17 December 2003 Reference: 0001922.03

DEP Permit Administrator
Bureau of Waste Site Cleanup
Massachusetts Department of Environmental Protection
1 Winter Street
Boston, Massachusetts 02118

RE: Tier Classification Submittal, Numerical Ranking Scoresheet, and Application for Tier IB Permit - Transmittal No. W045278
Former Raytheon Facility
Wayland, Massachusetts
DEP RTN 3-22408

Dear Sir or Madam:

On behalf of Raytheon Company (Raytheon), Environmental Resources Management (ERM) is submitting this Tier Classification Submittal, Numerical Ranking Scoresheet, and application for Tier IB Permit for Release Tracking Number (RTN) 3-22408 for the Former Raytheon Facility located at 430 Boston Post Road in Wayland, Massachusetts. Please find enclosed the following documents:

- A copy of the Department of Environmental Protection (DEP) Permit Transmittal Form for Permit Application and Payment (Transmittal Ref. No. W045278)
- BWSC-02 Tier I Initial Permit Application- original and one copy
- Numerical Ranking Scoresheet
- A copy of the Permit Application Fee submittal sent to MA DEP, P.O. Box 4062, Boston, MA 02211-4062
- Public Notification documentation (copies of public notice letters to Board of Health and Chief Municipal Manager, affidavit of legal notice, and copy of notice)
- · Figure showing the disposal site boundaries

Supplemental information required by BWSC 02 - Tier IB Initial Permit Application and pursuant to 310 CMR 40.0704, is included to support this application:

Environmental Resources Management

399 Boylston Street, 6th Floor Boston, MA 02116 (617) 646-7800 (617) 267-6447 (fax)

http://www.erm.com



Permit Administrator RTM 3-22408 17 December 2003 Page 2

Environmental Resources Management

Compliance History

Raytheon is no longer the operator at the Site. A Tier IB Permit (No. 133939) exists for RTN 3-13302, which is also located within the property boundaries of the Former Raytheon Facility located at 430 Boston Post Road in Wayland, Massachusetts. The two RTNs are being treated separately under the MCP to minimize delays in response actions. This enables completion of assessment activities under RTN 3-22408 without delaying ongoing remedial activities under RTN 3-13302 (Tier IB Permit No. 133939).

A copy of the Tier Classification Submittal and Numerical Ranking Scoresheet

A Tier Classification for the Site was determined using the Numerical Ranking System (NRS) described in 310 CMR 40.1500. The NRS Scoresheet and Tier Classification submittal were presented in the Phase I - Initial Site Investigation Report (Phase I) and are attached.

Pursuant to 310 CMR 40.0520(2)(a)(1), the Site is categorically classified as Tier I since "there is evidence of groundwater contamination with OHM at concentrations equal to or exceeding the applicable RCGW-1 Reportable Concentration set forth in 310 CMR 40.0360 at the time of Tier Classification, and such groundwater is located within an Interim Wellhead Protection Area or Zone II."

Completion of the NRS resulted in a Site score of 511, which scores the Site as Tier IB.

Phase II Scope of Work or conceptual scope of work required by 310 CMR 40.0500.

ERM previously submitted a Final Scope of Work (ERM, 2003a) to the Department in an effort to keep the public and the Department informed of ongoing assessment activities at the Site prior to submittal of the Phase I. This document was not required under the MCP, but was developed as a means to document previously completed Site investigation activities and to present a scope of work for additional assessment activities proposed to further characterize chlorinated volatile organic compounds (CVOCs) impacts to groundwater in the Northern Area, including:

- the potential for CVOCs from the Northern Area to impact the Baldwin Pond Wellfield; and
- the downgradient extent of Northern Area CVOC plume.

ERM has submitted a Notice of Intent (NOI) with the Wayland Conservation Commission and the Department for activities to be conducted within wetland areas or wetland buffer zones. Field work will commence following receipt of an Order of Conditions from the Conservation Commission. The exact timing of the field activities is dependent upon weather and ground conditions.

A Conceptual Phase II Scope of Work was included in the Phase I report. Pursuant to 310 CMR 40.0830, a Phase II Scope of Work will be completed subsequent to the submission of the Phase I report. The Phase II Scope of Work will include:

- the scope and nature of investigation and sampling events that will be undertaken to characterize the source, extent, and migration pathways of OHM, and the risk of harm posed to health, safety, public welfare or the environment;
- the name and license number of the LSP representing the person conducting the Comprehensive Response Action; and
- a schedule for implementation of the Phase II Comprehensive Site Assessment.

The Phase II Scope of Work will likely include the following activities:

- · advance soil borings and install monitoring wells;
- conduct hydraulic conductivity testing; and
- survey, gauge and sample monitoring wells.

The Phase II Scope of Work will be submitted for public review and comment following completion of the field activities proposed in the Final Scope of Work (ERM, 2003a).

Permit Administrator RTM 3-22408 17 December 2003 Page 4

Environmental Resources Management

A statement affirming that public notice was submitted for publication in the local newspapers of the communities in which the disposal site is located as required by 310 CMR 40.0703(8)(a).

Notification was submitted for publication on 18 December 2003 in the Wayland Town Crier as required by 310 CMR 40.0703(8)(a). A photocopy of the notice and an affidavit is attached and is presented in the Phase I Report submitted to the MA DEP.

A statement affirming that notice was submitted for publication in the Environmental Monitor as required by 310 CMR 40.0704(1)(c).

Notification was submitted for publication in the Environmental Monitor 23 December 2003 as required by 310 CMR 40.0704(1)(c). A photocopy of the notice is attached and an affidavit is presented in the Phase I Report submitted to the MA DEP.

LSP Opinion Regarding Proposed or Continuing Response Actions

The Tier I Permit application materials were prepared pursuant to 310 CMR 40.0700. A Phase I Initial Site Investigation, which includes a Numerical Ranking Scoresheet (NRS) completed in accordance with 310 CMR 40.1500, has been completed at the Site in accordance with 310 CMR 40.0480. A Phase I report was submitted to the DEP on 17 December 2003.

Based on the historic nature of this release and the need to complete activities proposed in the Final Scope of Work (ERM, 2003), ERM requests that MA DEP authorize, in writing, approval of the Tier IB Permit as soon as possible.

If you have any questions regarding this submittal, or require additional information, please contact me at (617) 267-8377.

Sincerely

John C. Drobinski, P.G., LSP

Principal-in-Charge

R Joseph Fige

R. Joseph Fiacco, Jr., P.G. Senior Project Manager

cc:

Edwin P. Madera, Raytheon Benson Gould, CMG Environmental Public Repositories File

DEP Permit Transmittal Form (original)

Enter your transmittal number

--->

W045278
Transmittal Number

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

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

Please type or print. A separate	Α.	Permit Information						
Fransmittal Form		BWSC 02		Tier 1B				
must be completed for each permit		Permit Code: 7 or 8 character code from permit instruction BWSC Disposal Site	ons	2. Name of Permit Cate	egory			
application.		3. Type of Project or Activity						
2. Make your								
check payable to the Commonwealth	В.	Applicant Information – Firm or Ind	lividua	ıl —				
of Massachusetts		Raytheon Company						
and mail it with a copy of this form to:		1. Name of Firm - Or, if party needing this approval is a	n individua	al enter name below:				
DEP, P.O. Box 4062, Boston, MA		2. Last Name of Individual	3. First	Name of Individual		4. MI		
02211.		528 Boston Post Road						
o		5. Street Address						
3. Three copies of this form will be			MA	01776	(978) 440-1318			
needed.			7. State	8. Zip Code	9. Telephone #	10. Ext. #		
Copy 1 - the		Mr. Edwin Madera						
original must accompany your		11. Contact Person		12. e-mail address (opt	iional)			
permit application. Copy 2 must	C.	Facility, Site or Individual Requiring	g App	roval				
accompany your		Former Raytheon Facility						
fee payment. Copy 3 should be		1. Name of Facility, Site Or Individual						
retained for your		430 Boston Post Road 2. Street Address						
∼çords			MA	01778				
Doth for poving			4. State	5. Zip Code	6. Telephone #	7. Ext. #		
 Both fee-paying and exempt 		o. o.g. rom	1. Otato	o. zip odde	RTN #3-22408	7. LAL 11		
applicants must mail a copy of this		8. DEP Facility Number (if Known)	9. Federa	al I.D. Number (if Known		g # (if Known)		
transmittal form to:	to: D. Application Prepared by (if different from Section B)*							
DEP	υ.			i occiloii bi				
P.O. Box 4062		Environmental Resouces Management (ERM) 1. Name of Firm Or Individual						
Boston, MA		1. Name of Firm Or Individual						
02211		399 Boylston Street, 6 th Floor		THE PARTY OF THE P				
		2. Address Boston	N / A	00116	(C17) C4C 7000			
* Note:			MA 4. State	02116 5. Zip Code	(617) 646-7800 6. Telephone #	7. Ext. #		
For BWSC Permits	,	John C. Drobinski	4. State	2196	o. reieprione #	7. EXI. #		
enter the LSP.		8. Contact Person		9. LSP Number (BWSC	Permits only)			
		o. contact roscii		o. cor reamour (beroc	or crime oray)			
	E.	Permit - Project Coordination						
	1.	Is this project subject to MEPA review? yes	⊠ no					
		If yes, enter the project's EOEA file number - ass		nen an				
		Environmental Notification Form is submitted to the	he MEPA	4 unit:				
	EOEA File Number							
	r.	Amount Due						
DEP Use Only	Sp	ecial Provisions:						
Pormit No:	1.	Fee Exempt (city, town or municipal housing authori			ess).			
Permit No:	2.	There are no fee exemptions for BWSC permits, regard Hardship Request - payment extensions according to						
c'd Date:	3.	Alternative Schedule Project (according to 310 CMF						
Date.	4.	Homeowner (according to 310 CMR 4.02).		•	, .			
Reviewer:		020376 3,550			12/12/03			

Dollar Amount

Check Number

Date

Tier I Initial Permit Application (original)



Bureau of Waste Site Cleanup

BWSC 01 - Tier IA

BWSC 02 - Tier IB

BWSC 03 - Tier IC

Initial Application for Tier I Permit

٧	045278	3

Transmittal Number

3-22408

Release Tracking Number

	A	. Disposal Site Information				
mportant: Vhen filling out orms on the	☐ 1. Check here if there is more than one applicant. (A Primary Representative must be listed in Section B and each applicant must fill out Sections C, D and E.)					
omputer, use nly the tab key	2.	Which permit category are you applying for?				
o move your ursor – do not se the return ey.		☐ a. Tier IA (Permit Category: BWSC 01) ☐ b. Tier IB (Permit Category: BWSC 02) ☐ c. Tier IC (Permit Category: BWSC 03)	☐ d.	to 310 CMR 4.02. A H	nt is a Homeowner pursuant Homeowner Certification submitted in order to qualify plication fee.	
return X	3.	a. Former Raytheon Facility Disposal Site Name b. 430 Boston Post Road				
		Street				
		c. Wayland	<u></u>	d. MA	e. <u>01778</u>	
lote:		City/Town		State	Zip Code	
IRS ≥ 550; ier IB =) ≤ NRS < 550; ier IC = 50 ≤ NRS < 450	4.	List other release tracking number(s) that is(a Release Tracking Number (RTN) a. c.		bd.		
		e	:	f		
	5.	Basis for Tier Classification:				
		a. Numerical Ranking System (NRS) Score:		511		
			usiona	y criteria. (Check all th	nat apply.)	
		i. Evidence of groundwater contam concentrations equal to or excee such groundwater is located with	ding a	pplicable RCGW-1 rep	ortable concentrations and	
		☐ ii. Disposal site at which an Immine	ent Haz	zard is present at the ti	me of Tier Classification.	



Bureau of Waste Site Cleanup

BWSC 01 - Tier IA

BWSC 02 - Tier IB

BWSC 03 - Tier IC

Initial Application for Tier I Permit

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B. Primary Representative Information

Note:

- 1. If there is only one applicant, you do not need to complete this section.
- 2. If there is more than one applicant, then the Primary Representative should complete this page.
- 3. The Primary
 Representative for
 multiple applicants
 will receive the
 annual compliance
 assurance fee
 statement for the
 disposal site.

1. Primary Representative:

• <u></u>		
Name of Organization		
•	d.	
Name	Title	
-		
Street		
	g.	h.
City/Town	State	Zip Code
	i.	•
Telephone	E-mail (option	onal)
<u>.</u>	1.	,
Contact Name (if different)	Contact Tele	ephone

2. Primary Representative Certification:

I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons submitting this permit application for the following purposes: (i) to receive oral and written correspondence from DEP with respect to this application; (ii) to receive oral and written correspondence from DEP with respect to the performance of response actions conducted pursuant to the Tier I permit; and (iii) to receive any statement of fee required by 310 CMR 4.03(3) associated with the Tier I permit. I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

a.		
	Name (Print)	
b.		
	Position or Title	
c.		
	Signature	
d.		
	Date	***



Bureau of Waste Site Cleanup

BWSC 01 - Tier IA

BWSC 02 - Tier IB

BWSC 03 - Tier IC

Initial Application for Tier I Permit

W 045278	
Transmittal Number	

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Release Tracking Number

C. Applicant Information

Note:
1. All applicants must complete this section. Where there is more than one Applicant, make copies of this page, have each applicant provide this information, and then attach all copies to this Permit Application.

2. The applicant, or the Primary Representative for more than one applicant, will receive the annual compliance assurance fee statement for the disposal site.

a. Raytheon Company	
Name of Organization	
b	c.
Applicant Name	Title,
d. 528 Boston Post Road	
Street	
e. Sudbury	f. <u>MA</u> g. 01776
City/Town	State Zip Code
h. <u>(</u> 978) 440-1000	i.
Telephone	E-mail (optional)
j. Mr. Edwin Madera	k. (978) 440-1318
Contact Name (if different)	Contact Telephone
Type of Applicant (check one): a. Individual b. Sole proprietorship c. Partnership d. Corporation e. Realty trust f. State authority	
g. Municipality h. State agency i. Federal agency j. Other, please specify:	
. Relationship of applicant to disposal site	

4. Check here to certify that additional copies of Sections C, D and E are attached to this application.

g. Other legally responsible party (as defined in Section 5(a)(5) of M.G.L. c 21E)

□ c. Past owner (as defined in Section 5(a)(2) of M.G.L. c 21E)
□ d. Past operator (as defined in Section 5(a)(2) of M.G.L. c 21E)
□ e. Generator (as defined in Section 5(a)(3) of M.G.L. c 21E)
□ f. Transporter (as defined in Section 5(a)(4) of M.G.L. c 21E)

h. Other person (as defined in 310 CMR 40.0006(10))



Note:

Each applicant

more than one

copies of this

copies to this

must complete this section. For

disposal sites with

Applicant, make

section, have each

applicant complete this information,

and then attach all

Permit Application.

Massachusetts Department of Environmental Protection

Bureau of Waste Site Cleanup

BWSC 01 - Tier IA

BWSC 02 – Tier IB

BWSC 03 - Tier IC

Initial Application for Tier I Permit

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Release Tracking Number

D. Applicant's Compliance History

☑ 1. Check here to certify that a statement further describing the applicant's compliance history is attached.

This statement must describe the applicant's history of compliance with DEP's requirements, including, but not limited to, M.G.L. c. 21E, 310 CMR 40.0000, and other laws for the protection of health, safety, public welfare and the environment administered or enforced by federal, state and local government agencies, that are material to the disposal site. Such a statement should identify information such as: action(s) material to the disposal site taken by DEP to enforce its requirements including, but not limited to Notice of Noncompliance (NON), Notice of Intent to Assess Civil Administrative Penalty (PAN), administrative enforcement order, Notice of Responsibility (NOR), Notice of Intent to Take Response Action (NORA); Administrative Consent Order; Judicial Consent Judgment; similar administrative actions taken by other states, federal, or local agencies; and/or civil or criminal actions material to the disposal site brought on behalf of DEP or other federal, state, or local agencies and any additional information relevant to the applicant's history of compliance. For each action identified, give the name of the issuing authority and identification number, if available, and a description of the noncompliance cited, the current status of the matter, and final disposition, if any.

2. List all other DEP permits or licenses held by the applicant that are material to this disposal site:

Prog	ram	Permit Code	Permit Category	Facility ID
a. Ai	ir Quality			*
. b. Н	azardous Waste (M.G.L. c. 21C)		:	
c. Se	olid Waste	- Address		-
d. Iņ	dustrial Wastewater Management			1
e. W	ater Supply			:
f. W	ater Pollution Control: Surface Water			18.00
g W	ater Pollution Control: Groundwater			
h. W	ater Pollution Control: Sewer Connection	·		
i. W	/etlands & Waterways			
3. List a	all other permits, licenses, certifications, r federal, state, or local authorities and h	registrations, variandeld by applicant that	ces, or other approv are material to this	als issued by disposal site:
Issui	ng Authority	Identification	n Number	Date Issued
a				
b				



Bureau of Waste Site Cleanup

BWSC 01 – Tier IA

BWSC 02 - Tier IB

BWSC 03 - Tier IC

Initial Application for Tier I Permit

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3-22408

Release Tracking Number

E. Applicant Certifications

Note: Each applicant must complete this section. For disposal sites with more than one Applicant, make copies of this page, have each applicant complete this information, and then attach all copies to this

Permit Application.

1. Certification of Submittal

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

2. Statement of Ability and Willingness

I attest under the pains and penalties of perjury that (i) I/the person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/is familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the/those Licensed Site Professional(s) employed or engaged to render Professional Services for the disposal site which is the subject of this permit application and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s') or entity's(ies') understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40.0172 for notifying the Department in the event that I/the person(s) or entity(ies) on whose behalf this submittal is made and/is(are) unable to proceed with the necessary response actions.

3. Certification of Remittance of Permit Application Fee

I attest under the pains and penalties of perjury that, on or before the date of submittal of this permit application to the Department, I remitted, or caused to be remitted, the applicable permit fee payable in accordance with 310 CMR 4.00.

4.	App	licant	Acceptance
----	-----	--------	------------

a. Mr. Edwin Madera

Name (Print)

b. Senior Env. Engineer; Raytheon Company

Position or Title

Signature

d 12///

Date



Bureau of Waste Site Cleanup

BWSC 01 - Tier IA

BWSC 02 - Tier IB

BWSC 03 - Tier IC

Initial Application for Tier I Permit

W 045278	
Transmittal Number	
2.00400	

3-22408 Release Tracking Number

F. Required Technical Submittals with Permit Application

- ☑ 1. Check here to certify that a Tier I Classification Submittal is attached to this application.
- 2. Please indicate which of the following response actions are in progress or have been completed at this disposal site at the time of this permit application:

Response Actions	Completed	In Progress
Preliminary Response Actions:		
a. Limited Removal Action (LRA)		
b. Immediate Response Action (IRA)		
c. Release Abatement Measure (RAM)		· , · · ·
d. Utility Related Abatement Measure (URAM)		
e. Phase I Initial Site Investigation		
f. Other (specify)		
Comprehensive Response Actions:		
g. Phase II Comprehensive Site Assessment		
h. Phase III Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives		
 i. Phase IV Implementation of the Selected Remedial Action Alternative (Remedy Implementation Plan only) 		60 g (

3. Please indicate which of the following Status Reports, Phase Reports, or Completion Statements have been prepared for response actions that are in progress or have been completed at the disposal site at the time of this permit application.

Note:
For response
actions in progress,
attach a statement
of description of the
current status and
projected schedule
for completion of
such response
actions.

Document	Previously Submitted	Submitted with this Application	Projected Date for Completion
a. Bill(s) of Lading		i	
b. Immediate Response Action (IRA) Plan(s)			
c. IRA Status Report(s)			***
d. IRA Completion Report(s)			
e. Release Abatement Measure (RAM) Plan(s)			



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup BWSC 01 – Tier IA

BWSC 02 - Tier IB

BWSC 03 – Tier IC

Initial Application for Tier I Permit

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3-22408	

. Required Technical Submittals with Permit Application (cont.)								
Document f. RAM Status Report(s)	Previously Submitted	Submitted with this Application						
g. RAM Completion Report(s)								
h. Utility-Related Abatement Measures (URAM)								
i. URAM Status Report(s)								
j. URAM Completion Report(s)								
k. Phase I Report and Completion Statement								
I. Phase II Scope of Work			Spring 2004					
m. Phase II Report and Completion Statement								
n. Phase III Remedial Action Plan and Completion Statement	. 🔲							
o. Phase IV Remedy Implementation Plan (RIP)								
p. Other (specify)								
Specify the pages of either the Phase I Report or Phase supporting the following information:	se II Report (i	f completed) for	purposes of					
a. Disposal site location information	Phase I Report ⊠	Phase II Report	Page(s) 5-6					
i. Institutions within 500 feet of the disposal site	\boxtimes		7					
ii. Listing of natural resource areas	\boxtimes		7-8					
b. Disposal Site Locus Map	\boxtimes		Figure 1					
c. Disposal site history			11-19:					
i. Release history and abatement measures	\boxtimes		12-13					
ii. OHM use and storage history	\boxtimes	· 🗀	13-14					
iii. Environmental permits and compliance history		·	11-19					



Bureau of Waste Site Cleanup

BWSC 01 - Tier IA

BWSC 02 - Tier IB

BWSC 03 - Tier IC

Initial Application for Tier I Permit

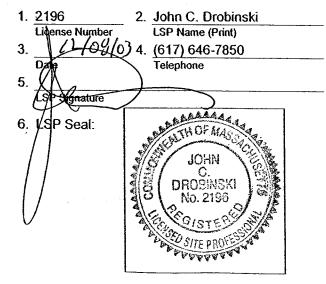
W 045278	
Transmittal Nu	mber
3-22408	

F. Required Technical Submittals with Permit Application (cont.)

d.	Disposal site hydrogeological characteristics	Phase I Report ⊠	Phase II Report	Page(s) 25-27
	i. Groundwater depth and flow direction	\boxtimes		25-27
	ii. Soil and bedrock description	\boxtimes		24-25
	iii. Disposal site topography	\boxtimes		5-6
e.	Nature and extent of contamination	\boxtimes		27-39
	i Thickness of non-aqueous phase liquid, if encountered	\boxtimes		27-39
	Approximate horizontal and vertical extent of contamination	\boxtimes		27-39
f.	Migration pathways and exposure potential	\boxtimes		39-41
	i. Contaminant migration potential	\boxtimes		39-40
	ii. Potential human exposure			40-41
	iii. Potential environmental receptors	\boxtimes		41
g.	Evaluation for Immediate Response Action(s)	\boxtimes		41
h.	Phase II Scope of Work			42-43
i.	Other (specify) Conclusions	\boxtimes		45-46

G. Licensed Site Professional Opinion

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this submittal, 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, this application was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40,0000. 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.



Numerical Ranking Scoresheet

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Waste Site Cleanup

NUMERICAL RANKING SYSTEM SCORESHEET

		(310	CMR 40.1:	511)			75
CLASSIFICATION	SUBMITTAL			DISPO	SAL SITE :	SCORE	
Initial Submittal	Re-Classification	11	ш	IV	٧	VI	TOTAL
I		150	131	95 ——	135	0	511
Disposal Site Tier Classifica	ation		(<u>(</u>			11
Permit Category (Tier I Onl	у)			Α	B	С	
		*****	*****	****			
I.		DISPOSAL S	SITE INFO	RMATION	1		
DEP Release Tracking Number(s)	3-22408			UTM Coo	rdinates	N: 4,692,7	780
DEP Disposal Site Number(s)						E: 304,8	20
					······································		
Disposal Site Name	Former Raytheor	Facility					
Disposal Site Address	430 Boston Post	Road					
	city: Wayland, M.	A					zip: 01778
-	ed Tier I because it is located water concentrations equal of					Yes	. ПоП
	ed Tier I because an Imminen	t Hazard is present	at the time of	f Tier Classifica	tion pursuant	Yes	No.
to 310 CMR 40.0520(2)(a)		·		····	·		
amiliar with the information pased upon: (i) the standard of t	contained in this submittal, of care in 309 CMR 4.02(1), (nation and belief, this Scores enalties may result, including	including any and a ii) the applicable p heet was developed	all documents rovisions of 3 d in accordance to, possible f	accompanying 109 CMR 4.02(2 ce with the appl	this submitta and (3), and icable provis conment, if 1	al, and in my profe d (iii) the provision ions of M.G.L. c. 2 submit information	personally examined and am ssional opinion and judgment is of 309 CMR 4.03(5), to the ellE and 310 CMR 40.0000. I on which I know to be false,
Licensed Size Professional S	Signature	LSP Registration N	*		Date	1	THOFMA
John Drobinsk	ci .	_ERM			617	.646.7850	JOHN
LSP Name (Printed)	lly Responsible Party, or Oth	Company Name	provide carrie	Geating in accom		hone Number	OROBINSKI No. 2199
Apponatore Fatty, Potentia	иу мезроизиче гапу, ог Uth	CI FEISON WNO WILL	Provide cetti	ivanou iu accor	GANGE WITH 3	10 CIVIK 40.0009.	SVE DONE SE

40.1511 (Continued)

II. EXPOSURE PATHWAYS

II. EXPOSURE PATHWAYS Score according to 40.1512 - Exposure Pathway Des	signation Criteria						
	DESIGNATION						
MEDIA	NONE or NOT APPLICABLE	EVIDENCE OF CONTAMINATION	POTENTIAL EXPOSURE PATHWAY	LIKELY OR CONFIRMED EXPOSURE PATHWAY			
A. SOIL (Includes Sediment)	0	15	100	150			
B. GROUNDWATER	0	20	100	150			
C. SURFACE WATER (Includes Wetlands)	0	20	100	150			
D. AIR	0	15	100	200			
Note: Score only the highest value for ea Pathway or Likely or Confirmed Exposure I II. (A - D) Summary	Pathway.	e or Not Applicable or Evid - D Values and Phase I Repo		or Potential Exposure			
II.A – No site contaminants anticip	oated or analyzed.						
II.B – CVOCs detected in groundw	vater > RC's with	in Zone II; Table 4	of Phase I Repo	rt			
II.C – No site contaminants anticip	ated or analyzed.						
II.D – No site contaminants anticip	oated or analyzed.						
II.E. OHM SO	OURCES						

II.E.	OHM SOURCES			
		1	2	≥ 3
Number of OHM Sources		0	25	50

SECTION II SCORE (A. + B. + C. + D. + E.)							
A. 0	B. 100	c. 0	D. 0	E. 50	TOTAL: (15 - 700) 150		

Check here if Section VI has been used to amend the score for this Section of the NRS.	
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40.1511 (Continued)

III. DISPOSAL SITE CHARACTERISTICS

Title Da					
III.A. OHM TOXICI	ITY SCORE				
Highest OHM T From Table III.A. or Worksheet					
Trichloroet OHM Scored:	thylene, Dichloroethylene	e-cis1,2-	Toxicity Score (1 - 80)		
Trichloroethyle Dichloroethyle Concentration and Media:	Oug/L		35		
III.B. MULTIPL	Е ОНМѕ				
More Than One OHM With an OHM Toxicity Score of ≥ 30	No	Yes			
	0	30)			
III.C. OHM MOBILITY an	nd PERSISTENCE				
Score according to 40.1514 - O.	HM Mobility and Persistence	T			
OHM Scored: Dichloroethylene-ci	is1,2-		Score (0 - 50)		
			50		
III.D. DISPOSAL SITE HYDROGEOLOGY					
Score according to 40.1515 - Soil Permeability					
DEPTH TO GROUNDWATER		SOIL PERMEABIL	ITY		
(in feet)	Low	Medium		High	
> 25	2	4		8	
10.1 - 25	4	8		12	
5.1 - 10	8	12		16	
0 - 5	12	16		20	
SECTION III SCORE (A + B + C + D) A. B. 35 30	C. D.	16	TOTAL: (3 - 180)		
Check here if Section VI has been used to amend the score f	for this Section of the NRS.				

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.1511: continued

Table III.A.OHM TOXICITY SCORE							
ОНМ		ca	ONCENTRATION	' (soil/sediment: μg/g;	surface/groundwater	rμg/l)	
	≤ 99	100 - 999	1,000 - 9,999	10,000 - 100,000	> 100,000 NAPL < 0.5"	NAPL 0.5" - 12"	NAPL > 12"
Aliphatics C5-C8	5	15	25	35	45	55	65
C9-C12	1	10	20	30	40	50	60
C9-C18	1	10	20	30	40	50	60
C19-C36	1	10	20	30	40	50	60
Arsenic	20	30	40	50	60		
Aromatics C9-C10	5	15	25	35	45	55	65
C11-C22	5	15	25	35	45	55	65
Benzene	15	25	35	45	55	65	75
Bis(2-ethylhexyl)phthalate	10	20	30	40	50	60	70
Cadmium	20	30	40	50	60		
Carbon Tetrachloride	20	30	40	50	60	70	80
Chlorobenzene	5	15	25	35	45	55	65
Chromium III	1	10	20	30	40		
Chromium VI	10	20	30	40	50		
Coal Tar	10	20	30	40	50	60	70
Cyanide	5	15	25	35	45		
1,1 Dichloroethane	10	20	30	40	50	60	70
1,2 Dichloroethane	10	20	30	40	50	60	70
Ethylbenzene	5	15	25	35	45	55	65
Ethylene Dibromide	20	30	40	50	60	70	80
#2 Fuel Oil (virgin product)	5	15	25	35	45	55	65
Gasoline (virgin product)	10	20	30	40	50	60	70
Lead	20	30	40	50	60		
Mercury	20	30	40	50	60	70	80
Methylene Chloride	10	20	30	40	50	60	70
Methyl Ethyl Ketone	1	10	20	30	40	50	60
Methyl Tert Butyl Ether	5	15	25	35	45	55	65
Nickel	5	15	25	35	45		

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40.1511: continued

Table III.A continuedOHM TOXICITY SCORE									
ОНМ		CONCENTRATION (soil/sediment: μg/g; surface/groundwater μg/l)							
	≤ 99	100 - 999	1,000 - 9,999	10,000 - 100,000	> 100,000 NAPL < 0.5"	NAPL 0.5" - 12"	NAPL > 12"		
Phenol	1	10	20	30	40	50	60		
PAHs	10	20	30	40	50	60	70		
PCBs	20	30	40	50	60	70	80		
Tetrachloroethylene	10	20	30	40	50	60	70		
Toluene	1	10	20	30	40	50	60		
1,1,1 Trichloroethane	5	15	25	35	45	55	65		
Trichloroethylene	15	25	(35)	45	55	65	75		
Vinyl Chloride	15	(25)	35	45	55	65	75		
Xylenes	1	10	20	30	40	50	60		
Zinc	1	10	20	30	40				

40.1511 (Continued)

Use Worksheet III.A.1. to determine the OHM Toxicity Score for OHM not listed in Table III.A.

See 40.1513 for Human Health-Based Toxicity Values for each OHM.

Worksheet III.A.1 OHM TOXICITY SCORE									
THE CONTRACTOR OF THE CONTRACT	CONCENTRATION								
HUMAN HEALTH-BASED TOXICITY VALUE		Use µg/g for Soil and µg/l for Surface Water and Groundwater							
	≤ 99	100 - 999	1,000 - 9,999	10,000 - 100,000	> 100,000 NAPL < 0.5"	NAPL 0.5" - 12"	NAPL > 12"		
< 5	1	10	20	30	40	50	60		
5 – 19	5	15	25	35	45	55	65		
20 – 29	10	20	30	40	50	60	70		
30 – 39	15	25	35	45	55	65	75		
40 – 50	20	30	40	50	60	70	80		

III.A.1.OHM and Concentrations Used in Section III.A.1.							
ОНМ	Human Health-Based Toxicity Value	Concentration (Soil - µg/g)	Concentration (Water - μg/l)	OHM Toxicity Score			
Dichloroethylene, cis-1,2-	18		10,000	35			

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40.1511 (Continued)

IV. HUMAN POPULATION AND LAND USES

IV.A.HUMAN POPULATION								
Residential Population Within ½ Mile	None 0	1 - 99 5	100 - 999	≥ 1,000 15				
Institutions Within 500 feet	No	one 0	One or M	iore				
On-Site Workers	None 0	1 - 99 5	100 - 999 10	≥ 1.000 15				

IV.B. AQUIFERS		
Sole Source Aquifer	No	Yes
Name:	0	25
Potentially Productive Aquifer	No 0	Medium or High 15

IV.C. WATER USE					
Proximity of Disposal Site to Public Drinking Water Supply Source	Not Applicable (NA)			Zone A	Zone II, IWPA, or SW Intake ≤ 400'
Tuone Brimaing Water Bappy, Source		0		20	50
Persons Served by Public Drinking Water Supply	NA	25 - 999	1,000 - 4,9	99 5,000 - 49,999	≥ 50,000
	0	5	10	(20)	25
Private Water Supplies Within 500 Feet	None		Commerci Industria		Drinking Food Processing
		_	industria	(Not Ingested)	1 ood 1 rocessing
		0 10		15	25
Alternative Public Water Supply Available	Yes			No	
(Viable Public Water Supply in Disposal Site Community and Public Water Connection ≤ 500 Feet from Site)	0		25		

Ī	SECTION IV SCORE (A + B + C)						
	A	25	В	0	C	70	TOTAL: (0 - 205)95

Check here if Section VI has been used to amend the score for this Section of the NRS.	

40.1511 (Continued)

V. ECOLOGICAL POPULATION

V.A. ENVIRONMENTAL RESOURCE AREAS							
RESOURCE		LOCATION					
Area of Critical Environmental Concern	> 500' from Site	≤ 500' from Site	On-Site				
	0	20	30				
Species of Special Concern,	> 500' from Site	On-Site or ≤ 500' from Habitat					
Threatened or Endangered Species Habitat	0	(3	0				
Wetlands, Certified Vernal Pool, or	> 100' from Site	≤ 100' from Site	On-Site				
Outstanding Resource Water	0	20	30)				
Fish Habitat	> 500' from Site	≤ 500' from Site	On-Site				
	0	(20)	30				
Protected Open Space	> 500' from Site	≤ 500' from Site	On-Site				
(Local/State/Federal/Trustee)	0	20	30				

SCORE SECTION V.B. ONLY IF SECTION V.A. SCORE IS $^{\rm 3}$ 30.

V.B.	ENVIRONMEN	NTAL TOXICITY	SCORE			
	Highest Envis	ronmental Toxicity S	Score			
	From Table V.B. or Wo	rksheet V.B.1. on Fo	ollowing Pages.			
					Toxicity Score (1 - 35)
OHM Scored:Dichloroethene-cis-1,2 Water - 10,000 ug/L				25		
Concentration and Media	a:					
SECTION V. S	SCORE (A. + B.)					
A	110	В.	25		TOTAL: (0 - 185) 135	
Check here if Section V	I has been used to amend the	score for this Section	on of the NRS.			

40.1511 (Continued)

Table V.B.ENVIRONMENTAL TOXICITY SCORE								
ОНМ		$\textbf{\textit{CONCENTRATION}} \ (soil/sediment: \mu g/g; \ surface/groundwater \ \mu g/l)$						
		< 1	1 - 99	100 - 999	1,000 - 9,999	≥ 10,000		
Arsenic		5	10	15	20	25		
Benzene		0	1	5	10	15		
Bis(2-ethylhexyl)phthalate	*	5	10	15	20	25		
Cadmium		10	15	20	25	30		
Carbon Tetrachloride		0	1	5	10	15		
Chlorobenzene	*	5	10	15	20	25		
Chromium III		1	5	10	15	20		
Chromium VI		5	10	15	20	25		
Coal Tar	*	5	10	15	20	25		
Cyanide		5	10	15	20	25		
1,1 Dichloroethane	*	5	10	15	20	25		
1,2 Dichloroethane		0	1	5	10	15		
Ethylbenzene		0	1	5	10	15		
Ethylene Dibromide	*	5	10	15	20	25		
#2 Fuel Oil (virgin product)	*	1	5	10	15	20		
Gasoline (virgin product)	*	5	10	15	20	25		
Lead		5	10	15	20	25		
Mercury		15	20	25	30	35		
Methylene Chloride	*	5	10	15	20	25		
Methyl Ethyl Ketone	*	5	10	15	20	25		
Methyl Tert Butyl Ether	*	1	5	10	15	20		
Nickel		1	5	10	15	20		
Phenol		0	1	5	10	15		
PAHs	*	5	10	15	20	25		
PCBs		15	20	25	30	35		
Tetrachloroethylene		0	1	5	10	15		
Toluene		0	1	5	10	15		
1,1,1 Trichloroethane		0	1	5	10	15		
Trichloroethylene		0	1	5	10	15		
Vinyl Chloride	*	5	10	15	20	25		
Xylenes	*	5	10	15	20	25		
Zinc		1	5	10	15	20		

^{*} Scores derived by default methods 40.1516(2).

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NON-TEXT PAGE

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40.1511 (Continued)

Use Worksheet V.B.1. to determine Environmental Toxicity Scores for OHM not listed in Table V.B.

See 40.1516 for Environmental Toxicity Values for each OHM.

Worksheet V.B.1ENVIRONMENTAL TOXICITY SCORE								
ENVIRONMENTAL		CONCENTRATION						
TOXICITY VALUE		Use µg/g for Soil and µg/l for Surface Water or Groundwater						
	< 1	1 - 99	100 - 999	1,000 - 9,900	≥ 10,000			
10	0	1	5	10	15			
20	1	5	10	15	20			
30	5	10	15	20	25			
40	10	15	20	25	30			
50	15	20	25	30	35			

V.B.1.OHM and Concentrations Used in Section V.B.1.							
ОНМ	Environmental Toxicity Value	Concentration (Soil - µg/g)	Concentration (Water - μg/l)	Environmental Toxicity Score			
Dichloroethene-cis1,2-	10		10,000	15			

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.1511 (Continued) VI. MITIGATING DISPOSAL SITE-SPECIFIC CONDITIONS

VI. MITIGATING DISPOSAL SITE-SPECIFIC CONDITIONS
Disposal site-specific conditions that warrant amending the site score. Changes directly related to NRS Sections or Subsection scores may not reduce the score more than the relevant subsection value assigned for the disposal site in that subsection. Section VI must reference specific pages of the Phase I. Section VI may not exceed ± 50 Points and may be scored only in 5-point increments. Attach additional pages as necessary.
NONE
Score Disposal Site Score Amendment (Not to Exceed ± 50 Points) O

Permit Application Fee (copy)

ERM399 BOYLSTON STREET 6TH FLOOR
BOSTON, MA 02116
PH (617), 267-8377

5-7017-2110

CITIZENS BANK MASSACHUSETTS

12/12/03

020376

9

*********3,550.00

DOLLARS AND THREE THOUSAND FIVE HUNDRED FIFTY

PAY

******00/100 CENTS

AUTHORIZED SIGNATURE

R DOES NOT APPEAR ON THE REVENSE SIDE IN RED 113015011BII #0 20 3 7 5 # 12 2 1 1 0 7 0 1 7 5 1

Commonwealth of Massachusetts
Department of Environmental Protection
PO Box 4062
Boston, MA 02211 US

TO THE ORDER Р

Supporting Documentation

Public Notice Letters
Affidavit of Legal Notice
Legal Notice

12 December 2003 Reference: 1922.12

Jeff Ritter
Executive Secretary
Town of Wayland
14 Cochituate Road
Wayland, MA 01778

RE: Notification of Legal Notice Regarding Tier 1 Permit Application and Phase I Report
Former Raytheon Facility
430 Boston Post Road
Wayland, Massachusetts

Release Tracking Number 3-22408

Dear Mr. Ritter:

On behalf of Raytheon Company, Environmental Resources Management (ERM), will be submitting a Tier 1B Permit Application for the above referenced site to the Massachusetts Department of Environmental Protection (DEP). In accordance with 310 CMR 40.0703(8)(a)(2), the Chief Municipal Officer and the Board of Health must be notified of the application. Copies of these documents may be obtained at the DEP Northeast Regional Office, 1 Winter Street, Boston, Massachusetts 02108.

A copy of the NOTICE OF INITIAL SITE INVESTIGATION AND WASTE SITE CLEANUP PERMIT APPLICATION as required by 310 CMR 40.0703(8)(a)(1) is included with this letter. This legal notice will be published in the Wayland Town Crier on 18 December 2003.

Environmental Resources Management

399 Boylston Street, 6th Floor Boston, MA 02116 (617) 646-7800 (617) 267-6447 (fax)

http://www.erm.com



Please direct any questions or correspondence to Edwin P. Madera, Raytheon Company at (978) 440-1813 or the undersigned at (617) 267-8377.

Sincerely,

John C. Drobinski, P.G., LSP

Principal-in Charge

JOCA CARLOS

R. Joseph Fiacco, Jr., P.G. Senior Project Manager

Enclosures:

NOTICE OF INITIAL SITE INVESTIGATION AND WASTE SITE CLEANUP PERMIT APPLICATION

cc:

Edwin P. Madera

12 December 2003 Reference: 1922.12

Steven Calichman Director of Public Health Town of Wayland 14 Cochituate Road Wayland, MA 01778

RE: Notification of Legal Notice Regarding Tier 1 Permit Application and Phase I Report
Former Raytheon Facility
430 Boston Post Road
Wayland, Massachusetts
Release Tracking Number 3-22408

Dear Mr. Calichman:

On behalf of Raytheon Company, Environmental Resources Management (ERM), will be submitting a Tier 1B Permit Application for the above referenced site to the Massachusetts Department of Environmental Protection (DEP). In accordance with 310 CMR 40.0703(8)(a)(2), the Chief Municipal Officer and the Board of Health must be notified of the application. Copies of these documents may be obtained at the DEP Northeast Regional Office, 1 Winter Street, Boston, Massachusetts 02108.

A copy of the NOTICE OF INITIAL SITE INVESTIGATION AND WASTE SITE CLEANUP PERMIT APPLICATION as required by 310 CMR 40.0703(8)(a)(1) is included with this letter. This legal notice will be published in the Wayland Town Crier on 18 December 2003.

Environmental Resources Management

399 Boylston Street, 6th Floor Boston, MA 02116 (617) 646-7800 (617) 267-6447 (fax)

http://www.erm.com



Please direct any questions or correspondence to Edwin P. Madera., Raytheon Company at (978) 440-1813 or the undersigned at (617) 267-8377.

Sincerely,

C. Drobinski, P.G., LSP

Principal-in Charge

R. Joseph Fiacco, Jr., P.G. Senior Project Manager

Englosures:

NOTICE OF INITIAL SITE INVESTIGATION AND WASTE SITE CLEANUP PERMIT APPLICATION

Edwin P. Madera

AFFIDAVIT

Commonwealth of Massachusetts

County: Suffolk

City: Boston

BE IT KNOWN that John Drobinski is of legal age and is hereby deposed and being duly sworn, under oath says the following:

In accordance with 310 CMR 40.0703(8)(a)(1), the legal notice will be published by Environmental Resources Management in the following publications:

• Wayland Town Crier - 18 December 2003

The Environmental Monitor – 23 December 2003

John Drobinski, P.G., LSP

Паtа

Sworn to before me on 12 December 2003, by John Drobinski, who acknowledged that the foregoing statements are true.

William H. O'Connell

Notary Public

1-22-04 My Commission Expires:

WILLIAM H. O'CONNELL Notary Public My Commission Expires Jan. 22, 2004

NOTICE OF INITIAL SITE INVESTIGATION AND WASTE SITE CLEANUP PERMIT APPLICATION

FORMER RAYTHEON FACILITY 430 BOSTON POST ROAD, WAYLAND, MASSACHUSETTS RELEASE TRACKING NUMBER 3-22408

Pursuant to the Massachusetts Contingency Plan (310 CMR 40.0480), an Initial Site Investigation has been performed at the above referenced location. A release of oil and/or hazardous materials has occurred at this location which is a disposal site (as defined by M.G.L. c. 21E, Section 2). This site has been classified as Tier 1B (310 CMR 40.0500). A Phase I – Initial Site Investigation and an Initial Application For Tier IB Permit was submitted on 17 December 2003 to the Department of Environmental Protection (DEP) pursuant to 310 CMR 40.0703. A permit is required to proceed with a Comprehensive Remedial Repsonse at all Tier I sites.

Anyone interested in reviewing the permit application should notify DEP by writing to DEP, BUREAU OF WASTE SITE CLEANUP, PERMIT SECTION, 1 WINTER STREET, BOSTON, MA 02108 by 19 January 2004. If anyone notifies DEP of his or her interest in reviewing or submitting comment on the Tier 1 permit application, DEP will conduct a public comment review period of twenty (20) days which shall run concurrently with DEP's Initial Technical Review of the application. Anyone who fails to notify DEP in writing of his/her interest in commenting on the application by the above date may be deemed to have waived his/her rights, if any, to appeal DEP's permit decision or to intervene in an adjudicatory proceeding with respect to this application, pursuant to 310 CMR 40.0770(2).

The permit application and the Phase I Report can be viewed at the public repositories located at the Wayland Public Library 5 Concord Road, Wayland, MA 01778, Wayland Board of Health 41 Cochituate Road, Wayland, MA 01778 and on the internet at www.ermne.com with user name: raytheon and password: wayland.

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

To obtain more information on this disposal site and the opportunities for public involvement during its remediation, please contact Mr John Drobinski, P.G., LSP, ERM, 399 Boylston Street, 6th Floor, Boston, MA 02116 at (617) 646-7800.