



November 13, 2009

DEP Permit Administrator
Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
Northeast Regional Office
205B Lowell Street
Wilmington, Massachusetts 01887

**Re: Tier IB Permit Extension Application
Former Malden Manufactured Gas Plant (MGP) Facility
Malden, Massachusetts
Release Tracking Number 3-0362
Tier IB Permit Number 7378**

To Whom It May Concern:

Per the requirements of the Massachusetts Contingency Plan (MCP), Innovative Engineering Solutions, Inc. (IESI) is submitting the enclosed Tier IB Permit Extension Application (see Attachment 1) on behalf of the Massachusetts Electric Company d/b/a National Grid. (National Grid) The site is located in vicinity of Charles and Centre Streets along Commercial Street in Malden, Massachusetts. Figure 1 depicts the site locus. The former Malden MGP is classified as a Tier 1B disposal site (with a Tier I permit number of 7378) and assigned Release Tracking Number (RTN) 3-0362 by the Massachusetts Department of Environmental Protection (MassDEP).

The partial Class C RAO applies to the portions of the Site that have not had a Waiver Completion Statement or Class A or B RAO filed at the MassDEP and excludes the Malden River portion of the Site. Parcel C (RTN 3-2066) has a Waiver Completion Statement that was submitted to the MassDEP in September 1990. Callahan Park which is located within a portion of Parcel D, is subject to an existing Partial Class A-3 RAO (RTN 3-13310) that was submitted to the MassDEP in January 1997. The Malden River portion of the Site was addressed with a Class A-2 RAO submitted to the MassDEP in July 2007. Refer to Figure 2 for a depiction of the Site boundary and the partial Class C RAO boundary that applies to the Site

Site Location/Layout

The former Malden MGP Site boundary and parcels of the MGP that are applicable to this Tier IB Permit Extension request are identified in Figure 2 and described below:

- Parcel A contains approximately 2.8 acres and is occupied by six buildings (51 through 109 Commercial Street) on five separate properties. The parcel is bound by Commercial Street to the east, Charles Street to the south, a Massachusetts Bay Transit Authority (MBTA) Orange Line railroad right-of-way to the west, and Centre Street to the north. Current occupants of the buildings on Parcel A include: a bank, muffler shop, retail liquor store, rental car garage and office, tanning/nail salon, and medical offices.
- Parcel B contains approximately 2 acres and is identified as 129 Commercial Street and is occupied by a bakery. The parcel is bound by Commercial Street to the east, Adams Street to the south, MTBA Orange Line railroad right-of-way to the west, and Charles Street to the north.

- The portion of Parcel D that was not included in the January 1997 Partial Class A-3 RAO (RTN 3-13310) is included in this review. This portion of the Site is approximately 0.1 acre (not including the portion beneath Charles Street) and is part of the paved parking lot for Callahan Park and was formerly the location of the former MGP governor house which housed equipment (i.e., pipes and valves) used to regulate the flow of the manufactured gas.
- Parcel E contains approximately 6.6 acres and is identified as 100 Commercial Street. The property is currently owned (since August 2007) and occupied by National Grid (formerly KeySpan) and is used as an Operations and Vehicle Maintenance Center. The parcel is bound by the culverted Malden River to the east, Charles Street to the south, Commercial Street to the west, and Centre Street to the north.
- West End Brook and Malden Culverts: The portions of the West End Brook and Malden River Culverts that extend from Parcel D to the Malden River.

The site is located within a City of Malden designated Industrial Zone, and there are no institutions located within 500 feet. The Site is not located within any Current or Potential Drinking Water Source Areas as defined by 310 CMR 40.0006. Drinking water is supplied to the area by the Massachusetts Water Resource Association (MWRA). Although it is not known, it is very unlikely that private wells are located in the Site vicinity. The property is located in a medium yield Non-Potential Drinking Water Source Area. Callahan Park, a protected open space, is located west of the Site, beyond the elevated MBTA railroad tracks. Another protected open space, which is part of the Malden City Hall Plaza, is located approximately 300 feet northeast of the Site.

The residential population within a one-half mile radius of the Site is estimated at greater than 5,000 people. No institutions, as defined by 310 CMR 40.0006, are located within 500 feet of the Site. The Site is located within a designated Industrial Zone.

According to the MassGIS On Line Mapping website for "DEP Priority Resource (21E)" (<http://maps.massgis.state.ma.us/21e/viewer.htm>), except for the Malden River, no other surface water bodies, including wetlands, vernal pools, ponds, lakes, streams, rivers, Outstanding Resource Waters, and reservoirs, are located within 500 feet of the Site. In addition, there are no Areas of Critical Environmental Concern, habitats, for Species of Special Concern or Threatened or Endangered Species, within 500 feet of the Site.

Background

Investigations began at the site in 1988, when the presence of coal tar contamination was first confirmed through subsurface borings. The site was initially designated a Tier II site under the MCP and assigned RTN 3-0362. In 1997, as part of a Tier II extension submittal, a series of RTNs, assigned due to releases or possible releases of contaminants associated with the former Malden MGP facility, were linked with RTN 3-0362. Annual Tier II Extensions submittals were made from 1996 to 1999.

In August 1999, a Tier Re-Classification/Tier IA Permit Application was submitted to the MassDEP, and Tier IB Permit 7378, with an effective date of December 28, 1999, was subsequently issued by the MassDEP. A Phase II Comprehensive Site Assessment was submitted to the MassDEP on December 28, 2001. Notice of delay letter for the Phase III Report was submitted to the MassDEP on December 27, 2001, October 31, 2002, and February 27, 2003. These extensions were requested to allow National Grid more time to evaluate remedial options for the site and to discuss recommended remedial action alternatives with City officials and affected property owners.

A Phase III Remedial Action Plan (RAP), was submitted to the MassDEP in July 2003 and the Phase III recommended a remedial approach to reduce the quantity of non-aqueous phase liquids (NAPL) in the subsurface at the Site, and to reduce volatile organic compounds (VOC) concentrations in soil, groundwater, and indoor air that may contribute to future potential exposures for which a condition of No Significant Risk could not be satisfied.

A partial Class C RAO was submitted for the Site to the MassDEP in February 2004. As indicated in the partial Class C RAO, a Permanent Solution was not feasible because of the presence of NAPL and soil containing contaminant concentrations that exceed MCP Upper Concentration Limits (UCLs) beneath existing, active commercial buildings across the Site.

A Five-Year Periodic Review of the Temporary Solution Opinion was submitted to the MassDEP for the site in February 2009, and concluded that a permanent solution was not feasible, a temporary solution has been achieved and the following definitive and enterprising steps would be continued at the site:

- Continued NAPL Recovery at 100 Commercial Street (and 51 Commercial if recoverable NAPL is observed in the extraction wells)
- Continued evaluation of remedial technologies
- Site Monitoring (consisting of periodic groundwater gauging and sampling)
- Continued operation of the Sub Slab Venting System (SSVS) at 129 Commercial Street
- Property Control (via purchase or placement of Activity and Use Limitations as is feasible)

Release Abatement Measures (RAM) are currently being conducted at the Site for 51 Commercial Street, 100 Commercial Street, and 129 Commercial Street. These RAMs are being conducted in accordance with 310 CMR 40.0896 in support of Post-RAO response actions. Only the RAM associated with the SSVS operation at 129 Commercial Street is considered necessary to maintain the Temporary Solution. The RAM for NAPL recovery at 51 and 100 Commercial Streets (one RAM) are considered definitive and enterprising steps toward reaching a Permanent Solution at this Site.

A Tier 1B Permit extension application was submitted to the MassDEP in November 2004 as part of a Notice of Noncompliance and the MassDEP established deadlines for an Amended Phase II, and Phase IV and RAO reports, the Tier 1B permit was extended to December 28, 2009. The Permit Extension Application was electronically submitted via the eDEP website and the following is intended to satisfy the MCP requirements for additional documentation where required in the BWSC-20 form.

ITEM D OF BWSC 20: APPLICANT'S HISTORY OF COMPLIANCE

A Notice of Noncompliance (NON) was issued by the MassDEP on December 16, 2004 for the site. The NON was issued because a Phase IV Remedy Implementation Plan and a RAO Statement were not submitted to the MassDEP within the regulatory deadlines. The NON established new regulatory deadlines for an amended Phase III, a Phase IV, and RAO reports. Each of these deadlines has been met. In addition, as part of the NON, the Tier 1B permit was extended such that it expires on December 28, 2009. No other enforcement actions have been taken by the MassDEP for this disposal site. In addition, no other federal, state, or local agencies have issued administrative actions against National Grid for this disposal site.

ITEM G.2 OF BWSC 20: ADDITIONAL INFORMATION REGARDING THE STATUS OF RESPONSE ACTIONS IN PROGRESS

In order to maintain the Temporary Solution and take definitive and enterprising steps toward reaching a Permanent Solution at this Site, National Grid will conduct the following activities:

NAPL Recovery

The NAPL recovery systems in place at 51 and 100 Commercial Streets will remain in operation while recoverable thicknesses of NAPL are present in the recovery wells connected to the systems and removal of the NAPL is feasible under reasonable effort. IESI has experienced difficulty in NAPL recovery from the subsurface using conventional methods and will be evaluating the use of surfactants, additives and other NAPL recovery enhancement techniques if continued reduction of the rate of recovery is observed. These activities will be presented in the RAM status reports submitted every 6 months. If NAPL recovery

proves successful using conventional and/or enhanced recovery methods, National Grid will evaluate expansion of the recovery system(s) if it can be done in a reasonable, cost effective manner without significant disruption of the businesses present. RAM status reports will be submitted every 6 months as required by 310 CMR 40.0440 in June and December.

Evaluation of Innovative Remediation Technologies

The environmental remediation science is constantly evolving and as new technologies become available that were not previously evaluated, National Grid will monitor and evaluate the technologies as they apply to the various contaminants and impacted media.

Site Monitoring

In order to ensure that Site conditions are maintained such that the Temporary Solution is maintained, the following monitoring activities will be conducted:

Groundwater Gauging

Wells located in areas identified as currently or historically containing NAPL will be gauged for the depth to water, and the presence/absence of NAPL, and the thickness of NAPL once every two years. These data will be submitted to the MassDEP with the RAM status reports.

Groundwater Sampling

Select groundwater monitoring wells will be sampled using low-flow sampling techniques and submitted to a laboratory for the analysis of extractable and volatile petroleum hydrocarbons via the MassDEP Method. Additional parameters may be analyzed for as determined by the LSP. Groundwater sampling will be conducted periodically such that each well selected for sampling is sampled once every three years. These data will be submitted to the MassDEP with the RAM status reports.

SSVS Operation

The SSVS system in place at 129 Commercial Street will remain in operation until the system is no longer necessary. The system will continue to be operated and RAM status reports will be submitted during this time every 6 months as required by 310 CMR 40.0440 in April and October.

Property Control

National Grid will pursue outright purchase or placement of AULs on the private properties located within the boundaries of the Site as is reasonable and feasible. As shown by the purchase of 51 and 89 Commercial Streets, National Grid desires to control, or at a minimum, restrict the use of the properties located within the Site boundary. No schedule is available for these actions.

310 CMR 40.0703(1)(d) and (e): PERMIT APPLICATION FEE

The applicable permit application fee of \$1,200 has been sent to MADEP's lock box. A copy of the fee transmittal form is included in Attachment 2.

310 CMR 40.0703(1)(g) PUBLICATION OF LEGAL NOTICE

The tear sheet from the *The Malden Observer* containing the legal notice required by 310 CMR 40.0703(8)(a)1 is included in Attachment 3 to this letter.

310 CMR 40.0703(1)(h): COPY OF PUBLIC NOTIFICATION LETTERS

A copy of the letter with the legal notice that was submitted to the Mayor and the Board of Health for the City of Malden, as required by 310 CMR 40.0703(8)(a)2, is included in Attachment 4 to this letter.

310 CMR 40.0703(1)(j): LIST OF STATUS REPORTS, PHASE REPORTS AND COMPLETION REPORTS

A list of all Status Reports, Phase Reports, and Completion Reports for any Immediate Response Actions (IRAs), Release Abatement Measures (RAMs), any Utility-related Abatement Measures (URAMs) and any Comprehensive Response Actions (CRAs) that are in progress or have been completed since submittal of the last Tier IB Extension Request are as follows:

Type of Document	Date Submitted	Purpose
Bill of Lading	Jan-08	Construction at 51 Commercial
Bill of Lading	Feb-08	Construction at 51 Commercial
Bill of Lading	May-08	Construction at 51 Commercial
Release Abatement Measure Plan	Aug-07	RAM Plan for construction at 51 Commercial, installation of NAPL recovery system at 51 Commercial, and restarting 100 Commercial NAPL recovery system.
Release Abatement Measure Plan	Dec-07	Modification for Construction at 51 Commercial
Release Abatement Measure Status Reports	Jun-08 through Jun-09	Status on Work at 51 and 100 Commercial
Release Abatement Measure Status Reports	Jan-99 through Oct-09	Status on Work at 129 Commercial
5-Year Periodic Review of Temporary Solution	Feb-09	For Class C RAO

We trust that this Tier I Permit Extension Application is complete and meets the submittal requirements detailed in the MCP. If you have any questions or require additional information, please contact the undersigned by telephone at (508) 668-0033, extension 231, or by email at M.Lotti@iesionline.com.

Very truly yours,
INNOVATIVE ENGINEERING SOLUTIONS, INC.

Michael Lotti, L.S.P
Project Manager

Attachments

Cc: Michele Leone, National Grid





Innovative Engineering Solutions, Inc.
25 SPRING STREET
WALPOLE, MASSACHUSETTS 02081
(508) 668-0033

0 2000

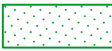
SCALE IN FEET
1:24000

SITE LAT/LONG: 42°25'30"N 71°04'30"W
UTM: 329,298E 4,699,051N ZONE 19
USGS Topographic Map:
Boston North, Massachusetts 1991

FIGURE 1
SITE LOCATION MAP

Former Malden MGP Site
Malden, Massachusetts

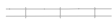
LEGEND



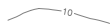
PORTION OF MALDEN MGP DISPOSAL SITE SUBJECT TO
PARTIAL CLASS C RAO



CHAIN-LINK FENCE

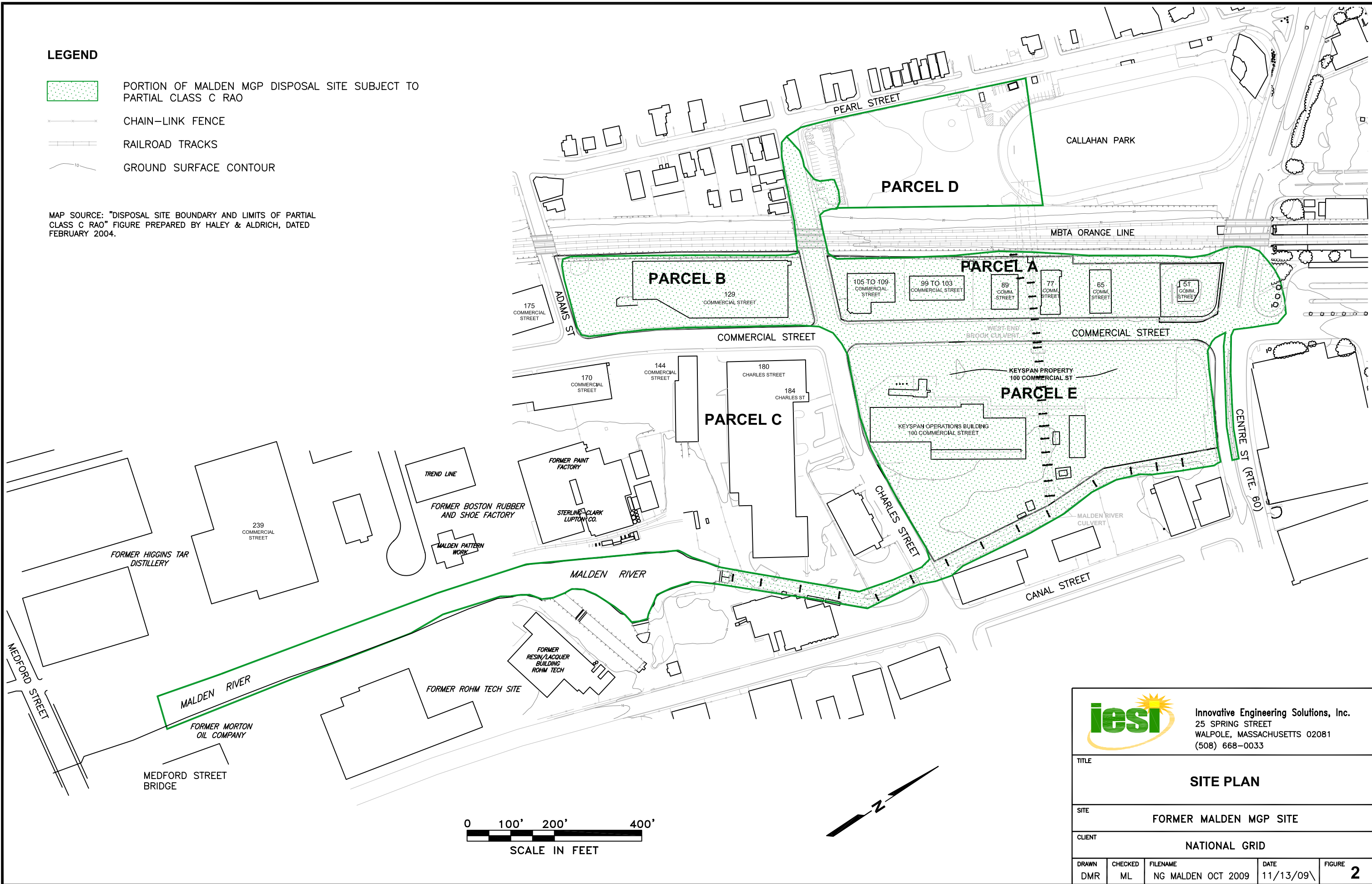


RAILROAD TRACKS



GROUND SURFACE CONTOUR

MAP SOURCE: "DISPOSAL SITE BOUNDARY AND LIMITS OF PARTIAL
CLASS C RAO" FIGURE PREPARED BY HALEY & ALDRICH, DATED
FEBRUARY 2004.



Innovative Engineering Solutions, Inc.
25 SPRING STREET
WALPOLE, MASSACHUSETTS 02081
(508) 668-0033

TITLE

SITE PLAN

SITE

FORMER MALDEN MGP SITE

CLIENT

NATIONAL GRID

DRAWN

DMR

CHECKED

ML

FILENAME

NG MALDEN OCT 2009

DATE

11/13/09

FIGURE

2

ATTACHMENT 1

**BWSC 20 – TIER I PERMIT EXTENSION
APPLICATION FOR SUPPLEMENTAL TIER I PERMIT ACTIONS**

ATTACHMENT 2

PERMIT APPLICATION FEE AND TRANSMITTAL FORM



Enter your transmittal number

Transmittal Number

Your unique Transmittal Number can be accessed online: <http://www.state.ma.us/scripts/dep/trasmfrm.stm> or call DEP's InfoLine at 617-338-2255 or 800-462-0444 (from 508, 781, and 978 area codes).

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. **Copy 2** must accompany your fee payment. **Copy 3** should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

DEP
P.O. Box 4062
Boston, MA
02211

*** Note:**
For BWSC Permits, enter the LSP.

A. Permit Information

1. Permit Code: 7 or 8 character code from permit instructions

2. Name of Permit Category

3. Type of Project or Activity

B. Applicant Information – Firm or Individual

1. Name of Firm - Or, if party needing this approval is an individual enter name below:

2. **Last Name** of Individual

3. **First Name** of Individual

4. MI

5. Street Address

6. City/Town

7. State

8. Zip Code

9. Telephone #

10. Ext. #

11. Contact Person

12. e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

1. Name of Facility, Site Or Individual

2. Street Address

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

8. DEP Facility Number (if Known)

9. Federal I.D. Number (if Known)

10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

1. Name of Firm Or Individual

2. Address

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

8. Contact Person

9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☐ no
If yes, enter the project's EOE file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

Special Provisions:

- ☐ **Fee Exempt** (city, town or municipal housing authority)(state agency if fee is \$100 or less).
There are no fee exemptions for BWSC permits, regardless of applicant status.
- ☐ **Hardship Request** - payment extensions according to 310 CMR 4.04(3)(c).
- ☐ **Alternative Schedule Project** (according to 310 CMR 4.05 and 4.10).
- ☐ **Homeowner** (according to 310 CMR 4.02).

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Check Number

Dollar Amount

Date

ATTACHMENT 3

COPY OF PUBLISHED LEGAL NOTICE FROM *THE MALDEN OBSERVER*

This is a copy of the legal notice that was published in the Malden Observer on November 11, 2009. A copy of the published ad from the Malden Observer was not available at the time of this submittal.

**NOTICE OF APPLICATION FOR AN EXTENSION OF A WASTE SITE
CLEANUP PERMIT**

**Former Malden Manufactured Gas Plant (MGP) Facility
100 Commercial Street
MALDEN, MASSACHUSETTS
RELEASE TRACKING NUMBER 3-362**

Pursuant to the Massachusetts Contingency Plan (310 CMR 40.0703), an application for a **Permit Extension** is being submitted to the Department of Environmental Protection (DEP) for this site on November 13, 2009. DEP issued a Tier IB permit extension for this site on December 28, 2004. The application proposes to extend the permit for this site for 2 years, or to December 28, 2011 for the following rationale:

- Extension of the permit is necessary so that the selected remedial action alternatives can be implemented and a Response Action Outcome achieved or maintained.

Once a site has been classified as Tier I, a permit is required to proceed with a Comprehensive Remedial Response Process. Anyone interested in reviewing the Permit Extension application should notify DEP by writing to DEP, Bureau of Waste Site Cleanup, Permit Section, Northeast Regional Office, 205B Lowell Street, Wilmington, Massachusetts 01887 by December 3, 2009. If anyone notifies DEP of his or her interest in reviewing or submitting comment on the application, DEP will conduct a public comment review period of twenty (20) days which shall run concurrently with DEP's Initial Technical Review of the application. Anyone who fails to notify DEP in writing of his/her interest in commenting on the application by the above date may be deemed to have waived his/her rights, if any, to appeal DEP's permit decision or to intervene in an adjudicatory proceeding with respect to this application, pursuant to 310 CMR 40.0770(2).

M.G.L. c. 21E and the Massachusetts Contingency Plan provide additional opportunities for public notice of and involvement in decisions regarding response actions at disposal sites: 1) The Chief Municipal Official and Board of Health of the community in which the site is located will be notified of major milestones and events, pursuant to 310 CMR 40.1403; and 2) Upon receipt of a petition from ten or more residents of the municipality in which the disposal site is located, or of a municipality potentially affected by a disposal site, a plan for involving the public in decisions regarding response actions at the site will be prepared and implemented, pursuant to 310 CMR 40.1405.

To obtain more information on this disposal site and the opportunities for public involvement during its remediation, please contact Ms. Michele Leone, National Grid, 40 Sylvan Road, Waltham, Massachusetts 02451, at (781) 907-3651.

ATTACHMENT 4

COPY OF PUBLIC NOTIFICATIONS



Innovative Engineering Solutions, Inc.

25 Spring Street • Walpole, Massachusetts 02081-4301

(508) 668-0033 • fax (508) 668-5175

November 5, 2009

Honorable Richard C. Howard
Office of the Mayor
200 Pleasant Street
Room 629
Malden, Massachusetts 02148

Dr. John R. Horne, Jr., Chairman
Board of Health
200 Pleasant Street
Room 517
Malden, Massachusetts 02148

**Subject: Tier IB Permit Extension Application
Former Malden MGP Site
100 Commercial Street
Malden, Massachusetts
DEP Release Tracking Number 3-362
Tier IB Permit Number 7378**

Dear Messrs. Howard and Horne:

In accordance with 310 CMR 40.1403(6) and 310 CMR 40.0703(8), the purpose of this letter is to inform you that a Tier IB Permit Extension Application is being submitted to the Massachusetts Department of Environmental Protection (DEP) for the former Malden manufactured gas plant (MGP) site located at 100 Commercial Street in Malden, Massachusetts. The Tier IB Permit Extension Application is being submitted to the DEP on behalf of the Massachusetts Electric Company d/b/a National Grid (National Grid) for permit number 7378. The site is identified by the DEP under release tracking number (RTN) 3-362.

A copy of the legal notice explaining that a Tier IB Permit Extension Application is being submitted to the DEP is attached. This notice will be published in the next issue of the *The Malden Observer*. The Tier IB Permit Extension Application, which is being submitted to the DEP on or before November 13, 2009, can be reviewed at the DEP's Northeast Regional Office at 205B Lowell Street in Wilmington, Massachusetts or at National Grid's office located at 40 Sylvan Road in Waltham, Massachusetts. If you have any questions or require additional information, please contact the Michele Leone of National Grid at 781-907-3651, or by email at michele.leone@us.ngrid.com.

Very truly yours,
Innovative Engineering Solutions, Inc.

Michael Lotti, LSP
Project Manager

Attachment: Copy of Legal Notice

cc: (w/o attachment)

Massachusetts Department of Environmental Protection, Northeast Regional Office
Michele Leone, National Grid