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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

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HALEY&

Haley & Aldrich, Inc. Boston, Massachusetts

for

National Grid Westborough, Massachusetts

File No. 06558-711 October 2005

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

SCANNED

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

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Rochester New York

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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 restart, 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



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Tel: 860.282.9400 Fax: 860.282.9500 HaleyAldrich.com



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Letter of Transmittal

Date File Number From	6 October 20 06558-711 Richard J. H	005 Rago	OCT 0.7 2005
То	Massachuser Northeast R 1 Winter Str Boston, Mas	tts Department egional Office reet ssachusetts 021	of Environmental Detection NORTHEAST REGIONAL OFFICE
Attention	Site Manage	ment Branch	
Copy to	Distribution		
Subject	Former Mar Parcel B, 12 Malden, Ma RTN 3-0362 Tier IB Perr	nufactured Gas 9 Commercial ssachusetts nit 7378	Plant (MGP) Site Street
Copies	Date	Description	
1, original	10/5/2005	BWSC Forr	n 106
1	10/7/2005	Release Aba	tement Measure (RAM) Status Report No. 15
last entry	2012		
Transmitted via	□ First class	s mail 🛛 Ove	might express 🛛 Hand delivery 🖵 Other

Remarks

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

Massachuseits Department of Enviro Bureau of Waste Site Cleanup RELEASE ABATEMENT MEASURE (F	nmental Protection RAM)	BWSC106 Release Tracking Number
RANSMITTAL FORM		3 - 3757
SITE LOCATION:	12.000 · · · · · · · · · · · · · · · · · ·	
Site Name/Location Aid: Former Manufactured Gas Plant	(MGP) Site	
Street Address: 129 Commercial Street		
City/Town: Malden	4. ZIP Code: 02148-000	00
5. Check here if a Tier Classification Submittal has been provided	I to DEP for this disposal site	9.
a. Tier IA Z b. Tier IB c. Tier IC d.	Tier II RECE	EIVED
	OCT Q	7 2005
THIS FORM IS BEING USED TO: (check all that apply)	Dr	·D
1. List Submittal Date of Initial FAM Written Plan (if previously sub	mitted): 07/02/1998	<u>:۲</u>
2. Submit an Initial Release Abatement Measure (RAM) Plan.	NORTHEAST	GIONAL OFFICE
a. Check here if this RAM Plan received previous oral approv Action (LRA).	val from DEP as a continuation	on of a Limited Removal
b. List Date of Oral Approval:		
(mm/dd/yyyy) 3. Submit a Modified RAM Plan of a previously submitted written I	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 previously linked to a Primary Tier Classified RTN do not nee a RAM to cover more than one unclassified RTN and not sho RTN. 	se Tracking Numbers (RTNs) d to be listed here. This sec w permanent linkage to a Pri). RTNs that have been tion is intended to allow mary Tier Classified
 b. Provide the additional Felease Tracking Number(s) covered by this RAM Submittal 	-	
(All sections of this transmittal form must be fille	ed out unless otherwise not	ed above)

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I.

	Bureau of Waste Site Cleanup	nvironmental Protectio	BWSC106
	RELEASE ABATEMENT MEASU TRANSMITTAL FORM	RE (RAM)	Release Tracking Numbe
	Polsuant to 310 CMR 40.0444 - 0446 (Subpa		
2. RELEASE OR TH	IREAT OF RELEASE CONDITIONS THAT WAR	RANT RAM:	
. Identify Media im	npacted and Receptors Affected: (check all tha	at apply)	
[∠] a. Air [_]	b. Basement c. Critical Exposure Pat	thway 🖌 d. Groundwate	e. Residence
f. Paved Su	rface 🔲 g. Private Well 🗌 h. Public V	Water Supply 🗌 i. School	j. Sediments
🖌 k. Soil [] I. Storm Drain 🔲 m. Surface Wate	er 🔲 n. Unknown 🗌 c	p. Wetland 🔲 p. Zone 2
a. Others	Specify:		
2 Identify all source	es of the Release or Threat of Release if kno	wa: (check all that apply)	
a. Above-g	round Storage Tank (AST)		
e. Pipe/Hos	e/Linef. Tanker Truckg. Tr	ansformer 📋 h. Under-gr	round Storage Tank (UST)
i. Vehicle	j. Others Specify: Disposal a	associated with former N	MGP operations
3. Identify Oils and	Hazardous Materials Released: (check all th	hat apply)	
3. Identify Oils and	Hazardous Materials Released: (check all th	hat apply)	
3. Identify Oils and	Hazardous Materials Released: (check all th	hat apply) Metals	
3. Identify Oils and a. Oils d. Others	Hazardous Materials Released: (check all th b. Chlorinated Solvents c. Heavy r Specify: MGP contaminants: VOCs,	hat apply) Metals PAHs, Cyanide	
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Revised: 11/04/2003

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Bureau	u of Waste Site Cleanup		BY	Tracking Nu
	ASE ABATEMENT MEA SMITTAL FORM	SURE (RAM)	3 -	3757
Pursuar	nt to 310 CMR 40.0444 - 0446 (S	Subpart D)		
D. DESCRIPTION OF RESP(ONSE ACTIONS (cont.): (check	all that apply for volumes	list cumulative amounts)	-
D b Store		timated volume in oubie v	ordo	
		sumated volume in cubic y		
	ii. Off Site Es	stimated volume in cubic y	ards	
iia. Receiving Fac	ility:	Town:		State: _
iib. Receiving Fac	ility:	Town:		State
c. Landfill	en de la generativa de la Maria			
i. Cover	Estimated volume in cubic ya	rds		
Receiving Es	cility	Town		State:
ii. Disposal	Estimated volume in cubic yar	ds		
Receiving Fa	icility:	Town:		State: _
14. Removal of Drum	s, Tanks or Containers:			
a Describe Quan	tity and Araquet			
			*	.
b. Receiving Facil	ity:	Town:		State: .
c. Receiving Facil	ity:	Town:		State:
✓ 15. Removal of Other	Contamir ated Media:			
a. Specify Type ar	nd Volume: To date: 47 5	-oal drums (approx	7755 LBS) spent a	ctivated ca
		3		
b. Receiving Facili	ty: Clean Harbors	Town: Bris	stol	State:
c. Receiving Facili	ty: Clean Harbors	Bra	intree	State
16 Other Response	Actions			
L IV. Other (response)				
Describe:				
· · · · · · · · · · · · · · · · · · ·			••• •••	

i.

Revised: 11/04/2003



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

RELEASE AEATEMENT MEASURE (RAM) TRANSMITTAL FORM

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Release Tracking Number

3	-	3757
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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, (iii) is (are) appropriate 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 Bichard	a Loui Norma Standish	
2. First Name: 1001010 4. Telephone: (860) 290-3131 5. E	Ext.: 6. FAX: (860) 282-9500	
7. Signature:	Ordet AMAGANA	
8. Date: ////////////////////////////////////	9. LSP Stamp:	
	NU. 2242	
	PARCAN	10
Device de 44/04/0000		

Revised: 11/04/2003

Massachusetts Department of Environmental Protection	
Bureau of Waste Site Cleanup	BWSC106
RELEASE ABATEMENT MEASURE (RAM)	Release Tracking Number
	3 - 3757
Pursuant to 310 C/MR 40.0444 - 0446 (Subpart D)	
F. PERSON UNDERTAKING RAM:	change in the person
2. Name of Organization: National Grid	ndertaking response actions
3. Contact First Name: 4. Last Name:	
5. Street: 25 Research Drive 6. Title:	
7. City/Town: Westborough 8. State: MA 9. ZIP C	Code: 01582-0000
10. Telephone: (508) 389-4296 11. Ext.: 12. FAX: (508) 389-42	299
G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING RAM:	
1. RP or PRP a. Owne b. Operator c. Generator d. Transporte	r
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)
\square 3. Agency of Public Litility on a Flight of Way (as defined by M.G.L. c. 215, s. 5/i))	
4. Any Other Person Undertaking RAM Specify Relationshin:	
H. REQUIRED ATTACHMENT AND SUBMITTALS:	
1. Check here if any Remediation Waste, generated as a result of this RAM, will be stored, treater reused at the site following submission of the RAM Completion Statement. You must submit a limplementation Plan along with the appropriate transmittal form (BWSC108).	ed, managed, recycled or Phase IV Remedy
 2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subje and/or approval(s) issued by DE.^o or EPA. If the box is checked, you MUST attach a statement id provisions thereof. 	ct to any order(s), permit(s) entifying the applicable
3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been implementation of a Release At atement Measure.	notified of the
4. Check here if any non-updatable information provided on this form is incorrect, e.g. Release a corrections to the DEP Regional Office.	Address/Location Aid. Send
5. If a RAM Compliance Fee is required for this RAM, check here to certify that a RAM Compliance DEP, P. O. Box 4062, Boston, MA 02211.	e Fee was submitted to
6. Check here to certify that the LSP Opinion containing the material facts, data, and other inform	nation is attached.

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Revised: 11/04/2003

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Bureau of Waste S	sile Cleanup		DHOUL	
	EMENT MEASURE (RAM)		Release Trackin	ng Number
Bursuant to 310 CMR 4	0 0444 - 0446 (Subpart D)			
L CERTIFICATION OF PERSON UNDERTAKI	NG RAM:			
1 Michele Leone	ottoot upday the pairs and paralli		(1) 16 at 1 6 a	
examined and am familiar with the informative transmittal form, (ii) that, based on my inqui material information contained in this submittat I am fully authorized to make this attest entity on whose behalf this submittal is man possible fines and imprisonment, for willful	tion contained in this submittal, including any a iry of those individuals immediately responsible nittal is, to the best of my knowledge and belief, action on behalf of the entity legally responsible de am/is aware that there are significant penal ly submitting false, inaccurate, or incomplete in	and all docur e for obtaini , true, accur for this sub ties, includir nformation.	ments accompa ng the information ate and complet mittal. I/the person ng, but not limite	nying this on, the e, and (iii) son or ed to,
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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 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 ug/m3. 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

HALEY&

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.

REMEDIATION 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.

MONITOFING 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

HALEY&

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 VOC: 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).

HALEY& ALDRICH

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.

or Todd R. Butler

Engineer

Richard J. Teagd Senior Scientist

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

Enclosures:

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Sample Locations
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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



129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACURED GAS PLANT SITE SUMMARY OF INDOOR AIR OUALITY DATA TABLE I

ND(11) ND(11) (11) ND(11) (11) ND(11) ND(11) ND(11) ND(11) ND(42) ND(42) ND(42) ND(42) ND(1.8) ND(1.8) ND(42) ND(42) ND(42) Site 11 2.1 6.9 3.4 2.6 9 Site 10 1 1 1 1 1 1 . 1 1 -1 ł 1 1 1 Site 9 -1 1 -: 1 -1 -4 Site 8 ND(31) ND(31) ND(31) ND(31) ND(31) ND(31) ND(1.4) ND(31) 1 -. . 3.5 2.4 6.4 1.5 2.1 27 Sample Results (Results listed in ug/m³) VD(1.2) Site 7 ND(13) ND(13) ND(13) ND(13) ND(13) ND(1.2) ND(13) ND(13) ND(13) ND(13) ND(13) ND(13) ND(13) ND(13) ND(13) 1.7 2.8 2.3 9 ø Site 6 ND(10) ND(10) ND(10) ND(10) ND(10) ND(14) ND(14) ND(14) ND(14) ND(1.2) ND(10) ND(14) ND(14) ND(14) ND(1.2) 11 2.8 1.5 3.6 1.3 15 Site 5 ND(3.6) ND(3.6) ND(3.6) ND(3.6) ND(3.6) ND(1.5) ND(1.5) ND(2) ND(2) ND(2) ND(2) ND(2) ND(2) 5.8 7.6 7.6 3.5 2.6 2.8 16 F ND(1.4) ND(1.4) ND(1.4) ND(1.5) ND(1.5) ND(1,4) ND(1.5) ND(1.5) ND(1.5) ND(1.3) ND(1.3) Site 4 7.8 1.7 1.7 S 4.7 2.6 2.7 2.2 16 60 Site 3 • ł 1 1 -1 1 -1 1 -ND(1.8) ND(1.8) ND(1.8) ND(1.8) ND(1.8) ND(1.5) ND(1.5) ND(1.5) ND(1.5) ND(1.5) ND(1.5) ND(1.4) ND(1.4) Site 2 2.8 4.4 2.9 8.2 2.8 3.8 2.8 10 Site 1A 1 1 1 1 1 : 1 1 1 : -1 Site 1 1 -1 1 1 1 : 1 -1 -1 1 : ; ł 1 1 1 Air Background MADEP Indoor 28.65 28.65 2.79 9.62 2.79 28.65 2.79 9.62 9.62 5 \$ 10 21 \$ 10 5 w 5 40 10 S MALDEN, MASSACHUSETTS ANALYTE m-&p-xylenes Ethylbenzene Ethylbenzene m-&p-xylenes Ethylbenzene m-&p-xylenes Naphthalene Naphthalene Naphthalene o-xylenes Benzene o-xylenes o-xylenes Benzene Benzene Styrene Toluene Styrene Toluene Toluene Styrene SAMPLE 03-Aug-05 27-Apr-05 13-Jan-05

20 September 2005

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Site 11	1.9	ND(1.6)	3.5	ND(1.6)	ND(1.6)	ND(1.6)	6.6	-		:		ł		ł	:	•		ţ	;	4 1	
Site 10	•	3	;	;	t t			ND(35)	ND(35)	ND(35)	ND(35)	ND(35)	ND(35)	ND(35)	ND(1.9)	ND(1.9)	64	ND(1.9)	2.6	2.8	1
Site 9	:	1	1	:	:	:	1	1	•	;	ť	ł	1	:	1	1	:	:	:	ł	:
	-	-		-	1000	10000			-	-	(allowed)	200	61949C		1	15-16		12-15		_	

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

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	IN ASSAULT	61 1300												
SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Sample Site 4	Results (F Site 5	tesults liste Site 6	ed in ug/m ³ Site 7) Site 8	Site 9	Site 10	Site 11
12-Feb-04	Benzene	21	1	1	20.8	1	ND(1.7)	ND(1.7)	ND(8.6)	ND(12.8)	ND(18.5)	1	ND(20.1)	1
	Ethylbenzene	9.62	:	• •	16.9	ł	ND(1.6)	ND(1.7)	ND(8.7)	ND(13)	ND(18.7)	;	ND(20)	
	m-&p-xylenes	40	;		52.1	ł	N	e	ND(8.7)	ND(13)	ND(18.7)	;	ND(20)	ł
	Naphthalene	Ŋ	i	k F	2	:	ND(1.7)	ND(1.7)	ND(8.9)	ND(13.1)	ND(18.3)	1 1	ND(19.9)	1
	o-xylenes	10	i i	ł	18.7	:	ND(1.6)	ND(1.7)	ND(8.7)	ND(13)	ND(18.7)	1	ND(20)	:
	Styrene	2.79	;	1	2.1	:	ND(1.7)	ND(1.7)	ND(8.5)	ND(12.8)	ND(18.7)	:	ND(20)	1
	Toluene	28.65	ł	ł	71.6	:	4.5	5.3	56.5	ND(12.8)	ND(18.5)	:	ND(20)	
30-Oct-03	Benzene	21		1	1.9	:	ND(1.7)	ND(1.5)	1	ND(1.8)	ND(3.5)	:	ND(3.8)	:
	Ethylbenzene	9.62	ł	l I	ND(1.6)	r 1	ND(1.7)	2.4	:	ND(1.9)	ND(3.5)	:	ND(3.7)	1
	m-&p-xylenes	40	;	:	ы	;	5.2	7.8	:	5.2	ND(3.5)	ł	ND(3.7)	:
	Naphthalene	IJ	ł	ł	ND(1.6)	ł	ND(1.7)	ND(1.5)	i.	ND(1.8)	ND(3.5)	;	ND(3.7)	:
	o-xylenes	10	:	•	ND(1.6)	ł	ND(1.7)	ND(1.5)	:	ND(1.8)	ND(3.5)	:	7.4	1
	Styrene	2.79	1	:	ND(1.6)	:	ND(1.7)	ND(1.5)	:	ND(1.9)	ND(3.4)	;	ND(3.7)	;
	Toluene	28.65	:	;	Q	ł	27.1	23	ţ,	23	13.2	:	10.2	t t
23-Jul-03	Benzene	21	ND(1.9)	1	:	:	ND(1.8)	ND(1.6)	ND(3.5)	ND(3.8)	ND(2.5)	1	ND(3.8)	:
	Ethylbenzene	9.62	ND(1.9)	:	Ĭ	f	ND(1.8)	ND(1.6)	ND(3.6)	ND(3.9)	ND(2.5)	:	ND(3.8)	1
	m-&p-xylenes	40	ND(1.9)	ł	ł	ł	2.3	2.6	ND(3.6)	ND(3.9)	2.5	ł	5.6	Ļ
Y	Naphthalene	ي. م	ND(1.8)	1			ND(1.8)	ND(1.6)	ND(3.6)	ND(4)	ND(2.5)	ł	ND(3.8)	:
	o-xylenes	10	ND(1.9)	ł			ND(1.8)	ND(1.6)	ND(3.6)	ND(3.9)	ND(2.5)	;	ND(3.8)	• •
	Styrene	2.79	ND(1.9)	1	:	1	ND(1.8)	ND(1.7)	ND(3.6)	ND(4)	ND(2.5)	1	28.5	-
	Toluene	28.65	23.7	ł	•	;	52.7	64	56.5	27.9	35.8	ţ	35.4	4

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

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SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Sample Site 4	Results (I Site 5	Kesults liste Site 6	d in ug/m' Site 7) Site 8	Site 9	Site 10	Site 11
25-Apr-03	Benzene	21	:	6 8	ND(1.9)	i.	ND(1.8)	ND(4.2)	ND(95.8)	ND(38.3)	ND(38.3)	1	ND(108.6)	:
	Ethylbenzene	9.62	ł	F.	ND(1.9)		ND(1.8)	ND(4)	ND(95.5)	ND(39.1)	ND(39.5)	;	ND(108.5)	
	m-&p-xylenes	40	1	ţ	ND(1.9)	:	ND(1.8)	ND(4)	ND(95.5)	ND(39.1)	ND(39.5)	1	ND(108.5)	;
	Naphthalene	S	:	ł	ND(1.9)	4	ND(1.8)	ND(4)	ND(94.3)	ND(39.3)	ND(39.8)	:	ND(104.8)	:
	o-xylenes	10	1	1	(0.1.9) UD(1.9)	1	ND(1.8)	ND(4)	ND(95.5)	ND(39.1)	ND(39.5)	1	ND(108.5)	:
	Styrene	2.79	ł	:	ND(1.9)	1	ND(1.8)	ND(4)	ND(93.7)	ND(39.2)	(9.9E) UD(39.6)	f	ND(106.4)	1
	Toluene	28.65	;	1	4.1	;	23.7	41.4	ND(94.2)	ND(37.7)	ND(41.4)	1	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)	3	ND(1.8)	;
	Ethylbenzene	9.62	:	ľ	ND(1.5)	-	ND(1.5)	ND(1.3)	ND(1.6)	ND(2.2)	ND(1.8)	;	(1.1)QN	;
	m-&p-xylenes	40	1	1	2.5	ł	ND(1.5)	1.6	2.3	ND(2.2)	ND(1.8)	:	2.5	1
	Naphthalene	S	:	ł	ND(1.5)	1	ND(1.5)	ND(1.3)	ND(1.6)	ND(2.2)	ND(1.8)	ł	ND(1.7)	;
	o-xylenes	10	1	1	1.5	ł	ND(1.5)	ND(1.3)	ND(1.6)	ND(2.2)	ND(1.8)	:	ND(3.9)	1
	Styrene	2.79	:	1	ND(1.5)	•	ND(1.5)	ND(1.3)	ND(1.6)	ND(2.2)	ND(1.8)	î T	4.3	1
	Toluene	28.65	:	1	4.1	:	2.4	2.9	2.4	2.3	ND(1.8)	ł	8	;
08-Oct-02	Benzene	21	:	1	ND(2.3)		ND(1.2)	+	ND(2.1)	ND(2)	ND(2)	:	1.9	1
	Ethylbenzene	9.62	:	i.	ND(2.3)	:	ND(1.2)	ţ	ND(2.1)	ND(2)	ND(2)	ļ	3.6	;
	m-&p-xylenes	40	1	ţ	1.6	ł	2.6	1	2.1	ND(2)	ND(2)	:	6.1	ł
3	Naphthalene	Q	1	ł	ND(2.3)	:	ND(1.2)	1	ND(2.1)	ND(2)	ND(2)	ł	ND(1.7)	:
	o-xylenes	10	:	ł	ND(2.3)	:	ND(1.2)	•	ND(2.1)	ND(2)	ND(2)	:	2.5	1
	Styrene	2.79	:	2	ND(2.3)	4	ND(1.1)	1	ND(2.1)	ND(2)	ND(2)	1	23.4	-
	Toluene	28.65	ł	1	4.5	;	24.5	ł	45.2	8.7	6.8	;	9.4	ł

20 September 2005

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

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AMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Sample Site 4	Results (F Site 5	tesults liste Site 6	ed in ug/m ³ Site 7) Site 8	Site 9	Site 10	Site 11
11-Oct-01	Benzene	21	(1) UD(1)	:	1	ľ	ND(1)	ND(2)	10.9	11.5	12.5	•	7.7	1
	Ethylbenzene	9.62	ND(1)		1	ł	1.9	ND(2)	(1) UN	(1) UN	ND(2)	:	3.2	1
	m-&p-xylenes	40	(I) (I)	Ę	ł	:	5.6	3.5	2.8	2.5	m	:	5.2	1
	Naphthalene	ى ە	(I)QN		1	1	(1) UN	ND(2)	(1) ON	(I)ON	ND(2)	ł	(1) ON	1
	o-xylenes	10	(1) UN	1	ł	1	2	ND(2)	(1) ND(1)	(1) UD(1)	ND(2)	1	22	:
	Styrene	2.79	(I)QN				(1) ND(1)	ND(2)	(1)QN	(1) UD(1)	ND(2)	;	15.8	1
	Toluene	28.65	4.1	1	:	4	20.7	17.3	31.3	10.9	7.9	ľ	8.3	
11-Jul-01	Benzene	21	::	:	ND(2)		ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	:	:	
	Ethylbenzene	9.62	1	:	ND(2)	:	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	:	ł	i i
	m-&p-xylenes	40	1	1	ND(2)	1 00	ND(2)	ND(2)	2	2.2	ND(2)	1	1	;
	Naphthalene	S	1	ļ	ND(2)	-	ND(2) -	ND(2)	ND(2)	1.7	ND(2)	:	;	-
	o-xylenes	10	1	1	ND(2)		ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ł	ł	ł
	Styrene	2.79	ł	i i	ND(2)	I I	ND(2)	ND(2)	6.4	2.8	3.5	:	1	;
	Toluene	28.65	1	1	4.5	1	6.4	109.2	8.3	9.4	9.4	:	:	:
10-nul-6	Benzene	21	:	1	ND(1)	:	2.2	6.7	31.6	35.1	35.1	1	30.7	1
	Ethylbenzene	9.62	NI-191		(1) UD(1)		6.5	3.7	(1)QN	(1)ON	(1) UN	1	10.9	;
	m-&p-xylenes	40	1	;	3.4	1	23	12.2	3.3	4.3	3.3	1	13.5	1
	Naphthalene	Q	;	•	(1) UN	ł	5.8	(1)QN	(I) DN	2.5	3.4	;	41.9	1
	o-xylenes	10	î î	e. E	(1) DN	Ĩ	6.9	3.7	ND(1)	ND(1)	ND(1)	:	6.1	ł
	Styrene	2.79	1	1	(1) ND(1)	:	(I)QN	ND(1)	2.7	ND(1)	1.7	ŀ	25.5	:
	Toluene	28.65	1	;	72		16.6	67.8	52.7	2.06	V O			

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

Site 11 1 1 1 1 : ! --: 1 : 4 1 -4 -1 ; : ; Site 10 TR(1.6) (L)(N) 14.5 10.9 (1) ND(1) 12.8 16.3 35.8 26.2 34.3 5.2 4.8 3 4.2 6.9 6.6 6.4 3.9 2.7 30 Ţ Site 9 -1 : 1 --1 Site 8 ND(1) (1) (1) (L) NN(L) (1)QN (I) ON TR(1.9) ND(2) ND(2) ND(2) ND(2) 4.1 41.5 97.9 2.1 8 5.6 1.3 5.3 2 2.7 2.7 Sample Results (Results listed in ug/m^3) Site 4 Site 5 Site 6 Site 7 ND(2) ND(2) NU(2) ND(2) ND(2) (1)ON (1) ND(1) ND(2) ND(2) ND(2) ND(2) 25.6 23.4 3.2 29.7 1.7 5.2 3.1 2.2 5.7 2 NU(2.5) ND(2) (1) UD(1) ND(2) ND(2) (F) ON (L)QN 24.3 (L)QN (L) ON (L)QN (I) (I) 3.1 15.4 5.2 2.3 2.5 2.3 1.2 5.2 54 **FR(1.8)** TR(1.3) ND(1) (L) ON ND(1) (บ)กา (L) ON ND(1) (L)QN ND(1) ND(2) ND(2) ND(2) ND(2) (I) ON 21.5 4.5 2.8 2.4 10 5.6 ND(1) (I) ON ND(1) NU(1) (I) ON (L)QN 208.3 256.8 63.9 (I) ON (1) (1) (L)QN (L)QN 269.1 4.1 86.8 1.3 226 1.5 37 S Site 3 : 1 1 ; -1 1 Site 2 (1) ON (1) (1) (L)QN NU(1) (I) ON (1) UN (L)QN (L)QN (L) (1) 15.6 24.5 4.2 7.8 23.1 ÷. 6.3 9.1 1.7 2.4 1.1 3.2 Site 1A 1 1 : Site 1 1 -: 1 1 1 1 1 ł 1 + 1 I I Air Background MADEP Indoor 9.62 28.65 2.79 28.65 28.65 2.79 2.79 9.62 2 40 n 9 5 4 10 9.62 10 ŝ 5 40 ŝ MALDEN, MASSACHUSETTS ANALYTE Ethylbenzene m-&p-xylenes Ethylbenzene m-&p-xylenes Ethylbenzene m-&p-xylenes Naphinaiene Naphthalene Naphthalene Benzene o-xylenes o-xylenes o-xylenes Benzene Benzene Toluene Styrene Styrene Styrene Toluene Toluene SAMPLE 18-Mar-01 03-Dec-00 16-Mar-01

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. . TABLE I SUMMARY OF INDOOR AIR QUALITY DATA 129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACURED GAS PLANT SITE MALDEN MASSACHISETTS

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SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Sample Site 4	Results (F Site 5	tesults liste Site 6	ed in ug/m ³ 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	r L	*	1.7	•	ND(1)	TR(0.99)	TR(1.5)	TR(1.4)	(1) UD(1)	1	3.8	:
	m-&p-xylenes	40	;	:	5.2	:	2.3	2.9	3.9	3.9	2.3	1	7.3	;
	Nanhthalane	¥0	ł	a r	(1)CN	;	(1)CN	(1)CN	<u>тк(i.3)</u>	2.5	(I)(I)	:	2.1	1
	o-xylenes	10	E.	ł	1.9	;	(1) UN	۲	TR(1.2)	TR(1.2)	(I) DN	:	2.8	;
	Styrene	2.79	ļ	;	ND(1)	1	(1) UD(1)	(1)ON	TR(1.5)	TR(1.2)	ND(1)		25	:
	Toluene	28.65	:	:	13	1	22	14	16	12	21	;	9.6	Ĩ
22-Oct-00	Benzene	- 21	•	1	1.4	:	1	1	1.7		1	:	:	:
	Ethylbenzene	9.62	ł		(I) (I)	1	ł	ł	1.4		:	ł	:	ł
	m-&p-xylenes	40	i r	ł	2.5	r T	:	:	5.2		1	;	;	ł
	Naphthalene	, O	ł	1	(1) ND(1)	;	:	1	N	1	:	ł	;	:
	o-xylenes	10	:	•	TR(0.9)	:	1	;	1.9	ł	:	:	:	:
	Styrene	2.79	1	1	(1) ND(1)	ł	1	1	3.3	ł	:	ł	;	()
	Toluene	28.65	ł	ł	3.7		:	ł	7.4	ł	:	ļ	1	1
0-Oct-00	Benzene	21	ł	1	2.8	:	:	:	4.5	:	:	:	:	1
	Ethylbenzene	9.62	;	ţ	1.3	:	1	1	2	:	1	ł	;	1
	m-&p-xylenes	40	ł	ł	4.3	ł	1	1	6.1	1	į	;	1	ł
	Naphthalene	S	i i	ł	(1) ND(1)	:	1	1	11.1	i i	ł	;	;	:
	o-xylenes	6	ł	1	1.6		l	!	2.2	;	1 1	;	ł	1
	Styrene	2.79	1	1	(L)QN	4	;	ł	2.3	k T	:	;	:	:
	Toluene	28.65	:	1	1				-					

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

														4
SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Sample Site 4	Kesults (F Site 5	tesults fiste Site 6	d in ug/m' Site 7) Site 8	Site 9	Site 10	Site 11
06-Apr-00	Benzene	21	:	1	2.3	ł	TR(1.8)	(1) UD(1)	45.2	32.3	83.9	:	45.2	1
	Ethylbenzene	9.62	1	ł	(I) (I)		16.5	208.7	(1)CN	73.9	17	:	(1) UN	;
	m-&p-xylenes	40	;	•	2.9	:	56.5	739.1	11.7	265.2	60.9	:	10	:
	Naphthalene	v	;	ł	(1) UD(1)	ť	(1) ND(1)	(I) QN	ND(1)	(1) UD(1)	TR(2.5)	;	(1) UN	1
	o-xylenes	10	;	ł	TR(1)	1	9.6	134.8	ND(1)	47.8	10.4		TR(4.2)	1
	Styrene	2.79	ł	1	(I) (I)		(I)(I)	(1) ND(1)	ND(1)	(1) ND(1)	(I) (I)	;	9.6	1
	Toluene	28.65		L L	8.5		159.3	2000	125.9	629.6	240.7	ł	21.9	ţ
22-Feb-00	Benzene	21	1	-	2.5	1	2.1	:	58.1	32.3	83.9	1	12	:
	Ethylbenzene	9.62	ţ	ł	1.2	1	1.1	ł	2.8	1.7	2.7	:	9	3
	m-&p-xylenes	40	1	•	4	:	3.1	:	8.7	5.2	9.6	;	18.3	Î
	Naphthalene	с,		;	(I) ON	ſ	(1) (1)	1	(1) ON	(1) UN	2.1	-	ND(1)	:
	o-xylenes	10	ì	4	1.3	1	-	:	2.9	1.7	2.9	ł	6.5	:
	Styrene	2.79	1	ł	(1)UN	;	(1) UD(1)	1	1.8	(1) (1)	1.8	1	39.1	;
	Toluene	28.65	1	ı L	8.5	ł	9.3		32.2	13	16.7	1	23	;
29-Nov-99	Benzene	21	1	:	3.5	;	1.2	1.8	11.6	11.6	18.1	:	9.7	:
	Ethylbenzene	9.62	ł	1 1	-	e I	1.1	1.5	1.2	0.8	TR(0.7)	ł	3.8	:
	m-&p-xylenes	40	e t	r t	3.1		3.9	5.2	3	2.3	2.3	ł	2	1
	Naphthalene	S	;	;	ND(2.1)	;	ND(2.1)	ND(2.1)	ND(2.1)	ND(2.1)	ND(2.1)	•	ND(2.1)	4 4
	o-xylenes	10	ł	ł	TR(1)	ł	1.1	1.5	•	0.7	TR(0.7)	1	2.8	:
	Styrene	2.79	1	1	ND(2.2)	i. e	ND(2.2)	ND(2.2)	1.4	ND(2.2)	t	;	29.6	1
	Toluene	28.65	1	ł	7.4	;	9.3	16.7	20.4	8.5	7.8	:	9.3	:

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 TABLE I

 SUMMARY OF INDOOR AIR QUALITY DATA

 129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACURED GAS PLANT SITE

MALDEN	, MASSAURI	136113									60			
SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site 1A	Site 2	Site 3	Sample Site 4	Results (F Site 5	tesults liste Site 6	d in ug/m ³ Site 7) Site 8	Site 9	Site 10	Site 11
30-Sep-99	Benzene	21	0.9	î.	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	:	:	1
	m-&p-xylenes	40	2	4	3.7	2.8	3.2	3.1	43.5	20.9	13.9	ł	1	4
	Naphthalene	S	TR(0.9)	5	-	TR(0.8)	TR(1.6)	2	2.2	2.6	2.1	:	t t	
	o-xylenes	0	TR(1)	1	7.1	1.2	TR(1.5)	1.3	12.2	6.5	4.2	:	1	;
	Styrene	2.79	ND(2.2)	:	ND(2.2)	ND(2.2)	ND(2.2)	ND(2.2)	3.3	1.7	165.2	:	ł	ł
	Toluene	28.65	5.2	ł	~	7.8	10.7	9.3	63	18.1	15.9	:	:	:
18-Dec-98	Benzene	21	1	:	:	1	1	:	74.2	22.6			:	:
	Ethylbenzene	9.62	-	ł	1 9	ł	F F	ł	12.2	7.4	÷	1	ł	;
	m-&p-xylenes	40	1	1	;	1	ł	1	28.7	28.7		;	:	:
	Naphthalene	ß				ł	ł		(L)QN	2.4		f	1	:
	o-xylenes	10	1	:	1	;	;	1	9.6	13		;	1	1
	Styrene	2.79	i F	ł	ł	i	1	ł	1.3	(Z)QN	;	:	1	:
	Toluene	28.65	1	:	•	1	1	1	16.7	13	:	:	:	:
22-Dec-97	Benzene	21		:	6.8	1	1	:	58.1	19.7	:	:	:	:
	Ethylbenzene	9.62	1	l t	ę	ł	ł	ł	5.2	8.7	:	:	1	:
	m-&p-xylenes	40	1	1	10.4	1	1	1	5.7	26.1	;	ł	ł	:
	Naphthalene	ъ	•	•	ND(2.1)	1	1	;	ND(2.1)	TR(1.1)	1	1	ł	
·	o-xylenes	10	;	t	3.9	1 1	ł	ł	1.7	8.7	:	-	ł	1
	Styrene	2.79	ł	1	ND(2.2)	;	1	1	1.3	3.5	ł	;	e c	:
	Toluene	28.65	1	1	18.1	1	:	:	9.6	81.5	:	1	1 1	1

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

SAMPLE	ANALYTE	MADEP Indoor Air Background	Site 1	Site IA	Site 2	Site 3	Sample Site 4	Results (F Site 5	kesults liste Site 6	d in ug/m ³ Site 7) Site 8	Site 9	Site 10	Site 11
19-Nov-97	Benzene	21	2.9	1	6.1	3.5	2.6	6.1	196.8	41.9	24.2	1	:	:
	Ethylbenzene	9.62	(6'0)QN	ł	3.9	1.3	1.7	4.8	11.7	4.3	n		í ç	ł
	m-&p-xylenes	40	2.6	1	13.5	4.8	4.3	6.5	12.2	8.7	6.5	;	1	ł
	Maphthalane	43	ND(1.1)	ł	ND(1.1)	(I.I)CN	NOVI . IJ	เกิ.ก)	(โ.โ)นี้ที	(1.1)UN	ND(1.1)	;	ł	;
	o-xylenes	10	0.9	i	5.2	1.7	1.7	2.6	3.5	2.6	2.2		;	;
	Styrene	2.79	ND(0.9)	1	ND(0.9)	(6.0) QN	ND(0.9)	ND(0.9)	1.7	ND(0.9)	2.2	•	ł	:
	Toluene	28.65	9.3	1	24.1	12.6	11.1	15.2	19.3	24.4	13.3	5		:
18-Jun-94	Benzene	21	1	3.2	:	:	;	5.8	1	3.5	3.5	2.3		:
	Ethylbenzene	9.62	;	1.7			:	4.8	•	61.7	8	69.1	;	;
	m-&p-xylenes	40	ł	4.3	1	1	;	10.9	L L	149.1	210	162.2	;	ł
	Naphthalene	Q	;	1.1	:	:	ł	2.1	4	F1	5	7	ľ	1
	o-xylenes	10	1	1.3	;	l	;	3.5	:	32.2	45.7	34.3	4	:
	Styrene	2.79	;	TR(0.11)	I L	1	1 1	1.3	ľ	3.5	3.5	e	;	1
	Toluene	28.65	1	13.3	1	i i	ł	44.1	1	29.6	20	20	:	1.

1. VOCs (volatile organic compound) were analyzed by EPA Method T014. Results are provided in ug/m3, unless otherwise noted.

2 OSHA PEL: Permissable 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.

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 (MCPstnds.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 focation 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.

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TABLE II CHEMICAL ANALYSIS OF SUB-SLAB VENTING SYSTEM VAPOR SAMPLES 139 COMMERCIAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE

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							Out value on 16	Cont services				
INFLUENT Sampling Increment Sample Date	Day I 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 IO-Jan-00	Day 70 25-Jan-00	3 Months 15-Feb-00	4 Months 14 Mar-00	4.5 Morths 29-Mar-00	5 Months 26-Apr-00	5.5 Months 1-May-00
PID Reading (ppm)	175	63	8	10.5	2	0.2	561	82	19	38	1.6	61
Compound (ug/L)												
Benzene	348	88	127	61	61	QN	402	192	148	11	C.0	AF
Toluene	45	23	8	7	п	QN	200	173	326	68	5	3 6
Ehylbenzene	32	15	22	4	S	Ð	77	8	153	\$2	82	12
M&P Xylene	81	Ξ	11	æ	s	Q	76	70	282	48	126	42
O Xylene	2	Q	e	₽	Q	Q	14	17	36	14	67	8
Naphthalcne	VN	NA	NA	150	NA	V N	V N	NA	NA	NA	AN	YZ
Styrene	Ð	£	*	Ð	£	5	8	2	50	9	48	6
Tetal VOCs	445	137	210	183	4	3	782	520	514	762	420	168
							Shut valve on 19	January 2000				
EPTLUENT - 1 Samiline Incenter	, Part 1	1.11	1.12	Der 14			1					
Sample Date	16-Nov-99	66-NON-61	23-Nov-99	30-Nov-99	14-Dec-99	10-Jan-00	25-Jan-00	5 Monuts 15-Feb-00	4 Months 14-Mar-00	29-Mar-00	5 Months 26-Apr-00	5.5 Months 1-May-00
PID Reading (ppm)	0	0	11	4.1	0	0.2	0	0.8		0	04	0
Compound (ng/L)												
Benzene	Q	ę	33	14	£	Q	ę	QN	8	Q	ę	ę
Toluene	2	2	2	ę	£	£	2	Ś	Q	ą	11	Ð
Ethylbenzene	21	2	2 !	2	Q !	Q	Ø	QN	Q	Q	£	ę
Mour Ayiche O Vulene	2 5	25	2 9	29	29	29	2	4	2!	2!	4	£
Nanhthalene	NA	NA N	NA	NA N	AN					20	8	2:
Styrene	2	£	2	-	2	12	2	22	5 9	2 g	ž	2 Q
Total VOCs	0	0	R	18	0	0	0	6	12	QN	66	0
							Shut valve on 19	January 2000				
SFFLUENT - Z	1.44	5.12							100 million (100 m			
sample Date	16-Nov-99	66-NON-61	23-Nov-99	30-Nov-99	14-Dec-99	2 Monus 10-Jan-00	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	£	YN	£	Ð	Q	£	Ð	ę	ę	Q	Ð	Q
Foluene	29	VN.	2!	2!	2	21	2	£.	ę	Q	Ð	ę
Further of the second	59	¥2	29	2	29	29	2 (2	2	2	2	Q
Mar Aylche	2 5		29	2 4	26	29	2 9	2 9	2 9	2 !	14	£
Vanhthairne	NA	AN N	NA	NA N	A N	N N	A N	NA	2 2	23	5	2:
Styrene	7	VN	2	Ð	Ð	2	=	Ð	2 8	Q	9	22
Fotal VOCs	2	VN	2	. 0	0	0	п	0	36	QN	53	0

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NOTES AND ABBEVIATIONS: L. VOC: valatile equals compounds 2. M): compared and encode doore method detection limit (hes than approximatly 1 vg/L). 3. M): contraction detected doore method detection limit (hes than approximatly 1 vg/L). 4. INPLUENT: Vapor samples collected then (heaving prioritanty curbon treatment doon (insid curbon). 5. EFFLUENT - 1: Vapor samples collected dont (heaving prioritanty curbon treatment doon (insid curbon). 5. EFFLUENT - 1: Vapor samples collected dont (heaving prioritanty curbon treatment doon (insid curbon). 5. EFFLUENT - 1: Vapor samples collected dont (heaving prioritanty curbon treatment down (insid curbon). 7. Samples analysed by go chronomograph at Hairy & Adrich laboratory.

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

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INFLUENT				2	11.000.000 AS				100000000			
Sampling Increment Sample Date	6 Months 24-May-00	7 Months 23-Jun-00	8 Months 31-Jul-00	9 Months 29-Aug-00	10 monuhs 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
PID Reading (ppm)	1.6	4.2	1.9	0.6	0.4	0	0	0	0	0	0	0
Compound (ug/L)						100						
Benzene	E	Q	£	QN	Ð	Q	Q	Q	Q	ą	ĝ	ĝ
Toluene	8	8	1	Q	£	Q	9	ę	QN	Q	£	Q
Ethylbenzene	15	9	£	Q	ę	Ð	Ð	QN	Q	£	ę	£
M&P Xylenc	21	18	5	18	Ð	Ð	Q	ę	QN	ę	ę	2
O Xylene	00	~	Ð	2	ę	ę	s	ę	Ð	ę	2	Ę
Naphthalene	NA.	NA	NA	NA	NA	NA	NA	NA	NA	VN	YN	ž
Styrene	£	Q	3	Q	£	ы	4	J	Q	£	2	i vi
Total VOCs	8	51	15	20	0	2	6	e	0	0	9	w.
CEELLIENT 1						Opened valve or.	1 2 October 2000					
Sampling Increment	6 Months	7 Months	8 Months	9 Morths	10 Months	11 months	12 months	13 months	14 months	15 months	15 months	16 Monthe
Sample Date	24-May-00	23-Jun-00	31-Jul-00	29-Aug-00	27-Sep-00	31-Oct-00	28-Nov-00	31-Dec-00	22-Jan-01	27-Feb-01	26-Mar-01	30-Apr-01
ID Reading (ppm)	4.5	3.3	1.2	0.8	0	0	0	0	0	0	0	0
Compound (ug/L)												
lenzene	82	œ	£	ę	QN	QN	QN	QN	Ð	Q	ę	Q
oluene	2	П	8	0	ę	g	ę	R	Ð	Q	Q	Q
athyl benzene	8	2	£	Ð	£	Ð	Q	g	Ð	Q	Q	QN
A&P Xylene	2	2	2	ę:	e	2	Q	2	ę	Q	Q	£
/ Ayiche			23	= 3	Żż	2:	2;	Q:	2	£	£	Ð
tyrene	Ê	ŝ	2 P	29		4 2	NA 11	NA A	Z S	S S	ž	ž
							1		?	2	2	2
otal VOCs	87	19	13	21	9	s	П	+	0	0	0	•
						Opened valve on	2 October 2000					
GFFLUENT - 2 ampling Increment	6 Morths	7 Months	8 Months	9 Months	10 Months	11 months	12 months	13 months	14 months	15 months	15 months	16 Months
ample Date	24-May-00	23-Jun-00	31-Jul-00	29-Aug-00	27-Sep-00	31-04-00	28-Nov-00	31-Dec-00	22-Jan-Oi	27-Feb-01	26-Mar-01	30-Apr-01
ID Reading (ppm)	o	0	0	0	0	0	0	0	0	0	0	0
ompound (ug/L)												
cuzene	2	Q	ę	ę	Ê	₽	Ð	QN	2	Q	Q	Q
otuene	2	Q.	2	2	£	Ð	£	QN	Ð	Ð	Q	Q
thythenzene	2 !	2!	2 !	2 !	2	₽!	2	Ð	Q	ę	ą	ę
Ker Aylene	2 9	29	2 C	2 9	2 9	29	2 9	29	2 !	2	2	£
Aytene					2 2	23	23	Q :	2:		2	2:
symmetric strength	ę	ę	Ę	2	Ê	20	22	22		2 Q	źź	ž ž
					× (e					!	!	2
Mal VOCs	0	0	0	0	0	0	0	0	0	0	•	0

8

NOTES AND ABBREVIATIONS:
 I. VOC:: votnite organic compounds
 J. AD: compound and detected above method detection limit (less than appointmanky | upt.).
 J. AD: compound and detected above method detection limit (less than appointmanky | upt.).
 J. AD: exploration and detected above method detection limit (less than appointmanky | upt.).
 J. AD: exploration and detected above method detection limit (less than appointmanky | upt.).
 J. AD: exploration and detected above method detection limit (less than appointment).
 J. AD: exploration and detected above data from appoint strong actions resummer duran (judd action).
 J. EFFLUENT - 1. Vacos method events and the data frough primary carbon resummer duran (judd action).
 J. EFFLUENT - 1. Vacos method activation is the data frough primary carbon resummer duran (judd action).
 J. EFFLUENT - 1. Vacos method activation is the data frough a the data carbon becames and activation is query activation by que chonendory activation textures activation in the data activation is query activation textures activation in the data activation is query activation textures activation in the data activation is query activation textures activation in the data activation is query activation textures activation in the data activation is query activation textures activation in the data activation is query activation textures activation in the data activation is query activation texture activation in the data activation is query activation texture activation texture

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MALDEN, MASSACHUSETTS

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NOTES AND ABBREVIATIONS:

Total VOCs

tyrene

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9999929 •

2222222 -

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8222229 -

2222222 •

2222222 -

-

2222222 -

VOCs: volatile arganic compound

Limit (leve the -bove

. ND: compound n

lug/L).

INFLUENT:

EFFLUENT - 2: 1 EFFLUENT -

7. Surples unit

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TABLE II CHEMICAL MALVSIS OF SUB-SLAB VENTING SYSTEM VAPOR SAMPLES 129 COMMERCIAL STREET, PARCEL B OF PORMER MANUFACTURED GAS PLANT SITE

Page 4 of 7

			1									
INFLUENT Sampling Increment Sample Date	28 Months 2-May-02	29 Months 5-Jun-02	30 Months 27-Jun-02	31 months 30-lul-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 Morahs 21-Feb-03	39 Months 31-Mar-03
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0	0
Company (ne/1.)												
Benzene	Q	R	Q	Q	Ð	Q	ð	9	QN	Q	Î	Q
Toluene	ę	Ð	Ð	Ð	ę	Ð	Ð	Ð	QN	£	;	QN
Ethylbenzene	Q	£	Ø	ę	ę	g	Q	Q	QN	Q	3	QN
M&P Xylene	Q	Q	Ð	Q	Q	Ð	Q	Q	Ð	ę		QN
O Xylene	QN	Q	Q	QN	2	9	9	Ð	QN	ę	1	R
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	V N	1	YN .
Styrche	Ð	QN	Q	Ð	Ð	2	₽	Ð	ę	£	1	£
Fotal VOCs	0	0	0	0	0	0	0	0	0	8	I	8
SFFLUENT - 1					1.000 No.000	and a second second				10		
sampling increment	28 Months	29 Months	30 Months	31 months	32 months	33 Months	34 Months	35 Months	36 Months	37 Months	38 Months	39 Months
sample use	70-ÁBW-7	70-lim/-c	70-ume-17	70-IDI-00	70-8mV-17	77-02-07	70-100-07	70 401-47	70-307-Ic	CD-1101-67	67-02J-17	CO-IRIN-IC
ID Reading (ppm)	0	0	0	0	0	0	Ð	0	0	0	Ð	0
Compound (ug/L)			10000	A second second		10000000000				1		-
Jenzene	2	2 !	2	2	2	2	2	2	2	29	ŝ	2
oluene	21	2	2!	2 9	2	29	29	2 !	2 9	2	r	2
thylbenzene	2 1	2	2 9	2 9	29	2	29		2 -	29	1	29
Addr Aylene	29	2 £	2 E	25	Ē	E	25	26	n E	2 5		Ē
lanhthalene	N.N.	X	NA	N	NA	NN.	NA	VN	YN.	NA	I	NA
tyrche	Ð	₽	Q	2	Q	Q	QN	Q	Q	QN	Ĩ	QN
otal VOCs	0	0	0	0	0	0	0	0	5	0	an an an an an	0
						8		12				
FFILUENT - 2										10.10		
ampling increment	28 Months	29 Months	30 Months	31 months	32 months	33 Months	34 Months	35 Months	36 Months	37 Months	38 Months	39 Months
iample Date	2-May-02	5-Jun-02	21-Jun-02	30-Jul-02	27-Aug-02	20-do-52	28-Oct-02	24-Nov_02	31-Dec-02	fD-ust-62	21-Feb-03	31-Mar-03
ID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0	0
(J/Jan) punoduo	ŝ	5	Ę		ŧ	9	f	5	£	£		£
chizene	2 !	2	2	2 9	2 9	2 9	2 9	5 9	2 9	29	•	2
oluence	2	2	2	2 9	29	2 1	2 9	2	2 9	29	J	2
Ethylbenzene	29	2	2	29		2	29	2 9	2 9	29	1	29
A&P Xylene	29	2		2 9	nĝ	29	29	29	29	29	ł	29
) Xylene	2 2		23						22	2		AN AN
Vaphthalche	£ 9	5		2	22	£ 9	e e	2	5		1	2
									6			
ADDA Intern	0	9	0	•	•	0	0	0	~	L	1	•

.

Total VOCs

POTES AND ABRREVIATIONS:
 I. VOC.s. exists ergence composured
 NID compound net denote above method detection limit (heat than approximately 1 ug/L).
 NID compound net denote above method detection limit (heat than approximately 1 ug/L).
 NID: compound net denote above method detection limit (heat than approximately 1 ug/L).
 NID: compound net denote above method detection limit (heat than approximately 1 ug/L).
 NID: rearry the matterial control denote the flow of the total of the total detection (indication).
 EPERLEY: 1 - Vapor matterial denoted detection (indication), external extern (indication).
 Stamples unityred by gas choremating rules at Match liberatory.
 Stamples unityred by gas choremating rules at Match liberatory.

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

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							and the second			1.11.12	1997
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 M
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	1
Compound (ug/L)											
Benzene	ą	Q	ę	Ð	ę	Q	Q	Ş	S	Ę	N
Toluene	£	Q	Ð	Q	Q	QN	2	£	Ð	9	Z
Ethylbenzene	QN	Q	Ð	2	Q	ND	2	ę	£	E	E E
M&P Xylcne	4	QN	S	Q	Q	QN	Q	£	£	Q	Ż
O Xylene	£	ę	ę	2	Ð	£	Ð	ę	£	2	E E
Naphthatene	AN.	VN	YN	V N	NA	NA	NA	AN	NA	NA	NA N
Styrene	7	£	2	₽	Ð	QN	Ð	Q	QN	QN	Ð
Total VOCs	и	-	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	S0 Mon 14-Feb
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)											
Benzene	Q	QN	Ð	ę	Ð	Ę	Ð	Q	Q	GN	GN
Toluene	9	ę	Q	Q	Ð	ę	E	Q	2	29	2 S
Ethylbenzene	Q	Q	QN	QN	Ð	ę	Q	Ð	£	2	2
M&P Xylene	2	£	Ê	ę	ę	Q	Ð	Ð	Ð	Q	g
O Xylene	9 ;	9 :	£	2	2	ĝ	Ð	£	£	Ø	QN
Naprunalene	ź	ž	ž	< Z	S.	YN.	V N	NA	NA	V N	N A
JUNETIC	N.		an	DN.	ON.	Q	£	£	₽	£	Q
Total VOCs	0	0	0	•	•	0	0	Ð	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 Morrths 22-Jan-04	50 Mont 14-Feb-0
PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0
Compound (ug/L)		18									
Benzene	2	9	£	£	Q	Ð	Ð	Q	Ð	QN	2
1 Oluene	2 4	2 9	29	2	£ !	2	£:	₽	£	Q	Ð
Lany Delazene	2 9	29		2	29	Q I	29	£!	2	£	Ð
O Xviene	2	29	29	2 9	29	25	29	2 5	29	29	29
Naphthalene	NA	NA	NA	NA.	N	NA	NA.	NA			
Styrene	Q	2	QN	Q	₽	QN	£	2	2	Đ	9
Total VOCs	0	0	•	0	0	0	•	0	0	0	0

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NOTES AND ABBREVIATIONS: 1. VOC1: volutior regarks compounds 2. ND: compound and detected shore method detection limit (han dana approximately 1 ug(L), 3. ND: compound and detected prior to tearbon formation in the state of the state of the state of the state of the state and the state of the state and the state of the state

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

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FID Functional (pm) 0	INF LUENT Sampling Increment Sample Date	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 Momhs 20-Dec-04	61 Months 25-Jan-05
Component (up() N	PID Reading (ppm)	0	0	0	0	0	0	0	0	0	0	0
Internet ND <	Compound (ug/L)											
Diffuse NO NO </td <td>Benzene</td> <td>Q</td> <td>CN.</td> <td>Ę</td> <td>5</td> <td>5</td> <td>5</td> <td>-</td> <td>-</td> <td>!</td> <td>(Transfer</td> <td></td>	Benzene	Q	CN.	Ę	5	5	5	-	-	!	(Transfer	
High Pytheme NG	Tolucne	Ę	Ę	2	2 5	29	29	29	2	2 !	2	£
Mike Nytee Nin	Ethylbenzene	Q	g	Ē	E	25	2 5	5 6	2 9	2 9	2 !	2
O X (refere ND	M&P Xylene	QN	g	Ē	E	2 5	2 5	2 9	29	2	2 !	2
Inspiration No. No. <th< td=""><td>O Xvlene</td><td>Ę</td><td>Ę</td><td>Ē</td><td>Ę</td><td>2 5</td><td></td><td>2</td><td>2 !</td><td>2 !</td><td>2</td><td>2</td></th<>	O Xvlene	Ę	Ę	Ē	Ę	2 5		2	2 !	2 !	2	2
Systeme ND ND </td <td>Naptithalene</td> <td>NA</td> <td>42</td> <td></td> <td></td> <td>23</td> <td>2 ;</td> <td>23</td> <td>2</td> <td>2</td> <td>2</td> <td>ę</td>	Naptithalene	NA	42			23	2 ;	23	2	2	2	ę
Total VOGs 0	Styrene	Ð	Ð	2	ę	22	2 Q	źŻ	ž	ž	ž	ž
EFFLUENT: 1 Standing Increment Standing Stand	Total VOCs	0	0	0	•	0	0	0	0	0] =	•
EFFLUENT - 1 Strutustication Strutusticati												
HD Reading (ppi) 0	EFFLUENT - 1 Sampling Increment Sample Date	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-Aun-04	57 Months 14-Sen-04	58 Morths	59 Months	60 Months	61 Months
Full Vicenting (p(n) N							- Free - A	to don to		HT-ADAI-DC	H1-3201-07	0-181-0
Componend (ug() Componend (ug() ND <	I'riu kcading (ppm)	0	D	¢	ð	0	0	0	0	0	0	0
Benzele ND ND <t< td=""><td>Compound (ug/L)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Compound (ug/L)											
Different ND	Benzene	2	£	QN	Q	2	£	Q	Ð	QZ	QN	CN
Mile Yole ND	Toluche	€!	2!	2	£	Q	Ð	£	Q	ę	2	2
O Xyrete Negativities NU NU </td <td>tury locuzone</td> <td>2</td> <td>Q</td> <td>Q.</td> <td>ę</td> <td>£</td> <td>Q</td> <td>ę</td> <td>Ð</td> <td>Ð</td> <td>Q</td> <td>Ð</td>	tury locuzone	2	Q	Q.	ę	£	Q	ę	Ð	Ð	Q	Ð
National No <		2	29	2	2	£.	ę	Ð	Q	Q	Q	Q
System ND ND <th< td=""><td>Nandritalene</td><td></td><td></td><td></td><td>2;</td><td>2</td><td>2;</td><td>2:</td><td>£</td><td>Ð</td><td>Q</td><td>2</td></th<>	Nandritalene				2;	2	2;	2:	£	Ð	Q	2
Total VOCs 0 14 0 0 0 0 0 0 0 0 Total VOCs 0 14 0 0 14 0 <t< td=""><td>Strene</td><td>ŝ</td><td>5</td><td>Ś</td><td>ž</td><td>ž</td><td>VN.</td><td>AN</td><td>NA</td><td>YN</td><td>NA</td><td>NA</td></t<>	Strene	ŝ	5	Ś	ž	ž	VN.	AN	NA	YN	NA	NA
Total VOC3 0 14 0 0 0 0 0 0 0 0 RFFUENT - 2 Sampling increment 51 Months 53 Months 53 Months 53 Months 53 Months 57 Months 37 Months 38 Months Sampling increment 51 Months 52 Months 53 Months 53 Months 57 Months 37 Months 38 Months Sampling increment 31-Mac-04 28-Mary-04 28-Jun-04 30-Jud-04 14-Sep-04 27-On-04 Sample Date 31-Mac-04 28-Jun-04 30-Jud-04 37-Aug-04 14-Sep-04 27-On-04 Compound (ug(1) 0 0 0 0 0 0 0 0 Compound (ug(1) 0 0 0 0 0 0 0 0 Compound (ug(1) ND ND ND ND ND ND ND Objecte ND ND ND ND ND ND ND Outloote ND ND ND ND ND ND Olderer ND ND ND ND ND ND Olderer ND ND ND ND ND ND <			t	Ð	2	n	9	£	Ð	£	Ð	£
EFFLUENT - 2 EFFLUENT - 2 EFFLUENT - 2 EfFLUENT - 2 Months 51 Months 53 Months 50 Months 70 Months	Total VOCs	0	И	0	0	0	0	0	0	0	0	0
Sampling locations 31 Months 32 Months 33 Months 34 months 35 months 35 Months 37 Months 38 Months 33 Months 33 Months 35 months 35 months 37 Months 38 Months 33-Mar-Ok 28-Jun-Ok 30-Jud-Ok 31-Aug-Ok 77-Okr-Ok 77-Okr-Ok 28-Jun-Ok 30-Jud-Ok 31-Aug-Ok 77-Okr-Ok 77-Okr-Okr-Okr-Okr-Okr-Okr-Okr-Okr-Okr-Okr												
PID Reading (pm) 0 0 0 0 0 0 Compound (ug(L)) ND ND ND ND ND 0 0 Compound (ug(L)) ND ND ND ND ND 0 0 0 Retracted ND ND ND ND ND ND ND 0 0 Toluence ND ND ND ND ND ND ND ND M2D/Petitizette ND ND ND ND ND ND ND All Protection ND ND ND ND ND ND ND All Protection ND ND ND ND ND ND ND O X (ster ND ND ND ND ND ND ND All Protection ND ND ND ND ND ND O X (ster ND ND ND ND ND ND O X (ster ND ND ND ND ND ND O X (ster ND ND ND ND ND ND Strate ND ND ND <td< td=""><td>Sample Date</td><td>51 Months 31-Mar-04</td><td>52 Months 28-Apr-04</td><td>53 Months 28-May-04</td><td>S4 months 29-Jun-04</td><td>55 months 30-Jut-D4</td><td>56 Months 31-Aug-04</td><td>57 Months 14-Seo-04</td><td>56 Morahs 27-Oct-04</td><td>59 Months</td><td>60 Months</td><td>61 Months 75 Ion 06</td></td<>	Sample Date	51 Months 31-Mar-04	52 Months 28-Apr-04	53 Months 28-May-04	S4 months 29-Jun-04	55 months 30-Jut-D4	56 Months 31-Aug-04	57 Months 14-Seo-04	56 Morahs 27-Oct-04	59 Months	60 Months	61 Months 75 Ion 06
A concernant (prim) Compound (ug(L)) Renarce Renarce NO No No No No No No No No No No	DID Bardine (mm)	c	c									
Compared (ug[L) Compared (ug[L) Compared (ug[L) ND ND <td>in the second (ppint)</td> <td>•</td> <td>5</td> <td>5</td> <td>></td> <td>•</td> <td>Ð</td> <td>0</td> <td>0</td> <td>0</td> <td>Ð</td> <td>0</td>	in the second (ppint)	•	5	5	>	•	Ð	0	0	0	Ð	0
Buttere ND ND <t< td=""><td>Compound (ug/L)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Compound (ug/L)											
Display NU NU <t< td=""><td>Benzene</td><td>9</td><td>2</td><td>2</td><td>Q</td><td>Q</td><td>Q</td><td>Ð</td><td>â</td><td>Q</td><td>2</td><td>QN</td></t<>	Benzene	9	2	2	Q	Q	Q	Ð	â	Q	2	QN
M&P YOPPOLATER NO	Louene Cohulhanaare	2 4	29	29	21	2	£.	£	Ð	Ð	Ð	Ę
	M&P Volume	26	29	29	2	2	2	2	2	£	£	£
Naphtalene NA	O Xvlene	2 9	25	2 5	2 5	29	29	29	29	2!	2	ę.
Systeme ND	Naphthalene	NA	NA	N.N.	Z	AN N	NA	AN	N.	2 2		23
	Styrene	Q	Q	QN	£	Ę	£	2	E P	22	22	źQ
	Total VICE	¢	4		•		i	3				

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NOTES AND ABBREVIATIONS: 1. VOC:: volatile regade compounds 3. ND: compound net detected how method detection limit (that that approximately 1 up.0.) 3. NO: volatile regades conferend prior to curbon testement 4. INTLUENT: Vages amplies collected for from the date of the priory colora treatment dram (mid-surbon), 4. EPPLUENT - 1. types amplies collected for from the draugh primary colora treatment dram (mid-surbon), 5. ERFLUENT - 1. types amplies collected for from the draugh primary colora treatment dram (mid-surbon), 5. Exerpte a anisysted by gat chromosograph at Haley & Aufrich historetery.

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LAB VENTING SYSTEM CEL B OF FORMER M	NALYSIS OF SUB-SLAB VENTING SYSTEM CIAL STREET. PARCEL B OF FORMER M	I VAPOR SAMPLES	ANIFACTURED CAS PLANT SITE
	NALYSIS OF SUB-S CIAL STREET, PAR	LAB VENTING SYSTEM	CEL B OF FORMER M

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68 Months 31-Aug-05 2222222 67 Months 21-Jul-05 22222222 66 Months 28-Jun-05 **2**2222×∞ 65 Months 31-May-05 2222222 64 Months 26-Apr-05 8888888 . 63 Months 21-Mar-05 2222222 0 -62 Morahs 28-Feb-05 2222222 -MALDEN, MASSACHUSETTS INFLUENT Sampling Increment Sample Date ID Reading (ppm) (7/3h) punodu ahvibenzen Total VOCs Naphthalen Styrene enzene

EFFLUENT - 1							
Sampling Increment Sample Date	62 Months 28-Feb-05	63 Months 21-Mar-05	64 Momths 26-Apr-05	65 Months 31-May-05	66 Months 28-Jun-05	67 Months 21-Jul-05	68 Months 31-Aug-05
PID Reading (ppm)	0	0	0	0	0	0	0
Compound (ug/L)							
Benzene	Q	ą	QN	ę	g	Q	Ð
Toluene	Ð	QN	Q	£	Q	Ð	Q
Ethylbenzene	Q	Q	g	Q	Q	Ð	Q
M&P Xylene	Ð	Ð	Q	Q	R	Q	R
O Xylene	Ð	ę	Q	Q	ę	Q	ę
Naphthalene	VN	NA	NA	NA	NA	NA	NA
Styrene	QN	ĝ	g	Q	2	Ð	9
Total VOCs	0	0	•	0	0	0	0

EPFLUENT - 2							
Sampling Increment Sample Date	62 Months 28-Feb-05	63 Months 21-Mar-05	64 Months 26-Apr-05	65 Months 31-May-05	66 Months 28-Jun-05	67 Months 21-Jul-05	68 Months 31-Aug-05
PID Reading (ppm)	0	0	0	0	0	0	0
Compound (ug/L)							
Benzene	2	Q	QN	Q	QN	Ð	QN
Toluene	R	£	Ð	ę	Q	9	£
Ethylbenzene	ę	ę	£	2	g	2	£
M&P Xylene	QN	₽	8	Q	2	2	g
O Xylene	Ð	Q	Q	R	2	Q	R
Naphthalene	NA						
Styrene	Ð	Q	Ð	Ð	Q	Ð	Q
Total VOCs	0	0	0	0	0	0	0

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NOTES AND ABBREVIATIONS. I. VOC: values or guise compound I. NO: compound not denived have I. A. nos natyout. J. M. nos natyout. 4. I.NELUENT: Varior methods collect G. EFFLUENT: 1: Varior methods collect G. EFFLUENT: 1: Varior methods of C. EFFLUENT: 1: Varior methods of C. EFFLUENT: 1: Varior methods of A. EFFLUENT: 1: Varior methods of the A. EFLUENT: 1: Vario

zimmety I ug/L). Limit (Less than app

Treatment ted after flowing through ted after flowing through

munb

(mid-carboo) onbected after

wh at Haley & Aldrich lab

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Monitoring Date	Ē	Influent C PID (ppm)	oncentrations H&A GC (ug/L)	Effluent Col Effluent - 1 (ppm)	ncentrations Effluent - 2 (ppm)	Outdoor Temp	Outlet Vapor Temp	Flow Veloc Influent	ity (frimin) Effluent	System Vac Blower	www and Pres Knockout Drum	Bure (" water) Discharge	5 F-43	cuum at Ex EP-2	traction Po EP-3		E Sea
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November 21, 1999	9:15 e.00	22.5		42.8	• •	នេះ	120	390	1450	•	. 2.9	ą	2	2	0	0	2
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TABLE III SUB-SLAB VENTING SYSTEM MONITORING DATA SUB-SLAB VENTING SYSTEM MONITORING DATA SOOMMESTAL STREET, PARCEL B OF FORMER MANUFACTURED GAS PLANT SITE MALDEM, MASSACHUSETTS

Page 4 of 10

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April 10, 2001	10:00	0		0	0	8	117	060	1500	2.01			(eplaced Air Field			
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And 10, 2001	15.00			ə c	ə c	4 9	11	380	1500	£ :	4	36				
April 20, 2001	16:00	0		0	0	88	137		1500	2 \$	4 4	38				
April 24, 2001	15:45	•		0	0	88	151	390	1500	2 9		95 8				
April 25, 2001	16:00	•		0	0	8	129	390	1500	12		88				
April 27, 2001	11:45	0	•	0	0	65	128	390	1500	10	*	8				
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May 11, 2001	1:30	• •		0.	0	8	136	390	1500	10	ŝ	37.5				
1007 'FL ABM	00.01			-	• •	22	142	088	1500	5	ю	37				
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May 25, 2001	10:00	0		0	0	10	122	390	1500	2	-	3 3				
May 31, 2001	88	0	8	•	Q	8	117	390	1500	9	•	38				
June 1, 2001	889	• •		•	•	21	124	380	1500	10.5	4.5	38				
June 4, 2001	13:00	,			0 0	2 4	9	390	1500	10.5	4.5	37				
June 8, 2001	13:30	• •			> c	2 8	158		1500	10.5	5	16				
June 11, 2001	9:30	0		0	0	75	140	380	1500	105	n w	8 8				
June 13, 2001	7:00	0		0	0	80	140	390	1500	10.5	- 10	36				
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ssure (* water) Vacuum at Erbaction Points Discharge EP-1 EP-2 EP-3 EP		37	37	98 ÷	36		37	98	88	37	8	3.4 System Lown, re-started	35.5	35.5	25.5 25.5	22	25	4, ¥	2	3			16	18.5	18	32	32	32	30 Sustan Duan	System Down, electrical repairs made, sy	8:	58	Standard and	Contrastal 'umora interesco MC	8	8	38	37	8	38	88	40	3	28
ystem Vacuum and Pres Blower Knockout Drum			11 5	11		0 K		11.5 5	11.5 5	11.5 5	47 51	12 5	12 5	12.5 5	2 E	13.5 5	5 1 1 1 1	0 vc	15.5 5	15.5 4	• •	20	20	20.5	22 4.5	22.5	24 3	2	24 3.5		4 4	24 4.5	24 4.5	11 4.5	1	17 17	4 <u>5</u> 4 6	11 3	12 3	n e	10 3.5	to 8	2.5	
Flow Velocity (fumin) S Influent Effluent	and term	390 1500	390 1500	390 1500	390 1500		390 1500	390 1500	390 1500	390 1500		380 1500	390 1500	390 1500	380 1500	390 1500	390 1500	390 1500	390 1500	390 1500	390 1500	390 1500	390 1500	380 1500	390 1500	390 1500	380 1500	390 1500	390 1200						450 1500	450 1500 750 1500	1000 1400	800 1250		met my	700 1250		met net	
Outlet atdoor Vapor antip Tamp	an 140	85 150	90 155	65 146 20 146	90 152 86 150		75 137	85 157	80 144	70 132		96 167	80 145	80 145 76 • 46	80 144	75 144	75 144 BD 145	75 144	75 143	65 126 ec 140	75 142	75 138	65 85 ee 433	65 135	75 150	55 130 55 130	55 122	55 122	A41 U/		55 130 46 114	148	. 0+1 . 3	55 118	112 112		22 S	35 104	55 10B	50 111 57 111	30 120	18		2
Effluent Concentrations Effluent - 1 Effluent - 2 0 (ppm) (ppm) 1		00	0	00			0	0	0	0	c)	0	0		00	0	•••	>o	0	00		0 0	•••		0		0	0	0 1.0		o c		0	0 0	•	- c	00	0 0	•		0	0	> c	>
uent Concentrations PID H&A GC ppm) (ug/L)		0	0			- c		0	0	0	5,	0	0	•	00	0	• •	0	•	0		0	00		•	>	0	0 4	5		•	,		0	0.	5 6						0		
Time (F	e.m	7:30	00	00:2	00:01	17-30	7:15	11:30	6:30	8:00		16:00	00.6	18:00	10:00	9:15	6.30	06.7	8:00	11:15	16:00	8:10	12:34	10:40	12-15	14:30	11:15	10:30	11:20	8:00	13:15	12:45	12:00	14:15	13:10	C1:51	11:15	13:30	13:30	00-61	15:40	001	2.0	200
Montroring Date	tion 1 west	July 5, 2001	July 6, 2001	Jury 9, 2001	July 10, 2001	tink 13 2001	July 17, 2001	July 20, 2001	July 24, 2001	Juhy 27, 2001	AND TO	August 7, 2001	August 8, 2001	August 10, 2001	August 18, 2001	August 20, 2001	August 24, 2001	Audust 28, 2001	August 31, 2001	ptember 14, 2001	ptember 30, 2001	October 4, 2001	October 8, 2001	October 15, 2001	October 24, 2001	October 29, 2001	wember 10, 2001	wember 12, 2001	wember 16, 2001 wember 21, 2001	vember 26, 2001	wember 27, 2001	ecember 6, 2001	ecember 7, 2001 rember 12, 2001	cember 19, 2001	cember 21, 2001	Comber 28, 2001	January 4, 2002	January 7, 2002	January 11, 2002	Jamuary 10, 2002	lanuary 28, 2002	January 31, 2002	February 6, AUL	ahniarv 12. ZUUZ

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TABLE III SUB-SLAB VENTING SYSTEM MONITORING DATA

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TAB SUB 1231 MAL

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

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Vacuum at Extraction Points (" water EP-1 EP-2 EP-3 EP-4 EP-5		Electricities on sue. System problems due to over heath Installed indet of vent adjacent to house			System down, restarted.						Svetam druwn resetured	Vent fan installed in trailer		System down, restarted.					2 2 2 0 2																System off metaded No access to Infell which a	due to large show bank.	System off, restarted. No access to Eff velocity port	due to large snow bank.	No access to Eff velocity port due to large snow bank.	System off, restarted. No access to Effivelocity port due to fame score hook	הנה המולה פיווידים המושיי		No access to inifelt velocity port due to lama some hant		0 0 0				10000 400 - 000 - 000 - 000 - 000	System off, restarted					
te (* water) Discharge	5	9	ę	38	\$ 1	R S	7 5	2 5	2 5	2 5		0	40	39	39	9	7	2 5		9	•	0	42	Ş	2		1	Ŧ	42	Ę	41	Ŧ	Ŧ	2	37	ŝ	Ŧ	9	2 9	¥	7	42	41 -	42	42	42	Ŧ	4	41	•	; ;	4	4 :	- -	100
rum and Pressur Knockout Drum	•	• ••	4	60	60 I	n w	n vr	s ut	5 10	. 40	140	ŝ	ŝ	ND -	in i	بد ب	0 v		o w		5	5	ŝ	47 4				4.4	4.5	*	4	•	•	• •	. 0	15	ŝ			n	\$	4.5		\$	5	ŝ	ŝ	ŝ	4.5		ۍ م <u>ا</u>	4	10. L	2 9	
System Vac		: =	11	11.5	11.5	- :	: :	: =	. =	11	11.5	11.5	11.5	11.5	1	311	1	115		÷	11	=	Ŧ	Ŧ	=;	: =	. #	1	=	11	Ŧ	E ;	= ;	= =	Ø		S	c	bv	'n	6	9	8.5	10	:	11	12	11.5	11.5		1.5	515	0.1	11.5	
city (Numin) Effluent			1200	1100	1000	1200	1200	1200	1200	1200	1250	1250	1250	1250	0671	0521	1300	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	0621	0071	1250	,		Ť.				1250	1200		1200	1200	1200	1200	1225	1200		1200	1200		1200	
Flow Velo Influent			300	250	376	375	8	400	425	400	475	900	200	000	2	5	325	375	375	350	300	8	300	300	305	475	450	400	8	8	88		3	8	•	1000	8	W,	00	ļ	400	350	•	350	350	200	350	8	900		892	35		3 Ş	
Outlet Vapor Temp	140	148	123	137	147	. 150	132	144	140	140	116	777	140	120		132	122	122	122	E#1	18	110	8		8 8	1 9	100	8	8	18	2	5 8	8 8	38	8	100	88	8	8	3	8	78	2	8	82	108	8	87	111	• •	9 3	8 8	2	8	
Outdoor Temp	8	80	50	88	8 8	8	8	80	70	20	70	18 1	21	88	85	2 8	8	8	8	8	ą	8	Ş f	5 8	3 9	9	50	9	29	2 9	2 9	88	2 8	1	20		0E	40	2		30	8	₽ :	Ş :	ន	29	Q :	q :	Ş	• •	2 5	3	2	29	
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HAA GC HAA GC (ug/L)		2	0					0				13				0		0					•	•				0		c	2				0							0		•	Ð					c	5				
Influent Con PID (ppm)		Ð	0 1	5 0	90	0	0	0	•	0	a	() d	> <	> c	> o	0	•	0	0	0	0	0 0	5 0	0	0	0	0	00		, ,		0 0	0	c	0	¢	•	0	0		0 (0 0	> c		2 0	5 0	5 0	э с	2	. c	0	• •	0	• 0	
1	6:15	11:30		00-11	18:45	14:00	5:00	12:30	6:45	5:15	8.5	3	2.0	2.00	5.45	11:20	ð:15	13:10	5:50	18:30	5:45	02.0	10.0	9.15	8:00	10:00	80	15:30	0511	14.45	17:45	5-30	5:15	6:20	12:15			11:20	5:15		11:45		2		5:10	0.0	14.0	02.80	0 S 4	201	245	5:30	2:30	4:30	
Monitoring Date	May 18, 2004	May 20, 2004	May 25, 2004	lime R 2004	June 10, 2004	June 17, 2004	June 21, 2004	June 29, 2004	July 8, 2004	July 18, 2004	July 23, 2004	Among and and	Autor of support	Audust 19 2004	August 29, 2004	August 31, 2004	September 10, 2004	September 14, 2004	September 23, 2004	eptember 28, 2004	October 7, 2004	October 14, 2004	October 21, 2004	November 4, 2004	kovember 11, 2004	lovember 15, 2004	lovember 26, 2004	lovember 30, 2004	Lecenses 0, 2004	recention 10, 2004	Accember 29, 2004	January 7, 2005	January 13, 2005	January 20, 2005	January 25, 2005	Ethered 2006	L CUI 1987 2' 2000	February 7, 2005	February 17, 2005		February 24, 2005	February 28, 2005	Manch 4, 2005	March 15, 2005	March 21, 2005	March 3U, 2000	April 0, 2000	April 12, 2005	April 20, 2005	And 25, 2005 1	May 8, 2005	Mav 13, 2005	May 18 2005	May 25, 2005	

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TABLE III SUB-SLAB VENTING SYSTEM MONITORING DATA

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FIGURE 1



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APPENDIX A

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Copy of Form BWSC-106

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RELEASE ABATEMENT MEASURE (RAM)	BWSC106 Release Tracking Numbe
TRANSMITTAL FORM	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: 02148-00	00
5. Check here if a Tier Classification Submittal has been provided to DEP for this dispared air	
	le.
	1000
5. If a Tier I Permit has been issued, provide Permit Number: 7378	
	VLU
	<u>ic</u>
1 List Cuterity Devention and the second sec	CI
1. List Submittal Date of Initial FAM Written Plan (if previously submitted):	
2. Submit an Initial Release Abatement Measure (RAM) Plan	y)
a. Check here if this RAM Plan received previous oral approval from DEP as a commitmate Action (LRA).	AL OFFICE emoval
b. List Date of Oral Approval:	
b. List Date of Oral Approval: (mm/dd/yyyy) 3. Submit a Modified RAM Plan of a previously submitted written DAMA Di	
 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 Penort 	
 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 	
 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 Rowing RAM Completion Statement. 	
 b. List Date of Oral Approval:	
 b. List Date of Oral Approval:	
 b. List Date of Oral Approval:). RTNs that have been tion is intended to allow mary Tier Classified
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 b. List Date of Oral Approval:). RTNs that have been tion is intended to allow mary Tier Classified
 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) previously linked to a Primary Tier Classified RTN do not need to be listed here. This sect a RAM to cover more than one unclassified RTN and not show permanent linkage to a Pri RTN. b. Provide the additional Release Tracking Number(s) covered by this RAM Submittal. 	RTNs that have been tion is intended to allow mary Tier Classified
 b. List Date of Oral Approval:). RTNs that have been tion is intended to allow mary Tier Classified
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Massachusetts Department of I Bureau of Waste Site Cleanup	Environmental Protection	BWSC106
RELEASE ABATEMENT MEASU	URE (RAM)	Release Tracking Numbe
Pursuant to 310 CMR 40.0444 - 0446 (Sub	part D)	
C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WAI	RRANT RAM:	
1. Identify Media Impacted and Receptors Affected: (check all th	hat apply)	
🖌 a. Air 📋 b. Basement 📋 c. Critical Exposure P	athway 🗹 d. Groundwater	e. Residence
🔲 f. Paved Surface 📋 g. Private Well 🗌 h. Public	Water Supply i. School	j. Sediments
K. Soil 🔲 I. Storm Drain 🗌 m. Surface Wa	ter 🗌 n. Unknown 🗌 o. W	Vetland 🔲 p. Zone 2
_ q. Others Specify:		
 Identify all sources of the Release or Threat of Release, if known 	own: (check all that apply)	
L a. Above-ground Storage Tank (AST) b. Boat	/Vessel 🗌 c. Drums 🗌] d. Fuel Tank
e. Pipe/Hose/Line f. Tanker Truck g. T	ransformer 🔲 h. Under-groun	d Storage Tank (UST)
i. Vehicle V i. Others Specify Disposal	associated with former MG	P operations
Identify Oils and Hazardous Materials Released: (check all the second secon	that apply) Metals , PAHs, Cyanide	- 10 - <u></u>
Identify Oils and Hazardous Materials Released: (check all 1 □ a. Oils □ b. Chlorinated Solvents □ c. Heavy ☑ d. Others Specify: MGP contaminants: VOCs,	that apply) Metals , PAHs, Cyanide	
	that apply) Metals <u>PAHs, Cyanide</u> ply, for volumes list cumulative amo	unts)
Identify Oils and Hazardous Materials Released: (check all f a. Oils b. Chlorinated Solvents c. Heavy d. Others Specify: MGP contaminants: VOCs, DESCRIPTION OF RESPONSE ACTIONS: (check all that app 1. Assessment and/or Monitorir g Only	that apply) Metals , PAHs, Cyanide oly, for volumes list cumulative amo	unts)
Identify Oils and Hazardous Materials Released: (check all 1 a. Oils b. Chlorinated Solvents c. Heavy d. Others Specify: MGP contaminants: VOCs, DESCRIPTION OF RESPONSE ACTIONS: (check all that app 1. Assessment and/or Monitorir g Only 3. Deployment of Absorbent or Containment Materials	that apply) Metals <u>PAHS, Cyanide</u> ply, for volumes list cumulative amo 2. Temporary Covers o 4. Temporary Water St	unts) or Caps upplies
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 Identify Oils and Hazardous Materials Released: (check all 1 a. Oils b. Chlorinated Solvents c. Heavy d. Others Specify: MGP contaminants: VOCs, d. Deployment of Absorbent or Containment Materials d. Structure Venting System f. Product or NAPL Recovery g. Groundwater Treatment Systems d. Bioremediation 	that apply) Metals <u>PAHs, Cyanide</u> bly, for volumes list cumulative amo 2. Temporary Covers of 4. Temporary Water St 6. Temporary Evacuati 8. Fencing and Sign P 10. Soil Vapor Extraction	unts) or Caps upplies ion or Relocation of Resident osting on
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Identify Oils and Hazardous Materials Released: (check all 1 a. Oils b. Chlorinated Solvents c. Heavy d. Others Specify: MGP contaminants: VOCs, d. Others Specify: MGP contaminants; VOCs, d. Others Specify: Others Containment Materials 5. Structure Venting System 7. Product or NAPL Recovery 9. Groundwater Treatment Systems 11. Bioremediation 13. Excavation of Contaminated Soils a. Recuse Recycling or Treatment [] is one contaminated Soils	that apply) Metals PAHS, Cyanide oly, for volumes list cumulative amo 2. Temporary Covers o 4. Temporary Water St 6. Temporary Evacuati 8. Fencing and Sign P 10. Soil Vapor Extractio 12. Air Sparging	unts) or Caps upplies ion or Relocation of Resident osting on
Identify Oils and Hazardous Materials Released: (check all 1 a. Oils b. Chlorinated Solvents c. Heavy d. Others Specify: MGP contaminants: VOCs, d. Others Specify: MGP contaminants: VOCs, DESCRIPTION OF RESPONSE ACTIONS: (check all that app. 1. Assessment and/or Monitorir g Only 3. Deployment of Absorbent or Containment Materials 5. Structure Venting System 7. Product or NAPL Recovery 9. Groundwater Treatment Systems 11. Bioremediation 13. Excavation of Contaminated Soils a. Re-use, Recycling or Treatment [] i. On Site E	that apply) Metals PAHS, Cyanide oly, for volumes list cumulative amo 2. Temporary Covers of 4. Temporary Water Si 6. Temporary Evacuati 8. Fencing and Sign P 10. Soil Vapor Extraction 12. Air Sparging	unts) or Caps upplies ion or Relocation of Resident osting on
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Bureau of Weste Site Cleanup	BWSC106
RELEASE ABATEMENT MEASURE (RAM)	Release Tracking Num
Pursuant to 310 (CMR 40.0444 - 0446 (Subpart D)	
b. Store ii. On Site Estimated volume in cubic yards	ative amounts)
iia. Receiving Facility: Town:	State
iib. Receiving Facility:	
	State:
i. Cover Estimated volume in cubic yards	
Receiving Facility:Town:Town:	State:
ii. Disposal Estimated volume in cubic yards	
Receiving Facility:	State
14. Removal of Drums. Tanks or Containers:	
a. Describe Quantity and Amount:	
0. Receiving Facility: Town: 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 carb
b. Receiving Facility: Clean Harbors Bristol	CT
C. Receiving Facility: Clear, Harbors	State:
	State: <u>MA</u>
Describe:	
17. Use of Innovative Technologies:	



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

RELEASE ABATEMENT MEASURE (RAM) TRANSMITTAL FORM

BWSC106

Release Tracking Number 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 orclers, 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 Lost Name Standish
4. Telephone: (860) 290-3131 5.	Ext.: 6. FAX: (860) 282-9500
B. Date: 10/5/2005 (mm/dd/yyyy)	9. LSP Stamp: RiCHARD STANDISH No. 2242 SITE PROT
Pevised: 11/04/2003	

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup	BWSC106
RELEASE ABATEMENT MEASURE (RAM)	Release Tracking Numbe
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
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) 389-4	299
3. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING RAM	
 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s 3. Agency or Public Utility on a Bisht of Mark (and for the state of the state	. 2)
3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))	
Any Other Person Undertaking RAM Specify Relationship:	
I. REQUIRED ATTACHMENT AND SUEMITTALS:	
 Check here if any Remediation Waste, generated as a result of this RAM, will be stored, treat reused at the site following submission of the RAM Completion Statement. You must submit a Implementation Plan along with the appropriate transmittal form (BWSC108). 	ed, managed, recycled or Phase IV Remedy
2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject and/or approval(s) issued by DEF or ERA. If the here is abarded to the second statement of the seco	
provisions thereof.	ect to any order(s), permit(s) lentifying the applicable
 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been implementation of a Release Abatement Measure. 	ect to any order(s), permit(s) lentifying the applicable notified of the
 A. Check here if any non-updatable information provided on this form is incorrect, e.g. Release. 4. Check here if any non-updatable information provided on this form is incorrect, e.g. Release. 	ect to any order(s), permit(s) lentifying the applicable notified of the Address/Location Aid. Send
 A. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been implementation of a Release Abatement Measure. 4. Check here if any non-updatable information provided on this form is incorrect, e.g. Release 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 DEP, P. O. Box 4062, Boston, MA 02211. 	ect to any order(s), permit(s) lentifying the applicable notified of the Address/Location Aid. Send œ Fee was submitted to
 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been implementation of a Release Abatement Measure. 4. Check here if any non-updatable information provided on this form is incorrect, e.g. Release 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 is required for this RAM, check here to certify that a RAM Compliance Fee is required for this RAM, check here to certify that a RAM Compliance Fee is required for this RAM, check here to certify that a RAM Compliance Fee is required for this RAM, check here to certify that a RAM Compliance Fee is required for this RAM, check here to certify that a RAM Compliance Fee is required for this RAM. 6. Check here to certify that the LSP Opinion containing the material facts, data, and other inform 	ect to any order(s), permit(s) lentifying the applicable notified of the Address/Location Aid. Send æ Fee was submitted to nation is attached.

Ľ		neau or Weste	Site Cleanup					BV	VS	C106	
Ċ	RE	ELEASE ABAT	EMENT MEASURE (RAM)				Rele	ase	Tra	cking	Number
		VANSIVIT TAL					3	-	3	757	
CER	TIFICATION OF	PERSON UNDERTAI	KING RAM:								
	Michele Leo	00									
materia hat I a entity o possib	hittal form, (ii) th al information c im fully authoriz on whose behal le fines and imp	at, based on my inq ontained in this sub ed to make this atte: f this submittal is m prisonment, for willfu	nation contained in this submittal, inclu quiry of those individuals immediately omittal is, to the best of my knowledge station on behalf of the entity legally re nade am/is aware that there are signifi- ully submitting false, inaccurate, or in-	uding any a responsibl and belief esponsible cant penal complete i	and e foi , true for t ties, nfor	all doo obtai a, acci his su incluo natior	suments ning the urate ar bmittal bing, bu n.	s ac e in nd c . I/i it no	com form comp the p ot lin	panyin ation, lete, a erson nited to	ng this the and (iii) or o,
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. For:	National G	rid		5 0	nto-	G	112	21	12	005	5
	(Name of person or	entity recorded in Section F)	J. De	ate:		- <u>\</u> (n	m/a	dd/w	vv)	
. City/ 1. Tel	Town:		9. State: 12. Ext.: 13. F		- 1	0. ZIF	Code:				••
. City/ 1. Tel	Town: ephone: YOU BILL	J ARE SUBJECT TO ABLE YEAR FOR T	9. State: 12. Ext.: 13. F 2 AN ANNUAL COMPLIANCE ASSURAT HIS DISPOSAL SITE. YOU MUST LEGI	 AX: NCE FEE 0 BLY COMP	1 	0. ZIF	2 Code:	PEF	e T		••••••••••••••••••••••••••••••••••••••
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APPENDIX B

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Indoor Air Quality Analytical Data



LABORATORY REPORT

Client:	HALEY & ALDRICH, INC.		Date of Repo	ort:	05/31/05
Address:	465 Medford Street, Suite 2200		Date Receive	ed:	05/02/05
	Boston, MA 02129		CAS Project	No:	P2500916
Contact:	Ms. Nancy Reardon		Purchase Ord	ler:	Verbal
Client Proje	ect ID: 129 Commercial St/06558-709				
Eight (8) St	ainless Steel Summa Canisters labeled:	"SITE 2" "SITE 6"	"SITE 4" "SITE 7"	"SII "SII	TE 5" TE 7 (DUP)"
	у	"SITÉ 8"	"SITE 11"	202.2	

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:

Page

1 of 1

Chris Parnell GCMS-VOA Team Leader Air Quality Laboratory

NELAP Accredited

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

3.0

Test Code:	EPA TO-15	10		Date Collected: 4/27/04	5
Instrument ID:	Tekmar AUTOCAW/HP5973/HP6890/MS3			Date Received: 5/2/05	-
Analyst:	Rusty Bravo			Date(s) Analyzed: 5/6/05	
Sampling Media: Test Notes:	Summa Canister			Volume(s) Analyzed:	1.00 Liter(s)
Container ID:	AC00016				
		Pi 1 =	-2.5	Pf1 = 3.5	

D.F. = 1.49

2

CAS#	Compound	Result µg/m³	MRL µg/m³	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	m,p-Xylenes	ND	1.5	ND	0.34	
100-42-5	Styrene	ND	1.5	ND	0.35	
95-47-6	o-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.

1

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

00916VOA.RD1 - Sample

Date: 5116105 Verified By: R(-

RESULTS OF ANALYSIS Page 1 of 1

Client:	Haley & Aldrich, Inc.	
Client Sample ID:	SITE 4	CAS Project ID: P2500916
Client Project ID:	129 Commercial St 06558-709	CAS Sample ID: P2500916-002

Test Code:	EPA TO-15			Date Collected: 4/27/0	5
Instrument ID:	Tekmar AUTOCAN/HP5973/HP6890/MS	3		Date Received: 5/2/05	
Analyst:	Rusty Bravo			Date(s) Analyzed: 5/6/05	
Sampling Media:	Summa Canister			Volume(s) Analyzed:	1.00 Liter(s)
Container ID:	AC00819				
		Pi 1 =	-2.8	Pf1 = 3.5	

Pi 1 = -2.8

D.F. = 1.53

CAS#	Compound	Result µg/m³	MRL µg/m³	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	m,p-Xylenes	1.7	1.5	0.39	0.35	
100-42-5	Styrene	ND	1.5	ND	0.36	
95-47-6	o-Xylene	ND	1.5	ND	0.35	1
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.

Verified By:

RIF

3

00916VOA.RD1 - Sample (2)

RESULTS OF ANALYSIS

Page 1 of 1

Client:	Haley & Aldrich, Inc.	
Client Sample ID:	SITE 5	CAS Project ID: P2500916
Client Project ID:	129 Commercial St/06558-709	CAS Sample ID: P2500916-003

Test Code:	EPA TO-15			Date Collected: 4/27/	05
nstrument ID:	Tekmar AUTOCAN/HP5973/HP6890/MS3			Date Received: 5/2/0	5
Analyst:	Rusty Bravo			Date(s) Analyzed: 5/6/0	5
Sampling Media:	Summa Canister			Volume(s) Analyzed:	1.00 Liter(s)
fest Notes:					
Container ID:	AC00030				
	ίų	Pi 1 =	-5.4	Pf1 = 3.5	

D.F. = 1.96

4

Date: 5116105 Page No.:

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Verified By:_

CAS#	Compound	Result µg/m³	MRL µg/m³	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	m,p-Xylenes	ND	2.0	. ND	0.45	
100-42-5	Styrene	ND	2.0	ND	0.46	
95-47-6	o-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.

00916VOA.RD1 - Sample (3)

RESULTS OF ANALYSIS

Page 1 of 1

Client:	Haley & Aldrich, Inc.	
Client Sample ID:	SITE 6	CAS Project ID: P2500916
Client Project ID:	129 Commercial St/06558-709	CAS Sample ID: P2500916-004

Tes: Code:	EPA TO-15			Date Colle	cted: 4/27/05	¥
Instrument ID:	Tekmar AUTOCAN/HP5973/HP6890/MS3			Date Rece	ived: 5/2/05	
Analyst:	Rusty Bravo			Date(s) Analy	yzed: 5/6/05	
Sampling Media: Test Notes:	Summa Canister			Volume(s) Anal	yzed:	0.115 Liter(s)
Container ID:	AC00078					
		Pi 1 =	-3.7	Pf 1 =	3.5	<i>8</i> 1

D.F. = 1.65

5

CAS#	Compound	Result μg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	14	ND	4.5	
:08-88-3	Toluene	ND	14	ND	3.8	And in a
100-41-4	Ethylbenzene	ND	14	ND	3.3	
136777-61-2	m,p-Xylenes	ND	14	ND	3.3	
100-42-5	Styrene	ND	14	NĎ	3.4	
95-47-6	o-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: RG Date:5/16/05 Page No:

00916VOA.RD1 - Sample (4)

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				Date Collected: 4/27/	05
Instrument ID:	Tekmar AUTOCAN/HP5973/HP6890/M		/05			
Analyst:	Rusty Bravo				Date(s) Analyzed: 5/6/0	5
Sampling Media: Test Notes:	Summa Canister				Volume(s) Analyzed:	0.12 Liter(s)
Container ID:	AC00274					
		•	Pi 1 =	-3.0	Pf 1 = -3.5	

D.F. = 1.56

6

CAS#	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Oualifier
71-43-2	Benzene	ND	13	ND	4.1	
108-88-3	Toluene	ND	13	ND	35	
100-41-4	Ethylbenzene	ND	13	ND	3.0	
136777-61-2	m,p-Xylenes	ND	13	ND	3.0	
100-42-5	Styrene	ND	13	ND	3.1	
95-47-6	o-Xylene	ND	13		2.0	-
91-20-3	Naphthalene	ND	13		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.

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_Date: 51605 Page No.: Verified By: Ru

RESULTS OF ANALYSIS Page 1 of 1

Client:	
Client Sample ID:	-
Client Project ID:	

Haley & Aldrich, Inc. SITE 7 (DUP) 129 Commercial St/06558-709

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

Test Code:	EPA TO-15			Date Collected: 4/27/04	•D
Instrument ID:	Tekmar AUTOCAN//HP5973/HP6890/MS3			Date Received: 5/2/05	,
Sampling Media	Summe Conjeter			Date(s) Analyzed: 5/6/05	
Test Notes:	Stamma Camister			Volume(s) Analyzed:	0.085 Liter(s)
Container ID:	AC00426			2	
		Pi 1 =	-13	Pf1 = 35	

D.F. = 1.36

7

CAS#	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL	Data Oualifier
71-43-2	Benzene	ND	16	ND	5.0	
108-88-3	Toluene	ND	16	ND	4.7	
100-41-4	Ethylbenzene	ND	16	ND	3.7	
136777-61-2	m,p-Xylenes	ND	16	ND	- 3.7	
100-42-5	Styrene	ND	16	ND	2.7	
95-47-6	o-Xvlene	- ND	16		3.8	
91-20-3	Nanhthalene		10	ND		
		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.

00916VOA RDI - Sample (6)

Verified By:_	RG	Date:	51	16/05	105
		54 D 0		NUC DAVE.	Page No.;

RESULTS OF ANALYSIS Page 1 of 1

Client:	Haley & Aldrich, Inc.	
Client Sample ID:	SITE 8	CAS Project ID: P2500916
Client Project ID:	129 Commercial St 06558-709	CAS Sample ID: P2500916-007

Test Code:	EPA TO-15	Date Collected: 4/27/05		
Instrument ID:	Tekmar AUTOCAN/HP5973/HP6890/MS3	Date Received: 5/2/05		
Analyst:	Rusty Bravo	Date(s) Analyzed: 5/6/05		
Sampling Media:	Summa Canister	Volume(s) Analyzed: 0.050 Liter(s)		
Test Notes:				
Container ID:	AC00646			

Pi 1 = -3.1

D.F. = 1.57

8

Pf1 = 3.5

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	ND	31	ND	9.8	1
108-88-3	Toluene	ND	31	ND	8.3	-
100-41-4	Ethylbenzene	ND	31	ND	7.2	
136777-61-2	m,p-Xylenes	ND	31	ND	7.2	
100-42-5	Styrene	ND	31	ND	7.4	
95-47-6	o-Xylene	ND	31	ND	7.2	
91-20-3	Naphthalene	ND	31 .	ND	6.0	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.

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00916VOA RD1 - Sample (7)

Date: 5116105 Verified By:_ RU

RESULTS OF ANALYSIS Page 1 of 1

Client:	Haley & Aldrich, Inc.	
Client Sample ID:	SITE 11	CAS Project ID: P2500916
Client Project ID:	129 Commercial St/06558-709	CAS Sample ID: P2500916-008

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Test Code:	EPA TO-15			Date Collected: 4/27/0	5
Instrument ID:	Tekmar AUTOCAN/HP5973/HP6890/MS3 Date Received: 5/2/05		i i i i i i i i i i i i i i i i i i i		
Analyst:	Rusty Bravo			Date(s) Analyzed: 5/6/05	
Sampling Media:	Summa Canister			Volume(s) Analyzed:	0.030 Liter(s)
Test: Notes:					
Container ID:	AC00479				
		Pi 1 =	-0.1	Pf1 = 3.5	

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	m,p-Xylenes	ND	42	ND	9.6	
1.00-42-5	Styrene	ND	42	ND	9.8	
95-47-6	o-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.

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

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			9
Verified By:	Rin	Date: 51605	
		Page	No.:

D.F. = 1.25

RESULTS OF ANALYSIS

Page 1 of 1

Client: Client Sample ID: Method Blank

Haley & Aldrich, Inc. Client Project ID: 129 Commercial St/)6558-709

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

Test Code:	EPA TO-15	Date Collected: NA	
Instrument ID:	Tekmar AUTOCAN/HP5973/HP6890/MS3	Date Received: NA	
Analyst:	· Rusty Bravo	Date(s) Analyzed: 5/5/05	
Sampling Media:	Summa Canister	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

D.F. = 1.00

10

Page No.:

Date: 5116/05

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	m,p-Xylenes	ND	1.0	ND	0.23	
100-42-5	Styrene	ND	1.0	ND	0.23	
95-47-6	o-Xylene	ND	1.0	ND	0.23	2
§1-20-3	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.

00916VOA.RDI - MBlank

RESULTS OF ANALYSIS

Page 1 of 1

Client: Client Sample ID: Method Blank

Haley & Aldrich, Iac. Client Project ID: 129 Commercial St/06558-709

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

Date Collected: NA EPA TO-15 Test Code: Date Received: NA Tekmar AUTOCAN/HP5973/HP6890/MS3 Instrument ID: Date(s) Analyzed: 5/6/05 **Rusty Bravo** Analyst: 1.00 Liter(s) Volume(s) Analyzed: Summa Canister Sampling Media: Test Notes: -

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	m n - Xvlenes	ND	1.0	ND	0.23	
100-42-5	Styrene	ND	1.0	ND	0.23	
05-47-6	o-Xylene	ND	1.0	ND	0.23	
91-20-3	Nanhthalene	(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.

11 Date: 51605 Verified By:___ Page No.:

Columbia Analytical Services, Inc.

		Sample A	Acceptance Che	k Form				
Clier	nt: Haley & Aldrich, Inc.			Work order:	P2500916	1		
Projec	et: 129 Commercial St/0655	8-7()9				10		
	Sample(s) received on:	5/2/05	Date opened	i : 5/2/0	05 by:	SM		
Note: Th	is form is used for all samples receive	d by CAS. The use of this for	m for custody seals is s	trictly meant to indicate	presence/absence	and not as a	a indicati	on of
complian	ce or nonconformity. Thermal preser	vation and pH will only be eva	luated either at the req	uest of the client or as r	equired by the meth	od/SOP.		
						Yes	No	<u>N/A</u>
1	Were custody seals on outs	ide of cooler/Box?					X	
	Location of seal(s)?				Sealing Lid?			\mathbf{X}
	Were signature and date i	ncluded?						\mathbf{X}
	Were seals intact?							X
	Were custody seals on outsi	de of sample container?					\mathbf{X}	
	Location of seal(s)?				Sealing Lid?			X
	Were signature and date i	nclu jed?						\mathbf{X}
	Were seals intact?	£2						X
2	Were sample containers p	rope:ly marked with clien	nt sample ID?			\mathbf{X}		
3	Did sample containers arri	we in good condition?				\mathbf{X}		
4	Were chain-of-custody pag	pers used and filled out?	·*:			\mathbf{X}		
5	Did sample container labe	is and/or tags agree with	custody papers?			\mathbf{X}		
6	Was sample volume receiv	ed adequate for analysis'	?			\mathbf{X}		
7	Are samples within specifie	ed holding times?	*			\mathbf{X}		
8	Was proper temperature (thennal preservation) of	cooler at receipt ac	lhered to?				\mathbf{X}
		Cooler Temperature	NA	_°C				
		Blank Temperature	NA	_°C			5.0	100 200
9	Is pH (acid) preservation i	necessary, according to n	nethod/SOP or Clic	ent specified inform	ation?		X	
	Is there a client indication	that the submitted sample	es are pH (acid) p	preserved?				X
	Were VOA vials checked	for presence/absence of a	ur bubbles?					X
	Does the client/method/SC	P require that the analys	t check the sample	pH and if necessa	ry alter it?			X

Tubes: 10 Are the tubes capped and intact? Do they contain moisture? 11 **Badges:** Are the badges properly capped and intact? 28 Are dual bed badges separated and individually capped and intact?

Lab Sample ID	R :quired pH (as received, if required)	pH (as received, if required)	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2500916-001			NA	
P2500916-002		ana an in the	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):

500916SR XLS - cooler - Page 1 of 1

X

X

X

X

12

2. Columbia	2665 Park Cente	r Drive, Su	lite D		14	the Close of B	eineae Dav (Su	rcharges) Please Cli	rcie:	CAS Protect	No.
Analytical	Simi Valtey, Calif	formia 9300	<u>ي</u>	Requested T	2 Dev (75%)	3 Day (50%) 4 Da	tv (35%) 5 Day	(15%) 10 Day-Stand	pre Die	1401	001100
Services	Phone (805) 526 Fax (805) 526-72	8-7161 270	-	a Unay (num	larni ken z	· Arrent france		CAS Contact:	LFRA		
Reporting Information (Comp. LAM EV + ALD RIGH IN C	any Name & Addres	(8		P.O. # / Billin	g Information			Analysis Me	thod and/or	Analytes	
HIS MEDFORD ST, ST	22200		1					Ċ			
Attention: NANCY REA	Rock			Project Name	129 Com	MERCIAL ST	F .	*			Comments
Phone Phone 74 65	Fax 617 881	6 776	6	Project Numb	0653	3-709		si-(0		e.g. Preservative c specific instruction
Email Address for Pesult Re Mr Address for Pesult Re	porting, cual anich . C	ma		Sempler (Prin	H & Sign) REARDON	- Call		3T A			
Client Sample ID	Date Collected Co	Time offected S	Lab tample No.	Sample Type (Air/Liquid /Solld/Tube)	Canister ID (Bar Code#)	Flow Controller (Bar Code #)	Sample Volume	E			
< (TE 7	4/27/0500	51-	-	AIR	ACODOLO	Fc00463'					* Denzene
2111 C	4/27/05 00.	27-	2	AIR	AC 00819	Fc0196 1			-		-11- 11- 11- 11-
21157 CITT 57	12/05/08	24-2	Ŋ	AIR	Acardo	R. 00380 4					CHN/INCINEN
SHE 6	41 27/08 00	134-	7-1	AIE	Ac00078	FL 00368					m/p.o-xyur
SITE 7	4 /27/05 08	2122	N	AIR	AC00274	FC00319		-			SIVNEME
(100) XITE 7 (DUP)	4/21/05 00	133.5	ې	AIR	AC00426	R 00248				•	nonmillilling
SITE 8	u/27/05 02	336-	ſ	AIR	ACCOUNT	R.00508 /			` - 		
SITE II	4/21/02 00	-52	y.	AIR	ACCOUTA	Reason.			+		
									-	-	
									+		
									-		
Dennet Tior Levels - Dia898	Belect							Vac: / No		Project Re	uirements (MRLs, QA
Ther I - (default if not specifi Ther I - (default if not specifi Ther II - (C forms)	F Q	ther II (OC,	Raw Data,	Spectra) 10%	Surcharge		Type:				
Relinquished by: (Signaburg)	6		Dete: Detes	Tune: 20 /	Releved by:	Signature) A	Die		Lest Time:	দ্বি	
Deline internet by: (Signations)			Date:	Time	Received by: (Signature)		Date	. Time:		
Souther Store (Signature)			Dete:	Time:	Received by: (Signature)		Date	Time:	Cooler / BI Temperatu	ank re °C
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2665 Park Center Drive, Suite D Simi Valley, California 93065 (805) 526-7161 ph (805) 526-7270 fax



Page 1 of 13

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 1 6 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 ______ 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 Aquilico

Kate Aguilera Project Manager

	LAI	BORATORY REPO	DRT	An Employee - Owned Company
Client:	HALEY & ALDRICH, INC	2.	Date of Report:	09/01/05
Address:	465 Medford Street, Suite 2	200	Date Received:	08/08/05
	Boston, MA 02129		CAS Project No:	P2501841
Contact:	Ms. Nancy Reardon		Purchase Order:	Verbal
Client Proje	ect ID: 129 Commercial St./06	558-709		
Eight (8) St	ainless Steel Summa Canisters	labeled:		
"SITE 2"	"SITE 4" "SITE 7(DUP)"	"SITE 5" "SITE 8"	"SITE 6" "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.

Voliatile Organic Compounds Analysis

The samples were analyzed by combined gas chromatography/mass spectrometry (GC/MS) for benzene, toluene, ethylbenzene, xylenes, stryane, 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 (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:

Svetlana Walsh Analytical Chemist Air Quality Laboratory

Reviewed and Approved:

Chris Parnell

GCMS-VOA Team Leader Air Quality Laboratory

RESULTS OF ANALYSIS Page 1 of 1

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

01841VOA.MSI - Sample

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

4

Test Code:	EPA TO-15			Date Collected: 8/3/	05
Inctn: ment ID:	Tekmar AUTOCAN/A zilent 5973inert/6890N/MS8			Date Received: 8/8/	05
A polyet:	Svetlana Walsh			Date(s) Analyzed: 8/22	2/05
Sampling Media:	Summa Canister			Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:	Summe Cambon				
Container ID:	AC00930	Pi 1 =	-4.4	Pf1 = 3.5	

Can D.F. = 1.77

CAS#	Compound	Result µg/m³	MRL µg/m³	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	m n-Xylenes	2.8	1.8	0.66	0.41	
100-42-5	Styrene	ND	1.8	ND	0.42	
05-47-6	o-Xylene	ND	1.8	ND	0.41	
01.20.3	Naphthalene	ND	1.8	ND	0.34	

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

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

Date: 8 23 05 Re-Verified By:_

RESULTS OF ANALYSIS

Page 1 of 1

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

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

Test Code:	EPA TO-15			Date Collected: 8/3/	05
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8			Date Received: 8/8/	05
Analyst:	Svetlana Walsh			Date(s) Analyzed: 8/22	2/05
Sampling Media:	Summa Canister			Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:					
Container ID:	AC00925				
		$\mathbf{Pil} =$	-21	Pf1 = 35	

Can D.F. = 1.44

CAS#	Compound	Result µg/m³	MRL µg/m³	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	m,p-Xylenes	5.0	1.4	1.2	0.33	
100-42-5	Styrene	ND	1.4	ND	0.34	
95-47-6	o-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.

RESULTS OF ANALYSIS

Page 1 of 1

Haley & Aldrich, Inc. **Client:** 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			Date Collected: 8/3/	05
Instrument ID:	Tekmar AUTOCAN/A.gilent 5973inert/6890N/MS8			Date Received: 8/8/	05
Analyst:	Svetlana Walsh			Date(s) Analyzed: 8/22	/05
Sampling Media:	Summa Canister			Volume(s) Analyzed:	0.50 Liter(s)
Test Notes:					
Container ID:	AC00929			41	
		Pi 1 =	-4.7	Pf1 = 3.5	

Pi 1 = -4.7

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Can D.F. = 1.82

5

Page No.:

Date: 8123/05

CAS#	Compound	Result µg/m³	MRL µg/m³	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	m,p-Xylenes	5.8	3.6	1.3	0.84	
100-42-5	Styrene	ND	3.6	ND	0.86	
95-47-6	o-Xylene	ND	3.6	ND	0.84	
91-20-3	Naphthalene	ND	3.6	ND	0.69	

NI) = 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.

01841VOA.MS1 - Sample (3)

RESULTS OF ANALYSIS

Page 1 of 1

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

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

Test Code:	EPA TO-15			Date Collected: 8/3/05			
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8			Date Received: 8/8/05			
Analyst:	Svetlana Walsh			Date(s) Analyzed: 8/22/05			
Sampling Media:	Summa Canister			Volume(s) Analyzed:	0.15 Liter(s)		
Test Notes:							
Container ID:	AC00923						
		Pil =	-2.9	Pf 1 = 3.5			

Can D.F. = 1.54

6

CAS#	Compound	Result µg/m³	MRL µg/m³	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	m,p-Xylenes	ND	10	ND	2.4	
100-42-5	Styrene	ND	10	ND	2.4	
95-47-6	o-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.

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01841VOA.MS1 - Sample (4)

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RESULTS OF ANALYSIS Page 1 of 1

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

01841VOA.MS1 - Sample (5)

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

Test Code: *	EPA TO-15			Date Collected: 8/3	/05		
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8			Date Received: 8/8/05			
Analyst:	Svetlana Walsh				2/05		
Sampling Media:	Summa Canister			Volume(s) Analyzed:	0.15 Liter(s)		
Test Notes:							
Container ID:	AC00926						
	9	Pi 1 =	-5.3	Pf1 = 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	m,p-Xylenes	ND	13	ND	3.0	
100-42-5	Styrene	ND	13	ND	3.0	
95-47-6	o-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.

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

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Por Date: 8 23/05 Verified By:
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

Date Collected: 8/3/05 EPA TO-15 Test Code: Date Received: 8/8/05 Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Instrument ID: Date(s) Analyzed: 8/23/05 Svetlana Walsh Analyst: 0.15 Liter(s) Volume(s) Analyzed: Summa Canister Sampling Media: Test Notes: Container ID: AC00917 Pf1 = 3.5 Pi 1 = -4.0 Can D.F. = 1.70

CAS#	Compound	Result µg/m³	MRL µg/m³	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	m,p-Xylenes	ND	11	ND	2.6	
100-42-5	Styrene	ND	11	ND	2.7	
95-47-6	o-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.

Date: 8123105 es. Verified By:

8

RESULTS OF ANALYSIS Page 1 of 1

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

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

Can D.F. = 1.67

Test Code:	EPA TO-15			Date Collected: 8/3/	'05
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8			Date Received: 8/8/	05
Analyst:	Svetlana Walsh	1.		Date(s) Analyzed: 8/23	3/05
Sampling Media: Test Notes:	Summa Canister	3		Volume(s) Analyzed:	0.15 Liter(s)
Container ID:	AC00918				
		Pi 1 =	-38	Pf1 = 35	

CAS#	Compound	Result µg/m³	MRL µg/m³	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	m,p-Xylenes	ND	11	ND	2.6	
100-42-5	Styrene .	ND	11	ND	2.6.	
95-47-6	o-Xylene	ND	11	ND	2.6	
91-20-3	Naphthalene	ND	11	ND	2.1	1

ND = Compound was analyzed for, but no: detected above the laboratory reporting limit.

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

RESULTS OF ANALYSIS

Page 1 of 1

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

01841VOA.MSI - MBlank

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

Test Code:EPA TO-15Date Collected: NAInstrument ID:Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8Date Received: NAAnalyst:Svetlana WalshDate(s) Analyzed: 8/22/05Sampling Media:Summa CanisterVolume(s) Analyzed: 1.00 Liter(s)Test Notes: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	m,p-Xylenes	ND	1.0	ND	0.23	
100-42-5	Styrene	ND	1.0	ND	0.23	
95-47-6	o-Xylene	· ND	1.0	ND	0.23	
91-20-3	Naphthalene	ND	1.0	ND	0.19	

ND = Compound was analyzed for, but no: detected above the laboratory reporting limit.

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

10 Date: 82305 Ru Verified By:

RESULTS OF ANALYSIS

Page 1 of 1

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

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

Test Code:	EPA TO-15	Date Collected: NA	
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8	Date Received: NA	
Analyst:	Svetlana Walsh	Date(s) Analyzed: 8/23	3/05
Sampling Media:	Summa Canister	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

D.F. = 1.00

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Date: 8 23 05 Page No.:

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Verified By:

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	m,p-Xylenes	ND	1.0	ND	0.23	
100-42-5	Styrene	ND	1.0	ND	0.23	
95-47-6	o-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.

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

01841VOA MS1 - MBlank (2)

Columbia Analytical Services, Inc. Sample Acceptance Check Form

Client	t: Haley & Aldric	h, Inc.		owo <u>9,440-1</u> 44 ;	Work o	order:	P2501841		0.0_0	
Project	t: 129 Commercia	ul St./06	558-709			<u> </u>				
	Sample(s) receiv	red on:	£/8/05	_ Date opened:		8/8/05	by:	MZ		
ote: This	s form is used for all sar	nples recei	ved by CAS. The use of t	his form for custody seals is str	ctly mean	t to indicate pr	esence/absence a	nd not as a	n indicatio	on of
mplianc	e or nonconformity. Th	ermal pres	ervation and pH will only	be evaluated either at the reque	st of the cl	ient or as requ	ired by the method	od/SOP.		
				12				Yes	No	<u>N/</u>
1	Were custody se	als on ou	tside of cooler/Box?						X	
	Location of sea	l(s)?			-		Sealing Lid?			X
	Were signature	and date	included?							\mathbf{X}
	Were seals inta	ct?				.*				\mathbf{X}
	Were custody sea	als on our	tside cf sample conta	iner?					\mathbf{X}	Ľ
	Location of sea	il(s)?					Sealing Lid?			X
	Were signature	and date	included?	11 - V2	and the second se					×
	Were seals inta	ct?								$[\times$
2	Were sample con	atainers	properly marked with	h client sample ID?				X		
3	Did sample cont	ainers a	rive in good conditio	on?					X	E
4	Were chain-of-c	ustody p	apers used and filled	out?				X		
5	Did sample cont	ainer la	bels and/or tags agree	e with custody papers?				X		C
6	Was sample volu	ime rece	ived adequate for ana	alysis?				X		C
7	Are samples with	un specit	fied holding times?			a.		X		E
8	Was proper tem	perature	(thermal preservation	n) of cooler at receipt adh	ered to?					
		12	Cooler Temperature	e NA	°C					
14.0			Blank Temperature	e NA	°C					
9	Is pH (acid) pres	ervation	necessary, according	g to method/SOP or Clien	t specifie	ed informati	ion?			X
	Is there a client :	indicatio	n that the submitted s	amples are pH (acid) pr	served?					Þ
	Were VOA vial	s checke	d for presence/absence	ce of air bubbles?						D
	Does the client/	method/S	OP require that the a	nalyst check the sample p	H and <u>i</u>	f necessary	alter it?			S
10	Tubes:	Are the	tubes capped and in	tact?						S
		Do they	y contain moisture?		•					×
11	Badges:	Are th	e badges properly cap	pped and intact?						
		Are du	al bed badges separat	ed and individually cappe	d and int	tact?				
	Lab Samela D		10					2.1.1		
	Carl Sample ID		(as received, if required)	(as received, if required)	(Presen	reauspace	Reu	Comme	ervation ats	1.
25018	41-001					NA				
25018	41-002				4	NA	*		~	
25018	41-003				1.12	NA	· · ·			
25018	41-004					NA				
25018	41-005					NA				
25018	41-006		***			NA	OPEN VAL	VE		
						11/3	INTLUX VAL	7 12		

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

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Columbia	2665 Park Cei Simi Valley, Ci	nter Drive. alifornia 9.	Suite D 3065	Requested	Turnaround T	Ime by Close of B	usiness Day (S	urcharges) Plea	tse Circle:	3	AS Project No	11-1
Services ~	Phone (805) 5	26-7161		1 Day (100%	() 2 Day (75%) 3 Day (50%) 4 L	lay (35%) 5 Day	(15%) 10 Day-	Standard	4	in se	RH
Reporting Information (Compa	ny Name & Addr	-1210		P.O. # / Billi	ng Information				÷			
HALEY + ALDRICH, I. 465 MEDRORD ST.	NC. SIF. 220	Ω				2		Analysis	s Methoc	and/or Ana	lytes	
CHARLESTOWN, M Attention: NANCY REAK	4 02129			Project Nam	6124 Com	45 0 St		G				
Phone 617 866 7465	Fax 6/7 8.	KL 776	ي ا	Project Num	ber DLSS	2-709)sı				Comments e.g. Preservative or
Email Address for Result Rep.	dinch, can			Sampler (Pr	int & Sign)	Test -		al				specific instructions
Client Sample ID	Date Collected	Time	Lab Sample No.	Sample Type (Air/Liquid /Solid/Tube)	Canister ID (Bar Code#)	Flow Controller (Bar Code #)	Sample Volume	ыз	2	_		
SITE 2	0/3/05/8	30 405	6	AIC	46 10930	Fcc0235		2			Ś	K) & TEX
SITEY	8/3/05 0.	27 37	0	AIR	400925	FC 00 501		7			2	Stynce
SITE 5	8/3/05 8	26 352	0	AIK	Acrof 24	RC00.363		7				Naphthalen
SITE 6	6/3/55 8	25 354	Θ	AIC	460723	Fcra373		1				
צ מדב ז	8/2/05-6	12 350	3	AIK	Actor 26	FC0352	•	>				
SITE 7 (DUP)	8/3/05 0	17 350	9	AIC	Ac Ory 17	FC 00 303	*	~			_	×
SITE 8	0/3/05 6	19 357	9	AIK	4000427	FC00247		>				
SITE 11	8/3/05 8.	20 352	B	AIR	R NY415	FL 00 333		7				
							-					
	-											
Report Tier Levels - please see Tier I - (default if not specified) Tier II (OC forms)		ther III (OC)	Raw Data, S	spectra) 10%	Surcharge	1	EDD required	Yes / No	-	ă	oject Require	ments (MRLs, QAPP)
Heimquished by Kignatura			Date:	Time: 45-	Property with	(inture)	.8	040	えん	Time:		
Retinquished by: (Signeture)			Date:	Time:	Received by: (5	ignature))ate:	Time:		
Relinquished by: (Signature)			Date:	Time:	Received by: (S	ignature)		0	late:	Time: Ca	oler / Blank	ł

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

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SAMPLE.	ANALYTE	MADEP Indoor			Dan	ple Kes	ults (Kesul	ts listed h	n parts pe	r billion b	y volume	([Aqdd)		
		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
03-Aug-05	Benzene	6.6	1	1	ND(0.55)		ND(0.45)	ND(1.1)	ND(3.2)	ND(4.1)	:	1	i i	ND(3.5)
	Ethylbenzene	2.3	ł	1	ND(0.41)	•	0.38	ND(0.84)	ND(2.4)	ND(3)	:	:	1	ND(2.6)
	m-&p-xylenes	8.3	•		0.66	:	1.2	1.3	ND(2.4)	ND(3)	•	:	:	ND(2.6)
	Naphiliaiene	·-	:	6	(#5:0)GN	l I	ND(0.27)	ND(0.09)	ND(2)	ND(2.5)	L L	f	ł	ND(2.1)
	o-xylenes	8.3	;	1	ND(0.41)		ND(0.33)	ND(0.84)	ND(2.4)	(E)QN	ł		1	ND(2.6)
	Styrene	0.7	ł	:	ND(0.42)	ŧ	ND(0.34)	ND(0.86)	ND(2.4)	(E)ON	•	:	:	ND(2.6)
•5	Toluene	7.7	1		1.2	-	2.1	7	e	ND(3.4)	1	•	1	ND(3)
27-Apr-05	Benzene	6.6	:	1	ND(0.47)	1	ND(0.48)	ND(0.61)	ND(4.5)	ND(4.1)	ND(9.8)	ł	F	ND(13)
	Ethylbenzene	2.3	1	:	ND(0.34)	:	ND(0.35)	ND(0.45)	ND(3.3)	ND(3)	ND(7.2)	*	1	ND(9.6)
	m-&p-xylenes	8.3	ł	;	ND(0.34)	:	0.39	ND(0.45)	ND(3.3)	(E)QN	ND(7.2)	:	:	ND(9.6)
	Naphthalene	F .	ł	ţ	ND(0.28)	:	ND(0.29)	ND(0.37)	ND(2.7)	ND(2.5)	(9)UN	:	:	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	1	1	ND(0.35)	1	ND(0.36)	ND(0.46)	ND(3.4)	ND(3.1)	ND(7.4)	:	•	ND(9.8)
	Toluene	7.7	1	•	0.77	ł	1.2	8	ND(3.8)	ND(3.5)	ND(8.3)	ŧ	:	(11)ON
13-Jan-05	Benzene	9.9	i		1.2	1	0.83	0.87	0.86	0.88	1.1	:	:	1.
	Ethylbenzene	2.3		1	0.65	ł	0.62	0.81	0.34	0.54	0.55	1	ł	0.6
	m-&p-xylenes	8.3	:	P t	1.9	ł	1.9	2.4	0.82	1.4	1.5	•	1	1.6
	Naphthalene	Ŧ	ľ	1	ND(0.27)	1	ND(0.24)	ND(0.28)	ND(0.22)	· ND(0.23)	ND(0.26)	:	1	ND(0.33)
	o-xylenes	8.3	1	:	0.64	1	0.51	0.59	0.29	0.4	0.48	n 1	1	0.49
	Styrene	0.7	:	i I	ND(0.33)		(E.0)CN	ND(0.35)	ND(0.27)	ND(0.28)	0.35	ŝ		ND(0.41)
	Toluene	7.7	I I	:	4.9	1	4.3	4.2	4	2.7	3.3	:	:	3.4

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SAMPLE	ANALYTE	MADEP Indeor			Cal	in pre ver	menter sum		n hairs he		A VUILING	(Inodd)		
		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
26-Oct-04	Benzene	6.6	•	1	0.69	1000	ND(0.52)	ND(0.48)	ND(0.56)	0.53	ND(0.46)	1	1	0.59
	Ethylbenzene	2.3	1	1	ND(0.33)	1	ND(0.38)	ND(0.35)	ND(0.41)	ND(0.36)	ND(0.34)	;	•	ND(0.36)
	m-&p-xylenes	8.3	•	1	0.83	:	0.74		0.71	0.93	-0.67	;	ł	0.8
	Maphthalone				ND(0.27)		ND(0.31)	ND(0.20)	(FC:0)CH	ND(0.0)	ND(0.20)	;	:	ND(0.5)
•	o-xylenes	8.3	:		ND(0.33)	:	ND(0.38)	ND(0.35)	ND(0.41)	ND(0.36)	ND(0.34)	:	ł	ND(0.36)
	Styrene	0.7	-	1	ND(0.34)	1	ND(0.39)	ND(0.36)	ND(0.42)	ND(0.37)	ND(0.35)	r. U	:	ND(0.37)
	Toluene	1.7	:	1	1.8	1	1.8	2.4	3.3	1.8	1.3	1	;	1.8
06-Aug-04	Benzene	6.6	:	:	ND(0.58)		ND(1.1)	ND(1.1)	ND(10)	(11) ND(11)	ND(1.1)	ł	ND(11)	1
	Ethylbenzene	2.3	ł	1	ND(0.42)	1	ND(0.8)	ND(0.78)	ND(7.6)	ND(7.8)	ND(0.81)	:	ND(8)	•
	m-&p-xylenes	B.3	;	ľ L	0.67	1	0.82	ND(0.78)	ND(7.6)	ND(7.8)	ND(0.81)	:	ND(8)	1
	Naphthalene	1	ł	ł	ND(0.35)	ł	ND(0.66)	ND(0.65)	ND(6.3)	ND(6.5)	ND(0.67)	;	ND(6.6)	•
	o-xylenes	8.3	1		ND(0.42)	:	ND(0.8)	ND(0.78)	ND(7.6)	ND(7.8)	ND(0.81)	ł	ND(8)	i i
	Styrene	0.7	1	1	ND(0.43)	1	ND(0.82)	ND(0.8)	(7.7) UN	ND(8)	ND(0.82)	1	ND(8.1)	•
•	Toluene	7.7	:	1	1.3	ţ	2.4	2	ND(8.7)	(6)QN	0.95	:	ND(9.2)	:
06-May-04	Benzene	6.6	3	;	ND(0.48)	:	ND(0.59)	0.52	ND(0.59)	ND(0.58)	ND(0.65)	1	ND(0.61)	:
	Ethylbenzene	2.3		1	ND(0.35)	:	ND(0.43)	0.4	ND(0.43)	0.47	ND(0.48)	:	ND(0.45)	;
	m-&p-xylenes	8.3	ł	ł	0.67	1	0.8	•	0.93	1.7	1.2	ł	1.5	ŕ
	Naphthalene	-	1	•	ND(0.29)	;	ND(0.36)	ND(0.3)	ND(0.36)	ND(0.35)	ND(0.4)	1	ND(0.37)	:
	o-xylenes	8.3	:	1	ND(0.35)	1	ND(0.43)	0.37	ND(0.43)	0.7	0.52	ł	0.59	1
	Styrene	0.7	1	ł	ND(0.36)	n F	ND(0.44)	ND(0.37)	ND(0.44)	ND(0.43)	ND(0.49)	ł	0.65	1
	Toluene	7.7	4 1	ł	23	:	8.9	19	4.8	3.5	2.3	:	2.8	1

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

Site 11 . 1 1 ; : Site 10 ND(4.6) ND(6.3) ND(4.6) ND(3.8) ND(4.6) ND(4.7) ND(5.3) ND(1.2) ND(0.86) ND(0.86) ND(0.71) ND(0.88) ND(0.88) ND(1.2) ND(0.73) ND(0.87 1.7 2.7 1.3 6.7 9.4 Site 9 Sample Results (Results listed in parts per billion by volume [ppbv]) 1 1 1 ND(5.8) ND(4.3) ND(4.3) ND(3.5) ND(4.3) Site 8 ND(4.4) ND(4.9) ND(0.8) ND(0.8) ND(0.66) ND(1.1) ND(0.8) ND(0.57) ND(0.81) ND(0.47) ND(0.57) ND(0.77) ND(0.58) 0.57 3.5 9.5 ND(0.55) ND(0.41) NU(2.5) ND(0.44) ND(0.34) ND(0.45) Site 7 ND(0.91) ND(4) ND(3.4) (E)QN ND(3) ND(3) (E)QN ND(1.2) ND(0.91) ND(0.76) ND(0.91) ND(0.93) 4 6.1 7.4 Site 6 ND(2.7) ND(0.83) ND(0.69) ND(2) NUII.7 ND(1.1) ND(0.83) ND(0.83) ND(2) ND(0.85) ND(2) ND(2) 15 1 : 1 1 15 ND(0.52) ND(0.54) ND(0.4) Site 5 ND(0.4) ND(0.33) ND(0.41) ND(0.48) ND(0.35) ND(0.36) ND(0.51) VD(0.41) ND(0.38) ND(0.29) ND(0.31) ND(0.41) ND(0.38) ND(0.39) 0.68 0.56 1.4 1.8 6.1 0.6 17 ND(0.38) ND(0.39) ND(0.38) ND(0.53) ND(0.32) ND(0.55) ND(0.32) VD(0.39) ND(0.39) Site 4 ND(0.4) VD(0.34) ND(0.42) 0.47 1.2 0.53 1.2 7.2 4 Site 3 : 1 --: -1 ; Site 2 ND(0.38) ND(0.31) ND(0.38) ND(0.38) 6.5 0.00 0.61 3.9 12 4.3 0.5 0.7 19 1.6 ; 1 Site 1A 1 : 1 1 1 1 1 -Site 1 ND(0.58) ND(0.43) ND(0.43) ND(0.35) ND(0.43) ND(0.44) -1 -1 1 1 6.3 **Air Background** ANALYTE MADEP Indoor 6.6 2.3 8.3 8.3 0.7 1.7 6.6 23 8.3 8.3 7.7 0.7 6.6 2.3 8.3 8.3 0.7 7.7 -Ethylbenzene m-&p-xylenes m-&p-xylenes Ethylbenzene Nanhthalene Ethylbenzene m-&p-xylenes Naphthalene Naphthalene o-xylenes Benzene o-xylenes Toluene Benzene o-xylenes Styrene Toluene Benzene Styrene Styrene Toluene SAMPLE 12-Feb-04 30-Oct-03 23-Jul-03

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

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Site 11 1 : ; 1 1 100 : 1 Site 10 VD(0.33) ND(0.55) ND(34) ND(25) ND(0.4) ND(25) ND(20) ND(25) ND(25) ND(28) ND(0.9) ND(0.32) 0.58 0.54 0.57 0.82 0.6 1.4 5.5 2.5 Site 9 Sample Results (Results listed in parts per billion by volume [ppbv] -1 1 --Site 8 ND(12) ND(9.1) ND(9.1) ND(9.1) ND(0.57) ND(0.48) ND(0.43) NU(7.0) ND(9.3) ND(11) ND(0.42) ND(0.42) ND(0.35) ND(0.42) ND(0.62) ND(0.46) ND(0.38) ND(0.46) ND(0.46) ND(0.47) 1.8 ND(0.51) ND(12) ND(0.51) ND(0.42) ND(0.51) ND(0.46) Site 7 NU(7.5) ND(9.2) ND(0.46) ND(0.46) ND(0.52) ND(0.62) ND(9) (6)**UN** ND(9) ND(10) ND(0.7) ND(0.38) ND(0.47) 0.6 2.3 ND(0.51) ND(0.31) ND(0.37) ND(30) ND(0.37) ND(0.66) ND(22) ND(22) ND(0.38) Site 6 ND(22) 101 101 ND(22) ND(25) ND(0.49) ND(0.49) ND(0.5) .0.53 ND(0.4) 0.64 0.49 12 ND(1.3) ND(0.92) ND(0.70) ND(0.92) ND(0.94) ND(0.29) ND(0.24) Site 5 ND(0.92) ND(0.29) ND(0.4) ND(0.3) 0.36 1 0.77 1 -ND(0.56) ND(0.41) ND(0.41) (10(0,04) ND(0.41) ND(0.48) ND(0.42) ND(0.35) VD(0.29) ND(0.35) Site 4 ND(0.35) ND(0.36) ND(0.37) ND(0.27) ND(0.22) ND(0.27) ND(0.27) 0.59 0.63 6.3 6.5 Site 3 . 1 ; ND(0.44) ND(0.44) (TC(0.07) VD(0.45) ND(0.44) ND(0.6) ND(0.35) VD(0.29) ND(0.36) ND(0.71) Site 2 ND(0.53) VD(0.44) ND(0.53) ND(0.54) 0.57 0.35 1.1 0.36 0.6 1.1 1.2 Site 1A . --. 1 1 1 E I Site 1 1 . 1 --1 Air Background ANALYTE MADEP Indoor 6.6 2.3 8.3 8.3 0.7 1.7 6.6 33 8.3 8.3 0.7 7.7 6.6 2.3 8.3 8.3 1.7 0.7 Ethylbenzene m-&p-xylenes Ethylbenzene m-&p-xylenes m-&p-xylenes Naphthalana Ethylbenzene Naphthalene Naphthalene o-xylenes Benzene o-xylenes o-xylenes Benzene Benzene Styrene Toluene Styrene Toluene Toluene Styrene SAMPLE . 25-Apr-03 24-Jan-03 08-Oct-02

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SAMPLE	ANALYTE	MADEP Indoor			Sar	nple Re	sults (Resu	Its listed i	in parts pe	r billion b	y volume	([vddd]		
		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-Jun-02	Benzene	6.6	:	ł	1	1	0.44	ND(0.31)	1.9	1.8	0.97	:	1.7	:
	Ethylbenzene	2.3	1	1	1	:	0.71	0.57	ND(0.23)	ND(0.23)	ND(0.46)	L	0.71	1
	m-&p-xylenes	8.3	1	ł		;	N	1.5	0.6	0.68	0.68	;	1.3	:
	Maphthelane	••	ł	;	i.	ł	หมิเน. เย)	ู่หมิ(ข.าย)	(ค.บ)เป	(0.19)	ND(0.38)	:	ND(0.19)	1
	o-xylenes	8.3	:	1		1	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)	1	4.7	;
2	Toluene	2.7	ł	1	1	:	9.2	13	Ŧ	ŝ	23	1	2.2	1
10-Apr-02	Benzene	6.6	:	:	ND(0.31)	1	ND(0.31)	ND(0.31)	ND(6.3)	1.4	ND(6.3)	1	ND(6.3)	:
	Ethylbenzene	2.3	1	1	ND(0.23)	:	ND(0.23)	0.31	ND(4.6)	ND(0.46)	ND(4.6)	4	ND(4.6)	ł
	m-&p-xylenes	8.3	1	Î.	0.52	1	0.56	-	ND(4.6)	ND(0.46)	ND(4.6)	:	ND(4.6)	;
	Naphthalene	-	:	1	ND(0.19)	ţ	ND(0.19)	ND(0.19)	ND(3.8)	ND(0.38)	ND(3.8)	:	ND(3.8)	;
	o-xylenes	8.3	ł	, 1	ND(0.23)	1	ND(0.23)	ND(0.23)	ND(4.6)	ND(0.46)	ND(4.6)	?	ND(4.6)	;
	Styrene	0.7	1	;	ND(0.23)	ľ	ND(0.23)	ND(0.23)	ND(4.7)	ND(0.47)	ND(4.7)	;	ND(4.7)	1
and the second second	Toluene	. 7.7	:	:	1.1	:	5.1	3.8	ND(5.3)	R	ND(5.3)	1	ND(5.3)	Ľ
10-Jan-02	Benzene	6.6	1	i		1	ND(0.31)	ND(0.63)	12	4	15	:	₽	
	Ethylbenzene	2.3	:	1	:	:	ND(0.23)	ND(0.46)	ND(0.92)	ND(0.92)	ND(1.8)	1	ND(1.8)	;
	m-&p-xylenes	8.3	1	ł	ł	ł	٠	1.1	ND(0.92)	ND(0.92)	ND(1.8)	1	ND(1.8)	1
	Naphthalene	1	1	ł	ł		ND(0.19)	ND(0.38)	ND(0.76)	ND(0.76)	ND(1.5)	:	ND(1.5)	:
	o-xylenes	8.3	;	1	;	:	ND(0.23)	ND(0.46)	ND(0.92)	ND(0.92)	ND(1.8)	:	ND(1.8)	;
	Styrene	0.7	;	1	1	•	ND(0.23)	ND(0.47)	ND(0.94)	ND(0.94)	ND(1.9)	ì	2.1	;
	Toluene	7.7	1	;	;	ŀ	5.2	5.1	10	3.5	2.8	1	2.9	:
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SAMPLE	ANALYTE	MADEP Indoor			San	nple Re	sults (Resu	Its listed	in parts pe	r billion b	y volume	([vddd]		
		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
11-Oct-01	Benzene	9.9	ND(0.31)	1	1	;	ND(0.31)	ND(0.63)	3.4	3.6	3.9	:	2.4	:
	Ethylbenzene	2.3	ND(0.23)	ł	1	1	0.44	ND(0.46)	ND(0.23)	ND(0.23)	ND(0.46)	;	0.74	1
	m-&p-xylenes	8.3	ND(0.23)	ł	ł	1	1.3	0.81	0.64	0.58	0.68	4	1.2	:
	· Nanhthalana	•	(01 · 0) UN	ti t	;	1	ND(0.10)	ND(0.00)	HD(0.13)	ND(0.18)	ND(0.30)	ł	หมิเช. 19)	:
	o-xylenes	8.3	ND(0.23)	;	L L		0.45	ND(0.46)	ND(0.23)	ND(0.23)	ND(0.46)	:	0.51	;
	Styrene	0.7	ND(0.23)	1	1	:	ND(0.23)	ND(0.47)	ND(0.23)	ND(0.23)	ND(0.47)	;	3.7	;
	Toluene	7.7	1.1	î 1	1	:	5.5	4.6	8.3	2.9	2.1	:	2.2	ť
01-Jul-01	Benzene	6.6	;	1	ND(0.63)	i I	ND(0.63)	ND(0.63)	ND(0.63)	ND(0.63)	ND(0.63)	:	:	:
	Ethylbenzene	2.3	I I	R.	ND(0.46)	:	ND(0.46)	ND(0.46)	ND(0.46)	ND(0.46)	ND(0.46)	1	;	ł
	m-&p-xylenes	8.3	1		ND(0.46)	1 1	ND(0.46)	ND(0.46)	0.47	0.5	ND(0.46)	ł	;	1
	Naphthalene	-	1	ţ,	ND(0.38)	:	ND(0.38)	ND(0.38)	ND(0.38)	0.32	ND(0.38)	1	r L	:
	o-xylenes	8,3	1	1	ND(0.46)	1	ND(0.46)	ND(0.46)	ND(0.46)	ND(0.46)	ND(0.46)	:	;	:
	Styrene	0.7	ł	:	ND(0.47)	ł	ND(0.47)	ND(0.47)	1.5	0.65	0.82	ł	:	;
	Toluene	7.7	ł	1	1.2	;	1.7	29	2.2	2.5	2.5	:	ł	1
29-Jun-01	Benzene	6.6	1	:	ND(0.31)	1;	0.68	. 2.1	9.9	ŧ	F	1	9.6	:
	Ethylbenzene	2.3	:	r 1	ND(0.23)	:	1.5	0.85	ND(0.23)	ND(0.23)	ND(0.23)	:	. 2.5	:
	m-&p-xylenes	- 8.3	ł	;	0.78	1	5.3	2.8	0.77	۰	0.77	;	3.1	;
	Naphthalene	-	1	:	ND(0.19)	ł	F.	ND(0.19)	ND(0.19)	0.48	0.64	:	80	:
	o-xylenes	8.3	i i	;	ND(0.23)	:	1.6	0.86	ND(0.23)	ND(0.23)	ND(0.23)	;	1.4	ł
	Styrene	0.7	1	;	ND(0.23)	:	ND(0.23)	ND(0.23)	0.64	ND(0.23)	0.4	:	9	1
	Toluene	7.7	ľ	ř	1.9	:	4.4	18	14	5.5	2.5	;	4.4	1
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SAMPLE	ANALYTE	MADEP Indoor			San	Tple Re	sults (Resu	Its listed i	n parts pe	r billion b	y volume	([vqdd		
		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
18-Mar-01	Benzene	6.6	;	1	ND(0.31)	r I	ND(0.31)	ND(0.31)	ND(0.63)	ND(0.63)	ND(0.31)	:	5.1	:
	Ethylbenzene	2.3	1	1	ND(0.23)	ł	ND(0.23)	ND(0.23)	ND(0.23)	ND(0.46)	ND(0.23)	;	1.2	:
	m-&p-xylenes	8.3		1	ND(0.23)	;	ND(0.23)	ND(0.23)	0.72	0.74	0.95	:	e	t 1
	Nachthalana	•	e F		ND(0.10)	!	ND(0.13)	ND(0.19)	ND(0.40)	NU(0.30)	(ยา.บ)บิท	1	ND(0.19)	i
	o-xylenes	8.3	:	i i	ND(0.23)	:	ND(0.23)	ND(0.23)	ND(0.46)	ND(0.46)	ND(0.23)	ł	11	1
	Styrene	0.7	ł	1	ND(0.23)	•	ND(0.23)	ND(0.23)	ND(0.47)	ND(0.47)	ND(0.23)	:	3.4	L F
	Toluene	7.7	:	1	ND(0.27)	;	1.1	1.2	4.1	6.8	17	ł	9.5	1
16-Mar-01	Benzene	6.6	- 1	;	1.3	1	20	ND(0.31)	7.6	9.3	13		8.2	:
	Ethylbenzene	2.3	ľ	1	2.1	i	62	0.65	ND(0.23)	0.4	0.42	ł	0.96	1
	m-&p-xylenes	8.3	:	;	3.6	ť	48	2.3	1.2	1.2	1.3	1	2.5	ł
	Naphthalene	Ŧ	i.	;	4.4	:	49	ND(0.19)	ND(0.19)	0.59	0.51	:	ND(0.19)	ł
	o-xylenes	8.3	1	1	1.8	1	20	0.55	0.53	ND(0.23)	0.62	1	1.6	:
	Styrene	0.7	;	ł	0.39	1	8.7	ND(0.23)	ND(0.23)	ND(0.23)	0.31	1	ю	:
	Toluene	7.7	:	ë.	6.5	1	60	5.7	17	6.2	26	ł	9.1	ł
03-Dec-00	Benzene	6.6	;	1	0.76	1	0.4	TR(0.41)	0.77	0.68	TR(0.61)	:	3.5	:
	Ethylbenzene	2.3	1	ł I	0.26	;	ND(0.23)	ND(0.46)	ND(0.23)	ND(0.46)	ND(0.46)	ť	0.89	1
	m-&p-xylenes	8.3	•	;	0.74	1	0.34	TR(0.41)	0.54	0.47	0.49	;	1.5	;
	Naphthalene	T	1	r F	ND(0.19)	1	ND(0.19)	ND(0.38)	0.22	ND(0.38)	ND(0.38)	į	TR(0.31)	1
	o-xylenes	8.3	1	Ř. T	0.29	:	ND(0.23)	ND(0.46)	ND(0.23)	ND(0.46)	ND(0.46)	f	0.62	1
	Styrene	0.7	;	1	ND(0.23)	:	ND(0.23)	ND(0.47)	ND(0.23)	ND(0.47)	ND(0.47)	:	7.1	1
	Toluene	7.7	r L	ł	1.7	:	1.3	1.5	1.4	1.5	1.4	:	1.7	
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SAMPLE	ANALYTE	MADEP Indoor		à	Sar	nple Re	sults (Resu	Its listed i	n parts pe	r billion b	y volume	([vqaa		
		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	6.6	1	1	0.99	:	0.5	0.58	4.1	S	4.3		7.2	:
	Ethylbenzene	2.3		1	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	ł	0.52	0.68	0.9	0.9	0.54	:	1.7	;
	Maphthalans	••	;	1	ND(0.13)	;	ND(0.19)	หมิเข. เช่	[K[U.20]	U.47	ND(0.19)	:	0.4	ł
	o-xylenes	8.3	3-3-8-9	1	0.44	1	ND(0.23)	0.24	TR(0.29)	TR(0.28)	ND(0.23)	ł	0.64	;
	Styrene	0.7	1	ł	ND(0.23)	ł	ND(0.23)	ND(0.23)	TR(0.35)	TR(0.27)	ND(0.23)	2 4 4 4 C	9	;
	Toluene	7.7	t t	ţ	3.4	:	5.8	3.7	4.2	3.1	5.6	1	2.5	
22-Oct-00	Benzene	6.6	ł	:	0.44	:	1	:	0.54	:	:	;	:	
	Ethylbenzene	2.3	ł	ł	ND(0.23)	ł	1	:	0.32	;	ł	;	i	:
	m-&p-xylenes	8.3	:	;	0.57	:	:	•	1.2	ł	ł	ł	:	:
	Naphthalene	£	ł	1	ND(0.19)	;	;	:	0.38	1	1	;	;	;
	o-xylenes	8.3	e K		TR(0.21)	1	;		0.44	:	:	1	:	;
	Styrene	0.7	1	4	ND(0.23)	ľ	1	1	0.75	1	1	ł	;	ł
	Toluene	1.7	1	ł	-	1	1	ł	2	Ť	ł	1	1	1
20-Oct-00	Benzene	6.6	:	:	0.86	:	:	ľ	1.4	:	:	:	:	:
	Ethylbenzene	2.3	ł	1	0.29	;	ţ	ł	0.46	•	1	•	;	1
	m-&p-xylenes	8.3	ł	:	0.98	;	:	1	1.4	1	ł	1	1	1
	Naphthalene	÷		•	ND(0.19)	ł	1	:	2.1	;	;	;	:	:
	o-xylenes	8.3	1	ł	0.36	ł	1	:	0.5	;	;	3	:	:
	Styrene	0.7	4	4	ND(0.23)	ţ	ł	:	0.53	ł	;	:	;	:
	Toluene	7.7	:	1	1.9		1	ł	6.1	:	1	;		

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SAMPLE	ANALYTE	MADEP Indoor			San	aple Res	sults (Resu	ilts listed i	in parts pe	r billion b	v volume	(vdaa		
		Air Background	Site 1	Site IA	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	1	ł	0.37	:	1	1	0.51	1	1	3	1	1
	Ethylbenzene	2.3		1	ND(0.23)	1	•	ľ	0.25	1	:	1	1	1
	m-&p-xylenes	8.3	•	1	0.44	:	•		0.73	:	:	100	ł	1
	Nephtrateric	••	;	:	ND(0.13)	L		;	ND(0. [3]	:	1	1	1	1
	o-xylenes	B. 3	1		ND(0.23)	;	1	:	0.26	i t	ł	:	ł	;
	Styrene	0.7	ł	:	ND(0.23)	1	1	:	0.41	ä		1	:	:
	Toluene	7.7	ł	1	1.8	1	1	ŀ	3.2	:	1	ļ	:	1
29-Sep-00	Benzene	6.6	1	:	0.52	1	1	:	7.7	1	:	•	:	1
	Ethylbenzene	2.3	:	-	ND(0.23)	:	1	;	0.52	ł	1	:	I I	1
	m-&p-xylenes	8.3	ł	ł	0.56	i i	1	ł	1.5	1	1	1	i d	;
	Naphthalene	F	;	ł	ND(0.19)	1	:	ł	0.31	ł	•••	:	1	:
	o-xylenes	8.3	ł	:	ND(0.23)	:	1	f	0.43	1	:	:	ł	:
	Styrene	0.7	1	ł	ND(0.24)	:	e C	ł	0.38	ł	;	;	1	1
	Toluene	7.7	1	1	2.2	;	1	1	4.7	1	*	1	ſ	1
19-Jul-00	Benzene	6.6	;	1	-	:	0.75	1.9	27	- 29	9.8	:	20	:
	Ethylbenzene	2.3	I I	;	0.47	1	TR(0.35)	TR(0.3)	TR(0.41)	TR(0.33)	TR(0.27)	i t	2.1	•
	m-&p-xylenes	8.3	:	•	1.5	:	0.84	0.65	•	0.75	0.74	;	3,8	1
	Naphthalene	-	•	1	ND(0.19)	1	ND(0.19)	ND(0.19)	0.59	0.76	TR(0.32)	ţ	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	ı I
	Styrene	0.7	•	ł	ND(0.24)	:	TR(0.26)	TR(0.32)	1.4	0.95	F	:	18	I I
	Toluene	7.7	1	:	4.8	1	9.8	9.7	9.7	6.3	9	;	9.1	ł
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APPENDIX B TABLE I SUMMARY OF INDOOR AIR QUALITY DATA 129 COMMERCIAL STREET, PARCEL B OF FORMER MALDEN MANUFACURED GAS PLANT SITE MALDEN, MASSACHIISETTS

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MPLE	ANALYTE	MADEP Indoor			San	nple Res	ults (Resu	Its listed i	n parts pe	r billion b	y volume	(vdqq]		
	Second Southern	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
-Apr-00	Benzene	6.6	:	1	0.72	•	TR(0.56)	ND(0.31)	14	10	26	:	14	:
	Ethylbenzene	2.3	:	1	ND(0.23)	1	3.8	48	ND(0.23)	17	3.9	;	ND(0.23)	ł
	m-&p-xylenes	8.3	Ĩ	1	0.67	1	13	170	2.7	61	14	1	2.3	:
	Maphthalana	٠.	1	1	ND(0.15)	r I	ND(0.13)	ND(0.19)	หมีเข. รัช	(ยา.บ)นี้ท	IK(U.47)	;	ND(0.19)	ľ
	o-xylenes	8.3	1	:	TR(0.23)	:	2.2	31	ND(0.23)	Ŧ	2.4	1	TR(0.96)	ł
	Styrene	0.7	ł		ND(0.24)	ł	ND(0.24)	ND(0.24)	ND(0.24)	ND(0.24)	ND(0.24)	f	2.2	•
	Toluene	7.7	•	;	2.3	:	43	540	34	170	65	:	5.9	ſ
-Feb-00	Benzene	6.6		1	0.76	:	0.65	:	8	\$	26	ļ	22	:
	Ethylbenzene	2.3	1	;	0.28	1	0.25	l l	0.65	0.38	0.63	:	2.3	:
	m-&p-xylenes	8.3	1) 1	0.91	:	0.72	:	2	1.2	2.2	i	4.2	ŗ
	Naphthalene	-	1	;	ND(0.19)	;	ND(0.19)	:	ND(0.19)	ND(0.19)	0.39	:	ND(0.19)	ł
	o-xylenes	8.3	;	:	0.3	i	0.24	1	0.67	0.38	0.67		1.5	;
	Styrene	0.7	ł	;	ND(0.23)	:	ND(0.24)	l	0.41	ND(0.24)	0.42	r 1	6	:
	Toluene	1.7	1	:	2.3	ł	2.5	1	8.7	3.5	4.5	ł	6.2	1
Nov-99	Benzene	6.6	ł	:	1.1	:	0.37	0.55	3.6	3.6	5.6	:	3	1
	Ethylbenzene	2.3	;	:	0.24	ł	0.25	0.34	0.28	0.19	TR(0.17)	;	0.88	1
	m-&p-xylenes	8.3		-	0.71	ł	0.9	1.2	0.69	0.54	0.52	R T	1.6	;
	Naphthalene	F	:	1.	ND(0.4)	1	ND(0.4)	ND(0.4)	ND(0.4)	ND(0.4)	ND(0.4)	;	ND(0.4)	:
	o-xylenes	8.3	1	;	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	1	6.8	1
	Toluene	1.7	;	1	2	;	50	45	5	5 6	• •		L	

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MPLE	ANALYTE	MADEP Indoor				Inpic Acsu	IIIS (Resul	IS listed 1	n parts pe	r billion b	y volume	(Addd		
		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
-Sep-99	Benzene	6.6	0.28	ł	0.65	0.44	TR(0.47)	0.72	19	10	6.7	;	ł	
	Ethylbenzene	2.3	ND(0.5)	:	0.27	TR(0.21)	TR(0.25)	0.36	3.9	1.7	1.1	ł	, 	;
	m-&p-xylenes	8.3	0.47		0.85	0.64	0.74	0.71	10	4.8	3.2	ł	:	
	Maphthalana	••	TP(0.17)	策	0.40	TTR(0.10)	TR(0.31)	0.21	14.0	Ú.4Ú	Û.35	1	-	:
	o-xylenes	8.3	TR(0.22)	1	0.39	0.28	TR(0.34)	0.31	2.8	1.5	0.97	1	1	;
	Styrene	0.7	ND(0.5)	1	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	1	:	1
-Dec-98	Benzene	6.8	1	:	1		:	:	23	4	:	:	i F	:
	Ethylbenzene	2.3	*	ł	1	:	1	ŗ	2.8	1.7	ł	1	ł	1
	m-&p-xylenes	8.3	ť	:		ł	ł	;	6.6	6.6	:	ł,		:
	Naphthalene	-	ł	1	1	1	:	:	ND(0.19)	0.46		-	;	:
	o-xylenes	8.3			÷	ł	ł	1	2.2	ო	1	1	ţ	:
	Styrene	0.7	:	3	:	ł	;	1	0.29	ND(0.47)	1	:	;	ł
×	· Toluene	7.7	ł	1	;	1	1	ł	4.5	3.5	ľ	;	:	:
Dec-97	Benzene	6.6	1	3	2.1	1	5	:	18	6.1	:	:	1	1
	Ethylbenzene	2.3	-	1	0.7	1	1	:	1.2	2	ŭ,	1	;	-
	m-&p-xylenes	8.3	1	•	2.4		1	ł	1.3	9	-	:	ł	ť
	Naphthalene	-	;	1	ND(0.4)	1 1	ł	:	ND(0.4)	TR(0.2)	;	:	;	ł
	o-xylenes	8.3	-	Î. T	0.9	ł	:	:	0.4	3	ł		;	:
	Styrene	0.7	:	ł	ND(0.5)		ł	r F	0.3	0.8	:	1	:	:
	Tolisene	77												

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SAMPLE	ANALYTE	MADEP Indoor			Sai	mple Resu	ilts (Resu	Its listed in	1 parts pei	r billion b	y volume	(vdaa]		
		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	6.6	0.9	•	1.9	1.1	0.8	1.9	61	13	7.5	:	:	:
	Ethylbenzene	2.3	ND(0.2)	1	0.9	0.3	0.4	1.1	2.7		0.7	:	1	1
	m-&p-xylenes	8.3	9.0	3	3.1	1.1	-	1.5	2.8	2	1.5	•	:	1
	พื่อมีเพิ่งสียาช		ND(0.2)	ł	ND(0.2)	หมี(ข.2)	ND(0.2)	NU(0.2)	(2.0)UN	(2.0)QN	ND(0.2)	:	•	1
	o-xylenes	8.3	0.2	ł	1.2	0.4	0.4	0.6	0.8	0.6	0.5	1	:	1
	Styrene	0.7	ND(0.2)	1	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	0.4	ND(0.2)	0.5	:	:	i a
	Toluene	7.7	2.5	1	6.5	3.4	e	4.1	5.2	6.6	3.6	;	•	
18-Jun-94	Benzene	6.6	1	-	;	:	:	1.8	:	1.1	-	0.7	:	:
	Ethylbenzene	2.3		0.4	ł	÷	1	1.1	ł	14.2	20.7	15.9	:	:
-9	m-&p-xylenes	8.3	1	÷	B J	1	ł	2.5	i i	34.3	48.3	37.3		;
	Naphthalene		ł	0.2	ł	:	1	0.4	:	0.2	0.2	0.2	ţ	:
	o-xylenes	8.3	:	0.3	ł	ľ	ť	0.8	:	7.4	10.5	7.9	ł	•
	Styrana	0.7	i I	TR(0.026)	;	ł	1	0.3	;	0.8	0.8	0.7		1
	Toluene	7.7	l k	3.6	ť,	•		11.9	ł	80	5.4	5.4	;	1

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esults (Resul	ts listed in parts	t per billion by	y volume	([vddd		
Site 4	Site 5 Site	6 Site 7	Site 8	Site 9	Site 10	Site 11
Si	te 4	te 4 Site 5 Site	te 4 Site 5 Site 6 Site 7	te 4 Site 5 Site 6 Site 7 Site 8	te 4 Site 5 Site 6 Site 7 Site 8 Site 9	te 4 Site 5 Site 6 Site 7 Site 8 Site 9 Site 10

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MADEP Indoor Air Background Values from: MADEP, "Characterizing Risks Posed by Petroleum Contaminated Sites. Implementation of MADEP VPH/EPH Approach,"
MADEP Indoor Air Background Values from: MADEP, "Characterizing Risks Posed by Petroleum Contaminated Sites. Implementation of MADEP VPH/EPH Approach,"
MADEP Posed 2002 (Policy #WSC-02-411); and MCP Toxicity. xls (MCPstnds zip), 20 December 2001, available at http://www.state.ma.us/dep/bwsc/files/standard/gw2/gw2.htm.
VOC (ppb): volatile organic compounds with values in parts per billion by volume; analyzed by REA Method T014.
ND: compound not detected above quantitation limit, number in parentheses is the quantitation limit.
TR: compound detected below the quantitation limit, number in parentheses is the quantitation limit.
TR: compound detected below the quantitation limit, number in parentheses is the quantitation limit.
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 ampling.
Results associated from the Rooflop sample location no 22 December 1997 are not shown in this table but have been reported in RAM Status reports dated 7 October 2004 and earlier.
Results collected from the Rooflop location 10 is no longer accessible as of October 2004. This location has been replaced by Sample Location 10 is no longer accessible as of October 2004. This location has been replaced by Sample Location.

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