

SCANNED

SL = U/A

RELEASE ABATEMENT MEASURE (RAM) STATUS REPORT
NO. 15, FORMER MANUFACTURED GAS PLANT (MGP) SITE
PARCEL B, 129 COMMERCIAL STREET
MALDEN, MASSACHUSETTS
RTN 3-0362 AND LINKED RTN 3-3757
TIER IB PERMIT 7378

by

Haley & Aldrich, Inc.
Boston, Massachusetts

for

National Grid
Westborough, Massachusetts

File No. 06558-711
October 2005

HALEY &
ALDRICH

SCANNED

Haley & Aldrich, Inc.
800 Connecticut Blvd.
Suite 100
East Hartford, CT 06108-7303
Tel: 860.282.9400
Fax: 860.282.9500
HaleyAldrich.com

**HALEY &
ALDRICH**

7 October 2005
File No. 06558-711

Massachusetts Department of Environmental Protection
Northeast Regional Office
1 Winter Street
Boston, Massachusetts 02108

Attention: Site Management Branch

Subject: Release Abatement Measure (RAM) Status Report No. 15
Former Manufactured Gas Plant (MGP) Site
Parcel B, 129 Commercial Street
Malden, Massachusetts
RTN 3-0362
Tier IB Permit 7378

OFFICES

Boston
Massachusetts

Cleveland
Ohio

Dayton
Ohio

Detroit
Michigan

Kansas City
Kansas

Los Angeles
California

Manchester
New Hampshire

Farsippamy
New Jersey

Portland
Maine

Rochester
New York

San Diego
California

Santa Barbara
California

Tucson
Arizona

Washington
District of Columbia

Ladies and Gentlemen:

On behalf of National Grid, Haley & Aldrich, Inc. is submitting this Release Abatement Measure (RAM) Status Report No. 15 for the above referenced site. The original BWSC-106 Transmittal form is attached and a copy is included in Appendix A of this report. Work on the subject site is being conducted under the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000. This Status Report was prepared in accordance with the guidelines presented in 310 CMR 40.0445.

RAM Status Report No. 15 presents findings during the reporting period 7 April 2005 through 7 October 2005 related to indoor air sampling and on-going operation and maintenance of the sub-slab venting system located at 129 Commercial Street, Malden, Massachusetts.

BACKGROUND

The subject site is located on Parcel B of the former Malden manufactured gas plant (MGP) site and is currently occupied by a bakery company located at 129 Commercial Street, Malden, Massachusetts. The site is bounded to the north by Charles Street, to the east by Commercial Street, to the south by Adams Street, and to the west by the MBTA Orange Line commuter railway as shown on Figure 1, "Project Locus."

Phase II field investigations associated with the former Malden MGP site identified elevated concentrations of volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs) in soil, and elevated concentrations of VOCs, PAHs and cyanide in groundwater beneath the 129 Commercial Street building. VOCs were also identified in indoor air at the facility. The presence of VOCs in indoor air did not constitute an imminent hazard for the workers in the building, and applicable occupational standards set by the Occupational Safety

and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) were not exceeded. MEC conducted response actions to reduce VOC concentrations to reduce potential long-term risks.

The original intent of the RAM was to mitigate the VOC migration into indoor air by applying epoxy sealants to selected floor areas inside the bakery building, as described in the 2 July 1998 RAM Plan. The RAM Plan also called for implementation of a second phase of work consisting of conducting a facility wide sealing program at identified migration pathway points if the first phase floor sealing activities were successful in reducing VOC concentrations in the packaging room. As described in RAM Status Report No. 1 dated 22 January 1999, since floor sealing efforts in the packaging room area of the facility to reduce VOC migration into the building were unsuccessful, the second phase was not implemented.

Haley & Aldrich evaluated alternative response actions to mitigate the VOC migration into indoor air, and submitted a RAM Plan modification to the Massachusetts Department of Environmental Protection (DEP) dated 9 April 1999. During normal bakery operations, a negative air pressure is created inside the building, which may enhance soil vapor migration into the building. The RAM modification proposed installation of an active sub-slab venting system in the general area of the packaging room where the highest indoor VOC concentrations had been encountered in the past. The active sub-slab venting system was proposed to create a negative pressure gradient beneath the floor slab such that soil vapors would migrate to the sub-slab venting system rather than penetrating through the floor slab into indoor air and thereby reduce the potential long term health risks. The active sub-slab venting was not proposed to remediate the source of contamination.

RAM Status Report No. 2, dated 21 July 1999, outlined the proposed active sub-slab venting system and summarized correspondence with DEP concerning the 9 April 1999 RAM Plan Modification through the date of the status report as discussed below. DEP issued a "Conditional Approval of Release Abatement Measure; Designation of Interim Deadline; M.G.L. 21E & 310 CMR 40.0000," letter dated 9 June 1999 which approved the RAM Plan modification with conditions. The Interim Deadline condition identified the need to submit a Phase II Report and Phase III Remedial Action Plan for the entire site to DEP within 120 days of receipt of the conditional approval letter. Haley & Aldrich responded to DEP in a letter dated 24 June 1999 which requested clarification of certain conditions, and deletion of an Interim Deadline condition. DEP issued an "Amendment of Conditional Approval of Release Abatement Measure M.G.L Chapter 21E, & 310 CMR 40.0000", dated 27 July 1999 which allowed for either submittal of a Phase II Report & Phase III Remedial Action Plan within 60 days of the date of the letter, or a Tier Classification and Tier I Permit Application within 60 days of obtaining knowledge of the need to reclassify the site pursuant to 310 CMR 40.0530 of the MCP. A Tier Re-Classification/Tier IA Permit Application was submitted to DEP on 20 August 1999, and Tier IB Permit 7378 with an effective date of 28 December 1999 was subsequently issued by DEP.

As part of the DEP 9 June 1999 conditional approval, a new RAM Status submittal deadline was established to be within 120 days of the date of the letter, or by 7 October 1999. RAM Status Report No. 3, dated 7 October 1999, was submitted to DEP, and detailed the design and installation of the sub-slab venting system. The system was initially started on 21 October 1999, operated for four days, shut down for adjustments, and re-started on

16 November 1999. Details of the initial operation and shut down, system adjustments and re-start, as well as the pilot test and long term operation plan were described in RAM Status Report No. 4, dated 7 April 2000. RAM Status Report No. 5, dated 6 October 2000 through RAM Status Report No. 14, dated 7 April 2005 detailed operation and maintenance of the sub-slab venting system and summarized indoor air sampling results and system monitoring data collected during the respective reporting periods. RAM Status Report No. 15 details indoor air sampling activities and on-going operation and maintenance of the sub-slab venting system, and summarizes monitoring data collected from 7 April 2005 through 7 October 2005.

Efforts on this project will continue to be coordinated and carried out by the following:

Party of Interest

National Grid
25 Research Drive
Westborough, Massachusetts 01582
Contact: Michele V. Leone, Senior Environmental Engineer
Telephone Number (508) 389-4296

Licensed Site Professional

Richard P. Standish, LSP
Licensed Site Professional No. 2242
Haley & Aldrich, Inc.
800 Connecticut Boulevard, Suite 100
East Hartford, Connecticut 06108-7303
Telephone Number (860) 290-3131

STATUS OF RESPONSE ACTIONS

On-going System Operation

Haley & Aldrich monitors the sub-slab venting system approximately once per week as part of an ongoing operation and maintenance (O&M) schedule. Total VOC levels in influent and effluent vapor from the off-gas control device (sub-slab venting treatment unit) are measured during these visits with a photoionization detector (PID). Influent and effluent vapor samples are collected and analyzed by Gas Chromatography (GC) on a monthly basis. The results are discussed below.

Indoor Air Sampling

Previously, indoor air sample pairs were collected during production and non-production hours (between September 2000 and July 2001) to evaluate the influence of the facility air handling system on indoor air VOC levels. The air handling system operated at a higher rate during production hours than non-production hours. Test results confirmed higher VOC levels during operating hours than non-operating hours. It is thought that the facility air handling system creates a negative pressure within the building when in operation and

Haley & Aldrich, Inc.
800 Connecticut Blvd.
Suite 100
East Hartford, CT 06108-7303

Tel: 860.282.9400
Fax: 860.282.9500
HaleyAldrich.com

**HALEY &
ALDRICH**

Letter of Transmittal

RECEIVED

Date **6 October 2005**
File Number **06558-711**
From **Richard J. Rago**

OCT 07 2005

To **Massachusetts Department of Environmental Protection
Northeast Regional Office
1 Winter Street
Boston, Massachusetts 02108** **DEP
NORTHEAST REGIONAL OFFICE**

Attention **Site Management Branch**

Copy to **Distribution**

Subject **Former Manufactured Gas Plant (MGP) Site
Parcel B, 129 Commercial Street
Malden, Massachusetts
RTN 3-0362
Tier IB Permit 7378**

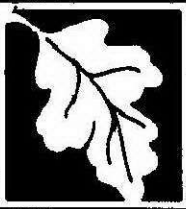
Copies	Date	Description
1, original	10/5/2005	BWSC Form 106
1	10/7/2005	Release Abatement Measure (RAM) Status Report No. 15

last entry

Transmitted via ☐ First class mail ☒ Overnight express ☐ Hand delivery ☐ Other

Remarks

Please do not hesitate to call if you have any questions. I can be reached at 860.290.3115.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM

Release Tracking Number

3 - 3757

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

A. SITE LOCATION:

1. Site Name/Location Aid: Former Manufactured Gas Plant (MGP) Site

2. Street Address: 129 Commercial Street

3. City/Town: Malden

4. ZIP Code: 02148-0000

☒ 5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.

☐ a. Tier IA ☒ b. Tier IB ☐ c. Tier IC ☐ d. Tier II

6. If a Tier I Permit has been issued, provide Permit Number: 7378

RECEIVED

OCT 07 2005

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial RAM Written Plan (if previously submitted): 07/02/1998

☐ 2. Submit an Initial Release Abatement Measure (RAM) Plan.

☐ a. Check here if this RAM Plan received previous oral approval from DEP as a continuation of a Limited Removal Action (LRA).

b. List Date of Oral Approval: _____
(mm/dd/yyyy)

☐ 3. Submit a Modified RAM Plan of a previously submitted written RAM Plan.

☒ 4. Submit a RAM Status Report.

☐ 5. Submit a RAM Completion Statement.

☐ 6. Submit a Revised RAM Completion Statement.

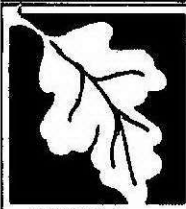
7. Provide Additional RTNs:

☐ a. Check here if this RAM Submittal covers additional Release Tracking Numbers (RTNs). RTNs that have been previously linked to a Primary Tier Classified RTN do not need to be listed here. This section is intended to allow a RAM to cover more than one unclassified RTN and not show permanent linkage to a Primary Tier Classified RTN.

b. Provide the additional Release Tracking Number(s) covered by this RAM Submittal.

☐ - ☐ -

(All sections of this transmittal form must be filled out unless otherwise noted above)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM

Release Tracking Number

3 - 3757

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT RAM:

1. Identify Media Impacted and Receptors Affected: (check all that apply)

- ☒ a. Air ☐ b. Basement ☐ c. Critical Exposure Pathway ☒ d. Groundwater ☐ e. Residence
☐ f. Paved Surface ☐ g. Private Well ☐ h. Public Water Supply ☐ i. School ☐ j. Sediments
☒ k. Soil ☐ l. Storm Drain ☐ m. Surface Water ☐ n. Unknown ☐ o. Wetland ☐ p. Zone 2
☐ q. Others Specify: _____

2. Identify all sources of the Release or Threat of Release, if known: (check all that apply)

- ☐ a. Above-ground Storage Tank (AST) ☐ b. Boat/Vessel ☐ c. Drums ☐ d. Fuel Tank
☐ e. Pipe/Hose/Line ☐ f. Tanker Truck ☐ g. Transformer ☐ h. Under-ground Storage Tank (UST)
☐ i. Vehicle ☒ j. Others Specify: Disposal associated with former MGP operations

3. Identify Oils and Hazardous Materials Released: (check all that apply)

- ☐ a. Oils ☐ b. Chlorinated Solvents ☐ c. Heavy Metals
☒ d. Others Specify: MGP contaminants: VOCs, PAHs, Cyanide

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)

- | | |
|--|---|
| ☐ 1. Assessment and/or Monitoring Only | ☐ 2. Temporary Covers or Caps |
| ☐ 3. Deployment of Absorbent or Containment Materials | ☐ 4. Temporary Water Supplies |
| ☒ 5. Structure Venting System | ☐ 6. Temporary Evacuation or Relocation of Residents |
| ☐ 7. Product or NAPL Recovery | ☐ 8. Fencing and Sign Posting |
| ☐ 9. Groundwater Treatment Systems | ☐ 10. Soil Vapor Extraction |
| ☐ 11. Bioremediation | ☐ 12. Air Sparging |
| ☐ 13. Excavation of Contaminated Soils | |

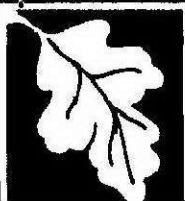
☐ a. Re-use, Recycling or Treatment ☐ i. On Site Estimated volume in cubic yards _____

☐ ii. Off Site Estimated volume in cubic yards _____

ii.a. Receiving Facility: _____ Town: _____ State: _____

ii.b. Receiving Facility: _____ Town: _____ State: _____

iii. Describe: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM

Release Tracking Number

3 - 3757

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

D. DESCRIPTION OF RESPONSE ACTIONS (cont.): (check all that apply, for volumes list cumulative amounts)

☐ b. Store

☐ i. On Site Estimated volume in cubic yards _____

☐ ii. Off Site Estimated volume in cubic yards _____

ii.a. Receiving Facility: _____ Town: _____ State: _____

ii.b. Receiving Facility: _____ Town: _____ State: _____

☐ c. Landfill

☐ i. Cover Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ ii. Disposal Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ 14. Removal of Drums, Tanks or Containers:

a. Describe Quantity and Amount: _____

b. Receiving Facility: _____ Town: _____ State: _____

c. Receiving Facility: _____ Town: _____ State: _____

☒ 15. Removal of Other Contaminated Media:

a. Specify Type and Volume: To date: 47 55-gal drums (approx 7755 LBS) spent activated carbon

b. Receiving Facility: Clean Harbors Town: Bristol State: CT

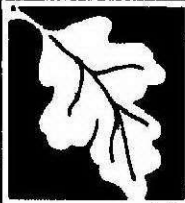
c. Receiving Facility: Clean Harbors Town: Braintree State: MA

☐ 16. Other Response Actions:

Describe: _____

☐ 17. Use of Innovative Technologies:

Describe: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM

Release Tracking Number

3 - 3757

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

E. LSP SIGNATURE AND STAMP :

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B of this form indicates that a **Release Abatement Measure Plan** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that a **Release Abatement Measure Status Report** is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that a **Release Abatement Measure Completion Statement** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 2242

2. First Name: Richard

3. Last Name: Standish

4. Telephone: (860) 290-3131

5. Ext.: _____

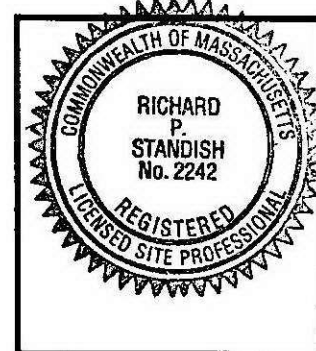
6. FAX: (860) 282-9500

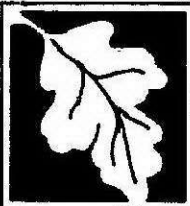
7. Signature: _____

8. Date: 10/5/2005

(mm/dd/yyyy)

9. LSP Stamp:





Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

**RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM**

Release Tracking Number

3 - **3757**

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

F. PERSON UNDERTAKING RAM:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: National Grid

3. Contact First Name: Michele 4. Last Name: Leone

5. Street: 25 Research Drive 6. Title: _____

7. City/Town: Westborough 8. State: MA 9. ZIP Code: 01582-0000

10. Telephone: (508) 389-4296 11. Ext.: _____ 12. FAX: (508) 389-4299

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING RAM:

☒ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☒ e. Other RP or PRP Specify: Party of Interest

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking RAM Specify Relationship: _____

H. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if any Remediation Waste, generated as a result of this RAM, will be stored, treated, managed, recycled or reused at the site following submission of the RAM Completion Statement. You must submit a Phase IV Remedy Implementation Plan along with the appropriate transmittal form (BWSC108).

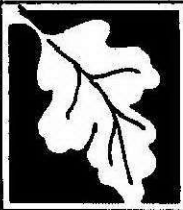
☒ 2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☒ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the implementation of a Release Abatement Measure.

☐ 4. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to the DEP Regional Office.

☐ 5. If a RAM Compliance Fee is required for this RAM, check here to certify that a RAM Compliance Fee was submitted to DEP, P. O. Box 4062, Boston, MA 02211.

☒ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM

Release Tracking Number

3 - 3757

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

I. CERTIFICATION OF PERSON UNDERTAKING RAM:

1. I, Michele Leone, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: Michele Leone
Signature

3. Title: LEAD SR. ENV. ENGINEER

4. For: National Grid
(Name of person or entity recorded in Section F)

5. Date: 09/22/2005
(mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

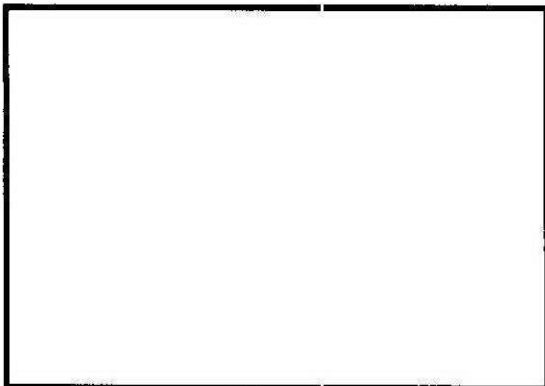
7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)



promotes the migration of VOCs from the subsurface into the building. Therefore, sampling during production hours is thought to be more protective since the facility air handling system may create a negative pressure within the building, thereby facilitating soil vapor intrusion.

During this reporting period, indoor air samples were collected during production hours only by Haley & Aldrich. The first round of indoor air samples was collected on 27 April 2005 and the second round was collected on 3 August 2005. Samples were collected at the same locations previously tested throughout the facility, as documented in RAM Status Report No. 14. Due to sampling error associated with a faulty Summa canister flow controller valve, the sample collected from location Site 8 on 3 August 2005 was not analyzed. Sample Site 8 was collected from the Production Area, where sample locations Site 7 and Site 11 were also collected on 3 August 2005. The Site 7 and Site 11 data are considered to be representative of field conditions in the Production Area and it was determined that Site 8 resampling was not necessary for these data.

Indoor air test results, both previous and new, are summarized on Table I in units of $\mu\text{g}/\text{m}^3$. Laboratory data for this reporting period are located in Appendix B, along with indoor air test results summarized in units of parts per billion by volume (ppbV).

NEW SITE INFORMATION

Treatment System Influent and Effluent Air Testing

As indicated above, O&M visits have been conducted approximately once per week throughout the reporting period. Influent and effluent readings are currently monitored with an HNU Systems PID equipped with an 11.7 eV lamp. System influent, mid-carbon (Effluent-1) and post-carbon (Effluent-2) VOC levels were below the detection level of the instrument (0.1 ppm). A graphical representation of influent PID measurements, both previous and new, is presented in Figure 3. A more detailed description of monitoring data is discussed later in this report.

As specified by DEP in their 9 June 1999 conditional approval letter, off-gas control device (sub-slab venting system treatment unit) influent and effluent vapor samples have been collected on a monthly basis and submitted for laboratory analysis. Samples are collected from the system influent port prior to treatment and at effluent ports on each drum of granular activated carbon. Samples are quantitatively tested for benzene, toluene, ethylbenzene, m&p xylene, and o-xylene, and styrene (including qualitative naphthalene screening) by GC-FID analysis at the Haley & Aldrich laboratory. Results of chemical analysis of sub-slab venting system vapor samples, both previous and new, are presented on Table II, and a graphical representation of the test results are shown on Figure 4.

VOCs were not detected in the mid-carbon (Effluent-1), or post-carbon (Effluent-2) samples during this reporting period. During the 28 June 2005 sampling round, styrene was detected in the influent sample.

Indoor Air Sampling and Test Results

A summary of indoor air quality data, both previous and new, is provided on Table I. Laboratory data for this reporting period is located in Appendix B.

During the 27 April 2005 sampling, low concentrations of VOCs were detected, including toluene in Sites #2, #4, and #5, and m&p-xylenes in Site #4. The indoor air test results from 27 April 2005 did not exceed MADEP indoor air background levels for the compounds tested.

During the 3 August 2005 sampling, low concentrations of VOCs were detected, including toluene in Sites #2, #4, #5 and #6, m&p-xylenes in Sites #2, #4, and #5, and ethylbenzene in Site #4. The indoor air test results from 3 August 2005 did not exceed MADEP indoor air background levels for the compounds tested.

Overall, the indoor air test results are consistent with past sampling events conducted during production hours at the facility.

The next quarterly indoor air sampling round is scheduled for October 2005. Results will be included in the next RAM Status Report due April 2006.

REMEDATION WASTE MANAGEMENT

No remediation waste was generated or disposed of during this reporting period.

A total of 47 drums, or approximately 7,755 pounds of spent carbon, have been generated and removed from the site since start-up of the sub-slab ventilation system. Also during the reporting period, there was no accumulation of water within the sub-slab venting system.

MONITORING DATA FROM OPERATION OF THE REMEDIAL SYSTEM

Vacuum and pressure, air velocity, PID readings, and vapor temperature are monitored on a regular basis. System data are presented in Table III.

During this reporting period, the system periodically shut down due to blower unit overheating. A new blower unit has been obtained and will be installed before the next reporting period.

Vacuum and Discharge Pressure

Vacuum conditions are monitored with fixed vacuum gauges on the influent piping prior to the blower and on the knockout drum. A portable gauge is used to periodically measure vacuum at the individual extraction points (EP-1 through EP-5). Vacuum conditions at EP-1 measured less than 0.1 inch of water during the reporting period. Vacuum conditions at extraction point EP-2 and EP-5 measured approximately 1.5 inches of water. Vacuum conditions at extraction point EP-3 measured approximately 1.75 inches of water. Vacuum conditions at extraction point EP-4 measured approximately 0.4 inches of water.

Vacuum at the blower ranged between 11.5 and 12 inches of water, vacuum at the knockout drum ranged between 4.5 and 5 inches of water, and discharge pressure ranged between 39 and 42 inches of water during this period. These vacuum measurements are generally consistent with other recent vacuum data for this system.

PID Screening and GC Analysis

VOC levels are screened with an HNu Systems 11.7 eV PID at 3 locations along the vapor stream: Influent (pre-carbon), Effluent-1 (mid-carbon) and Effluent-2 (post-carbon). PID readings of the influent were at background levels (0.0 ppm) as measured throughout the reporting period. A graphical representation of PID readings from system start-up to the present is shown on Figure 3. Effluent PID readings were at background levels throughout the reporting period.

Air samples were collected on a monthly basis in Tedlar bags and analyzed with a Gas Chromatograph (GC). Samples were collected from the influent, mid-carbon (Effluent-1), and post-carbon (Effluent-2) positions. VOCs were not detected in the mid-carbon (Effluent-1), or post-carbon (Effluent-2) samples collected during this reporting period. During the 28 June 2005 sampling round, styrene was detected in the influent sample. A graphical representation of GC analytical results of the influent from system start-up to the present is shown on Figure 4.

Influent/Effluent Air Velocity and VOC Removal

Air flow in and out of the system is measured with a Dwyer 401T Air Velocity Meter. During this reporting period, the influent flow rate ranged from 250 fpm (22 cfm) to 450 fpm (40 cfm) and the effluent flow rate ranged from 1000 fpm (88 cfm) to 1250 fpm (110 cfm). Based on flow rates and monthly GC analysis of air samples, it is estimated that nearly 900 lbs of VOCs have been removed from beneath the building since commencement of sub-slab ventilation in November 1999.

FUTURE RESPONSE ACTIONS

Future response actions that will be associated with ongoing system O&M activities include indoor air sampling at 3 month intervals, monthly screening of system influent and effluent vapor samples, and replacement of activated carbon if necessary. The next quarterly indoor air sampling round is scheduled for October 2005. Those results will be included in the next RAM Status Report, due 7 April 2006.

System enhancements and alternative response actions were evaluated as part of the Phase III Remedial Action Plan to develop a long-term plan to address indoor air quality at the facility. The Phase III was submitted to DEP in June 2003 and a Remedial Action Alternative (RAA) was recommended. The proposed RAA included an air sparging and/or SVE system installed via Horizontal Directional Drilling (HDD).

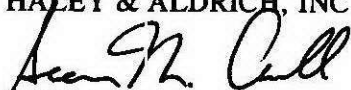
The recent quarterly rounds of indoor air sampling data indicate that indoor air VOC levels are generally not detected or are detected below published residential background values recommended by DEP. These data also indicate that the current system appears to be

functioning properly by depressurizing the sub-slab environment and preventing vapor intrusion. Therefore, implementation of an HDD-installed air sparging/SVE system Remedial Action Alternative does not appear to be a necessary mitigation measure at this time.

A partial Class C RAO was submitted for the former Malden MGP site in February 2004. National Grid will continue to evaluate the performance of the current sub-slab depressurization system. If it is determined that significant improvements or enhancements are necessary or conditions are appropriate, it is anticipated that the installation of a Remedial Action Alternative system will be conducted as part of the Post-RAO response actions conducted at 129 Commercial Street, and implemented via a modification to the RTN 3-0362/RTN 3-3757 RAM for 129 Commercial Street.

Please do not hesitate to call the undersigned or Michele Leone of National Grid at 508-389-4296 if you have any questions or comments.

Sincerely yours,
HALEY & ALDRICH, INC.


for Todd R. Butler
Engineer


Richard J. Iago
Senior Scientist


Richard P. Standish, LSP-of-Record
Senior Vice President

Enclosures:

Table I	Summary of Indoor Air Quality Data
Table II	Chemical Analysis of Sub-Slab Venting System Vapor Samples
Table III	Sub-Slab Venting System Monitoring Data
Figure 1	Project Locus
Figure 2	Extraction Well Point and Indoor Air Sample Locations
Figure 3	PID Measurements of Sub-Slab Vapor Influent
Figure 4	GC Analysis of Sub-Slab Vapor Influent
Appendix A	Copy of Form BWSC-106
Appendix B	Indoor Air Quality Analytical Data

c: National Grid; Attn: Michele V. Leone
KeySpan Energy Delivery of New England; Attn: Patricia A. Haederle
KeySpan Energy Delivery of New England; Attn: Richard J. Schmitz

TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in ug/m³)											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
03-Aug-05	Benzene	21	--	--	ND(1.8)	--	ND(1.4)	ND(3.6)	ND(10)	ND(13)	--	--	--	ND(11)
	Ethylbenzene	9.62	--	--	ND(1.8)	--	1.7	ND(3.6)	ND(10)	ND(13)	--	--	--	ND(11)
	m-&p-xylenes	40	--	--	2.8	--	5	5.8	ND(10)	ND(13)	--	--	--	ND(11)
	Naphthalene	5	--	--	ND(1.8)	--	ND(1.4)	ND(3.6)	ND(10)	ND(13)	--	--	--	ND(11)
	o-xylenes	10	--	--	ND(1.8)	--	ND(1.4)	ND(3.6)	ND(10)	ND(13)	--	--	--	ND(11)
	Styrene	2.79	--	--	ND(1.8)	--	ND(1.4)	ND(3.6)	ND(10)	ND(13)	--	--	--	ND(11)
	Toluene	28.65	--	--	4.4	--	7.8	7.6	11	ND(13)	--	--	--	ND(11)
27-Apr-05	Benzene	21	--	--	ND(1.5)	--	ND(1.5)	ND(2)	ND(14)	ND(13)	ND(31)	--	--	ND(42)
	Ethylbenzene	9.62	--	--	ND(1.5)	--	ND(1.5)	ND(2)	ND(14)	ND(13)	ND(31)	--	--	ND(42)
	m-&p-xylenes	40	--	--	ND(1.5)	--	1.7	ND(2)	ND(14)	ND(13)	ND(31)	--	--	ND(42)
	Naphthalene	5	--	--	ND(1.5)	--	ND(1.5)	ND(2)	ND(14)	ND(13)	ND(31)	--	--	ND(42)
	o-xylenes	10	--	--	ND(1.5)	--	ND(1.5)	ND(2)	ND(14)	ND(13)	ND(31)	--	--	ND(42)
	Styrene	2.79	--	--	ND(1.5)	--	ND(1.5)	ND(2)	ND(14)	ND(13)	ND(31)	--	--	ND(42)
	Toluene	28.65	--	--	2.9	--	4.7	7.6	ND(14)	ND(13)	ND(31)	--	--	ND(42)
13-Jan-05	Benzene	21	--	--	3.8	--	2.6	2.8	2.8	2.8	3.5	--	--	3.4
	Ethylbenzene	9.62	--	--	2.8	--	2.7	3.5	1.5	2.3	2.4	--	--	2.6
	m-&p-xylenes	40	--	--	8.2	--	8	11	3.6	6	6.4	--	--	6.9
	Naphthalene	5	--	--	ND(1.4)	--	ND(1.3)	ND(1.5)	ND(1.2)	ND(1.2)	ND(1.4)	--	--	ND(1.8)
	o-xylenes	10	--	--	2.8	--	2.2	2.6	1.3	1.7	2.1	--	--	2.1
	Styrene	2.79	--	--	ND(1.4)	--	ND(1.3)	ND(1.5)	ND(1.2)	ND(1.2)	1.5	--	--	ND(1.8)
	Toluene	28.65	--	--	18	--	16	16	15	10	12	--	--	13

	Site 9	Site 10	Site 11
6)	--	--	1.9
7)	--	--	ND(1.6)
8)	--	--	3.5
9)	--	--	ND(1.6)
10)	--	--	ND(1.6)
11)	--	--	ND(1.6)
12)	--	--	6.6
13)	--	ND(35)	--
14)	--	ND(35)	--
15)	--	ND(35)	--
16)	--	ND(35)	--
17)	--	ND(35)	--
18)	--	ND(35)	--
19)	--	ND(35)	--
20)	--	ND(35)	--
21)	--	ND(1.9)	--
22)	--	ND(1.9)	--
23)	--	6.4	--
24)	--	ND(1.9)	--
25)	--	2.6	--
26)	--	2.8	--
27)	--	11	--

TABLE I

SUMMARY OF INDOOR AIR QUALITY DATA
 I29 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
 MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
12-Feb-04	Benzene	21	--	--	20.8	--	ND(1.7)	ND(1.7)	ND(8.6)	ND(12.8)	ND(18.5)	--	ND(20.1)	--
	Ethylbenzene	9.62	--	--	16.9	--	ND(1.6)	ND(1.7)	ND(8.7)	ND(13)	ND(18.7)	--	ND(20)	--
	m-8p-xylenes	40	--	--	52.1	--	2	3	ND(8.7)	ND(13)	ND(18.7)	--	ND(20)	--
	Naphthalene	5	--	--	2	--	ND(1.7)	ND(1.7)	ND(8.9)	ND(13.1)	ND(18.3)	--	ND(19.9)	--
	o-xylenes	10	--	--	18.7	--	ND(1.6)	ND(1.7)	ND(8.7)	ND(13)	ND(18.7)	--	ND(20)	--
	Styrene	2.79	--	--	2.1	--	ND(1.7)	ND(1.7)	ND(8.5)	ND(12.8)	ND(18.7)	--	ND(20)	--
	Toluene	28.65	--	--	71.6	--	4.5	5.3	56.5	ND(12.8)	ND(18.5)	--	ND(20)	--
30-Oct-03	Benzene	21	--	--	1.9	--	ND(1.7)	ND(1.5)	--	ND(1.8)	ND(3.5)	--	ND(3.8)	--
	Ethylbenzene	9.62	--	--	ND(1.6)	--	ND(1.7)	2.4	--	ND(1.9)	ND(3.5)	--	ND(3.7)	--
	m-8p-xylenes	40	--	--	3	--	5.2	7.8	--	5.2	ND(3.5)	--	ND(3.7)	--
	Naphthalene	5	--	--	ND(1.6)	--	ND(1.7)	ND(1.5)	--	ND(1.8)	ND(3.5)	--	ND(3.7)	--
	o-xylenes	10	--	--	ND(1.6)	--	ND(1.7)	ND(1.5)	--	ND(1.8)	ND(3.5)	--	7.4	--
	Styrene	2.79	--	--	ND(1.6)	--	ND(1.7)	ND(1.5)	--	ND(1.9)	ND(3.4)	--	ND(3.7)	--
	Toluene	28.65	--	--	6	--	27.1	23	--	23	13.2	--	10.2	--
23-Jul-03	Benzene	21	ND(1.9)	--	--	--	ND(1.8)	ND(1.6)	ND(3.5)	ND(3.8)	ND(2.5)	--	ND(3.8)	--
	Ethylbenzene	9.62	ND(1.9)	--	--	--	ND(1.8)	ND(1.6)	ND(3.6)	ND(3.9)	ND(2.5)	--	ND(3.8)	--
	m-8p-xylenes	40	ND(1.9)	--	--	--	2.3	2.6	ND(3.6)	ND(3.9)	2.5	--	5.6	--
	Naphthalene	5	ND(1.8)	--	--	--	ND(1.8)	ND(1.6)	ND(3.6)	ND(4)	ND(2.5)	--	ND(3.8)	--
	o-xylenes	10	ND(1.9)	--	--	--	ND(1.8)	ND(1.6)	ND(3.6)	ND(3.9)	ND(2.5)	--	ND(3.8)	--
	Styrene	2.79	ND(1.9)	--	--	--	ND(1.8)	ND(1.7)	ND(3.6)	ND(4)	ND(2.5)	--	28.5	--
	Toluene	28.65	23.7	--	--	--	52.7	64	56.5	27.9	35.8	--	35.4	--

TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
25-Apr-03	Benzene	21	--	--	ND(1.9)	--	ND(1.8)	ND(4.2)	ND(95.8)	ND(38.3)	ND(38.3)	--	ND(108.6)	--
	Ethylbenzene	9.62	--	--	ND(1.9)	--	ND(1.8)	ND(4)	ND(95.5)	ND(39.1)	ND(39.5)	--	ND(108.5)	--
	m-&p-xylenes	40	--	--	ND(1.9)	--	ND(1.8)	ND(4)	ND(95.5)	ND(39.1)	ND(39.5)	--	ND(108.5)	--
	Naphthalene	5	--	--	ND(1.9)	--	ND(1.8)	ND(4)	ND(94.3)	ND(39.3)	ND(39.8)	--	ND(104.8)	--
	o-xylenes	10	--	--	ND(1.9)	--	ND(1.8)	ND(4)	ND(95.5)	ND(39.1)	ND(39.5)	--	ND(108.5)	--
	Styrene	2.79	--	--	ND(1.9)	--	ND(1.8)	ND(4)	ND(93.7)	ND(39.2)	ND(39.6)	--	ND(106.4)	--
	Toluene	28.65	--	--	4.1	--	23.7	41.4	ND(94.2)	ND(37.7)	ND(41.4)	--	ND(105.5)	--
24-Jan-03	Benzene	21	--	--	1.9	--	ND(1.5)	ND(1.3)	ND(1.6)	ND(2.2)	ND(1.8)	--	ND(1.8)	--
	Ethylbenzene	9.62	--	--	ND(1.5)	--	ND(1.5)	ND(1.3)	ND(1.6)	ND(2.2)	ND(1.8)	--	ND(1.7)	--
	m-&p-xylenes	40	--	--	2.5	--	ND(1.5)	1.6	2.3	ND(2.2)	ND(1.8)	--	2.5	--
	Naphthalene	5	--	--	ND(1.5)	--	ND(1.5)	ND(1.3)	ND(1.6)	ND(2.2)	ND(1.8)	--	ND(1.7)	--
	o-xylenes	10	--	--	1.5	--	ND(1.5)	ND(1.3)	ND(1.6)	ND(2.2)	ND(1.8)	--	ND(3.9)	--
	Styrene	2.79	--	--	ND(1.5)	--	ND(1.5)	ND(1.3)	ND(1.6)	ND(2.2)	ND(1.8)	--	4.3	--
	Toluene	28.65	--	--	4.1	--	2.4	2.9	2.4	2.3	ND(1.8)	--	2	--
08-Oct-02	Benzene	21	--	--	ND(2.3)	--	ND(1.2)	--	ND(2.1)	ND(2)	ND(2)	--	1.9	--
	Ethylbenzene	9.62	--	--	ND(2.3)	--	ND(1.2)	--	ND(2.1)	ND(2)	ND(2)	--	3.6	--
	m-&p-xylenes	40	--	--	1.6	--	2.6	--	2.1	ND(2)	ND(2)	--	6.1	--
	Naphthalene	5	--	--	ND(2.3)	--	ND(1.2)	--	ND(2.1)	ND(2)	ND(2)	--	ND(1.7)	--
	o-xylenes	10	--	--	ND(2.3)	--	ND(1.2)	--	ND(2.1)	ND(2)	ND(2)	--	2.5	--
	Styrene	2.79	--	--	ND(2.3)	--	ND(1.1)	--	ND(2.1)	ND(2)	ND(2)	--	23.4	--
	Toluene	28.65	--	--	4.5	--	24.5	--	45.2	8.7	6.8	--	9.4	--

TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in ug/m ³)											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
11-Oct-01	Benzene	21	ND(1)	--	--	--	ND(1)	ND(2)	10.9	11.5	12.5	--	7.7	--
	Ethylbenzene	9.62	ND(1)	--	--	--	1.9	ND(2)	ND(1)	ND(1)	ND(2)	--	3.2	--
	m-&p-xylenes	40	ND(1)	--	--	--	5.6	3.5	2.8	2.5	3	--	5.2	--
	Naphthalene	5	ND(1)	--	--	--	ND(1)	ND(2)	ND(1)	ND(1)	ND(2)	--	ND(1)	--
	o-xylenes	10	ND(1)	--	--	--	2	ND(2)	ND(1)	ND(1)	ND(2)	--	2.2	--
	Styrene	2.79	ND(1)	--	--	--	ND(1)	ND(2)	ND(1)	ND(1)	ND(2)	--	15.8	--
	Toluene	28.65	4.1	--	--	--	20.7	17.3	31.3	10.9	7.9	--	8.3	--
01-Jul-01	Benzene	21	--	--	ND(2)	--	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	--	--	--
	Ethylbenzene	9.62	--	--	ND(2)	--	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	--	--	--
	m-&p-xylenes	40	--	--	ND(2)	--	ND(2)	ND(2)	2	2.2	ND(2)	--	--	--
	Naphthalene	5	--	--	ND(2)	--	ND(2)	ND(2)	ND(2)	1.7	ND(2)	--	--	--
	o-xylenes	10	--	--	ND(2)	--	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	--	--	--
	Styrene	2.79	--	--	ND(2)	--	ND(2)	ND(2)	6.4	2.8	3.5	--	--	--
	Toluene	28.65	--	--	4.5	--	6.4	109.2	8.3	9.4	9.4	--	--	--
29-Jun-01	Benzene	21	--	--	ND(1)	--	2.2	6.7	31.6	35.1	35.1	--	30.7	--
	Ethylbenzene	9.62	--	--	ND(1)	--	6.5	3.7	ND(1)	ND(1)	ND(1)	--	10.9	--
	m-&p-xylenes	40	--	--	3.4	--	23	12.2	3.3	4.3	3.3	--	13.5	--
	Naphthalene	5	--	--	ND(1)	--	5.8	ND(1)	ND(1)	2.5	3.4	--	41.9	--
	o-xylenes	10	--	--	ND(1)	--	6.9	3.7	ND(1)	ND(1)	ND(1)	--	6.1	--
	Styrene	2.79	--	--	ND(1)	--	ND(1)	ND(1)	2.7	ND(1)	1.7	--	25.5	--
	Toluene	28.65	--	--	7.2	--	16.6	67.8	52.7	20.7	9.4	--	16.6	--

TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in ug/m³)												
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	
18-Mar-01	Benzene	21	--	--	ND(1)	--	ND(1)	ND(1)	ND(2)	ND(2)	ND(2)	ND(1)	--	16.3	--
	Ethylbenzene	9.62	--	--	ND(1)	--	ND(1)	ND(1)	ND(1)	ND(1)	ND(2)	ND(1)	--	5.2	--
	m-&p-xylenes	40	--	--	ND(1)	--	ND(1)	ND(1)	ND(1)	3.1	3.2	4.1	--	13	--
	Naphthalene	5	--	--	ND(1)	--	ND(1)	ND(1)	ND(2.5)	ND(2)	ND(1)	ND(1)	--	ND(1)	--
	o-xylenes	10	--	--	ND(1)	--	ND(1)	ND(1)	ND(2)	ND(2)	ND(2)	ND(1)	--	4.8	--
	Styrene	2.79	--	--	ND(1)	--	ND(1)	ND(1)	ND(2)	ND(2)	ND(1)	ND(1)	--	14.5	--
	Toluene	28.65	--	--	ND(1)	--	4.1	4.5	15.4	25.6	64	--	--	35.8	--
16-Mar-01	Benzene	21	--	--	4.2	--	63.9	ND(1)	24.3	29.7	41.5	--	--	26.2	--
	Ethylbenzene	9.62	--	--	9.1	--	269.1	2.8	ND(1)	1.7	1.8	--	--	4.2	--
	m-&p-xylenes	40	--	--	15.6	--	208.3	10	5.2	5.2	5.6	--	--	10.9	--
	Naphthalene	5	--	--	23.1	--	256.8	ND(1)	ND(1)	3.1	2.7	--	--	ND(1)	--
	o-xylenes	10	--	--	7.8	--	86.8	2.4	2.3	ND(1)	2.7	--	--	6.9	--
	Styrene	2.79	--	--	1.7	--	37	ND(1)	ND(1)	ND(1)	1.3	--	--	12.8	--
	Toluene	28.65	--	--	24.5	--	226	21.5	64	23.4	97.9	--	--	34.3	--
03-Dec-00	Benzene	21	--	--	2.4	--	1.3	TR(1.3)	2.5	2.2	TR(1.9)	--	--	11	--
	Ethylbenzene	9.62	--	--	1.1	--	ND(1)	ND(2)	ND(1)	ND(2)	ND(2)	ND(2)	--	3.9	--
	m-&p-xylenes	40	--	--	3.2	--	1.5	TR(1.8)	2.3	2	2.1	--	--	6.6	--
	Naphthalene	5	--	--	ND(1)	--	ND(1)	ND(2)	1.2	ND(2)	ND(2)	--	--	TR(1.6)	--
	o-xylenes	10	--	--	1.3	--	ND(1)	ND(2)	ND(1)	ND(2)	ND(2)	ND(2)	--	2.7	--
	Styrene	2.79	--	--	ND(1)	--	ND(1)	ND(2)	ND(1)	ND(2)	ND(2)	ND(2)	--	30	--
	Toluene	28.65	--	--	6.3	--	5	5.6	5.2	5.7	5.3	--	--	6.4	--

TABLE I

SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
01-Dec-00	Benzene	21	--	--	3.2	--	1.6	1.9	13	16	14	--	23	--
	Ethylbenzene	9.62	--	--	1.7	--	ND(1)	TR(0.99)	TR(1.5)	TR(1.4)	ND(1)	--	3.8	--
	m-&p-xylenes	40	--	--	5.2	--	2.3	2.9	3.9	3.9	2.3	--	7.3	--
	Naphthalene	5	--	--	ND(1)	--	ND(1)	ND(1)	TR(1.3)	2.5	ND(1)	--	2.1	--
	o-xylenes	10	--	--	1.9	--	ND(1)	1	TR(1.2)	TR(1.2)	ND(1)	--	2.8	--
	Styrene	2.79	--	--	ND(1)	--	ND(1)	ND(1)	TR(1.5)	TR(1.2)	ND(1)	--	25	--
	Toluene	28.65	--	--	13	--	22	14	16	12	21	--	9.6	--
22-Oct-00	Benzene	21	--	--	1.4	--	--	--	1.7	--	--	--	--	--
	Ethylbenzene	9.62	--	--	ND(1)	--	--	--	1.4	--	--	--	--	--
	m-&p-xylenes	40	--	--	2.5	--	--	--	5.2	--	--	--	--	--
	Naphthalene	5	--	--	ND(1)	--	--	--	2	--	--	--	--	--
	o-xylenes	10	--	--	TR(0.9)	--	--	--	1.9	--	--	--	--	--
	Styrene	2.79	--	--	ND(1)	--	--	--	3.3	--	--	--	--	--
	Toluene	28.65	--	--	3.7	--	--	--	7.4	--	--	--	--	--
20-Oct-00	Benzene	21	--	--	2.8	--	--	--	4.5	--	--	--	--	--
	Ethylbenzene	9.62	--	--	1.3	--	--	--	2	--	--	--	--	--
	m-&p-xylenes	40	--	--	4.3	--	--	--	6.1	--	--	--	--	--
	Naphthalene	5	--	--	ND(1)	--	--	--	11.1	--	--	--	--	--
	o-xylenes	10	--	--	1.6	--	--	--	2.2	--	--	--	--	--
	Styrene	2.79	--	--	ND(1)	--	--	--	2.3	--	--	--	--	--
	Toluene	28.65	--	--	7	--	--	--	22.6	--	--	--	--	--

TABLE I

**SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS**

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in ug/m ³)											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
06-Apr-00	Benzene	21	--	--	2.3	--	TR(1.8)	ND(1)	45.2	32.3	83.9	--	45.2	--
	Ethylbenzene	9.62	--	--	ND(1)	--	16.5	208.7	ND(1)	73.9	17	--	ND(1)	--
	m-&p-xylenes	40	--	--	2.9	--	56.5	739.1	11.7	265.2	60.9	--	10	--
	Naphthalene	5	--	--	ND(1)	--	ND(1)	ND(1)	ND(1)	ND(1)	TR(2.5)	--	ND(1)	--
	o-xylenes	10	--	--	TR(1)	--	9.6	134.8	ND(1)	47.8	10.4	--	TR(4.2)	--
	Styrene	2.79	--	--	ND(1)	--	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	--	9.6	--
	Toluene	28.65	--	--	8.5	--	159.3	2000	125.9	629.6	240.7	--	21.9	--
22-Feb-00	Benzene	21	--	--	2.5	--	2.1	--	58.1	32.3	83.9	--	71	--
	Ethylbenzene	9.62	--	--	1.2	--	1.1	--	2.8	1.7	2.7	--	10	--
	m-&p-xylenes	40	--	--	4	--	3.1	--	8.7	5.2	9.6	--	18.3	--
	Naphthalene	5	--	--	ND(1)	--	ND(1)	--	ND(1)	ND(1)	2.1	--	ND(1)	--
	o-xylenes	10	--	--	1.3	--	1	--	2.9	1.7	2.9	--	6.5	--
	Styrene	2.79	--	--	ND(1)	--	ND(1)	--	1.8	ND(1)	1.8	--	39.1	--
	Toluene	28.65	--	--	8.5	--	9.3	--	32.2	13	16.7	--	23	--
29-Nov-99	Benzene	21	--	--	3.5	--	1.2	1.8	11.6	11.6	18.1	--	9.7	--
	Ethylbenzene	9.62	--	--	1	--	1.1	1.5	1.2	0.8	TR(0.7)	--	3.8	--
	m-&p-xylenes	40	--	--	3.1	--	3.9	5.2	3	2.3	2.3	--	7	--
	Naphthalene	5	--	--	ND(2.1)	--	ND(2.1)	ND(2.1)	ND(2.1)	ND(2.1)	ND(2.1)	--	ND(2.1)	--
	o-xylenes	10	--	--	TR(1)	--	1.1	1.5	1	0.7	TR(0.7)	--	2.8	--
	Styrene	2.79	--	--	ND(2.2)	--	ND(2.2)	ND(2.2)	1.4	ND(2.2)	1	--	29.6	--
	Toluene	28.65	--	--	7.4	--	9.3	16.7	20.4	8.5	7.8	--	9.3	--

TABLE I

SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
30-Sep-99	Benzene	21	0.9	--	2.1	1.4	TR(1.5)	2.3	61.3	32.3	21.6	--	--	--
	Ethylbenzene	9.62	ND(2.2)	--	1.2	TR(0.9)	TR(1.1)	1.6	17	7.4	4.8	--	--	--
	m-&p-xylenes	40	2	--	3.7	2.8	3.2	3.1	43.5	20.9	13.9	--	--	--
	Naphthalene	5	TR(0.9)	--	1	TR(0.8)	TR(1.6)	1.1	2.2	2.6	2.1	--	--	--
	o-xylenes	10	TR(1)	--	1.7	1.2	TR(1.5)	1.3	12.2	6.5	4.2	--	--	--
	Styrene	2.79	ND(2.2)	--	ND(2.2)	ND(2.2)	ND(2.2)	ND(2.2)	3.3	1.7	165.2	--	--	--
	Toluene	28.65	5.2	--	7	7.8	10.7	9.3	63	18.1	15.9	--	--	--
18-Dec-98	Benzene	21	--	--	--	--	--	--	74.2	22.6	--	--	--	--
	Ethylbenzene	9.62	--	--	--	--	--	--	12.2	7.4	--	--	--	--
	m-&p-xylenes	40	--	--	--	--	--	--	28.7	28.7	--	--	--	--
	Naphthalene	5	--	--	--	--	--	--	ND(1)	2.4	--	--	--	--
	o-xylenes	10	--	--	--	--	--	--	9.6	13	--	--	--	--
	Styrene	2.79	--	--	--	--	--	--	1.3	ND(2)	--	--	--	--
	Toluene	28.65	--	--	--	--	--	--	16.7	13	--	--	--	--
22-Dec-97	Benzene	21	--	--	6.8	--	--	--	58.1	19.7	--	--	--	--
	Ethylbenzene	9.62	--	--	3	--	--	--	5.2	8.7	--	--	--	--
	m-&p-xylenes	40	--	--	10.4	--	--	--	5.7	26.1	--	--	--	--
	Naphthalene	5	--	--	ND(2.1)	--	--	--	ND(2.1)	TR(1.1)	--	--	--	--
	o-xylenes	10	--	--	3.9	--	--	--	1.7	8.7	--	--	--	--
	Styrene	2.79	--	--	ND(2.2)	--	--	--	1.3	3.5	--	--	--	--
	Toluene	28.65	--	--	18.1	--	--	--	9.6	81.5	--	--	--	--

TABLE I

**SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS**

SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
19-Nov-97	Benzene	21	2.9	--	6.1	3.5	2.6	6.1	196.8	41.9	24.2	--	--	--
	Ethylbenzene	9.62	ND(0.9)	--	3.9	1.3	1.7	4.8	11.7	4.3	3	--	--	--
	m-8p-xylenes	40	2.6	--	13.5	4.8	4.3	6.5	12.2	8.7	6.5	--	--	--
	Naphthalene	5	ND(1.1)	--	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	--	--	--
	o-xylenes	10	0.9	--	5.2	1.7	1.7	2.6	3.5	2.6	2.2	--	--	--
	Styrene	2.79	ND(0.9)	--	ND(0.9)	ND(0.9)	ND(0.9)	ND(0.9)	1.7	ND(0.9)	2.2	--	--	--
	Toluene	28.65	9.3	--	24.1	12.6	11.1	15.2	19.3	24.4	13.3	--	--	--
18-Jun-94	Benzene	21	--	3.2	--	--	--	5.8	--	3.5	3.5	2.3	--	--
	Ethylbenzene	9.62	--	1.7	--	--	--	4.8	--	61.7	90	69.1	--	--
	m-8p-xylenes	40	--	4.3	--	--	--	10.9	--	149.1	210	162.2	--	--
	Naphthalene	5	--	1.1	--	--	--	2.1	--	1.1	1.1	1.1	--	--
	o-xylenes	10	--	1.3	--	--	--	3.5	--	32.2	45.7	34.3	--	--
	Styrene	2.79	--	TR(0.11)	--	--	--	1.3	--	3.5	3.5	3	--	--
	Toluene	28.65	--	13.3	--	--	--	44.1	--	29.6	20	20	--	--

NOTES AND ABBREVIATIONS:

1. VOCs (volatile organic compound) were analyzed by EPA Method T014. Results are provided in ug/m³, unless otherwise noted.
2. OSHA PEL: Permissible Exposure Limits for air contaminants in Title 29 CFR Part 19.10.1000, Department of Labor, Occupational Safety Health Administration, 1989 and 1993 final ruling. Based on the lowest of the 8-hour average, 15-minute readings, or instantaneous readings.
3. ACGIH TLV: Threshold Limit Values recommended by the ACGIH. Based on the lowest of the 8-hour average, 15-minute readings, or instantaneous readings.
4. NIOSH REL: 1994 Recommended Exposure Limits from the National Institute of Occupational Safety and Health. Based on the lowest of the 8-hour average, 15-minute readings, or instantaneous readings.
5. MADEP Indoor Air Background Values from: MADEP, "Characterizing Risks Posed by Petroleum Contaminated Sites: Implementation of MADEP VPH/EPH Approach," Final Policy, 31 October 2002 (Policy #WSC-02-411); and MCP Toxicity.xls (MCPstds.zip), 20 December 2001, available at <http://www.state.ma.us/dep/bwsc/files/standard/gw2/gw2.htm>.
6. ND: compound not detected above quantitation limit, number in parentheses is the quantitation limit.
7. TR: compound detected below the quantitation limit, number in parentheses is the quantitation limit.
8. Test Results associated with 6 April 2000 sampling event are not representative of typical indoor air conditions due to interference from products containing VOCs being used inside the facility at the time of sampling.
9. Results collected from the Rooftop sample location on 22 December 1997 are not shown in this table but have been reported in RAM Status reports dated 7 October 2004 and earlier.
10. Due to facility modifications, Sample location 10 is no longer accessible as of October 2004. This location has been replaced by Sample Location 11; refer to Figure 2 for this sample location.

TABLE II
CHEMICAL ANALYSIS OF SUB-SLAB VENTING SYSTEM VAPOR SAMPLES
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

INFLUENT		Shut valve on 19 January 2000											
Sampling Increment Sample Date	Day 1 16-Nov-99	Day 3 19-Nov-99	Day 7 23-Nov-99	Day 14 30-Nov-99	Day 28 14-Dec-99	2 Months 10-Jan-00	Day 70 25-Jan-00	3 Months 15-Feb-00	4 Months 14-Mar-00	4.5 Months 29-Mar-00	5 Months 26-Apr-00	5.5 Months 1-May-00	
PID Reading (ppm)	175	63	60	10.5	2	0.2	195	82	61	38	1.6	19	
Compound (ug/L)													
Benzene	348	88	127	19	19	ND	402	192	148	72	47	26	
Toluene	45	23	36	7	11	ND	200	173	326	89	103	53	
Ethylbenzene	32	15	22	4	5	ND	77	56	153	29	29	23	
M&P Xylene	18	11	17	3	5	ND	76	70	282	48	126	42	
O Xylene	2	ND	3	ND	ND	ND	14	17	36	14	67	18	
Naphthalene	NA	NA	NA	150	NA	NA	NA	NA	NA	NA	NA	NA	
Styrene	ND	ND	5	ND	ND	2	13	12	29	10	48	6	
Total VOCs	445	137	210	183	40	2	782	520	974	262	420	168	

Shut valve on 19 January 2000													
EFFLUENT - 1		Day 1	Day 3	Day 7	Day 14	Day 28	2 Months	Day 70	3 Months	4 Months	4.5 Months	5 Months	5.5 Months
Sampling Increment		16-Nov-99	19-Nov-99	23-Nov-99	30-Nov-99	14-Dec-99	10-Jan-00	25-Jan-00	15-Feb-00	14-Mar-00	29-Mar-00	26-Apr-00	1-May-00
Sample Date													
PID Reading (ppm)		0	0	11	4.1	0	0.2	0	0.8	4	0	0.4	0
Compound (ug/L)													
Benzene		ND	ND	33	14	ND	ND	ND	ND	56	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND	5	ND	ND	11	ND
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene		ND	ND	ND	ND	ND	ND	ND	4	ND	ND	41	ND
O Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26	ND
Naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene		ND	ND	ND	4	ND	ND	ND	ND	16	ND	15	ND
Total VOCs		0	0	33	18	0	0	0	9	72	ND	93	0

EFFLUENT - 2		Shut valve on 19 January 2000											
Sampling Increment	Sample Date	Day 1 16-Nov-99	Day 3 19-Nov-99	Day 7 23-Nov-99	Day 14 30-Nov-99	Day 28 14-Dec-99	2 Months 10-Jan-00	Day 70 25-Jan-00	3 Months 15-Feb-00	4 Months 14-Mar-00	4.5 Months 29-Mar-00	5 Months 26-Apr-00	5.5 Months 1-May-00
PID Reading (ppm)		0	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)													
Benzene		ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene		ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene		ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	14	ND
O Xylene		ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	9	ND
Naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene		2	NA	2	ND	ND	ND	11	ND	36	ND	6	ND
Total VOCs		2	NA	2	0	0	0	11	0	36	ND	29	0

NOTES AND ABBREVIATIONS:

- VOCs: volatile organic compounds
- ND: compound not detected above method detection limit (less than approximately 1 ug/L).
- NA: not analyzed.
- INFLUENT: Vapor samples collected prior to carbon treatment
- EFFLUENT - 1: Vapor samples collected after flowing through primary carbon treatment drum (mid-carbon).
- EFFLUENT - 2: Vapor samples collected after flowing through secondary carbon treatment drum (post-carbon).
- Samples analyzed by gas chromatograph at Halsey & Aldrich Laboratory.

TABLE II
CHEMICAL ANALYSIS OF SUB-SLAB VENTING SYSTEM VAPOR SAMPLES
129 COMMERCIAL STREET, PARCEL 8 OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

Opened valve on 2 October 2000

INFLUENT	6 Months 24-May-00	7 Months 23-Jun-00	8 Months 31-Jul-00	9 Months 29-Aug-00	10 Months 27-Sep-00	11 months 31-Oct-00	12 months 28-Nov-00	13 months 31-Dec-00	14 months 22-Jan-01	15 months 27-Feb-01	15 months 26-Mar-01	16 Months 30-Apr-01
Sampling Increment												
Sample Date												
PID Reading (ppm)	9.4	4.2	1.9	0.6	0.4	0	0	0	0	0	0	0
Compound (ug/L)												
Benzene	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	50	20	7	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	15	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	27	18	5	18	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene	8	7	ND	2	ND	ND	5	ND	ND	ND	ND	ND
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	ND	ND	3	ND	ND	2	4	3	ND	ND	ND	5
Total VOCs	113	51	15	20	0	2	9	3	0	0	0	5

Opened valve on 2 October 2000

EFFLUENT - 1	6 Months 24-May-00	7 Months 23-Jun-00	8 Months 31-Jul-00	9 Months 29-Aug-00	10 Months 27-Sep-00	11 months 31-Oct-00	12 months 28-Nov-00	13 months 31-Dec-00	14 months 22-Jan-01	15 months 27-Feb-01	15 months 26-Mar-01	16 Months 30-Apr-01
Sampling Increment												
Sample Date												
PID Reading (ppm)	4.5	3.3	1.2	0.8	0	0	0	0	0	0	0	0
Compound (ug/L)												
Benzene	28	8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	11	13	10	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	ND	ND	ND	ND	3	ND	ND	ND	ND	ND	ND	ND
O Xylene	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	ND	ND	ND	ND	ND	5	11	4	ND	ND	ND	ND
Total VOCs	28	19	13	21	3	5	11	4	0	0	0	0

Opened valve on 2 October 2000

EFFLUENT - 2	6 Months 24-May-00	7 Months 23-Jun-00	8 Months 31-Jul-00	9 Months 29-Aug-00	10 Months 27-Sep-00	11 months 31-Oct-00	12 months 28-Nov-00	13 months 31-Dec-00	14 months 22-Jan-01	15 months 27-Feb-01	15 months 26-Mar-01	16 Months 30-Apr-01
Sampling Increment												
Sample Date												
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)												
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	NA	ND
Naphthalene	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	0	0	0	0	0	0	0	0	0	0	0	0

NOTES AND ABBREVIATIONS:

1. VOCs: volatile organic compounds
2. ND: compound not detected above method detection limit (less than approximately 1 ug/L).
3. NA: not analyzed.
4. INFLUENT: Vapor samples collected prior to carbon treatment.
5. EFFLUENT - 1: Vapor samples collected after flowing through primary carbon treatment drum (mid section).
6. EFFLUENT - 2: Vapor samples collected after flowing through secondary carbon treatment drum (post carbon).
7. Samples analyzed by gas chromatograph at Halsey & Aldrich Laboratory.

TABLE II
CHEMICAL ANALYSIS OF SUB-SLAB VENTING SYSTEM VAPOR SAMPLES
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

INFLUENT		17 Months	18 Months	19 Months	20 months	21 months	22 Months	23 months	24 months	25 months	26 months	27 months
Sampling Increment		31-May-01	27-Jun-01	27-Jul-01	31-Aug-01	30-Sep-01	29-Oct-01	30-Nov-01	19-Dec-01	31-Jan-02	27-Feb-02	28-Mar-02
Sample Date												
PID Reading (ppm)		0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)												
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene		6	3	ND	1	3	ND	4	ND	ND	ND	ND
Total VOCs		6	3	0	1	3	0	4	0	0	0	0

EFFLUENT - 1		17 Months	18 Months	19 Months	20 months	21 months	22 Months	23 months	24 months	25 months	26 months	27 months
Sampling Increment		31-May-01	27-Jun-01	27-Jul-01	31-Aug-01	30-Sep-01	29-Oct-01	30-Nov-01	19-Dec-01	31-Jan-02	27-Feb-02	28-Mar-02
Sample Date												
PID Reading (ppm)		0	1.2	0.8	0	0	0	0	0	0	0	0
Compound (ug/L)												
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene		ND	ND	ND	ND	2	ND	ND	1	ND	ND	ND
Total VOCs		0	0	0	0	2	0	0	1	0	0	0

EFFLUENT - 2		17 Months	18 Months	19 Months	20 months	21 months	22 Months	23 months	24 months	25 months	26 months	27 months
Sampling Increment		31-May-01	27-Jun-01	27-Jul-01	31-Aug-01	30-Sep-01	29-Oct-01	30-Nov-01	19-Dec-01	31-Jan-02	27-Feb-02	28-Mar-02
Sample Date												
PID Reading (ppm)		0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)												
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs		0	0	0	0	0	0	0	0	0	0	0

NOTES AND ABBREVIATIONS:

1. VOCs: volatile organic compounds
2. ND: compound not detected above method detection limit (less than approximately 1 ug/L).
3. NA: not analyzed.
4. INFLUENT: Vapor samples collected prior to carbon treatment.
5. EFFLUENT - 1: Vapor samples collected after flowing through primary carbon treatment drum (mid-carbon).
6. EFFLUENT - 2: Vapor samples collected after flowing through secondary carbon treatment drum (post-carbon).
7. Samples analyzed by gas chromatograph at Halsey & Aldrich laboratory.

TABLE II
CHEMICAL ANALYSIS OF SUB-SLAB VENTING SYSTEM VAPOR SAMPLES
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

INFLUENT	28 Months 2-May-02	29 Months 5-Jun-02	30 Months 27-Jun-02	31 months 30-Jul-02	32 months 27-Aug-02	33 Months 25-Sep-02	34 Months 28-Oct-02	35 Months 24-Nov-02	36 Months 31-Dec-02	37 Months 29-Jan-03	38 Months 21-Feb-03	39 Months 31-Mar-03
Sampling Increment												
Sample Date												
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)												
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	0	0	0	0	0	0	0	0	0	0	0	0

EFFLUENT - 1	28 Months 2-May-02	29 Months 5-Jun-02	30 Months 27-Jun-02	31 months 30-Jul-02	32 months 27-Aug-02	33 Months 25-Sep-02	34 Months 28-Oct-02	35 Months 24-Nov-02	36 Months 31-Dec-02	37 Months 29-Jan-03	38 Months 21-Feb-03	39 Months 31-Mar-03
Sampling Increment												
Sample Date												
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)												
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	0	0	0	0	0	0	0	0	5	0	0	0

EFFLUENT - 2	28 Months 2-May-02	29 Months 5-Jun-02	30 Months 27-Jun-02	31 months 30-Jul-02	32 months 27-Aug-02	33 Months 25-Sep-02	34 Months 28-Oct-02	35 Months 24-Nov-02	36 Months 31-Dec-02	37 Months 29-Jan-03	38 Months 21-Feb-03	39 Months 31-Mar-03
Sampling Increment												
Sample Date												
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)												
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	ND	3	ND	ND	ND	ND	ND	ND	5	1	0	0
Total VOCs	0	3	0	0	5	0	0	0	5	1	0	0

NOTES AND ABBREVIATIONS:

1. VOCs: volatile organic compounds
2. ND: compound not detected above method detection limit (less than approximately 1 ug/L).
3. NA: not analyzed.
4. INFLUENT: Vapor samples collected prior to carbon treatment.
5. EFFLUENT - 1: Vapor samples collected after flowing through primary carbon treatment drum (cold-carbon).
6. EFFLUENT - 2: Vapor samples collected after flowing through secondary carbon treatment drum (post-carbon).
7. Samples analyzed by gas chromatograph at Haley & Aldrich laboratory.

TABLE II
CHEMICAL ANALYSIS OF SUB-SLAB VENTING SYSTEM VAPOR SAMPLES
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

INFLUENT Sampling Increment Sample Date	40 Months 28-Apr-03	41 Months 29-May-03	42 Months 30-Jun-03	43 months 31-Jul-03	44 months 22-Aug-03	45 Months 30-Sep-03	46 Months 28-Oct-04	47 Months 30-Nov-04	48 Months 18-Dec-04	49 Months 22-Jan-04	50 Months 14-Feb-04
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)											
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	4	ND	5	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	11	0	5	0	0	0	0	0	0	0	0

EFFLUENT - 1 Sampling Increment Sample Date	40 Months 28-Apr-03	41 Months 29-May-03	42 Months 30-Jun-03	43 months 31-Jul-03	44 months 22-Aug-03	45 Months 30-Sep-03	46 Months 28-Oct-04	47 Months 30-Nov-04	48 Months 18-Dec-04	49 Months 22-Jan-04	50 Months 14-Feb-04
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)											
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	0	0	0	0	0	0	0	0	0	0	0

EFFLUENT - 2 Sampling Increment Sample Date	40 Months 28-Apr-03	41 Months 29-May-03	42 Months 30-Jun-03	43 months 31-Jul-03	44 months 22-Aug-03	45 Months 30-Sep-03	46 Months 28-Oct-04	47 Months 30-Nov-04	48 Months 18-Dec-04	49 Months 22-Jan-04	50 Months 14-Feb-04
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)											
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	0	0	0	0	0	0	0	0	0	0	0

NOTES AND ABBREVIATIONS:

1. VOCs: volatile organic compounds
2. ND: compound not detected above method detection limit (less than approximately 1 ug/L).
3. NA: not analyzed.
4. INFLUENT: Vapor samples collected prior to carbon treatment.
5. EFFLUENT - 1: Vapor samples collected after flowing through primary carbon treatment drum (mid-carbon).
6. EFFLUENT - 2: Vapor samples collected after flowing through secondary carbon treatment drum (post-carbon).
7. Samples analyzed by gas chromatograph at Haley & Aldrich Laboratory.

TABLE II
CHEMICAL ANALYSIS OF SUB-SLAB VENTING SYSTEM VAPOR SAMPLES
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

INFLUENT	51 Months 31-Mar-04	52 Months 28-Apr-04	53 Months 28-May-04	54 months 29-Jun-04	55 months 30-Jul-04	56 Months 31-Aug-04	57 Months 14-Sep-04	58 Months 27-Oct-04	59 Months 30-Nov-04	60 Months 20-Dec-04	61 Months 25-Jan-05
Sampling Increment											
Sample Date											
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)											
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	0	0	0	0	0	0	0	0	0	0	0

EFFLUENT - 1	51 Months 31-Mar-04	52 Months 28-Apr-04	53 Months 28-May-04	54 months 29-Jun-04	55 months 30-Jul-04	56 Months 31-Aug-04	57 Months 14-Sep-04	58 Months 27-Oct-04	59 Months 30-Nov-04	60 Months 20-Dec-04	61 Months 25-Jan-05
Sampling Increment											
Sample Date											
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)											
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	0	14	0	0	0	0	0	0	0	0	0

EFFLUENT - 2	51 Months 31-Mar-04	52 Months 28-Apr-04	53 Months 28-May-04	54 months 29-Jun-04	55 months 30-Jul-04	56 Months 31-Aug-04	57 Months 14-Sep-04	58 Months 27-Oct-04	59 Months 30-Nov-04	60 Months 20-Dec-04	61 Months 25-Jan-05
Sampling Increment											
Sample Date											
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)											
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M&P Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	0	0	0	0	0	0	0	0	0	0	0

NOTES AND ABBREVIATIONS:

1. VOCs: volatile organic compounds
2. ND: compound not detected above method detection limit (less than approximately 1 ug/L).
3. NA: not analyzed.
4. INFLUENT: Vapor samples collected prior to carbon treatment.
5. EFFLUENT - 1: Vapor samples collected after flowing through primary carbon treatment drum (mid-carbon).
6. EFFLUENT - 2: Vapor samples collected after flowing through secondary carbon treatment drum (post-carbon).
7. Samples analyzed by gas chromatograph at Haley & Aldrich Laboratory.

TABLE II
CHEMICAL ANALYSIS OF SUB-SLAB VENTING SYSTEM VAPOR SAMPLES
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

INFLUENT		62 Months	63 Months	64 Months	65 Months	66 Months	67 Months	68 Months
Sampling Increment	Sample Date	28-Feb-05	21-Mar-05	28-Apr-05	31-May-05	28-Jun-05	21-Jul-05	31-Aug-05
PID Reading (ppm)		0	0	0	0	0	0	0
Compound (ug/L)								
Benzene		ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND
M&P Xylene		ND	ND	ND	ND	ND	ND	ND
O Xylene		ND	ND	ND	ND	ND	ND	ND
Naphthalene		NA	NA	NA	NA	NA	NA	NA
Styrene		ND	ND	ND	ND	ND	ND	ND
Total VOCs		0	0	0	0	0	0	0

EFFLUENT - 1		62 Months	63 Months	64 Months	65 Months	66 Months	67 Months	68 Months
Sampling Increment	Sample Date	28-Feb-05	21-Mar-05	28-Apr-05	31-May-05	28-Jun-05	21-Jul-05	31-Aug-05
PID Reading (ppm)		0	0	0	0	0	0	0
Compound (ug/L)								
Benzene		ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND
M&P Xylene		ND	ND	ND	ND	ND	ND	ND
O Xylene		ND	ND	ND	ND	ND	ND	ND
Naphthalene		NA	NA	NA	NA	NA	NA	NA
Styrene		ND	ND	ND	ND	ND	ND	ND
Total VOCs		0	0	0	0	0	0	0

EFFLUENT - 2		62 Months	63 Months	64 Months	65 Months	66 Months	67 Months	68 Months
Sampling Increment	Sample Date	28-Feb-05	21-Mar-05	28-Apr-05	31-May-05	28-Jun-05	21-Jul-05	31-Aug-05
PID Reading (ppm)		0	0	0	0	0	0	0
Compound (ug/L)								
Benzene		ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND
M&P Xylene		ND	ND	ND	ND	ND	ND	ND
O Xylene		ND	ND	ND	ND	ND	ND	ND
Naphthalene		NA	NA	NA	NA	NA	NA	NA
Styrene		ND	ND	ND	ND	ND	ND	ND
Total VOCs		0	0	0	0	0	0	0

NOTES AND ABBREVIATIONS:

- VOCs: volatile organic compounds
- ND: compound not detected above method detection limit (less than approximately 1 ug/L).
- NA: not analyzed.
- INFLUENT: Vapor sample collected prior to carbon treatment.
- EFFLUENT - 1: Vapor sample collected after flowing through primary carbon treatment drum (field carbon).
- EFFLUENT - 2: Vapor sample collected after flowing through secondary carbon treatment drum (post-carbon).
- Samples analyzed by gas chromatograph at Halsey & Aldrich laboratory.

TABLE III
SUB-SLAB VENTING SYSTEM MONITORING DATA
128 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

Monitoring Date	Time	Influent Concentrations PID (ppm)	Influent Concentrations H&A GC (ug/L)	Effluent Concentrations Effluent - 1 (ppm)	Effluent Concentrations Effluent - 2 (ppm)	Outdoor Temp	Outlet Vapor Temp	Flow Velocity (ft/min) Influent	Flow Velocity (ft/min) Effluent	System Vacuum and Pressure ("water) Blower	Knockout Drum	Discharge	Vacuum at Extraction Points ("water) EP-1 EP-2 EP-3 EP-4 EP-5
November 18, 1999	4:40	0	0	0	0		82	0	0	0	0	0	0
November 18, 1999	5:47	62.4	445	5	5		100.5	750	1600	7.5	0	40	0
November 16, 1999	17:00	129		0	0		99	390	1450	7.5	1	40	0
November 17, 1999	7:00	102		0	0		99	390	1450	8.5	1	40	
November 17, 1999	19:30	122		0	0		102	390	1450	8.5	1	40.5	
November 16, 1999	7:05	128		0	0		101	390	1450	8	1	41	
November 16, 1999	17:35	105	137	0	0		112	390	1450	8.5	1.5	40	0
November 16, 1999	7:10	69		0	0		111	390	1450	8	1.5	41	
November 16, 1999	17:05	44.4		0	0	57	121	390	1450	8.5	1.5	40	
November 20, 1999	14:07	27.8		0	0		120	390	1450	8.5	1.5	40	
November 21, 1999	9:15	22.5		0	0	55	120	390	1450	8.5	3	40	
November 22, 1999	5:20	25.7		0	0	55	121	390	1450	8	2.9	40	2
November 23, 1999	7:50	67.5	210	17.2	0	65	121.5	390	1450	8.5	2.8	40.5	
November 24, 1999	4:15	45		50	0	65	123	390	1450	8.5	2.8	40.5	
November 25, 1999	7:35	24		0	0	45	112	390	1450	8.5	2.8	40	2
November 25, 1999	8:45	15.5		0	0	55	122	390	1450	8.5	3	40.5	
November 25, 1999	7:00	12		5.5	0	32	105	390	1450	8.5	3	40	
November 30, 1999	4:35	10.5	183	4.7	0	30	101.5	390	1450	8	2.8	40.5	
December 2, 1999	7:25	5.4		0	0	25	97.5	390	1450	8	2.1	42	0
December 2, 1999	7:38	3		0	0	50	120	390	1450	8.5	2	41.5	
December 6, 1999	17:38	3		0	0	50	120	390	1450	8	2.9	40	
December 14, 1999	9:20	2	40	0	0	55	118	390	1450	9	2.2	40	1
December 17, 1999	9:52	0.8		0	0	40	108	390	1450	9	2.4	41	
December 22, 1999	18:40	0.2		0	0	25	109	390	1450	9	2.5	41	
January 4, 2000	9:25	0.1		0	0	50	102	390	1450	9	2.5	41	1
January 4, 2000	18:05	0.3		0.4	0	60	122	390	1450	8.5	2	40	
January 5, 2000	12:16	0.1		1.7	0	55	118	390	1450	9.5	3	40	
January 6, 2000	11:25	0.1		0.1	0	45	113	390	1450	9	2.7	40	
January 10, 2000	18:15	0.2	2	0.2	0	47	108	390	1450	9	2.2	37.5	
January 14, 2000	10:45	0.1		0	0	5	98	390	1450	6	1.5	40	
January 14, 2000	5:35	0		0	0	60	80	390	1450	8.5	1.5	39.5	
January 18, 2000	7:05	102		0	0	3	84	1500	1490	17	10	34	0
January 18, 2000	17:35	247		0	0	15	97	1500	1490	17.5	11	34.5	4
January 20, 2000	8:25	310		0	0	10	98	1500	1490	17.5	10.5	33.5	4
January 20, 2000	11:50	283		9	0	5	88	1500	1490	17.5	10.5	34.5	4
January 21, 2000	5:30	240		186	0	10	98	1500	1490	17	10	34	0
January 22, 2000	13:55	235		243	0	5	98	1500	1490	17	10	34	0
January 23, 2000	13:20	232		0	0	20	98	1500	1490	17	10	35	4
January 24, 2000	8:45	223	782	199	0	15	98	1500	1490	17	10	35	4
January 25, 2000	7:00	196		0	0	25	98	1500	1490	17.5	11	35	4
January 25, 2000	16:10	191		0	0	30	98	1500	1490	17	10	34	0
January 25, 2000	7:45	215		78	0	15	99	1500	1490	17	10	34.5	4
January 26, 2000	12:30	226		122	0	30	100	1500	1490	17	10	34.5	4
January 27, 2000	8:00	204		0	0	15	99	1500	1490	17.5	11	35	4
January 27, 2000	13:30	160		48	0	30	104	1500	1490	18	11	35	4
January 28, 2000	7:50	165		145	0	0	94	1500	1490	17.5	10.5	35	4
January 28, 2000	13:20	168		145	0	20	100	1500	1490	17.5	10.5	36	4
January 30, 2000	12:10	149		96	0	40	100	1500	1490	17	10	35	4
January 31, 2000	5:30	165		96	0	30	100	1500	1490	17	10	35	4
February 1, 2000	20:20	163		0	0	25	100	1500	1490	18	12	34	4
February 1, 2000	8:15	134		62	0	5	99	1500	1490	17	11.5	36	4
February 1, 2000	19:45	168		106	0	5	99	1500	1490	17.5	11.5	35	4
February 2, 2000	7:00	154		0	0	30	101	1500	1490	17	10.5	36	4
February 3, 2000	9:00	157		0	0	30	101	1500	1490	17.5	11	38	4
February 4, 2000	16:20	146		3	0	20	100	1500	1490	17	11	35	4
February 4, 2000	13:40	138		28	0	30	101	1500	1490	18	12	35	4
February 5, 2000	22:30	152		0	0	25	98	1500	1490	18	11.5	36	4
February 6, 2000	7:00	138		0	0	30	99	1500	1490	18	12	35	4
February 7, 2000	8:45	127		0	0	20	100	1500	1490	17.5	11	34	4
February 7, 2000	20:45	124		58	0	0	97	1500	1490	17	11	38	4
February 8, 2000	8:00	124		58	0	0	97	1500	1490	17.5	11	35	4

TAB
SUB
129
MAL

TABLE III
SUB-SLAB VENTING SYSTEM MONITORING DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

Monitoring Date	Time	Influent Concentrations PID (ppm)	Influent Concentrations H&A GC (ug/L)	Effluent Concentrations Effluent - 1 (ppm)	Effluent Concentrations Effluent - 2 (ppm)	Outdoor Temp	Outlet Vapor Temp	Flow Velocity (ft/min) Influent	Flow Velocity (ft/min) Effluent	System Vacuum and Pressure (" water) Blower	Knockout Drum	Discharge	Vacuum at Extraction Points (" water) EP-1 EP-2 EP-3 EP-4 EP-5
February 8, 2000	17:20	117		0	0	25	96	1500	1490	17	11.5	36	
February 9, 2000	7:45	120		0	0	15	99	1500	1490	18	11	36	
February 10, 2000	8:30	128		0	0	40	102	1500	1490	17.5	11	38	
February 11, 2000	18:30	134		40	0	35	102	1500	1490	17.5	11.5	38	
February 12, 2000	7:00	137		105	0	35	103	1500	1490	17	13.5	35	
February 13, 2000	7:20	128		0	0	0	100	1500	1490	17.5	11	38	
February 14, 2000	15:00	120		0	0	25	100	1500	1490	17.5	11	38.5	
February 15, 2000	17:10	78		0	0	50	103	1500	1490	17.5	11	35	
February 16, 2000	8:00	82	520	0.3	0	30	102	1500	1490	17.5	11	36	
February 17, 2000	7:30	85		48	0	35	101	1500	1490	17.5	11	36	
February 18, 2000	7:00	78		0	0	20	100	1500	1490	17	10.5	37	
February 19, 2000	0:15	112		22	0	30	100	1500	1490	17.5	10.5	38	
February 20, 2000	0:00	70		0	0	30	100	1500	1490	17	10.5	35.8	
February 21, 2000	9:00	102		0	0	35	101	1500	1490	17.5	11	35	
February 22, 2000	6:30	81		0	0	37	101	1500	1490	17.5	11	36	
February 23, 2000	18:50	98		0.5	0	50	108	1500	1490	17.5	11.5	35.5	
February 24, 2000	14:00	98		32	0	50	107	1500	1490	17.5	11	35	
February 25, 2000	8:15	62		77	0	50	112	1500	1490	17.5	11	34.5	
February 26, 2000	18:00	88		0	0	35	108	1500	1490	17.5	11.5	38	
February 27, 2000	18:50	80		0	0	60	112	1500	1490	17.5	12	38	
February 28, 2000	12:45	98		1	0	32	100	1500	1490	17.5	12	35	
February 29, 2000	7:00	90		0	0	50	109	1500	1490	17.5	11.5	35	
February 29, 2000	8:00	86		0	0	50	110	1500	1490	17.5	11.5	35	
February 29, 2000	10:30	71		31	0	30	103	1500	1490	17.5	11	35	
March 1, 2000	10:00	86		22	0	40	106	1500	1490	17	11	35	
March 2, 2000	7:45	32		46	0	55	109	1500	1490	17.5	11.5	35.5	
March 3, 2000	9:00	80		0	0	50	106	1500	1490	17	11.5	35.5	
March 4, 2000	9:00	69		0	0	48	108	1500	1490	17	11.5	38	
March 5, 2000	14:00	74		7	0	50	110	1500	1490	17	10.5	38	
March 6, 2000	9:00	47		21	0	60	110	1500	1490	17	11	38	
March 7, 2000	8:00	39		0	0	50	110	1500	1490	17	10.5	38	
March 8, 2000	19:00	47		0	0	60	111	1500	1490	17	11	38	
March 9, 2000	8:20	35		0	0	70	122	1500	1490	17	11	38	
March 9, 2000	8:30	81		7	0	45	114	1500	1490	17	11	35	
March 10, 2000	17:30	82		19	0	40	103	1500	1490	17.5	11.5	38	
March 11, 2000	6:15	65		21	0	30	105	1500	1490	17.5	11.5	38	
March 12, 2000	18:30	46		0	0	45	106	1500	1490	17.5	11	35	
March 13, 2000	13:30	49		0	0	45	108	1500	1490	17.5	11	38	
March 14, 2000	9:00	45		0	0	30	105	1500	1490	17.5	11.5	38	
March 15, 2000	8:50	61	874	4	0	35	107	1500	1490	17.5	11.5	38	
March 16, 2000	8:45	8		3	0	55	110	1500	1490	19	11	38	
March 17, 2000	20:30	86		52	0	55	111	1500	1490	17	11.5	38	
March 18, 2000	9:15	98		58	0	55	114	1500	1490	17.5	11	38	
March 19, 2000	12:45	85		86	0	65	120	1500	1490	17.5	11	38	
March 20, 2000	18:15	46		38	0	60	117	1500	1490	17.5	11	38	
March 21, 2000	8:45	50		0	0	32	104	1500	1490	17.5	11	34	
March 22, 2000	18:30	15		0	0	30	102	1500	1490	17	11	35	
March 23, 2000	7:30	39		0	0	30	104	1500	1490	17.5	11	35	
March 24, 2000	system down												
March 25, 2000	system re-started												
March 26, 2000	system down												
March 27, 2000	system re-started												
March 28, 2000	18:30	28		0	0	45	105	1500	1490	17.5	10	34.5	
March 29, 2000	8:00	28		0	0	40	107	1500	1490	17.5	10.5	34.5	
March 30, 2000	21:00	32		0	0	45	110	1500	1490	17.5	10.5	34.5	
March 31, 2000	9:45	32		0	0	60	113	1500	1490	17.5	10.5	34.5	
March 32, 2000	13:00	34		0	0	65	117	1500	1490	17.5	10.5	34.5	
March 33, 2000	17:45	38		0	0	80	112	1500	1490	17	11	34	
March 34, 2000	11:30	32		28	0	65	119	1500	1490	17	11	33	
March 35, 2000	13:15	47		29	0	60	114	1500	1490	18	12.5	32	
March 36, 2000	20:00	37		29	0	50	112	1500	1490	18	12	33	
March 37, 2000	9:00	38	262	0	0	50	112	1500	1490	17.5	12	33	
March 38, 2000	18:30	20		0	0	45	112	1500	1490	17.5	12	33	

TABLE III
SUB-SLAB VENTING SYSTEM MONITORING DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

Monitoring Date	Time	Influent Concentrations PID (ppm)	H2A GC (ug/L)	Effluent Concentrations Effluent - 1 (ppm)	Effluent - 2 (ppm)	Outdoor Temp	Outlet Vapor Temp	Flow Velocity (ft/min) Influent	Flow Velocity (ft/min) Effluent	System Vacuum and Pressure (in water) Blower	Knockout Drum	Discharge	Vacuum at Extraction Points (in water) EP-1 EP-2 EP-3 EP-4 EP-5
June 13, 2000	8:00	4.8		0.2	0.0	85	123	1500	1500	18	12.5	33	
June 14, 2000	9:00	3.3		0.1	0.0	60	122	1500	1500	18	12.5	33	
June 15, 2000	8:45	1.7		0.2	0.0	60	123	1500	1500	18	12.5	33	
June 17, 2000	8:15	5.0		2.0	0.0	70	133	1500	1500	19	12	32	
June 18, 2000	15:30	6.2		2.5	0.0	70	133	1500	1500	18	12.5	33	
June 20, 2000	9:00	5.7		2.2	0.0	75	134	1500	1500	18	12.5	33	
June 21, 2000	7:30	4.6		2.7	0.0	75	133	1500	1500	18	12.5	33	
June 21, 2000	8:15	3.9		2.6	0.0	90	134	1500	1500	17.5	12.5	32.5	
June 23, 2000	9:00	4.2		3.3	0.0	75	139	1500	1500	17.5	12.5	32.5	
June 27, 2000	9:30	3.7	51	3.4	0.0	75	139	1500	1500	17	12	32	
June 28, 2000	7:15	3.6		3.3	0.0	75	137	1500	1500	18	11.5	32.5	
July 5, 2000	8:00	3		0.6	0.0	75	137	1500	1500	18	11	31	
July 7, 2000	8:45	2.3		1.0	0.0	70	135	1500	1500	15.5	11	33	
July 8, 2000	10:00	2.9		0.0	0.0	60	138	1500	1500	15.5	11	33	
July 12, 2000	8:00	2.3		0.1	0.0	80	137	1500	1500	18	11	33	
July 13, 2000	8:00	2.3		0.1	0.0	85	137	1500	1500	18	11	32.5	
July 14, 2000	8:00	2.3		0.2	0.0	80	137	1500	1500	18	11	32.5	
July 20, 2000	17:00	2.2		0.4	0.0	80	137	1500	1500	18	11	33	
July 25, 2000	7:00	2		0.7	0.0	80	137	1500	1500	18	11	33	
July 31, 2000	15:30	1.9	15	1.2	0.0	70	137	1500	1500	17	11	33	
August 2, 2000	16:30	1.6		0.9	0.0	75	137	1500	1500	16	11	33	
August 7, 2000	7:30	1.5		0.6	0.0	75	137	1500	1500	19	11	33	
August 15, 2000	8:15	1.3		0.2	0.0	70	138	1500	1500	18	11	34	
August 17, 2000	9:15	1.2		0.3	0.0	75	138	1500	1500	18	11	33	
August 21, 2000	12:15	1		1.2	0.0	70	137	1500	1500	17.5	11.6	33.5	
August 28, 2000	15:30	0.6		0.8	0.0	85	140	1500	1500	17.5	11.5	33	
August 29, 2000	11:30	0.6	20	0.8	0.0	80	138	1500	1500	17.5	11.5	33	
September 1, 2000	16:30	0.7		0.9	0.0	80	140	1500	1500	17.5	11.5	33	
September 5, 2000	7:30	0.6		0.5	0.0	75	140	1500	1500	17.5	11.5	34	
September 10, 2000	16:15	0.3		0.4	0.0	70	130	1500	1500	17.5	11.5	34	6.5
September 12, 2000	14:15	0.7		0	0.0	75	135	1500	1500	17.5	11.5	34	
September 14, 2000	17:15	0.4		0	0.0	75	137	1500	1500	18	12	33	
September 27, 2000	9:15	0.4	0	0	0.0	60	120	1500	1500	18	11	34	
October 2, 2000	7:30	0.2		0	0.0	55	125	1500	1500	18	11	33.5	
October 2, 2000	8:00	0		0	0.0	55	121	390	1500	8	2	39	
October 11, 2000	13:15	0.1		0	0.0	65	135	390	1500	8.5	3	38	
October 11, 2000	16:30	0		0	0.0	60	130	390	1500	8	3	38	
October 23, 2000	16:30	0		0	0.0	60	132	390	1500	8.5	3	38	
October 31, 2000	19:30	0	2	0	0.0	55	123	390	1500	8.5	3	38	
November 3, 2000	19:30	0		0	0.0	60	130	390	1500	8.5	3	38	
November 6, 2000	17:50	0		0	0.0	50	121	390	1500	9	3	38	
November 13, 2000	17:30	0		0	0.0	45	115	390	1500	10	2	38	
November 17, 2000	12:00	0		0	0.0	35	109	390	1500	10	2	38	
November 22, 2000	15:45	0		0	0.0	32	108	390	1500	10.5	2.5	38	
November 26, 2000	17:00	0	9	0	0.0	45	107	390	1500	11	2	38	
December 4, 2000	6:00	0		0	0.0	30	105	390	1500	13.5	2.5	38	
December 11, 2000	11:00	0		0	0.0	40	108	390	1500	13	2	38	
December 21, 2000	8:45	0		0	0.0	20	97	390	1500	13.5	2.5	38	
December 27, 2000	8:00	0		0	0.0	20	92	390	1500	14	2	38	
December 29, 2000	10:00	0		0	0.0	25	91	390	1500	14	2	38	
December 31, 2000	11:00	0	3	0	0.0	20	92	390	1500	14	2	38	
System Down, re-started													
January 3, 2001	16:45	0		0	0.0	20	98	390	1500	14	2	37	
January 4, 2001	9:00	0		0	0.0	25	101	390	1500	15	2	38	
January 9, 2001	17:30	0		0	0.0	20	98	390	1500	17	2	38	
January 16, 2001	7:30	0		0	0.0	20	97	390	1500	17.5	2	34	
January 19, 2001	15:00	0		0	0.0	15	98	390	1500	17.5	2	34	
January 22, 2001	8:00	0	0	0	0.0	25	105	390	1500	18	2	34	
January 24, 2001	9:30	0		0	0.0	25	117	390	1500	18.5	2.5	33	
January 29, 2001	7:30	0		0	0.0	45	117	390	1500	18.5	2.5	33	
January 31, 2001	9:00	0		0	0.0	30	107	390	1500	19	2.5	34	
February 2, 2001	9:00	0		0	0.0	30	115	390	1500	19.5	2.5	33	
February 5, 2001	7:30	0		0	0.0	30	115	390	1500	19.5	2.5	33	

TABLE III
SUB-SLAB VENTING SYSTEM MONITORING DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

Monitoring Date	Time	Influent Concentrations PID (ppm) HSA GC (ug/L)	Effluent Concentrations Effluent-1 (ppm) Effluent-2 (ppm)	Outdoor Temp	Outlet Vapor Temp	Flow Velocity (ft/min) Influent Effluent	System Vacuum and Pressure ("water") Blower Knockout Drum Discharge	Vacuum at Extraction Points ("water") EP-1 EP-2 EP-3 EP-4 EP-5
February 7, 2001	10:00	0	0	0	0	390	2.5	33
February 9, 2001	8:30	0	0	0	0	390	2	34
February 12, 2001	8:30	0	0	0	0	390	2	34
February 14, 2001	7:30	0	0	0	0	390	2.5	33
February 15, 2001	10:45	0	0	0	0	390	2.5	33
February 16, 2001	7:30	0	0	0	0	390	2.5	33
February 18, 2001	10:45	0	0	0	0	390	2.5	33
February 20, 2001	8:15	0	0	0	0	390	2.5	33
February 23, 2001	7:30	0	0	0	0	390	2.5	33
February 27, 2001	9:00	0	0	0	0	390	2.5	33
February 27, 2001	7:00	0	0	0	0	390	2.5	32.5
March 1, 2001	9:00	0	0	0	0	390	2.5	32.5
March 2, 2001	9:00	0	0	0	0	390	2.5	32.5
March 5, 2001	12:00	0	0	0	0	390	2.5	32.5
March 7, 2001	13:00	0	0	0	0	390	2.5	32.5
March 8, 2001	7:00	0	0	0	0	390	2.5	32.5
March 9, 2001	8:00	0	0	0	0	390	2.5	32.5
March 12, 2001	7:30	0	0	0	0	390	2.5	32.5
March 14, 2001	10:00	0	0	0	0	390	2.5	32.5
March 16, 2001	8:00	0	0	0	0	390	2.5	32.5
March 19, 2001	8:00	0	0	0	0	390	2.5	32.5
March 20, 2001	9:00	0	0	0	0	390	2.5	32.5
March 22, 2001	9:00	0	0	0	0	390	2.5	32.5
March 23, 2001	9:00	0	0	0	0	390	2.5	32.5
March 26, 2001	9:30	0	0	0	0	390	2.5	32.5
March 28, 2001	15:00	0	0	0	0	390	2.5	32.5
March 30, 2001	8:00	0	0	0	0	390	2.5	32.5
April 2, 2001	9:45	0	0	0	0	390	2.5	32.5
April 4, 2001	10:30	0	0	0	0	390	2.5	32.5
April 9, 2001	13:00	0	0	0	0	390	2.5	32.5
April 10, 2001	10:00	0	0	0	0	390	2.5	32.5
April 13, 2001	10:00	0	0	0	0	390	2.5	32.5
April 16, 2001	9:30	0	0	0	0	390	2.5	32.5
April 19, 2001	15:00	0	0	0	0	390	2.5	32.5
April 20, 2001	16:00	0	0	0	0	390	2.5	32.5
April 24, 2001	15:45	0	0	0	0	390	2.5	32.5
April 25, 2001	16:00	0	0	0	0	390	2.5	32.5
April 27, 2001	11:45	0	0	0	0	390	2.5	32.5
April 30, 2001	19:00	0	0	0	0	390	2.5	32.5
May 1, 2001	8:30	0	0	0	0	390	2.5	32.5
May 4, 2001	15:00	0	0	0	0	390	2.5	32.5
May 7, 2001	8:00	0	0	0	0	390	2.5	32.5
May 9, 2001	8:00	0	0	0	0	390	2.5	32.5
May 11, 2001	7:30	0	0	0	0	390	2.5	32.5
May 14, 2001	10:00	0	0	0	0	390	2.5	32.5
May 15, 2001	16:00	0	0	0	0	390	2.5	32.5
May 18, 2001	7:30	0	0	0	0	390	2.5	32.5
May 22, 2001	14:00	0	0	0	0	390	2.5	32.5
May 24, 2001	7:00	0	0	0	0	390	2.5	32.5
May 25, 2001	10:00	0	0	0	0	390	2.5	32.5
May 31, 2001	8:00	0	0	0	0	390	2.5	32.5
June 1, 2001	8:00	0	0	0	0	390	2.5	32.5
June 4, 2001	13:00	0	0	0	0	390	2.5	32.5
June 6, 2001	9:30	0	0	0	0	390	2.5	32.5
June 8, 2001	13:30	0	0	0	0	390	2.5	32.5
June 11, 2001	9:30	0	0	0	0	390	2.5	32.5
June 13, 2001	7:00	0	0	0	0	390	2.5	32.5
June 15, 2001	15:00	0	0	0	0	390	2.5	32.5
June 16, 2001	9:00	0	0	0	0	390	2.5	32.5
June 21, 2001	9:30	0	0	0	0	390	2.5	32.5
June 23, 2001	8:00	0	0	0	0	390	2.5	32.5
June 25, 2001	12:00	0	0	0	0	390	2.5	32.5
June 27, 2001	10:00	0	0	0	0	390	2.5	32.5

System down, re-started

1 1 1 0 1

Replaced Air Filter

TABLE III
SUB-SLAB VENTING SYSTEM MONITORING DATA
128 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

Monitoring Date	Time	Influent Concentrations PID (ppm)	H2A GC (ug/L)	Effluent Concentrations Effluent - 1 (ppm)	Effluent - 2 (ppm)	Outdoor Temp	Outlet Vapor Temp	Flow Velocity (ft/min) Influent	Flow Velocity (ft/min) Effluent	System Vacuum and Pressure (" water) Blower	Knockout Drum	Discharge	Vacuum at Extraction Points (" water) EP-1 EP-2 EP-3 EP-4 EP-5
July 3, 2001	8:00	0		0	0	80	140	390	1500	11	5	37	
July 5, 2001	7:30	0		0	0	85	150	390	1500	11	5	37	
July 6, 2001	6:00	0		0	0	90	155	390	1500	11	5	37	
July 8, 2001	7:00	0		0	0	85	146	390	1500	11	5	36	
July 10, 2001	16:00	0		0	0	90	152	390	1500	11	5	37	
July 11, 2001	7:30	0		0	0	85	150	390	1500	11	5	37	
July 13, 2001	17:30	0		0	0	85	150	390	1500	11	5	37	
July 17, 2001	7:15	0		0	0	75	137	390	1500	11	5	37	
July 20, 2001	11:30	0		0	0	85	157	390	1500	11.5	5	36	
July 24, 2001	8:30	0		0	0	80	144	390	1500	11.5	5	38	
July 27, 2001	8:00	0	0	0	0	70	132	390	1500	11.5	5	37	
July 30, 2001	11:00	0		0	0	75	145	390	1500	12	5	37	
August 5, 2001	15:00	0		0	0	80	120	390	1500	12	5	36	
August 7, 2001	16:00	0		0	0	85	167	390	1500	12	5	35.5	
August 8, 2001	9:00	0		0	0	80	145	390	1500	12.5	5	35.5	
August 10, 2001	16:00	0		0	0	80	145	390	1500	12.5	5	35.5	
August 13, 2001	7:30	0		0	0	75	145	390	1500	13	5	35.5	
August 16, 2001	10:00	0		0	0	80	144	390	1500	13.5	5	35	
August 20, 2001	8:15	0		0	0	75	144	390	1500	15	5	35	
August 24, 2001	8:30	0		0	0	75	144	390	1500	15	5	35	
August 27, 2001	7:30	0		0	0	80	145	390	1500	15	5	34	
August 28, 2001	7:30	0		0	0	75	144	390	1500	15.5	5	34	
August 31, 2001	8:00	0	1	0	0	75	143	390	1500	15.5	5	34	
September 14, 2001	11:15	0		0	0	85	126	390	1500	17	4	34	
September 21, 2001	13:30	0		0	0	65	140	390	1500	17	4	34	
September 30, 2001	16:00	0	3	0	0	75	142	390	1500	17	4	34	
October 4, 2001	8:10	0		0	0	75	138	390	1500	20	4.5	16	
October 6, 2001	12:34	0		0	0	85	85	390	1500	20	4.5	16	
October 9, 2001	11:50	0		0	0	85	132	390	1500	20	4	16.5	
October 15, 2001	10:40	0		0	0	85	135	390	1500	20.5	4	18.5	
October 24, 2001	12:15	0		0	0	75	150	390	1500	22	4.5	18	
October 26, 2001	12:00	0		0	0	55	130	390	1500	22.5	3	32	
October 31, 2001	14:30	0	0	0	0	55	130	390	1500	22.5	4	17.5	
November 10, 2001	11:15	0		0	0	55	122	390	1500	24	3	32	
November 12, 2001	10:30	0		0	0	55	122	390	1500	22	2	32	
November 16, 2001	14:30	0		0	0	70	148	390	1500	24	3.5	30	
November 21, 2001	11:20	0		0.1	0								
November 26, 2001	8:00	0		0	0	55	130			22	4	30	
November 27, 2001	13:15	0		0	0	45	114			22	3	31	
November 30, 2001	8:45	0	4	0	0	75	146			24	4.5	29	
December 6, 2001	12:45	0		0	0	65	140			24	4.5	29	
December 7, 2001	14:45	0		0	0								
December 12, 2001	12:00	0		0	0	55	118			11	4.5	34	
December 18, 2001	14:15	0		0	0	45	112			11	4.5	38	
December 21, 2001	13:10	0		0	0	40	98			12	4.5	38	
December 28, 2001	13:15	0		0	0	35	92			12	2	37	
January 3, 2002	7:45	0		0	0	35	106			12	3	36	
January 4, 2002	11:15	0		0	0	35	104			11	3	37	
January 7, 2002	13:30	0		0	0	55	108			12	3	36	
January 11, 2002	13:30	0		0	0	45	110			11	3	36	
January 16, 2002	15:30	0		0	0	55	111			10	3	38	
January 22, 2002	12:00	0		0	0	60	120			10	3.5	38	
January 28, 2002	15:40	0		0	0	35	94			10	3	40	
January 31, 2002	7:00	0	0	0	0	35	102			10	3	38	
February 8, 2002	8:45	0		0	0	15	90			10	3	38	
February 12, 2002	7:00	0		0	0	34	104			10	3	38	
February 27, 2002	15:15	0	0	0	0								
March 8, 2002	16:40	0		0	0								
March 18, 2002	9:30	0	0	0	0	32	100			10	3.5	38	
March 28, 2002	13:30	0	0	0	0	55	130			10	4	38	

System Down
System Down, electrical repairs made, system re-started

System Down, re-started

System Down, re-started

TAB
SUB
121
MAL

TABLE III
SUB-SLAB VENTING SYSTEM MONITORING DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

Monitoring Date	Time	Influent Concentrations PID (ppm)	Influent Concentrations H2A GC (ug/L)	Effluent Concentrations Effluent - 1 (ppm)	Effluent - 2 (ppm)	Outdoor Temp	Outlet Vapor Temp	Flow Velocity (ft/min) Influent	Flow Velocity (ft/min) Effluent	System Vacuum and Pressure (" water) Blower Knockout Drum	Vacuum at Extraction Points (" water) EP-1 EP-2 EP-3 EP-4 EP-5
April 5, 2002	14:00	0	0	0	0	55	136	550	1250	11	37
April 9, 2002	17:30	0	0	0	0	55	124			10	38
April 18, 2002	8:45	0	0	0	0	55					
April 26, 2002	15:00	0	0	0	0	55	110	450	1450	11	38
May 2, 2002	15:30	0	0	0	0	55	130	550	1350	12	38
May 8, 2002	16:00	0	0	0	0	60	148	450	1250	12	37
May 16, 2002	16:00	0	0	0	0	60	130	500	1400	12	38
May 20, 2002	12:30	0	0	0	0	70	138	450	1250	12	36
May 22, 2002	16:10	0	0	0	0	70	144	425	1250	13	37
May 31, 2002	16:30	0	0	0	0	60	136	500	1300	12	36
June 5, 2002	13:00	0	0	0	0	70	131	425	1250	13	36
June 13, 2002	16:30	0	0	0	0	70	144	425	1250	13	35
June 19, 2002	14:40	0	0	0	0	75	158	425	1250	14	34
June 27, 2002	11:30	0	0	0	0	85	172			15	34
July 3, 2002	15:30	0	0	0	0	90	158	600	1250	17	34
July 8, 2002	12:00	0	0	0	0	90	158	500	1100	17	32
July 19, 2002	15:30	0	0	0	0	75	150	1000	1500	20	32
July 24, 2002	14:00	0	0	0	0	70	174	500	1000	22	34
July 30, 2002	12:30	0	0	0	0	85	174	500	1100	25	30
August 9, 2002	14:15	0	0	0	0	90	182	420	1100	27	26
August 16, 2002	12:30	0	0	0	0	85	172				
August 23, 2002	16:00	0	0	0	0	70					
August 27, 2002	12:20	0	0	0	0	60	148	140	1200	30	28
September 11, 2002	16:00	0	0	0	0	85	141			31	28
September 12, 2002	14:00	0	0	0	0	60	150			30	27
October 4, 2002	14:45	0	0	0	0	48					
October 8, 2002	8:30	0	0	0	0	50	140			32	28
October 14, 2002	12:00	0	0	0	0	60	138			30	27
October 25, 2002	15:30	0	0	0	0	30	124			32	28
October 26, 2002	16:30	0	0	0	0	40	138			32	27
November 12, 2002	11:30	0	0	0	0	35	1220	450	1150	34	26
December 2, 2002	13:30	0	0	0	0	40	128			32	24
December 13, 2002	15:00	0	0	0	0	40	116			32	24
December 17, 2002	15:30	0	0	0	0	35	116			32	25
December 27, 2002	15:45	0	0	0	0	30	120			34	25
December 31, 2002	15:30	0	0	0	0	30	128			34	24
January 10, 2003	14:00	0	0	0	0	40					
January 14, 2003	9:30	0	0	0	0	50					
January 20, 2003	10:30	0	0	0	0	35	116				
January 26, 2003	10:30	0	0	0	0	35	116				
January 29, 2003	12:45	0	0	0	0	30	120				
February 7, 2003	16:00	0	0	0	0	30					
February 10, 2003	11:30	0	0	0	0	35					
February 21, 2003	12:00	0	0	0	0	40					
February 26, 2003	12:00	0	0	0	0	40					
March 17, 2003	13:00	0	0	0	0	50	120	500	1250	9	40
March 18, 2003	13:30	0	0	0	0	55	120	500	1250	9	40
March 24, 2003	11:00	0	0	0	0	55	120	500	1250	9	40
March 25, 2003	13:30	0	0	0	0	60	135	500	1250	9	40
March 26, 2003	15:00	0	0	0	0	39	120	500	1250	9	40
March 31, 2003	12:30	0	0	0	0	45	122	500	1250	9	40
April 4, 2003	17:30	0	0	0	0	45		300	>6000	5	64
April 7, 2003	12:20	0	0	0	0					3	65
April 8, 2003	12:00	0	0	0	0						
April 9, 2003	14:00	0	0	0	0	60	135	480	1400	9.5	40
April 11, 2003	17:00	0	0	0	0	50				9.5	40
April 14, 2003	17:30	0	0	0	0	60	140			9.5	40
April 17, 2003	16:00	0	0	0	0	50	125			9.5	40
April 25, 2003	13:55	0	0	0	0	50				9.5	40
April 28, 2003	7:30	0	0	0	0						

0855816

08558163005 0625 tbsRAM15.xls

TABLE III
SUB-SLAB VENTING SYSTEM MONITORING DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

Monitoring Date	Time	Influent Concentrations PID (ppm)	Influent Concentrations H2A GC (ug/L)	Effluent Concentrations Effluent - 1 (ppm)	Effluent Concentrations Effluent - 2 (ppm)	Outdoor Temp	Outlet Vapor Temp	Flow Velocity (ft/min) Influent	Flow Velocity (ft/min) Effluent	System Vacuum and Pressure ("water) Blower Knockout Drum	Vacuum at Extraction Points ("water) EP-1 EP-2 EP-3 EP-4 EP-5		
May 19, 2004	6:15	0		0	0	80	140			11	2	40	Electrician on site. System problems due to over heating. Installed inlet air vent adjacent to blower.
May 20, 2004	11:30	0		0	0	80	148			11	2	40	
May 28, 2004	11:00	0	0	0	0	50	123	300	1200	11	4	40	
June 4, 2004	17:15	0		0	0	80	137	250	1100	11.5	8	38	
June 6, 2004	17:20	0		0	0	80	130			11.5	8	38	System down, restarted.
June 10, 2004	18:45	0		0	0	80	142	375	1200	11	5	39	
June 17, 2004	14:00	0		0	0	80	150	375	1200	11	5	38	
June 21, 2004	5:00	0		0	0	80	132	400	1200	11	5	40	
June 28, 2004	12:30	0	0	0	0	80	144	400	1200	11	5	40	System down, restarted.
July 9, 2004	8:45	0		0	0	70	140	425	1200	11	5	40	
July 16, 2004	5:15	0		0	0	70	140	400	1200	11	5	40	
July 23, 2004	5:00	0		0	0	70	116	475	1250	11.5	5	40	
July 29, 2004	10:00	0	0	0	0	60	144	500	1250	11.5	5	40	System down, restarted. Vent fan installed in trailer.
August 5, 2004	5:00	0		0	0	70	140	500	1250	11.5	5	40	
August 10, 2004	18:15	0		0	0	80	120	500	1250	11.5	5	39	
August 19, 2004	6:00	0		0	0	80	124	350	1250	12	5	39	
August 26, 2004	5:45	0		0	0	70	114	300	1250	11	5	40	System down, restarted.
August 31, 2004	11:20	0		0	0	90	132	350	1250	11.5	5	40	
September 10, 2004	6:15	0		0	0	80	122	325	1300	12	5	40	
September 14, 2004	13:10	0	0	0	0	80	122	375	1250	11.5	5	40	
September 23, 2004	5:50	0		0	0	80	143	350	1250	11	5	40	
September 28, 2004	18:30	0		0	0	40	100	300	1250	11	5	41	
October 7, 2004	5:45	0		0	0	50	110	500	1250	11	5	40	
October 14, 2004	6:20	0		0	0	40	98	300	1250	11	5	42	
October 21, 2004	6:00	0		0	0	70	112	300	1250	11	5	40	
October 27, 2004	18:00	0	0	0	0	60	98	475	1250	11	5	42	
November 4, 2004	9:15	0		0	0	40	100	475	1250	11	5	41	
November 11, 2004	8:00	0		0	0	50	100	450	1250	11	5	41	
November 15, 2004	10:00	0		0	0	40	88	400	1250	11	4.5	41	System off, restarted. No access to In/Ex velocity port due to large snow bank.
November 26, 2004	9:00	0	0	0	0	20	85	400	1250	11	4.5	42	
November 30, 2004	15:30	0		0	0	10	78	400	1250	11	4	41	
December 6, 2004	11:40	0		0	0	30	84	400	1250	11	4	41	
December 16, 2004	8:00	0		0	0	20	88	300	1250	11	4	41	System off, restarted. No access to In/Ex velocity port due to large snow bank.
December 20, 2004	14:45	0	0	0	0	30	86	400	1250	11	4	41	
December 29, 2004	17:45	0		0	0	20	98	400	1250	11	4	42	
January 7, 2005	5:30	0		0	0	10	76	400	1250	11	4	41	
January 13, 2005	5:15	0		0	0	20	90			11	4	42	System off, restarted. No access to In/Ex velocity ports due to large snow bank.
January 20, 2005	6:20	0		0	0	20	76			11	4	41	
January 25, 2005	12:15	0	0	0	0	30	90			9	3	37	
February 2, 2005	14:30	0		0	0	30	68	400		5	5	41	
February 7, 2005	11:20	0		0	0	40	88	400		9	5	40	System off, restarted. No access to In/Ex velocity port due to large snow bank.
February 17, 2005	5:15	0		0	0	20	66	400		5	5	40	
February 24, 2005	11:45	0		0	0	30	85	400	1250	9	5	42	
February 28, 2005	5:15	0	0	0	0	20	78	350	1200	9.5	4.5	42	
March 9, 2005	7:45	0		0	0	10	70			8.5	4	41	System off, restarted. No access to In/Ex velocity port due to large snow bank.
March 15, 2005	14:30	0		0	0	40	100	350	1200	10	5	42	
March 21, 2005	5:10	0	0	0	0	30	92	350	1200	11	5	42	
March 30, 2005	10:30	0		0	0	50	108	200	1200	11	5	42	
April 6, 2005	5:20	0		0	0	40	100	350	1200	12	5	41	System off, restarted. No access to In/Ex velocity port due to large snow bank.
April 12, 2005	18:30	0		0	0	40	92	400	1225	11.5	5	42	
April 20, 2005	5:45	0		0	0	40	111	300	1200	11.5	4.5	41	
April 21, 2005	6:00	0		0	0	40	105	300	1200				
April 25, 2005	11:00	0	0	0	0	40	98	350	1200	11.5	5	41	System off, restarted.
May 8, 2005	5:45	0		0	0	40	96	350	1200	11.5	4.5	42	
May 13, 2005	5:30	0		0	0	40	98	350	1200	11.5	4.5	41	
May 18, 2005	5:30	0		0	0	40	104	350	1200	11.5	4.5	41	
May 25, 2005	14:30	0		0	0	40	99	400	1200	11.5	4.5	41	

TABLE III
SUB-SLAB VENTING SYSTEM MONITORING DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

Monitoring Date	Time	Influent Concentrations		Effluent Concentrations		Outdoor Temp	Outlet Vapor Temp	Flow Velocity (ft/min)		System Vacuum and Pressure (" water)		Vacuum at Extraction Points (" water)					
		PID (ppm)	N/A GC (ug/L)	Effluent - 1 (ppm)	Effluent - 2 (ppm)			Influent	Effluent	Blower	Knockout Drum	Discharge	EP-1	EP-2	EP-3	EP-4	EP-5
May 31, 2005	5:00	0		0	0	40	104	400	1200	11.5	4.5	41					
June 7, 2005	5:30	0		0	0	60	120	350	1200	12	5	40					
June 14, 2005	5:00	0		0	0	80	108	350	1200	12	5	40					
June 23, 2005	8:30	0		0	0	80	118	300	1100	12	5	40					
June 27, 2005	5:15	0		0	0	80	94	300	1100	12	5	40					
June 28, 2005	5:20, 11:20	0	8	0	0	90	132	400	1150	12	5	40					
July 5, 2005	5:30	0		0	0	70	100	300	1250	12	5	40					
July 12, 2005	5:30	0		0	0	60	100	300	1200	12	5	40					
July 18, 2005	5:30	0		0	0	80	118	300	1200	12	5	40					
July 20, 2005	5:00, 17:30	-		-	-	90	138	-	-	-	-	-					
July 21, 2005	6:00	0	0	0	0	70	148	325	1000	12	5	40					
July 25, 2005	7:00	0		0	0	70	108	300	1100	12	5	40					
July 27, 2005	7:15	0		0	0	80	120	250	1250	12	5	39					
August 2, 2005	5:30	-		-	-	80	-	-	-	-	-	-					
August 4, 2005	11:00	0		0	0	80	132	350	1200	12	5	40					
August 8, 2005	19:15	0		0	0	80	140	350	1200	12	5	40					
August 16, 2005	6:00	0		0	0	70	134	400	1200	12	5	40					
August 24, 2005	5:30	0		0	0	60	122	-	-	12	5	41					
August 31, 2005	10:45	0	0	0	0	80	134	-	-	12	5	40					
September 7, 2005	5:30	0		0	0	60	125	-	-	12	5	40					
September 16, 2005	5:30	0		0	0	70	124	-	-	12	5	40					
September 23, 2005	5:30	0		0	0	70	124	-	-	12	5	40					
September 26, 2005	7:15	0		0	0	70	123	450	1300	12	5	40					

06558-711 A230



FIGURE 1

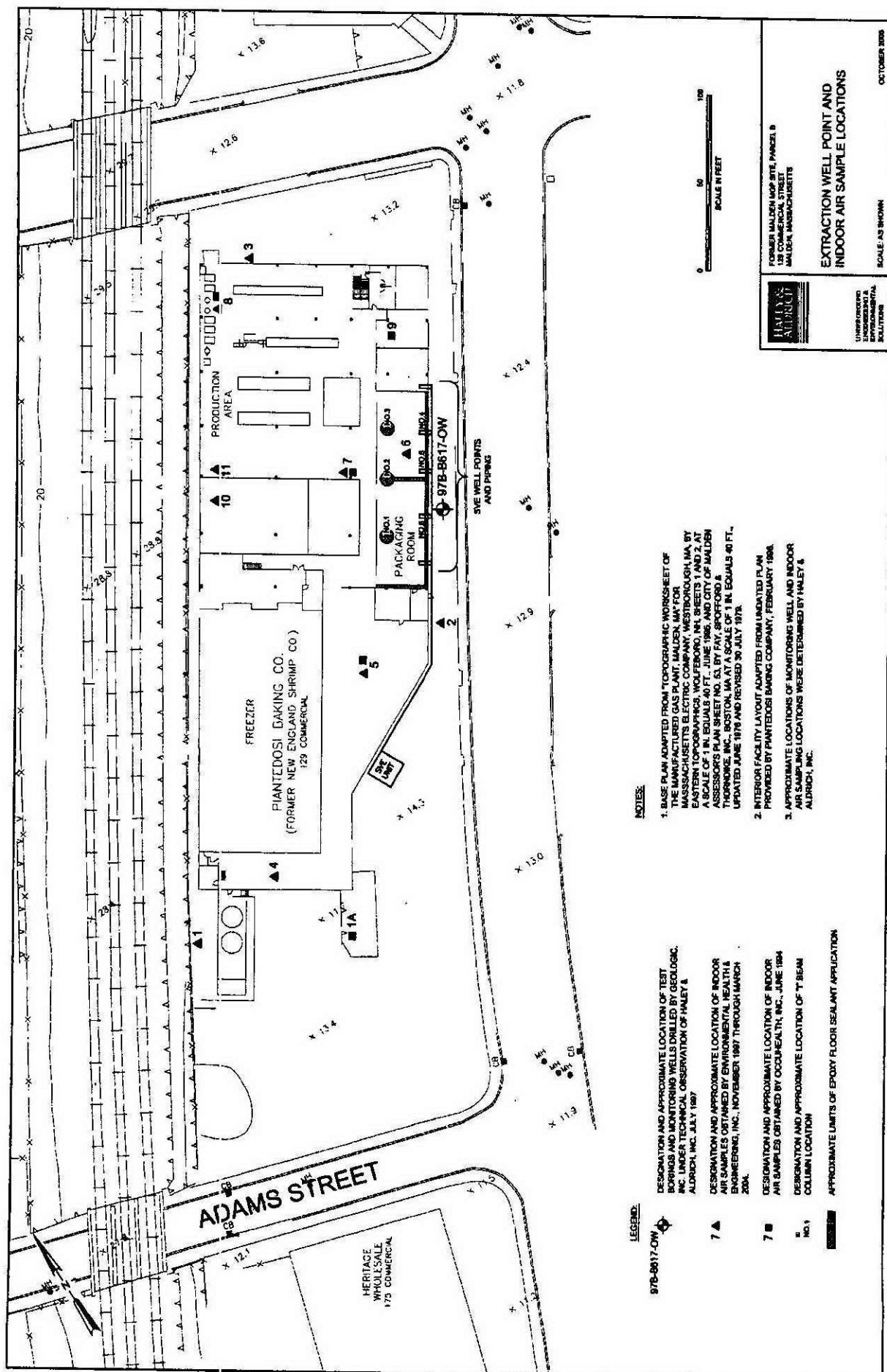


Figure 3 PID Measurements of Sub-Slab Vapor Influent

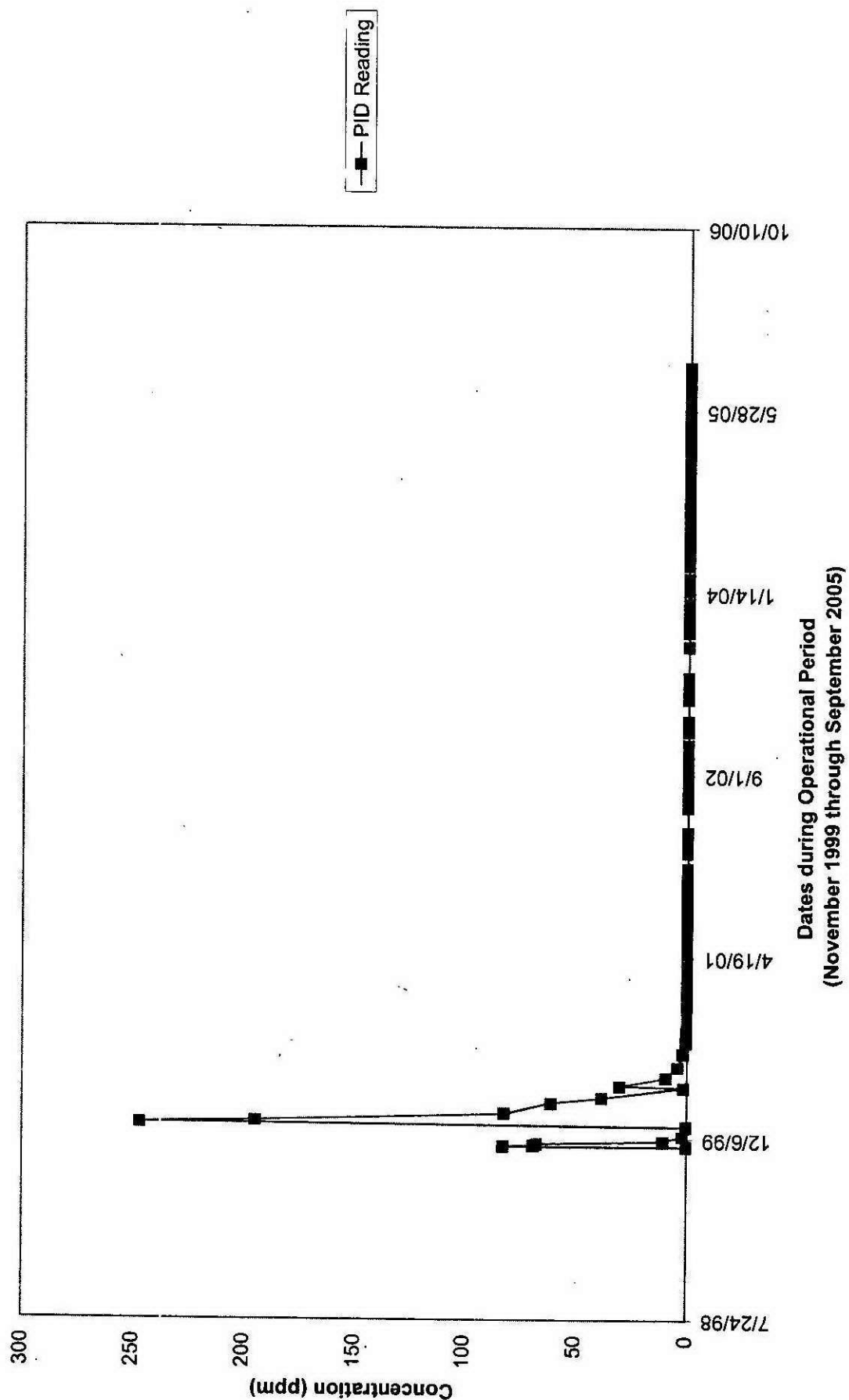
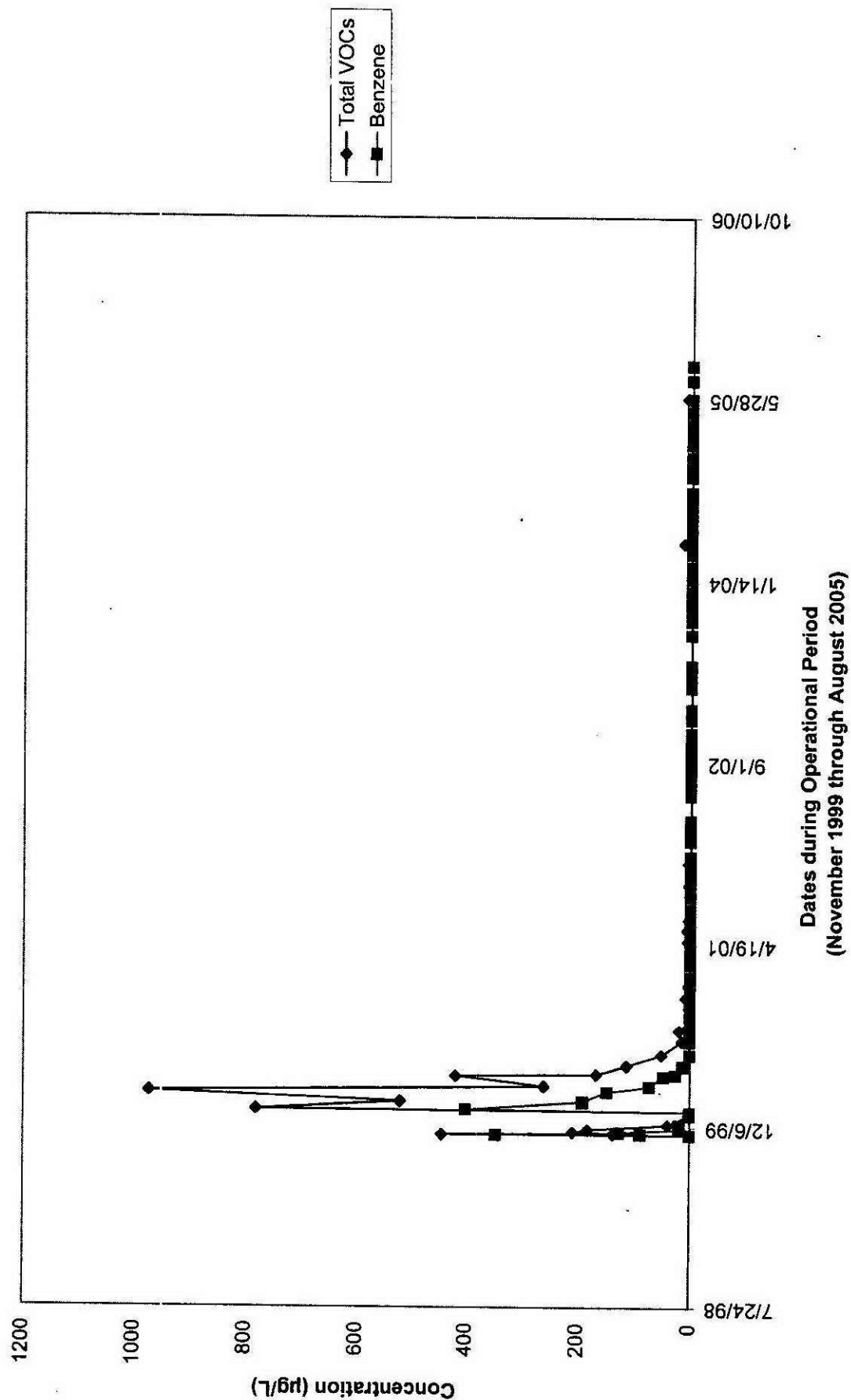
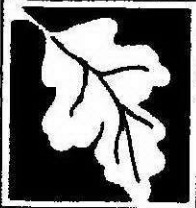


Figure 4 GC Analysis of Sub-Slab Vapor Influent



APPENDIX A

Copy of Form BWSC-106



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM

Release Tracking Number

3 - 3757

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

A. SITE LOCATION:

1. Site Name/Location Aid: Former Manufactured Gas Plant (MGP) Site

2. Street Address: 129 Commercial Street

3. City/Town: Malden

4. ZIP Code: 02148-0000

☒ 5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.

☐ a. Tier IA ☒ b. Tier IB ☐ c. Tier IC ☐ d. Tier II

6. If a Tier I Permit has been issued, provide Permit Number: 7378

RECEIVED

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial RAM Written Plan (if previously submitted):

OCT 07 2005
07/02/1998

☐ 2. Submit an Initial Release Abatement Measure (RAM) Plan

☐ a. Check here if this RAM Plan received previous oral approval from DEP as a continuation of a Limited Removal Action (LRA).

b. List Date of Oral Approval: _____

(mm/dd/yyyy)

☐ 3. Submit a Modified RAM Plan of a previously submitted written RAM Plan.

☒ 4. Submit a RAM Status Report.

☐ 5. Submit a RAM Completion Statement.

☐ 6. Submit a Revised RAM Completion Statement.

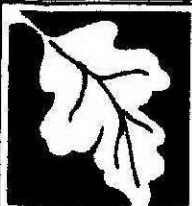
7. Provide Additional RTNs:

☐ a. Check here if this RAM Submittal covers additional Release Tracking Numbers (RTNs). RTNs that have been previously linked to a Primary Tier Classified RTN do not need to be listed here. This section is intended to allow a RAM to cover more than one unclassified RTN and not show permanent linkage to a Primary Tier Classified RTN.

b. Provide the additional Release Tracking Number(s) covered by this RAM Submittal.

☐ - ☐ -

(All sections of this transmittal form must be filled out unless otherwise noted above)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM

Release Tracking Number

3 - 3757

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT RAM:

1. Identify Media Impacted and Receptors Affected: (check all that apply)

- ☒ a. Air ☐ b. Basement ☐ c. Critical Exposure Pathway ☒ d. Groundwater ☐ e. Residence
☐ f. Paved Surface ☐ g. Private Well ☐ h. Public Water Supply ☐ i. School ☐ j. Sediments
☒ k. Soil ☐ l. Storm Drain ☐ m. Surface Water ☐ n. Unknown ☐ o. Wetland ☐ p. Zone 2
☐ q. Others Specify: _____

2. Identify all sources of the Release or Threat of Release, if known: (check all that apply)

- ☐ a. Above-ground Storage Tank (AST) ☐ b. Boat/Vessel ☐ c. Drums ☐ d. Fuel Tank
☐ e. Pipe/Hose/Line ☐ f. Tanker Truck ☐ g. Transformer ☐ h. Under-ground Storage Tank (UST)
☐ i. Vehicle ☒ j. Others Specify: Disposal associated with former MGP operations

3. Identify Oils and Hazardous Materials Released: (check all that apply)

- ☐ a. Oils ☐ b. Chlorinated Solvents ☐ c. Heavy Metals
☒ d. Others Specify: MGP contaminants: VOCs, PAHs, Cyanide

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)

- | | |
|--|---|
| ☐ 1. Assessment and/or Monitoring Only | ☐ 2. Temporary Covers or Caps |
| ☐ 3. Deployment of Absorbent or Containment Materials | ☐ 4. Temporary Water Supplies |
| ☒ 5. Structure Venting System | ☐ 6. Temporary Evacuation or Relocation of Residents |
| ☐ 7. Product or NAPL Recovery | ☐ 8. Fencing and Sign Posting |
| ☐ 9. Groundwater Treatment Systems | ☐ 10. Soil Vapor Extraction |
| ☐ 11. Bioremediation | ☐ 12. Air Sparging |
| ☐ 13. Excavation of Contaminated Soils | |

☐ a. Re-use, Recycling or Treatment ☐ i. On Site Estimated volume in cubic yards _____

☐ ii. Off Site Estimated volume in cubic yards _____

ii.a. Receiving Facility: _____ Town: _____ State: _____

ii.b. Receiving Facility: _____ Town: _____ State: _____

iii. Describe: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM

Release Tracking Number

3 - 3757

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

D. DESCRIPTION OF RESPONSE ACTIONS (cont): (check all that apply, for volumes list cumulative amounts)

☐ b. Store

☐ i. On Site Estimated volume in cubic yards _____

☐ ii. Off Site Estimated volume in cubic yards _____

iiia. Receiving Facility: _____ Town: _____ State: _____

iiib. Receiving Facility: _____ Town: _____ State: _____

☐ c. Landfill

☐ i. Cover Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ ii. Disposal Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ 14. Removal of Drums, Tanks or Containers:

a. Describe Quantity and Amount: _____

b. Receiving Facility: _____ Town: _____ State: _____

c. Receiving Facility: _____ Town: _____ State: _____

☒ 15. Removal of Other Contaminated Media:

a. Specify Type and Volume: To date: 47 55-gal drums (approx 7755 LBS) spent activated carbon

b. Receiving Facility: Clean Harbors Town: Bristol State: CT

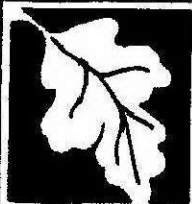
c. Receiving Facility: Clean Harbors Town: Braintree State: MA

☐ 16. Other Response Actions:

Describe: _____

☐ 17. Use of Innovative Technologies:

Describe: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM

Release Tracking Number

3 - 3757

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

E. LSP SIGNATURE AND STAMP :

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B of this form indicates that a **Release Abatement Measure Plan** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that a **Release Abatement Measure Status Report** is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that a **Release Abatement Measure Completion Statement** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 2242

2. First Name: Richard

3. Last Name: Standish

4. Telephone: (860) 290-3131

5. Ext.: _____

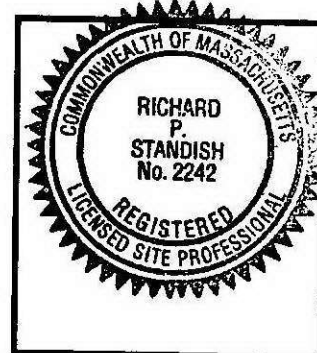
6. FAX: (860) 282-9500

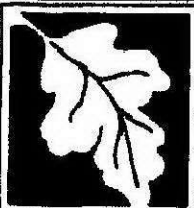
7. Signature: Richard P. Standish

8. Date: 10/5/2005

(mm/dd/yyyy)

9. LSP Stamp:





Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM

Release Tracking Number

3 - 3757

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

F. PERSON UNDERTAKING RAM:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: National Grid

3. Contact First Name: Michele 4. Last Name: Leone

5. Street: 25 Research Drive 6. Title: _____

7. City/Town: Westborough 8. State: MA 9. ZIP Code: 01582-0000

10. Telephone: (508) 389-4296 11. Ext.: _____ 12. FAX: (508) 389-4299

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING RAM:

- ☒ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☒ e. Other RP or PRP Specify: Party of Interest

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking RAM Specify Relationship: _____

H. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if any Remediation Waste, generated as a result of this RAM, will be stored, treated, managed, recycled or reused at the site following submission of the RAM Completion Statement. You must submit a Phase IV Remedy Implementation Plan along with the appropriate transmittal form (BWSC108).

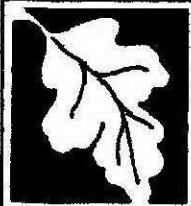
☒ 2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☒ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the implementation of a Release Abatement Measure.

☐ 4. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to the DEP Regional Office.

☐ 5. If a RAM Compliance Fee is required for this RAM, check here to certify that a RAM Compliance Fee was submitted to DEP, P. O. Box 4062, Boston, MA 02211.

☒ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC106

RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM

Release Tracking Number

3 - 3757

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

I. CERTIFICATION OF PERSON UNDERTAKING RAM:

1. I, Michele Leone, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: Michele Leone

Signature

3. Title: LEAD SR. ENV. ENGINEER

4. For: National Grid

(Name of person or entity recorded in Section F)

5. Date: 09/22/2005
(mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

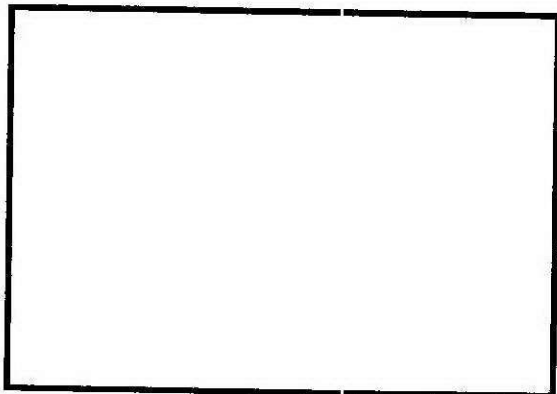
7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)



APPENDIX B

Indoor Air Quality Analytical Data

LABORATORY REPORT

Client: HALEY & ALDRICH, INC.

Date of Report: 05/31/05

Address: 465 Medford Street, Suite 2200

Date Received: 05/02/05

Boston, MA 02129

CAS Project No: P2500916

Contact: Ms. Nancy Reardon

Purchase Order: Verbal

Client Project ID: 129 Commercial St/06558-709

Eight (8) Stainless Steel Summa Canisters labeled: "SITE 2" "SITE 4" "SITE 5"
"SITE 6" "SITE 7" "SITE 7 (DUP)"
"SITE 8" "SITE 11"

The samples were received at the laboratory under chain of custody on May 02, 2005. The samples were received intact. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time that they were received at the laboratory.

Volatile Organic Compound Analysis

The samples were analyzed by combined gas chromatography/mass spectrometry (GC/MS) for selected volatile organic compounds. The analyses were performed according to the methodology outlined in EPA Method TO-15. The analyses were performed by gas chromatography/mass spectrometry, utilizing a direct cryogenic trapping technique. The analytical system used was comprised of a Hewlett Packard Model 5973 GC/MS/DS interfaced to a Tekmar AutoCan Elite whole air inlet system/cryogenic concentrator. A 100% Dimethylpolysiloxane capillary column (RT_x-1, Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation.

The results of analyses are given on the attached data sheets. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Reviewed and Approved:



Rusty Bravo
Analytical Chemist
Air Quality Laboratory

Reviewed and Approved:



Chris Parnell
GCMS-VOA Team Leader
Air Quality Laboratory

Page
1 of 13

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Haley & Aldrich, Inc.
 Client Sample ID: SITE 2
 Client Project ID: 129 Commercial St/06558-709

CAS Project ID: P2500916
 CAS Sample ID: P2500916-001

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
 Analyst: Rusty Bravo
 Sampling Media: Summa Canister
 Test Notes:
 Container ID: AC00016

Date Collected: 4/27/05
 Date Received: 5/2/05
 Date(s) Analyzed: 5/6/05
 Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -2.5 Pf 1 = 3.5

D.F. = 1.49

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	1.5	ND	0.47	
108-88-3	Toluene	2.9	1.5	0.77	0.40	
100-41-4	Ethylbenzene	ND	1.5	ND	0.34	
136777-61-2	<i>m,p</i> -Xylenes	ND	1.5	ND	0.34	
100-42-5	Styrene	ND	1.5	ND	0.35	
95-47-6	<i>o</i> -Xylene	ND	1.5	ND	0.34	
91-20-3	Naphthalene	ND	1.5	ND	0.28	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
Client Sample ID: **SITE 4**
Client Project ID: **129 Commercial St 06558-709**

CAS Project ID: **P2500916**
CAS Sample ID: **P2500916-002**

Test Code: **EPA TO-15**
Instrument ID: **Tekmar AUTOCAN/HP5973/HP6890/MS3**
Analyst: **Rusty Bravo**
Sampling Media: **Summa Canister**
Test Notes:
Container ID: **AC00819**

Date Collected: **4/27/05**
Date Received: **5/2/05**
Date(s) Analyzed: **5/6/05**
Volume(s) Analyzed: **1.00 Liter(s)**

Pi 1 = -2.8

Pf 1 = 3.5

D.F. = 1.53

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	1.5	ND	0.48	
108-88-3	Toluene	4.7	1.5	1.2	0.41	
100-41-4	Ethylbenzene	ND	1.5	ND	0.35	
136777-61-2	<i>m,p</i> -Xylenes	1.7	1.5	0.39	0.35	
100-42-5	Styrene	ND	1.5	ND	0.36	
95-47-6	<i>o</i> -Xylene	ND	1.5	ND	0.35	
91-20-3	Naphthalene	ND	1.5	ND	0.29	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Haley & Aldrich, Inc.
Client Sample ID: SITE 5
Client Project ID: 129 Commercial St/06558-709

CAS Project ID: P2500916
CAS Sample ID: P2500916-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00030

Date Collected: 4/27/05
Date Received: 5/2/05
Date(s) Analyzed: 5/6/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -5.4

Pf 1 = 3.5

D.F. = 1.96

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	2.0	ND	0.61	
108-88-3	Toluene	7.6	2.0	2.0	0.52	
100-41-4	Ethylbenzene	ND	2.0	ND	0.45	
136777-61-2	<i>m,p</i> -Xylenes	ND	2.0	ND	0.45	
100-42-5	Styrene	ND	2.0	ND	0.46	
95-47-6	<i>o</i> -Xylene	ND	2.0	ND	0.45	
91-20-3	Naphthalene	ND	2.0	ND	0.37	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Haley & Aldrich, Inc.
Client Sample ID: SITE 6
Client Project ID: 129 Commercial St/06558-709

CAS Project ID: P2500916
CAS Sample ID: P2500916-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00078

Date Collected: 4/27/05
Date Received: 5/2/05
Date(s) Analyzed: 5/6/05
Volume(s) Analyzed: 0.115 Liter(s)

Pi 1 = -3.7

Pf 1 = 3.5

D.F. = 1.65

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	14	ND	4.5	
108-88-3	Toluene	ND	14	ND	3.8	
100-41-4	Ethylbenzene	ND	14	ND	3.3	
136777-61-2	<i>m,p</i> -Xylenes	ND	14	ND	3.3	
100-42-5	Styrene	ND	14	ND	3.4	
95-47-6	<i>o</i> -Xylene	ND	14	ND	3.3	
91-20-3	Naphthalene	ND	14	ND	2.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RGDate: 5/16/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
 Client Sample ID: **SITE 7**
 Client Project ID: **129 Commercial St/06558-709**

CAS Project ID: **P2500916**
 CAS Sample ID: **P2500916-005**

Test Code: **EPA TO-15**
 Instrument ID: **Tekmar AUTOCAN/HP5973/HP6890/MS3**
 Analyst: **Rusty Bravo**
 Sampling Media: **Summa Canister**
 Test Notes:
 Container ID: **AC00274**

Date Collected: **4/27/05**
 Date Received: **5/2/05**
 Date(s) Analyzed: **5/6/05**
 Volume(s) Analyzed: **0.12 Liter(s)**

Pi 1 = -3.0

Pf 1 = -3.5

D.F. = 1.56

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	13	ND	4.1	
108-88-3	Toluene	ND	13	ND	3.5	
100-41-4	Ethylbenzene	ND	13	ND	3.0	
136777-61-2	<i>m,p</i> -Xylenes	ND	13	ND	3.0	
100-42-5	Styrene	ND	13	ND	3.1	
95-47-6	<i>o</i> -Xylene	ND	13	ND	3.0	
91-20-3	Naphthalene	ND	13	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
 Client Sample ID: **SITE 7 (DUP)**
 Client Project ID: **129 Commercial St/06558-709**

CAS Project ID: **P2500916**
 CAS Sample ID: **P2500916-006**

Test Code: **EPA TO-15**
 Instrument ID: **Tekmar AUTOCAN/HP5973/HP6890/MS3**
 Analyst: **Rusty Bravo**
 Sampling Media: **Summa Canister**
 Test Notes:
 Container ID: **AC00426**

Date Collected: **4/27/05**
 Date Received: **5/2/05**
 Date(s) Analyzed: **5/6/05**
 Volume(s) Analyzed: **0.085 Liter(s)**

Pi 1 = -1.3 Pf 1 = 3.5

D.F. = 1.36

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	16	ND	5.0	
108-88-3	Toluene	ND	16	ND	4.2	
100-41-4	Ethylbenzene	ND	16	ND	3.7	
136777-61-2	<i>m,p</i> -Xylenes	ND	16	ND	3.7	
100-42-5	Styrene	ND	16	ND	3.8	
95-47-6	<i>o</i> -Xylene	ND	16	ND	3.7	
91-20-3	Naphthalene	ND	16	ND	3.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
Client Sample ID: **SITE 8**
Client Project ID: **129 Commercial St 06558-709**

CAS Project ID: P2500916
CAS Sample ID: P2500916-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00646

Date Collected: 4/27/05
Date Received: 5/2/05
Date(s) Analyzed: 5/6/05
Volume(s) Analyzed: 0.050 Liter(s)

Pi 1 = -3.1 Pf 1 = 3.5

D.F. = 1.57

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	31	ND	9.8	
108-88-3	Toluene	ND	31	ND	8.3	
100-41-4	Ethylbenzene	ND	31	ND	7.2	
136777-61-2	<i>m,p</i> -Xylenes	ND	31	ND	7.2	
100-42-5	Styrene	ND	31	ND	7.4	
95-47-6	<i>o</i> -Xylene	ND	31	ND	7.2	
91-20-3	Naphthalene	ND	31	ND	6.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
 Client Sample ID: **SITE 11**
 Client Project ID: **129 Commercial St/06558-709**

CAS Project ID: **P2500916**
 CAS Sample ID: **P2500916-008**

Test Code: **EPA TO-15**
 Instrument ID: **Tekmar AUTOCAN/HP5973/HP6890/MS3**
 Analyst: **Rusty Bravo**
 Sampling Media: **Summa Canister**
 Test Notes:
 Container ID: **AC00479**

Date Collected: **4/27/05**
 Date Received: **5/2/05**
 Date(s) Analyzed: **5/6/05**
 Volume(s) Analyzed: **0.030 Liter(s)**

Pi 1 = -0.1 Pf 1 = 3.5

D.F. = 1.25

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	42	ND	13	
108-88-3	Toluene	ND	42	ND	11	
100-41-4	Ethylbenzene	ND	42	ND	9.6	
136777-61-2	<i>m,p</i> -Xylenes	ND	42	ND	9.6	
100-42-5	Styrene	ND	42	ND	9.8	
95-47-6	<i>o</i> -Xylene	ND	42	ND	9.6	
91-20-3	Naphthalene	ND	42	ND	8.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **129 Commercial St/06558-709**

CAS Project ID: **P2500916**
CAS Sample ID: **P050505-MB**

Test Code: **EPA TO-15**
Instrument ID: **Tekmar AUTOCAN/HP5973/HP6890/MS3**
Analyst: **Rusty Bravo**
Sampling Media: **Summa Canister**
Test Notes:

Date Collected: **NA**
Date Received: **NA**
Date(s) Analyzed: **5/5/05**
Volume(s) Analyzed: **1.00 Liter(s)**

D.F. = 1.00

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	1.0	ND	0.31	
108-88-3	Toluene	ND	1.0	ND	0.27	
100-41-4	Ethylbenzene	ND	1.0	ND	0.23	
136777-61-2	<i>m,p</i> -Xylenes	ND	1.0	ND	0.23	
100-42-5	Styrene	ND	1.0	ND	0.23	
95-47-6	<i>o</i> -Xylene	ND	1.0	ND	0.23	
91-20-3	Naphthalene	ND	1.0	ND	0.19	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Rv Date: 5/16/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
 Client Sample ID: **Method Blank**
 Client Project ID: **129 Commercial St/06558-709**

CAS Project ID: **P2500916**
 CAS Sample ID: **P050506-MB**

Test Code: **EPA TO-15**
 Instrument ID: **Tekmar AUTOCAN/IP5973/HP6890/MS3**
 Analyst: **Rusty Bravo**
 Sampling Media: **Summa Canister**
 Test Notes: -

Date Collected: **NA**
 Date Received: **NA**
 Date(s) Analyzed: **5/6/05**
 Volume(s) Analyzed: **1.00 Liter(s)**

D.F. = 1.00

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	1.0	ND	0.31	
108-88-3	Toluene	ND	1.0	ND	0.27	
100-41-4	Ethylbenzene	ND	1.0	ND	0.23	
136777-61-2	<i>m,p</i> -Xylenes	ND	1.0	ND	0.23	
100-42-5	Styrene	ND	1.0	ND	0.23	
95-47-6	<i>o</i> -Xylene	ND	1.0	ND	0.23	
91-20-3	Naphthalene	ND	1.0	ND	0.19	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 5/16/05

Page No.:

Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Haley & Aldrich, Inc.

Work order:

P2500916

Project: 129 Commercial St/06558-709

Sample(s) received on: 5/2/05

Date opened: 5/2/05

by: SM

Note: This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client or as required by the method/SOP.

		<u>Yes</u>	<u>No</u>	<u>N/A</u>
1	Were custody seals on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
2	Were sample containers properly marked with client sample ID?	☒	☐	☐
3	Did sample containers arrive in good condition?	☒	☐	☐
4	Were chain-of-custody papers used and filled out?	☒	☐	☐
5	Did sample container labels and/or tags agree with custody papers?	☒	☐	☐
6	Was sample volume received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper temperature (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
	Cooler Temperature <u>NA</u> °C			
	Blank Temperature <u>NA</u> °C			
9	Is pH (acid) preservation necessary, according to method/SOP or Client specified information?	☐	☒	☐
	Is there a client indication that the submitted samples are pH (acid) preserved?	☐	☐	☒
	Were <u>VOA vials</u> checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?	☐	☐	☒
10	Tubes: Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
11	Badges: Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Required pH (as received, if required)	pH (as received, if required)	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2500916-001			NA	
P2500916-002			NA	
P2500916-003			NA	
P2500916-004			NA	
P2500916-005			NA	
P2500916-006			NA	
P2500916-007			NA	
P2500916-008			NA	

Explain any discrepancies: (include lab sample ID numbers): _____

12



Air Quality Laboratory
2865 Park Center Drive, Suite D
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Chain of Custody Record & Analytical Service Request

Reporting Information (Company Name & Address)

HALEY + ALDRICH, INC.
465 WEDFORD ST, STE 2200
CHARLESTOWN, MA 02124
Attention: NANCY REARDON

Phone 617 886 7465 Fax 617 886 7765

Email Address for Result Reporting:

nreardon@haleyaldrich.com

P.O. # / Billing Information

Project Name 129 COMMERCIAL ST

Project Number 0655B-709

Sampler (Print & Sign)

NANCY E. REARDON

Analysis Method and/or Analytes

(*) TPA TO-15

Comments
e.g. Preservative or
specific instructions

(*) benzene
toluene
ethylbenzene
m,p,o-xylene
styrene
naphthalene

Client Sample ID	Date Collected	Time Collected	Lab Sample No.	Sample Type (Air/Liquid/Solid/Tube)	Canister ID (Bar Code #)	Flow Controller (Bar Code #)	Sample Volume
SITE 2	4/27/05	0837-1621	-1	AIR	AC00016	FC00463	
SITE 4	4/27/05	0827-1611	-2	AIR	AC00819	FC00196	
SITE 5	4/27/05	0824-1612	-3	AIR	AC00030	FC00380	
SITE 6	4/27/05	0834-1620	-4	AIR	AC00078	FC00368	
SITE 7	4/27/05	0832-1616	-5	AIR	AC00274	FC00319	
SITE 7 (DUP)	4/27/05	0833-1616	-6	AIR	AC00426	FC00248	
SITE 8	4/27/05	0836-1618	-7	AIR	AC00446	FC00508	
SITE 11	4/27/05	0835-1617	-8	AIR	AC00474	FC00505	

Project Requirements (MRLs, QAPI)

Report Tier Levels - please select

Tier I - (default if not specified)

Tier II (QC forms)

Tier III (QC, Raw Data, Spectra) 10% Surcharge

Other

EDD required Yes / No

Type:

Relinquished by: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature)

Date: 4/28/05

Date:

Date:

Received by: (Signature)

Received by: (Signature)

Received by: (Signature)

Received by: (Signature)

Received by: (Signature)

Received by: (Signature)

Date: 5/2/05

Date:

Date:

Time: 11:07

Time:

Time:

Cooler / Blank Temperature °C

* Note: Site to moved slightly from original location (not by sampler)

September 1, 2005

Ms. Nancy Reardon
Haley & Aldrich, Inc.
465 Medford Street, Suite 2200
Boston, MA 02129

RE: P2501841
129 Commercial St./06558-709

RECEIVED

SEP 16 2005

Haley & Aldrich, Inc

Dear Ms. Nancy Reardon:

Enclosed are the results of the sample(s) submitted to our laboratory on August 8, 2005.
For your reference, these analyses have been assigned our service request number P2501841.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains 13 pages.

Columbia Analytical Services is certified by the California Department of Health Services, Certificate No. 2380; Arizona Department of Health Services, Certificate No. AZ0550; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661. Please contact me for specific method(s) and analyte(s) corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.



Kate Aguilera
Project Manager

LABORATORY REPORT

Client:	HALEY & ALDRICH, INC.	Date of Report:	09/01/05
Address:	465 Medford Street, Suite 2200	Date Received:	08/08/05
	Boston, MA 02129	CAS Project No:	P2501841
Contact:	Ms. Nancy Reardon	Purchase Order:	Verbal
Client Project ID:	129 Commercial St./06558-709		

Eight (8) Stainless Steel Suruma Canisters labeled:

"SITE 2"	"SITE 4"	"SITE 5"	"SITE 6"
"SITE 7"	"SITE 7(DUP)"	"SITE 8"	"SITE 11"

The samples were received at the laboratory under chain of custody on August 8, 2005. The sample identified as "SITE 8" was received with the valve open, at the client's request, it was not analyzed. Otherwise, the samples were received intact. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time that they were received at the laboratory.

Volatile Organic Compounds Analysis

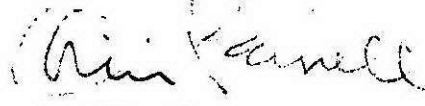
The samples were analyzed by combined gas chromatography/mass spectrometry (GC/MS) for benzene, toluene, ethylbenzene, xylenes, styrene, and naphthalene. The analyses were performed according to the methodology outlined in EPA Method TO-15. The analyses were performed by gas chromatography/mass spectrometry, utilizing a direct cryogenic trapping technique. The analytical system used was comprised of an Agilent Model 5973 inert GC/MS/DS interfaced to a Tekmar AutoCan Elite whole air inlet system/cryogenic concentrator. A 100% Dimethylpolysiloxane capillary column (RTx-1, Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation.

The results of analyses are given on the attached data sheets. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Reviewed and Approved:


Svetlana Walsh
Analytical Chemist
Air Quality Laboratory

Reviewed and Approved:


Chris Parnell
GCMS-VOA Team Leader
Air Quality Laboratory

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
 Client Sample ID: **SITE 2**
 Client Project ID: **129 Commercial St./06558-709**

CAS Project ID: **P2501841**
 CAS Sample ID: **P2501841-001**

Test Code: **EPA TO-15**
 Instrument ID: **Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8**
 Analyst: **Svetlana Walsh**
 Sampling Media: **Summa Canister**
 Test Notes:
 Container ID: **AC00930**

Date Collected: **8/3/05**
 Date Received: **8/8/05**
 Date(s) Analyzed: **8/22/05**
 Volume(s) Analyzed: **1.00 Liter(s)**

Pi 1 = **-4.4**

Pf 1 = **3.5**

Can D.F. = **1.77**

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	1.8	ND	0.55	
108-88-3	Toluene	4.4	1.8	1.2	0.47	
100-41-4	Ethylbenzene	ND	1.8	ND	0.41	
136777-61-2	<i>m,p</i> -Xylenes	2.8	1.8	0.66	0.41	
100-42-5	Styrene	ND	1.8	ND	0.42	
95-47-6	<i>o</i> -Xylene	ND	1.8	ND	0.41	
91-20-3	Naphthalene	ND	1.8	ND	0.34	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 8/23/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
 Client Sample ID: **SITE 4**
 Client Project ID: **129 Commercial St./06558-709**

CAS Project ID: **P2501841**
 CAS Sample ID: **P2501841-002**

Test Code: **EPA TO-15**
 Instrument ID: **Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8**
 Analyst: **Svetlana Walsh**
 Sampling Media: **Summa Canister**
 Test Notes:
 Container ID: **AC00925**

Date Collected: **8/3/05**
 Date Received: **8/8/05**
 Date(s) Analyzed: **8/22/05**
 Volume(s) Analyzed: **1.00 Liter(s)**

Pi 1 = -2.1 Pf 1 = 3.5

Can D.F. = 1.44

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	1.4	ND	0.45	
108-88-3	Toluene	7.8	1.4	2.1	0.38	
100-41-4	Ethylbenzene	1.7	1.4	0.38	0.33	
136777-61-2	<i>m,p</i> -Xylenes	5.0	1.4	1.2	0.33	
100-42-5	Styrene	ND	1.4	ND	0.34	
95-47-6	<i>o</i> -Xylene	ND	1.4	ND	0.33	
91-20-3	Naphthalene	ND	1.4	ND	0.27	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 8/23/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Haley & Aldrich, Inc.
Client Sample ID: SITE 5
Client Project ID: 129 Commercial St./06558-709

CAS Project ID: P2501841
CAS Sample ID: P2501841-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00929

Date Collected: 8/3/05
Date Received: 8/8/05
Date(s) Analyzed: 8/22/05
Volume(s) Analyzed: 0.50 Liter(s)

Pi 1 = -4.7

Pf 1 = 3.5

Can D.F. = 1.82

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	3.6	ND	1.1	
108-88-3	Toluene	7.6	3.6	2.0	0.97	
100-41-4	Ethylbenzene	ND	3.6	ND	0.84	
136777-61-2	<i>m,p</i> -Xylenes	5.8	3.6	1.3	0.84	
100-42-5	Styrene	ND	3.6	ND	0.86	
95-47-6	<i>o</i> -Xylene	ND	3.6	ND	0.84	
91-20-3	Naphthalene	ND	3.6	ND	0.69	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Haley & Aldrich, Inc.
Client Sample ID: SITE 6
Client Project ID: 129 Commercial St./06558-709

CAS Project ID: P2501841
CAS Sample ID: P2501841-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00923

Date Collected: 8/3/05
Date Received: 8/8/05
Date(s) Analyzed: 8/22/05
Volume(s) Analyzed: 0.15 Liter(s)

Pi 1 = -2.9

Pf 1 = 3.5

Can D.F. = 1.54

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	10	ND	3.2	
108-88-3	Toluene	11	10	3.0	2.7	
100-41-4	Ethylbenzene	ND	10	ND	2.4	
136777-61-2	<i>m,p</i> -Xylenes	ND	10	ND	2.4	
100-42-5	Styrene	ND	10	ND	2.4	
95-47-6	<i>o</i> -Xylene	ND	10	ND	2.4	
91-20-3	Naphthalene	ND	10	ND	2.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
 Client Sample ID: **SITE 7**
 Client Project ID: **129 Commercial St./06558-709**

CAS Project ID: **P2501841**
 CAS Sample ID: **P2501841-005**

Test Code: **EPA TO-15**
 Instrument ID: **Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8**
 Analyst: **Svetlana Walsh**
 Sampling Media: **Summa Canister**
 Test Notes:
 Container ID: **AC00926**

Date Collected: **8/3/05**
 Date Received: **8/8/05**
 Date(s) Analyzed: **8/22/05**
 Volume(s) Analyzed: **0.15 Liter(s)**

Pi 1 = **-5.3**

Pf 1 = **3.5**

Can D.F. = **1.94**

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	13	ND	4.1	
108-88-3	Toluene	ND	13	ND	3.4	
100-41-4	Ethylbenzene	ND	13	ND	3.0	
136777-61-2	<i>m,p</i> -Xylenes	ND	13	ND	3.0	
100-42-5	Styrene	ND	13	ND	3.0	
95-47-6	<i>o</i> -Xylene	ND	13	ND	3.0	
91-20-3	Naphthalene	ND	13	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Ru Date: 8/23/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
 Client Sample ID: **SITE 7(DUP)**
 Client Project ID: **129 Commercial St./06558-709**

CAS Project ID: **P2501841**
 CAS Sample ID: **P2501841-006**

Test Code: **EPA TO-15**
 Instrument ID: **Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8**
 Analyst: **Svetlana Walsh**
 Sampling Media: **Summa Canister**
 Test Notes:
 Container ID: **AC00917**

Date Collected: **8/3/05**
 Date Received: **8/8/05**
 Date(s) Analyzed: **8/23/05**
 Volume(s) Analyzed: **0.15 Liter(s)**

Pi 1 = **-4.0**

Pf 1 = **3.5**

Can D.F. = **1.70**

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	11	ND	3.5	
108-88-3	Toluene	ND	11	ND	3.0	
100-41-4	Ethylbenzene	ND	11	ND	2.6	
126777-61-2	<i>m,p</i> -Xylenes	ND	11	ND	2.6	
100-42-5	Styrene	ND	11	ND	2.7	
95-47-6	<i>o</i> -Xylene	ND	11	ND	2.6	
91-20-3	Naphthalene	ND	11	ND	2.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RW

Date: 8/23/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
 Client Sample ID: **SITE 11**
 Client Project ID: **129 Commercial St./06558-709**

CAS Project ID: **P2501841**
 CAS Sample ID: **P2501841-008**

Test Code: **EPA TO-15**
 Instrument ID: **Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8**
 Analyst: **Svetlana Walsh**
 Sampling Media: **Summa Canister**
 Test Notes:
 Container ID: **AC00918**

Date Collected: **8/3/05**
 Date Received: **8/8/05**
 Date(s) Analyzed: **8/23/05**
 Volume(s) Analyzed: **0.15 Liter(s)**

Pi 1 = **-3.8**

Pf 1 = **3.5**

Can D.F. = **1.67**

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	11	ND	3.5	
108-88-3	Toluene	ND	11	ND	3.0	
100-41-4	Ethylbenzene	ND	11	ND	2.6	
136777-61-2	<i>m,p</i> -Xylenes	ND	11	ND	2.6	
100-42-5	Styrene	ND	11	ND	2.6	
95-47-6	<i>o</i> -Xylene	ND	11	ND	2.6	
91-20-3	Naphthalene	ND	11	ND	2.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Haley & Aldrich, Inc.
Client Sample ID: Method Blank
Client Project ID: 129 Commercial St./06558-709

CAS Project ID: P2501841
CAS Sample ID: P050822-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date(s) Analyzed: 8/22/05
Volume(s) Analyzed: 1.00 Liter(s)

D.F. = 1.00

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	1.0	ND	0.31	
108-88-3	Toluene	ND	1.0	ND	0.27	
100-41-4	Ethylbenzene	ND	1.0	ND	0.23	
136777-61-2	<i>m,p</i> -Xylenes	ND	1.0	ND	0.23	
100-42-5	Styrene	ND	1.0	ND	0.23	
95-47-6	<i>o</i> -Xylene	ND	1.0	ND	0.23	
91-20-3	Naphthalene	ND	1.0	ND	0.19	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Haley & Aldrich, Inc.**
 Client Sample ID: **Method Blank**
 Client Project ID: **129 Commercial St./06558-709**

CAS Project ID: **P2501841**
 CAS Sample ID: **P050823-MB**

Test Code: **EPA TO-15**
 Instrument ID: **Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8**
 Analyst: **Svetlana Walsh**
 Sampling Media: **Summa Canister**
 Test Notes:

Date Collected: **NA**
 Date Received: **NA**
 Date(s) Analyzed: **8/23/05**
 Volume(s) Analyzed: **1.00 Liter(s)**

D.F. = 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	1.0	ND	0.31	
108-88-3	Toluene	ND	1.0	ND	0.27	
100-41-4	Ethylbenzene	ND	1.0	ND	0.23	
136777-61-2	<i>m,p</i> -Xylenes	ND	1.0	ND	0.23	
100-42-5	Styrene	ND	1.0	ND	0.23	
95-47-6	<i>o</i> -Xylene	ND	1.0	ND	0.23	
91-20-3	Naphthalene	ND	1.0	ND	0.19	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Haley & Aldrich, Inc. Work order: P2501841
Project: 129 Commercial St./06558-709

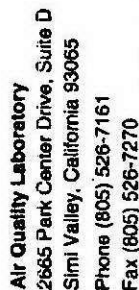
Sample(s) received on: 8/8/05 Date opened: 8/8/05 by: MZ

Note: This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client or as required by the method/SOP.

		Yes	No	N/A
1	Were custody seals on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
2	Were sample containers properly marked with client sample ID?	☒	☐	☐
3	Did sample containers arrive in good condition?	☐	☒	☐
4	Were chain-of-custody papers used and filled out?	☒	☐	☐
5	Did sample container labels and/or tags agree with custody papers?	☒	☐	☐
6	Was sample volume received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper temperature (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
	Cooler Temperature <u>NA</u> °C			
	Blank Temperature <u>NA</u> °C			
9	Is pH (acid) preservation necessary, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are pH (acid) preserved?	☐	☐	☒
	Were VOA vials checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	Tubes: Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
11	Badges: Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Required pH (as received, if required)	pH (as received, if required)	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2501841-001			NA	
P2501841-002			NA	
P2501841-003			NA	
P2501841-004			NA	
P2501841-005			NA	
P2501841-006			NA	
P2501841-007			NA	OPEN VALVE
P2501841-008			NA	

Explain any discrepancies: (include lab sample ID numbers):
Sample -007 was received with the valve open.

Page 1 of 1[illegible]

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in parts per billion by volume [ppbv])											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
03-Aug-05	Benzene	6.6	--	--	ND(0.55)	--	ND(0.45)	ND(1.1)	ND(3.2)	ND(4.1)	--	--	--	ND(3.5)
	Ethylbenzene	2.3	--	--	ND(0.41)	--	0.38	ND(0.84)	ND(2.4)	ND(3)	--	--	--	ND(2.6)
	m-&p-xylenes	8.3	--	--	0.66	--	1.2	1.3	ND(2.4)	ND(3)	--	--	--	ND(2.6)
	Naphthalene	1	--	--	ND(0.34)	--	ND(0.27)	ND(0.65)	ND(2)	ND(2.5)	--	--	--	ND(2.1)
	o-xylenes	8.3	--	--	ND(0.41)	--	ND(0.33)	ND(0.84)	ND(2.4)	ND(3)	--	--	--	ND(2.6)
	Styrene	0.7	--	--	ND(0.42)	--	ND(0.34)	ND(0.86)	ND(2.4)	ND(3)	--	--	--	ND(2.6)
	Toluene	7.7	--	--	1.2	--	2.1	2	3	ND(3.4)	--	--	--	ND(3)
27-Apr-05	Benzene	6.6	--	--	ND(0.47)	--	ND(0.48)	ND(0.61)	ND(4.5)	ND(4.1)	ND(9.8)	--	--	ND(13)
	Ethylbenzene	2.3	--	--	ND(0.34)	--	ND(0.35)	ND(0.45)	ND(3.3)	ND(3)	ND(7.2)	--	--	ND(9.6)
	m-&p-xylenes	8.3	--	--	ND(0.34)	--	0.39	ND(0.45)	ND(3.3)	ND(3)	ND(7.2)	--	--	ND(9.6)
	Naphthalene	1	--	--	ND(0.28)	--	ND(0.29)	ND(0.37)	ND(2.7)	ND(2.5)	ND(6)	--	--	ND(8)
	o-xylenes	8.3	--	--	ND(0.34)	--	ND(0.35)	ND(0.45)	ND(3.3)	ND(3)	ND(7.2)	--	--	ND(9.6)
	Styrene	0.7	--	--	ND(0.35)	--	ND(0.36)	ND(0.46)	ND(3.4)	ND(3.1)	ND(7.4)	--	--	ND(9.8)
	Toluene	7.7	--	--	0.77	--	1.2	2	ND(3.8)	ND(3.5)	ND(8.3)	--	--	ND(11)
13-Jan-05	Benzene	6.6	--	--	1.2	--	0.83	0.87	0.86	0.88	1.1	--	--	1.1
	Ethylbenzene	2.3	--	--	0.65	--	0.62	0.81	0.34	0.54	0.55	--	--	0.6
	m-&p-xylenes	8.3	--	--	1.9	--	1.9	2.4	0.82	1.4	1.5	--	--	1.6
	Naphthalene	1	--	--	ND(0.27)	--	ND(0.24)	ND(0.28)	ND(0.22)	ND(0.23)	ND(0.26)	--	--	ND(0.33)
	o-xylenes	8.3	--	--	0.64	--	0.51	0.59	0.29	0.4	0.48	--	--	0.49
	Styrene	0.7	--	--	ND(0.33)	--	ND(0.3)	ND(0.35)	ND(0.27)	ND(0.28)	0.35	--	--	ND(0.41)
	Toluene	7.7	--	--	4.9	--	4.3	4.2	4	2.7	3.3	--	--	3.4

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in parts per billion by volume [ppbv])											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
26-Oct-04	Benzene	6.6	--	--	0.69	--	ND(0.52)	ND(0.48)	ND(0.56)	0.53	ND(0.46)	--	--	0.59
	Ethylbenzene	2.3	--	--	ND(0.33)	--	ND(0.38)	ND(0.35)	ND(0.41)	ND(0.36)	ND(0.34)	--	--	ND(0.36)
	m-&p-xylenes	8.3	--	--	0.83	--	0.74	1	0.71	0.93	0.67	--	--	0.8
	Naphthalene	4	--	--	ND(0.27)	--	ND(0.31)	ND(0.22)	ND(0.34)	ND(0.3)	ND(0.23)	--	--	ND(0.3)
	o-xylenes	8.3	--	--	ND(0.33)	--	ND(0.38)	ND(0.35)	ND(0.41)	ND(0.36)	ND(0.34)	--	--	ND(0.36)
	Styrene	0.7	--	--	ND(0.34)	--	ND(0.39)	ND(0.36)	ND(0.42)	ND(0.37)	ND(0.35)	--	--	ND(0.37)
	Toluene	7.7	--	--	1.8	--	1.8	2.4	3.3	1.8	1.3	--	--	1.8
06-Aug-04	Benzene	6.6	--	--	ND(0.58)	--	ND(1.1)	ND(1.1)	ND(10)	ND(11)	ND(1.1)	--	ND(11)	--
	Ethylbenzene	2.3	--	--	ND(0.42)	--	ND(0.8)	ND(0.78)	ND(7.6)	ND(7.8)	ND(0.81)	--	ND(8)	--
	m-&p-xylenes	8.3	--	--	0.67	--	0.82	ND(0.78)	ND(7.6)	ND(7.8)	ND(0.81)	--	ND(8)	--
	Naphthalene	1	--	--	ND(0.35)	--	ND(0.66)	ND(0.65)	ND(6.3)	ND(6.5)	ND(0.67)	--	ND(6.6)	--
	o-xylenes	8.3	--	--	ND(0.42)	--	ND(0.8)	ND(0.78)	ND(7.6)	ND(7.8)	ND(0.81)	--	ND(8)	--
	Styrene	0.7	--	--	ND(0.43)	--	ND(0.82)	ND(0.8)	ND(7.7)	ND(8)	ND(0.82)	--	ND(8.1)	--
	Toluene	7.7	--	--	1.3	--	2.4	2	ND(8.7)	ND(9)	0.95	--	ND(9.2)	--
06-May-04	Benzene	6.6	--	--	ND(0.48)	--	ND(0.59)	0.52	ND(0.59)	ND(0.58)	ND(0.65)	--	ND(0.61)	--
	Ethylbenzene	2.3	--	--	ND(0.35)	--	ND(0.43)	0.4	ND(0.43)	0.47	ND(0.48)	--	ND(0.45)	--
	m-&p-xylenes	8.3	--	--	0.67	--	0.8	1	0.93	1.7	1.2	--	1.5	--
	Naphthalene	1	--	--	ND(0.29)	--	ND(0.36)	ND(0.3)	ND(0.36)	ND(0.35)	ND(0.4)	--	ND(0.37)	--
	o-xylenes	8.3	--	--	ND(0.35)	--	ND(0.43)	0.37	ND(0.43)	0.7	0.52	--	0.59	--
	Styrene	0.7	--	--	ND(0.36)	--	ND(0.44)	ND(0.37)	ND(0.44)	ND(0.43)	ND(0.49)	--	0.65	--
	Toluene	7.7	--	--	23	--	8.9	19	4.8	3.5	2.3	--	2.8	--

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
Sample Results (Results listed in parts per billion by volume [ppbv])														
12-Feb-04	Benzene	6.6	--	--	6.5	--	ND(0.52)	ND(0.54)	ND(2.7)	ND(4)	ND(5.8)	--	ND(6.3)	--
	Ethylbenzene	2.3	--	--	3.9	--	ND(0.38)	ND(0.4)	ND(2)	ND(3)	ND(4.3)	--	ND(4.6)	--
	m-&p-xylenes	8.3	--	--	12	--	0.47	0.88	ND(2)	ND(3)	ND(4.3)	--	ND(4.6)	--
	Naphthalene	1	--	--	0.22	--	ND(0.32)	ND(0.33)	ND(1.7)	ND(2.5)	ND(3.5)	--	ND(3.8)	--
	o-xylenes	8.3	--	--	4.3	--	ND(0.38)	ND(0.4)	ND(2)	ND(3)	ND(4.3)	--	ND(4.6)	--
	Styrene	0.7	--	--	0.5	--	ND(0.39)	ND(0.41)	ND(2)	ND(3)	ND(4.4)	--	ND(4.7)	--
	Toluene	7.7	--	--	19	--	1.2	1.4	15	ND(3.4)	ND(4.9)	--	ND(5.3)	--
30-Oct-03	Benzene	6.6	--	--	0.61	--	ND(0.53)	ND(0.48)	--	ND(0.55)	ND(1.1)	--	ND(1.2)	--
	Ethylbenzene	2.3	--	--	ND(0.38)	--	ND(0.39)	0.56	--	ND(0.44)	ND(0.8)	--	ND(0.86)	--
	m-&p-xylenes	8.3	--	--	0.7	--	1.2	1.8	--	1.2	ND(0.8)	--	ND(0.86)	--
	Naphthalene	1	--	--	ND(0.31)	--	ND(0.32)	ND(0.29)	--	ND(0.34)	ND(0.66)	--	ND(0.71)	--
	o-xylenes	8.3	--	--	ND(0.38)	--	ND(0.39)	ND(0.35)	--	ND(0.41)	ND(0.8)	--	1.7	--
	Styrene	0.7	--	--	ND(0.38)	--	ND(0.4)	ND(0.36)	--	ND(0.45)	ND(0.81)	--	ND(0.87)	--
	Toluene	7.7	--	--	1.6	--	7.2	6.1	--	6.1	3.5	--	2.7	--
23-Jul-03	Benzene	6.6	ND(0.58)	--	--	--	ND(0.55)	ND(0.51)	ND(1.1)	ND(1.2)	ND(0.77)	--	ND(1.2)	--
	Ethylbenzene	2.3	ND(0.43)	--	--	--	ND(0.41)	ND(0.38)	ND(0.83)	ND(0.91)	ND(0.57)	--	ND(0.88)	--
	m-&p-xylenes	8.3	ND(0.43)	--	--	--	0.53	0.6	ND(0.83)	ND(0.91)	0.57	--	1.3	--
	Naphthalene	1	ND(0.35)	--	--	--	ND(0.34)	ND(0.31)	ND(0.69)	ND(0.76)	ND(0.47)	--	ND(0.73)	--
	o-xylenes	8.3	ND(0.43)	--	--	--	ND(0.41)	ND(0.38)	ND(0.83)	ND(0.91)	ND(0.57)	--	ND(0.88)	--
	Styrene	0.7	ND(0.44)	--	--	--	ND(0.42)	ND(0.39)	ND(0.85)	ND(0.93)	ND(0.58)	--	6.7	--
	Toluene	7.7	6.3	--	--	--	14	17	15	7.4	9.5	--	9.4	--

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in parts per billion by volume [ppbv])											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
25-Apr-03	Benzene	6.6	--	--	ND(0.6)	--	ND(0.56)	ND(1.3)	ND(30)	ND(12)	ND(12)	--	ND(34)	--
	Ethylbenzene	2.3	--	--	ND(0.44)	--	ND(0.41)	ND(0.92)	ND(22)	ND(9)	ND(9.1)	--	ND(25)	--
	m-&p-xylenes	8.3	--	--	ND(0.44)	--	ND(0.41)	ND(0.92)	ND(22)	ND(9)	ND(9.1)	--	ND(25)	--
	Naphthalene	1	--	--	ND(0.37)	--	ND(0.34)	ND(0.70)	ND(16)	ND(7.5)	ND(7.6)	--	ND(20)	--
	o-xylenes	8.3	--	--	ND(0.44)	--	ND(0.41)	ND(0.92)	ND(22)	ND(9)	ND(9.1)	--	ND(25)	--
	Styrene	0.7	--	--	ND(0.45)	--	ND(0.42)	ND(0.94)	ND(22)	ND(9.2)	ND(9.3)	--	ND(25)	--
	Toluene	7.7	--	--	1.1	--	6.3	11	ND(25)	ND(10)	ND(11)	--	ND(28)	--
24-Jan-03	Benzene	6.6	--	--	0.6	--	ND(0.48)	ND(0.4)	ND(0.51)	ND(0.7)	ND(0.57)	--	ND(0.55)	--
	Ethylbenzene	2.3	--	--	ND(0.35)	--	ND(0.35)	ND(0.29)	ND(0.37)	ND(0.51)	ND(0.42)	--	ND(0.4)	--
	m-&p-xylenes	8.3	--	--	0.57	--	ND(0.35)	0.36	0.53	ND(0.51)	ND(0.42)	--	0.58	--
	Naphthalene	1	--	--	ND(0.29)	--	ND(0.29)	ND(0.24)	ND(0.31)	ND(0.42)	ND(0.35)	--	ND(0.33)	--
	o-xylenes	8.3	--	--	0.35	--	ND(0.35)	ND(0.29)	ND(0.37)	ND(0.51)	ND(0.42)	--	ND(0.9)	--
	Styrene	0.7	--	--	ND(0.36)	--	ND(0.36)	ND(0.3)	ND(0.38)	ND(0.52)	ND(0.43)	--	1	--
	Toluene	7.7	--	--	1.1	--	0.63	0.77	0.64	0.6	ND(0.48)	--	0.54	--
08-Oct-02	Benzene	6.6	--	--	ND(0.71)	--	ND(0.37)	--	ND(0.66)	ND(0.62)	ND(0.62)	--	0.6	--
	Ethylbenzene	2.3	--	--	ND(0.53)	--	ND(0.27)	--	ND(0.49)	ND(0.46)	ND(0.46)	--	0.82	--
	m-&p-xylenes	8.3	--	--	0.36	--	0.59	--	0.49	ND(0.46)	ND(0.46)	--	1.4	--
	Naphthalene	1	--	--	ND(0.44)	--	ND(0.22)	--	ND(0.4)	ND(0.38)	ND(0.38)	--	ND(0.32)	--
	o-xylenes	8.3	--	--	ND(0.53)	--	ND(0.27)	--	ND(0.49)	ND(0.46)	ND(0.46)	--	0.57	--
	Styrene	0.7	--	--	ND(0.54)	--	ND(0.27)	--	ND(0.5)	ND(0.47)	ND(0.47)	--	5.5	--
	Toluene	7.7	--	--	1.2	--	6.5	--	12	2.3	1.8	--	2.5	--

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in parts per billion by volume [ppbv])											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
25-Jun-02	Benzene	6.6	--	--	--	--	0.44	ND(0.31)	1.9	1.8	0.97	--	1.7	--
	Ethylbenzene	2.3	--	--	--	--	0.71	0.57	ND(0.23)	ND(0.23)	ND(0.46)	--	0.71	--
	m-&p-xylenes	8.3	--	--	--	--	2	1.5	0.6	0.68	0.68	--	1.3	--
	Naphthalene	1	--	--	--	--	ND(0.19)	ND(0.19)	ND(0.19)	ND(0.19)	ND(0.38)	--	ND(0.19)	--
	o-xylenes	8.3	--	--	--	--	0.51	ND(0.23)	ND(0.23)	ND(0.23)	ND(0.46)	--	0.51	--
	Styrene	0.7	--	--	--	--	ND(0.23)	ND(0.23)	ND(0.23)	ND(0.23)	ND(0.47)	--	4.7	--
	Toluene	7.7	--	--	--	--	9.2	13	11	5	2.3	--	2.2	--
10-Apr-02	Benzene	6.6	--	--	ND(0.31)	--	ND(0.31)	ND(0.31)	ND(6.3)	1.4	ND(6.3)	--	ND(6.3)	--
	Ethylbenzene	2.3	--	--	ND(0.23)	--	ND(0.23)	0.31	ND(4.6)	ND(0.46)	ND(4.6)	--	ND(4.6)	--
	m-&p-xylenes	8.3	--	--	0.52	--	0.56	1	ND(4.6)	ND(0.46)	ND(4.6)	--	ND(4.6)	--
	Naphthalene	1	--	--	ND(0.19)	--	ND(0.19)	ND(0.19)	ND(3.8)	ND(0.38)	ND(3.8)	--	ND(3.8)	--
	o-xylenes	8.3	--	--	ND(0.23)	--	ND(0.23)	ND(0.23)	ND(4.6)	ND(0.46)	ND(4.6)	--	ND(4.6)	--
	Styrene	0.7	--	--	ND(0.23)	--	ND(0.23)	ND(0.23)	ND(4.7)	ND(0.47)	ND(4.7)	--	ND(4.7)	--
	Toluene	7.7	--	--	1.1	--	5.1	3.8	ND(5.3)	3	ND(5.3)	--	ND(5.3)	--
10-Jan-02	Benzene	6.6	--	--	--	--	ND(0.31)	ND(0.63)	12	14	15	--	10	--
	Ethylbenzene	2.3	--	--	--	--	ND(0.23)	ND(0.46)	ND(0.92)	ND(0.92)	ND(1.8)	--	ND(1.8)	--
	m-&p-xylenes	8.3	--	--	--	--	1	1.1	ND(0.92)	ND(0.92)	ND(1.8)	--	ND(1.8)	--
	Naphthalene	1	--	--	--	--	ND(0.19)	ND(0.38)	ND(0.76)	ND(0.76)	ND(1.5)	--	ND(1.5)	--
	o-xylenes	8.3	--	--	--	--	ND(0.23)	ND(0.46)	ND(0.92)	ND(0.92)	ND(1.8)	--	ND(1.8)	--
	Styrene	0.7	--	--	--	--	ND(0.23)	ND(0.47)	ND(0.94)	ND(0.94)	ND(1.9)	--	2.1	--
	Toluene	7.7	--	--	--	--	5.2	5.1	10	3.5	2.8	--	2.9	--

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in parts per billion by volume [ppbv])											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
11-Oct-01	Benzene	6.6	ND(0.31)	--	--	--	ND(0.31)	ND(0.63)	3.4	3.6	3.9	--	2.4	--
	Ethylbenzene	2.3	ND(0.23)	--	--	--	0.44	ND(0.46)	ND(0.23)	ND(0.23)	ND(0.46)	--	0.74	--
	m-&p-xylenes	8.3	ND(0.23)	--	--	--	1.3	0.81	0.64	0.58	0.68	--	1.2	--
	Naphthalene	1	ND(0.19)	--	--	--	ND(0.19)	ND(0.38)	ND(0.13)	ND(0.16)	ND(0.36)	--	ND(0.19)	--
	o-xylenes	8.3	ND(0.23)	--	--	--	0.45	ND(0.46)	ND(0.23)	ND(0.23)	ND(0.46)	--	0.51	--
	Styrene	0.7	ND(0.23)	--	--	--	ND(0.23)	ND(0.47)	ND(0.23)	ND(0.23)	ND(0.47)	--	3.7	--
	Toluene	7.7	1.1	--	--	--	5.5	4.6	8.3	2.9	2.1	--	2.2	--
01-Jul-01	Benzene	6.6	--	--	ND(0.63)	--	ND(0.63)	ND(0.63)	ND(0.63)	ND(0.63)	ND(0.63)	--	--	--
	Ethylbenzene	2.3	--	--	ND(0.46)	--	ND(0.46)	ND(0.46)	ND(0.46)	ND(0.46)	ND(0.46)	--	--	--
	m-&p-xylenes	8.3	--	--	ND(0.46)	--	ND(0.46)	ND(0.46)	0.47	0.5	ND(0.46)	--	--	--
	Naphthalene	1	--	--	ND(0.38)	--	ND(0.38)	ND(0.38)	ND(0.38)	0.32	ND(0.38)	--	--	--
	o-xylenes	8.3	--	--	ND(0.46)	--	ND(0.46)	ND(0.46)	ND(0.46)	ND(0.46)	ND(0.46)	--	--	--
	Styrene	0.7	--	--	ND(0.47)	--	ND(0.47)	ND(0.47)	1.5	0.65	0.82	--	--	--
	Toluene	7.7	--	--	1.2	--	1.7	2.9	2.2	2.5	2.5	--	--	--
29-Jun-01	Benzene	6.6	--	--	ND(0.31)	--	0.68	2.1	9.9	11	11	--	9.6	--
	Ethylbenzene	2.3	--	--	ND(0.23)	--	1.5	0.85	ND(0.23)	ND(0.23)	ND(0.23)	--	2.5	--
	m-&p-xylenes	8.3	--	--	0.78	--	5.3	2.8	0.77	1	0.77	--	3.1	--
	Naphthalene	1	--	--	ND(0.19)	--	1.1	ND(0.19)	ND(0.19)	0.48	0.64	--	8	--
	o-xylenes	8.3	--	--	ND(0.23)	--	1.6	0.86	ND(0.23)	ND(0.23)	ND(0.23)	--	1.4	--
	Styrene	0.7	--	--	ND(0.23)	--	ND(0.23)	ND(0.23)	0.64	ND(0.23)	0.4	--	6	--
	Toluene	7.7	--	--	1.9	--	4.4	18	14	5.5	2.5	--	4.4	--

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
Sample Results (Results listed in parts per billion by volume [ppbv])														
18-Mar-01	Benzene	6.6	--	--	ND(0.31)	--	ND(0.31)	ND(0.31)	ND(0.63)	ND(0.63)	ND(0.31)	--	5.1	--
	Ethylbenzene	2.3	--	--	ND(0.23)	--	ND(0.23)	ND(0.23)	ND(0.23)	ND(0.46)	ND(0.23)	--	1.2	--
	m-&p-xylenes	8.3	--	--	ND(0.23)	--	ND(0.23)	ND(0.23)	0.72	0.74	0.95	--	3	--
	Naphthalene	1	--	--	ND(0.19)	--	ND(0.19)	ND(0.19)	ND(0.46)	ND(0.36)	ND(0.19)	--	ND(0.19)	--
	o-xylenes	8.3	--	--	ND(0.23)	--	ND(0.23)	ND(0.23)	ND(0.46)	ND(0.46)	ND(0.23)	--	1.1	--
	Styrene	0.7	--	--	ND(0.23)	--	ND(0.23)	ND(0.23)	ND(0.47)	ND(0.47)	ND(0.23)	--	3.4	--
	Toluene	7.7	--	--	ND(0.27)	--	1.1	1.2	4.1	6.8	17	--	9.5	--
16-Mar-01	Benzene	6.6	--	--	1.3	--	20	ND(0.31)	7.6	9.3	13	--	8.2	--
	Ethylbenzene	2.3	--	--	2.1	--	62	0.65	ND(0.23)	0.4	0.42	--	0.96	--
	m-&p-xylenes	8.3	--	--	3.6	--	48	2.3	1.2	1.2	1.3	--	2.5	--
	Naphthalene	1	--	--	4.4	--	49	ND(0.19)	ND(0.19)	0.59	0.51	--	ND(0.19)	--
	o-xylenes	8.3	--	--	1.8	--	20	0.55	0.53	ND(0.23)	0.62	--	1.6	--
	Styrene	0.7	--	--	0.39	--	8.7	ND(0.23)	ND(0.23)	ND(0.23)	0.31	--	3	--
	Toluene	7.7	--	--	6.5	--	60	5.7	17	6.2	26	--	9.1	--
03-Dec-00	Benzene	6.6	--	--	0.76	--	0.4	TR(0.41)	0.77	0.68	TR(0.61)	--	3.5	--
	Ethylbenzene	2.3	--	--	0.26	--	ND(0.23)	ND(0.46)	ND(0.23)	ND(0.46)	ND(0.46)	--	0.89	--
	m-&p-xylenes	8.3	--	--	0.74	--	0.34	TR(0.41)	0.54	0.47	0.49	--	1.5	--
	Naphthalene	1	--	--	ND(0.19)	--	ND(0.19)	ND(0.38)	0.22	ND(0.38)	ND(0.38)	--	TR(0.31)	--
	o-xylenes	8.3	--	--	0.29	--	ND(0.23)	ND(0.46)	ND(0.23)	ND(0.46)	ND(0.46)	--	0.62	--
	Styrene	0.7	--	--	ND(0.23)	--	ND(0.23)	ND(0.47)	ND(0.23)	ND(0.47)	ND(0.47)	--	7.1	--
	Toluene	7.7	--	--	1.7	--	1.3	1.5	1.4	1.5	1.4	--	1.7	--

**APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS**

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in parts per billion by volume [ppbv])											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
01-Dec-00	Benzene	6.6	--	--	0.99	--	0.5	0.58	4.1	5	4.3	--	7.2	--
	Ethylbenzene	2.3	--	--	0.39	--	ND(0.23)	TR(0.23)	TR(0.35)	TR(0.32)	ND(0.23)	--	0.88	--
	m-&p-xylenes	8.3	--	--	1.2	--	0.52	0.68	0.9	0.9	0.54	--	1.7	--
	Naphthalene	1	--	--	ND(0.19)	--	ND(0.19)	ND(0.19)	TR(0.29)	0.47	ND(0.19)	--	0.4	--
	o-xylenes	8.3	--	--	0.44	--	ND(0.23)	0.24	TR(0.29)	TR(0.28)	ND(0.23)	--	0.64	--
	Styrene	0.7	--	--	ND(0.23)	--	ND(0.23)	ND(0.23)	TR(0.35)	TR(0.27)	ND(0.23)	--	6	--
	Toluene	7.7	--	--	3.4	--	5.8	3.7	4.2	3.1	5.6	--	2.5	--
22-Oct-00	Benzene	6.6	--	--	0.44	--	--	--	0.54	--	--	--	--	--
	Ethylbenzene	2.3	--	--	ND(0.23)	--	--	--	0.32	--	--	--	--	--
	m-&p-xylenes	8.3	--	--	0.57	--	--	--	1.2	--	--	--	--	--
	Naphthalene	1	--	--	ND(0.19)	--	--	--	0.38	--	--	--	--	--
	o-xylenes	8.3	--	--	TR(0.21)	--	--	--	0.44	--	--	--	--	--
	Styrene	0.7	--	--	ND(0.23)	--	--	--	0.75	--	--	--	--	--
	Toluene	7.7	--	--	1	--	--	--	2	--	--	--	--	--
20-Oct-00	Benzene	6.6	--	--	0.86	--	--	--	1.4	--	--	--	--	--
	Ethylbenzene	2.3	--	--	0.29	--	--	--	0.46	--	--	--	--	--
	m-&p-xylenes	8.3	--	--	0.98	--	--	--	1.4	--	--	--	--	--
	Naphthalene	1	--	--	ND(0.19)	--	--	--	2.1	--	--	--	--	--
	o-xylenes	8.3	--	--	0.36	--	--	--	0.5	--	--	--	--	--
	Styrene	0.7	--	--	ND(0.23)	--	--	--	0.53	--	--	--	--	--
	Toluene	7.7	--	--	1.9	--	--	--	6.1	--	--	--	--	--

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in parts per billion by volume [ppbv])											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
01-Oct-00	Benzene	6.6	--	--	0.37	--	--	--	0.51	--	--	--	--	--
	Ethylbenzene	2.3	--	--	ND(0.23)	--	--	--	0.25	--	--	--	--	--
	m-&p-xylenes	8.3	--	--	0.44	--	--	--	0.73	--	--	--	--	--
	Naphthalene	1	--	--	ND(0.19)	--	--	--	ND(0.19)	--	--	--	--	--
	o-xylenes	8.3	--	--	ND(0.23)	--	--	--	0.26	--	--	--	--	--
	Styrene	0.7	--	--	ND(0.23)	--	--	--	0.41	--	--	--	--	--
	Toluene	7.7	--	--	1.8	--	--	--	3.2	--	--	--	--	--
29-Sep-00	Benzene	6.6	--	--	0.52	--	--	--	7.7	--	--	--	--	--
	Ethylbenzene	2.3	--	--	ND(0.23)	--	--	--	0.52	--	--	--	--	--
	m-&p-xylenes	8.3	--	--	0.56	--	--	--	1.5	--	--	--	--	--
	Naphthalene	1	--	--	ND(0.19)	--	--	--	0.31	--	--	--	--	--
	o-xylenes	8.3	--	--	ND(0.23)	--	--	--	0.43	--	--	--	--	--
	Styrene	0.7	--	--	ND(0.24)	--	--	--	0.38	--	--	--	--	--
	Toluene	7.7	--	--	2.2	--	--	--	4.7	--	--	--	--	--
19-Jul-00	Benzene	6.6	--	--	1	--	0.75	1.9	27	29	9.8	--	20	--
	Ethylbenzene	2.3	--	--	0.47	--	TR(0.35)	TR(0.3)	TR(0.41)	TR(0.33)	TR(0.27)	--	2.1	--
	m-&p-xylenes	8.3	--	--	1.5	--	0.84	0.65	1	0.75	0.74	--	3.8	--
	Naphthalene	1	--	--	ND(0.19)	--	ND(0.19)	ND(0.19)	0.59	0.76	TR(0.32)	--	TR(0.26)	--
	o-xylenes	8.3	--	--	0.57	--	TR(0.32)	TR(0.27)	TR(0.38)	TR(0.31)	TR(0.3)	--	1.5	--
	Styrene	0.7	--	--	ND(0.24)	--	TR(0.26)	TR(0.32)	1.4	0.95	1	--	18	--
	Toluene	7.7	--	--	4.8	--	9.8	9.7	9.7	6.3	6	--	9.1	--

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in parts per billion by volume [ppbv])											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
06-Apr-00	Benzene	6.6	--	--	0.72	--	TR(0.56)	ND(0.31)	14	10	26	--	14	--
	Ethylbenzene	2.3	--	--	ND(0.23)	--	3.8	48	ND(0.23)	17	3.9	--	ND(0.23)	--
	m-&p-xylenes	8.3	--	--	0.67	--	13	170	2.7	61	14	--	2.3	--
	Naphthalene	1	--	--	ND(0.15)	--	ND(0.15)	ND(0.19)	ND(0.19)	ND(0.19)	1K(0.47)	--	ND(0.19)	--
	o-xylenes	8.3	--	--	TR(0.23)	--	2.2	31	ND(0.23)	11	2.4	--	TR(0.96)	--
	Styrene	0.7	--	--	ND(0.24)	--	ND(0.24)	ND(0.24)	ND(0.24)	ND(0.24)	ND(0.24)	--	2.2	--
	Toluene	7.7	--	--	2.3	--	43	540	34	170	65	--	5.9	--
22-Feb-00	Benzene	6.6	--	--	0.76	--	0.65	--	18	10	26	--	22	--
	Ethylbenzene	2.3	--	--	0.28	--	0.25	--	0.65	0.38	0.63	--	2.3	--
	m-&p-xylenes	8.3	--	--	0.91	--	0.72	--	2	1.2	2.2	--	4.2	--
	Naphthalene	1	--	--	ND(0.19)	--	ND(0.19)	--	ND(0.19)	ND(0.19)	0.39	--	ND(0.19)	--
	o-xylenes	8.3	--	--	0.3	--	0.24	--	0.67	0.38	0.67	--	1.5	--
	Styrene	0.7	--	--	ND(0.23)	--	ND(0.24)	--	0.41	ND(0.24)	0.42	--	9	--
	Toluene	7.7	--	--	2.3	--	2.5	--	8.7	3.5	4.5	--	6.2	--
29-Nov-99	Benzene	6.6	--	--	1.1	--	0.37	0.55	3.6	3.6	5.6	--	3	--
	Ethylbenzene	2.3	--	--	0.24	--	0.25	0.34	0.28	0.19	TR(0.17)	--	0.88	--
	m-&p-xylenes	8.3	--	--	0.71	--	0.9	1.2	0.69	0.54	0.52	--	1.6	--
	Naphthalene	1	--	--	ND(0.4)	--	ND(0.4)	ND(0.4)	ND(0.4)	ND(0.4)	ND(0.4)	--	ND(0.4)	--
	o-xylenes	8.3	--	--	TR(0.22)	--	0.26	0.34	0.23	0.17	TR(0.17)	--	0.65	--
	Styrene	0.7	--	--	ND(0.5)	--	ND(0.5)	ND(0.5)	0.33	ND(0.5)	0.24	--	6.8	--
	Toluene	7.7	--	--	2	--	2.5	4.5	5.5	2.3	2.1	--	2.5	--

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in parts per billion by volume [ppbv])										
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10
30-Sep-99	Benzene	6.6	0.28	--	0.65	0.44	TR(0.47)	0.72	19	10	6.7	--	--
	Ethylbenzene	2.3	ND(0.5)	--	0.27	TR(0.21)	TR(0.25)	0.36	3.9	1.7	1.1	--	--
	m-&p-xylenes	8.3	0.47	--	0.85	0.64	0.74	0.71	10	4.8	3.2	--	--
	Naphthalene	1	TR(0.17)	--	0.10	TR(0.10)	TR(0.31)	0.21	0.41	0.49	0.39	--	--
	o-xylenes	8.3	TR(0.22)	--	0.39	0.28	TR(0.34)	0.31	2.8	1.5	0.97	--	--
	Styrene	0.7	ND(0.5)	--	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.75	0.4	38	--	--
	Toluene	7.7	1.4	--	1.9	2.1	2.9	2.5	17	4.9	4.3	--	--
18-Dec-98	Benzene	6.6	--	--	--	--	--	--	23	7	--	--	--
	Ethylbenzene	2.3	--	--	--	--	--	--	2.8	1.7	--	--	--
	m-&p-xylenes	8.3	--	--	--	--	--	--	6.6	6.6	--	--	--
	Naphthalene	1	--	--	--	--	--	--	ND(0.19)	0.46	--	--	--
	o-xylenes	8.3	--	--	--	--	--	--	2.2	3	--	--	--
	Styrene	0.7	--	--	--	--	--	--	0.29	ND(0.47)	--	--	--
	Toluene	7.7	--	--	--	--	--	--	4.5	3.5	--	--	--
22-Dec-97	Benzene	6.6	--	--	2.1	--	--	--	18	6.1	--	--	--
	Ethylbenzene	2.3	--	--	0.7	--	--	--	1.2	2	--	--	--
	m-&p-xylenes	8.3	--	--	2.4	--	--	--	1.3	6	--	--	--
	Naphthalene	1	--	--	ND(0.4)	--	--	--	ND(0.4)	TR(0.2)	--	--	--
	o-xylenes	8.3	--	--	0.9	--	--	--	0.4	2	--	--	--
	Styrene	0.7	--	--	ND(0.5)	--	--	--	0.3	0.8	--	--	--
	Toluene	7.7	--	--	4.9	--	--	--	2.6	22	--	--	--

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in parts per billion by volume [ppbv])											
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11
19-Nov-97	Benzene	6.6	0.9	--	1.9	1.1	0.8	1.9	61	13	7.5	--	--	--
	Ethylbenzene	2.3	ND(0.2)	--	0.9	0.3	0.4	1.1	2.7	1	0.7	--	--	--
	m-&p-xylenes	8.3	0.6	--	3.1	1.1	1	1.5	2.8	2	1.5	--	--	--
	Naphthalene	1	ND(0.2)	--	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	--	--	--
	o-xylenes	8.3	0.2	--	1.2	0.4	0.4	0.6	0.8	0.6	0.5	--	--	--
	Styrene	0.7	ND(0.2)	--	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	0.4	ND(0.2)	0.5	--	--	--
	Toluene	7.7	2.5	--	6.5	3.4	3	4.1	5.2	6.6	3.6	--	--	--
18-Jun-94	Benzene	6.6	--	1	--	--	--	1.8	--	1.1	1.1	0.7	--	--
	Ethylbenzene	2.3	--	0.4	--	--	--	1.1	--	14.2	20.7	15.9	--	--
	m-&p-xylenes	8.3	--	1	--	--	--	2.5	--	34.3	48.3	37.3	--	--
	Naphthalene	1	--	0.2	--	--	--	0.4	--	0.2	0.2	0.2	--	--
	o-xylenes	8.3	--	0.3	--	--	--	0.8	--	7.4	10.5	7.9	--	--
	Styrene	0.7	--	TR(0.026)	--	--	--	0.3	--	0.8	0.8	0.7	--	--
	Toluene	7.7	--	3.6	--	--	--	11.9	--	8	5.4	5.4	--	--

APPENDIX B TABLE I
SUMMARY OF INDOOR AIR QUALITY DATA
129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACTURED GAS PLANT SITE
MALDEN, MASSACHUSETTS

SAMPLE	ANALYTE	MADEP Indoor Air Background	Sample Results (Results listed in parts per billion by volume [ppbv])										
			Site 1	Site 1A	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10

NOTES AND ABBREVIATIONS:

1. OSHA PEL: Permissible Exposure Limits for air contaminants in Title 29 CFR Part 1910.1000, Department of Labor, Occupational Safety Health Administration, 1989 and 1993 final ruling. Based on the lowest of the 8-hour average, 15-minute readings, or instantaneous readings.
2. ACGIH TLV: Threshold Limit Values recommended by the ACGIH. Based on the lowest of the 8-hour average, 15-minute readings, or instantaneous readings.
3. NIOSH REL: 1994 Recommended Exposure Limits from the National Institute of Occupational Safety and Health. Based on the lowest of the 8-hour average, 15-minute readings, or instantaneous readings.
4. MADEP Indoor Air Background Values from: MADEP, "Characterizing Risks Posed by Petroleum Contaminated Sites: Implementation of MADEP VPH/EPH Approach," Final Policy, 31 October 2002 (Policy #WSC-02-411); and MCP Toxicity.xls (MCPstds.zip), 20 December 2001, available at <http://www.state.ma.us/dep/bwsc/files/standard/gw2/gw2.htm>.
5. VOC (ppb): volatile organic compounds with values in parts per billion by volume; analyzed by EPA Method T014.
6. ND: compound not detected above quantitation limit, number in parentheses is the quantitation limit.
7. TR: compound detected below the quantitation limit, number in parentheses is the quantitation limit.
8. Test Results associated with 6 April 2000 sampling event are not representative of typical indoor air conditions due to interference from products containing VOCs being used inside the facility at the time of sampling.
9. Results collected from the Rooftop sample location on 22 December 1997 are not shown in this table but have been reported in RAM Status reports dated 7 October 2004 and earlier.
10. Due to facility modifications, Sample location 10 is no longer accessible as of October 2004. This location has been replaced by Sample Location 11; refer to Figure 2 for this sample location.