reporting Limit
Total Petroleum Hydrocarbons "GRO"	N.D.	136
Surrogates:		
Compound	% Recovery	Limits
Fluorobenzene	176	70-130

METALS RESULTS

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Metals Analysis Department certifies that the results included in this section have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

New England Testing Laboratory, Inc.

METALS RESULTS



Case Number: Q1007-12
 Sample ID: System Influent
 Date collected: 10/06/05
 Matrix: WATER
 Sample Type: TOTAL

Analyst CC/RM

Parameter	CAS Number	Preparative Method	Analytical Method	Result	Reporting Limit	Detection Limit	Units	Date of Preparation	Date Analyzed
Antimony	7440-36-0	NA	3113B	ND	0.005	0.005	mg/l	10/7/05	10/10/05
Cadmium	7440-43-9	NA	3113B	ND	0.0005	0.0005	mg/l	10/7/05	10/10/05
Chromium	7440-47-3	NA	200.7	ND	0.005	0.005	mg/l	10/7/05	10/11/05
Copper	7440-50-8	NA	200.7	ND	0.02	0.02	mg/l	10/7/05	10/11/05
Iron	7439-89-6	NA	200.7	2.00	0.05	0.05	mg/l	10/7/05	10/11/05
Lead	7439-92-1	NA	3113B	0.008	0.002	0.002	mg/l	10/7/05	10/12/05
Mercury	7439-97-6	NA	245.1	ND	0.0002	0.0002	mg/l	10/11/05	10/11/05
Nickel	7440-02-0	NA	200.7	ND	0.005	0.005	mg/l	10/7/05	10/11/05
Selenium	7782-49-2	NA	3113B	ND	0.005	0.005	mg/l	10/7/05	10/11/05
Silver	7440-22-4	NA	3113B	ND	0.0005	0.0005	mg/l	10/7/05	10/13/05
Zinc	7440-66-6	NA	200.7	0.11	0.02	0.02	mg/l	10/7/05	10/11/05

ND indicates not Detected

METALS RESULTS



Sample ID: METHOD BLANK

Matrix WATER
 Sample Type: Preparation Blank

Analyst CC/RM

Parameter	CAS Number	Preparative Method	Analytical Method	Result	Reporting Limit	Detection Limit	Units	Date of Preparation	Date Analyzed
Antimony	7440-36-0	NA	3113B	ND	0.005	0.005	mg/l	10/7/05	10/10/05
Cadmium	7440-43-9	NA	3113B	ND	0.0005	0.0005	mg/l	10/7/05	10/10/05
Chromium	7440-47-3	NA	200.7	ND	0.005	0.005	mg/l	10/7/05	10/11/05
Copper	7440-50-8	NA	200.7	ND	0.02	0.02	mg/l	10/7/05	10/11/05
Iron	7439-89-6	NA	200.7	0.08	0.05	0.05	mg/l	10/7/05	10/11/05
Lead	7439-92-1	NA	3113B	ND	0.002	0.002	mg/l	10/7/05	10/12/05
Mercury	7439-97-6	NA	245.1	ND	0.0002	0.0002	mg/l	10/11/05	10/11/05
Nickel	7440-02-0	NA	200.7	ND	0.005	0.005	mg/l	10/7/05	10/11/05
Selenium	7782-49-2	NA	3113B	ND	0.005	0.005	mg/l	10/7/05	10/11/05
Silver	7440-22-4	NA	3113B	ND	0.0005	0.0005	mg/l	10/7/05	10/13/05
Zinc	7440-66-6	NA	200.7	ND	0.02	0.02	mg/l	10/7/05	10/11/05

ND indicates not Detected

LABORATORY CONTROL SAMPLE RECOVERY

Parameter	True Value	Result	Units	Recovery, %	LCL, %	UCL, %	Date Analyzed
Antimony	0.02	0.0179	mg/l	89.6	81	123	10/10/05
Cadmium	0.005	0.00517	mg/l	103	80	122	10/10/05
Chromium	1	0.946	mg/l	94.6	89	110	10/11/05
Copper	1	1.02	mg/l	102	87	113	10/11/05
Iron	1	1.00	mg/l	100	74	122	10/11/05
Lead	1	0.957	mg/l	95.7	87	112	10/11/05
Lead	0.02	0.0187	mg/l	93.6	86	119	10/12/05
Mercury	0.001	0.001	mg/l	100	89	114	10/11/05
Nickel	1	0.974	mg/l	97.4	89	109	10/11/05
Selenium	0.02	0.0221	mg/l	111	88	113	10/11/05
Silver	0.005	0.0053	mg/l	106	71	118	10/13/05
Zinc	1	0.978	mg/l	97.8	91	110	10/11/05

RESULTS: PCBs

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

Sample: System Influent		Analyst's Initials: DC
Case No. Q1007-12		
Date Collected: 10/6/05		
Sample Matrix: Water		
Subject: PCBs	Date Extracted	Date Analyzed
Analytical Method: EPA 608	10/10/05	10/11/05
Compound	Concentration ug/l (ppb)	Reporting Limit
PCB-1016	N.D.	0.2
PCB-1221	N.D.	0.4
PCB-1232	N.D.	0.2
PCB-1242	N.D.	0.2
PCB-1248	N.D.	0.2
PCB-1254	N.D.	0.2
PCB-1260	N.D.	0.2
Surrogates:		
Compound	% Recovery	Limits
TCMX	60	25-141
DCBP	75	41-156

Sample: Method Blank		Analyst's Initials: DC
Case No. Q1007-12		
Date Collected: NA		
Sample Matrix: Water		
Subject: PCBs	Date Extracted	Date Analyzed
Analytical Method: EPA 608	10/10/05	10/11/05
Compound	Concentration ug/l (ppb)	Reporting Limit
PCB-1016	N.D.	0.2
PCB-1221	N.D.	0.4
PCB-1232	N.D.	0.2
PCB-1242	N.D.	0.2
PCB-1248	N.D.	0.2
PCB-1254	N.D.	0.2
PCB-1260	N.D.	0.2
Surrogates:		
Compound	% Recovery	Limits
TCMX	68	25-141
DCBP	85	41-156

PCB Laboratory Control Spike

Date Collected: NA			Analyst:	DC
Sample Matrix: Water				
Subject: PCB	Date Extracted			Date Analyzed
Prep Method: EPA 3510C	10/10/05			10/11/05
Analytical Method: EPA 8082				
Compound	Amount Spiked ug/l	Result ug/l	Recovery %	Recovery Limits
1260-1	0.50	0.28	57	40-140
Surrogates:	% Recovery	Limits		
TCMX	58	19-139		
DCBP	75	29-155		

Custody Records

