12 October 2005 Reference: 0033366

Brian Monahan Conservation Administrator Wayland Conservation Commission Town Building Wayland, MA 01778

Re: Inspection Report #7

17 September through 30 September 2005

Former Raytheon Facility 430 Boston Post Road DEP File No. 322-0564

Dear Mr. Monahan:

In accordance with Condition Number 48 of Order of Conditions 322-0564, dated 20 November 2003, Environmental Resources Management (ERM) is pleased to provide the Wayland Conservation Commission (Commission) with this Inspection Report regarding the monitoring well installation activities for the former Raytheon facility at 430 Boston Post Road.

The following information summarizes work performed during the period from 17 September through 30 September 2005.

### Work Performed During Period

- Monitoring well installation conducted using sonic drilling techniques at the following locations.
  - B-556
- Daily erosion control measure inspections were performed and corrective action taken, as needed. Sufficient supplies of silt fence and straw bails are maintained on site to allow for corrective action and maintenance activities. Inspection logs are detailed on the Daily Reports (Attachment A).
- Photographs were taken in accordance with Condition Number 40 and available for the Commission's inspection.

Environmental Resources Management

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



Mr. Monahan Conservation Administrator Wayland Conservation Commission Reference: 0033366 12 October 2005 Page 2

- Equipment is being refueled in accordance with the "Equipment Refueling Plan" provided to the Commission. Sufficient spill containment supplies are maintained at each location. Daily equipment inspections are also performed to ensure that there are no visible oil or fluid leaks/weeps from the equipment.
- Surface water quality monitoring was conducted between 17
  September and 30 September 2005 in accordance with Condition
  Number 35. The results were submitted to the Commission and are
  detailed in the Daily Reports (Appendix A).

### Items Not in Conformance with Order of Conditions During Period

 A Port-a-John was not provided as suggested in Condition 37. Site personnel use the bathrooms on-site within the building, or use offsite facilities during personnel breaks.

### Other Information

- The Daily Reports, in accordance with Condition Number 23, for 17
   September through 30 September 2005 are attached in Appendix A.
- Drilling work is complete. This will be the last inspection report submitted under this Order of Conditions. If any work related to this Order of Conditions recommences, ERM will notify the Commission.

If there are significant changes to the work plan as presented to the Commission in the Notice of Intent, ERM will contact you to provide details and discuss the changes.

If you have any questions or comments, please contact Rachel Leary at (617) 646-7841.

Sincerely

Rachel B. Leary (

Project Manager

Jeffrey J. Plante, P.E.

Professional Engineer MA License #36282 Mr. Monahan Conservation Administrator Wayland Conservation Commission Reference: 0033366 12 October 2005 Page 3

Environmental Resources Management

No. 36282

As required by Condition 48, I certify that, to the best of my knowledge, based on my observations during a site visit on 30 September 2005 and on conversations with ERM field representatives, work at the Former Raytheon Facility located at 430 Boston Post Road in Wayland, MA has, with the exception of changes noted above, been conducted in accordance with the Order of Conditions #322-0564.

> Jeffrey Plante, P.E. Professional Engineer

*MA License* #36282

Enclosures:

Figure 1 – Wetland Monitoring Well Location Map

Appendix A – Daily Reports for the Period Ending

30 September 2005

cc:

Edwin Madera, Raytheon

**Public Repositories** 

Ben Gould, CMG Environmental

Date: 9/17/05 Page 1
Report #:9

### Raytheon - Wayland Wetland Drilling Daily Report: DEP File #: 322-0564

**Project Number: 0033366** 

Prepared By: Eric J. Moore Date: 9/17/2005

Signature

Checked By: Rachel . Leary Date: 9/19/2005

Signature:

### **Project Activity:**

Wetland drilling.

### Summary of Activities ending on Saturday, 17 September 2005:

Onsite: 700 Offsite: 1230

- E. Moore on-site Boart Longyear already on-site.
- Boart on-site to perform some basic maintenance on the drill rig. Moved all trucks and equipment off of the wetland mats to avoid problems with potential rain fall.
- Boart decons pipe and rods in preparation for drilling @ B-556 on Monday.
- E. Moore covers core samples with poly sheeting and secures site for night. Boart off-site @1200 headed to Maher shop to build stand pipes. E. Moore off-site @1230.

### Anticipated Operations for next 24 hours:

No activities anticipated. Drilling to continue on Monday.

#### **Surface Water Quality Sampling:**

None taken

Location	PH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Temp. (Celsius)	Conductivity (uS/cm)
SW-1						
SW-2						
SW-3						
SW-4						
SW-5						

#### **Inspection of Erosion Barriers:**

Intact and in place. No damage to barriers noticed.

#### Equipment Type and Quantity / Companies Represented:

Roto-Sonic drill rig/ Boart Longyear Crane mounted flatbed truck/ Boart Lonyear Pickup truck/ ERM

Page 2 Report #:9 Date: 9/17/05

# Raytheon - Wayland Wetland Drilling Daily Report: DEP File #: 322-0564

Wetland Drill	ing Activities
<b>Location I.D.:</b>	<b>No Boring Data</b>

**Total Depth Advanced:** Anticipated **GPS Boring** Refusal **Refusal Depth:** 

Sample I.D.	Depth Sampled (feet)	Analysis	Sp. Cond (uS/cm)	PH (standard units)	D.O. (mg/L)	O.R.P. (mV)	Hydraulic Head	I.K.
No Water samples								

Date: 9/19/05 Page 1
Report #.10

### Raytheon - Wayland Wetland Drilling Daily Report: DEP File #: 322-0564

Project Number: 0033366

Prepared By: Eric J. Moore Date: 9/19/2005

Signature

Checked By: Rachel B. Leary Date: 9/20/2005

Signature:

# **Project Activity:** Wetland drilling.

#### Summary of Activities ending on Monday, September 19, 2005:

Onsite: 700 Offsite: 1730

- Eric Moore on-site Boart Longyear already on-site.
- Boart on-site continuing to drill in wetland area. Setting up @ B-556. Begin drilling and will drill to deep sand layer ~145-165′ bgs.
- 1030 Jeremy Picard on-site. 1100 J.D. on-site. Drill to 165′ bgs and will set deep screen @160-150′. 1230 E. Moore, John Drobinski., and J. Picard off-site to meet with Edwin Madera.
- E. Madera on-site to walk over drilling area with ERM. Describe geology on-site.
- E. Moore covers core samples with poly sheeting and secures site for night. Boart off-site @1430 headed to Maher shop to pick up supplies. E. Moore off-site @1730.

#### Anticipated Operations for next 24 hours:

Complete well installation.

#### **Surface Water Quality Sampling:**

None taken

Location	PH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Temp. (Celsius)	Conductivity (uS/cm)
SW-1						
SW-2						
SW-3						
SW-4						
SW-5						

#### **Inspection of Erosion Barriers:**

Intact and in place. No damage to barriers noticed.

#### **Equipment Type and Quantity / Companies Represented:**

Roto-Sonic drill rig/Boart Longyear Crane mounted flatbed truck/ Boart Longyear Pickup truck/ ERM

Page 2
Report #.10

# Raytheon - Wayland Wetland Drilling Daily Report: DEP File #: 322-0564

**Wetland Drilling Activities** 

Location I.D.: B-556

GPS/Boring Total Depth Advanced: Anticipated Refusal Refusal Depth:

Location: Depth to Encountered:

Bedrock:

B-556 135'-165' 195'

Sample I.D.	Depth Sampled (feet)	Analysis	Sp. Cond (uS/cm)	PH (standard units)	D.O. (mg/L)	O.R.P. (mV)	Hydraulic Head	I.K.
No Water samples								

Date: 9/20/05 Page 1
Report #:11

### Raytheon - Wayland Wetland Drilling Daily Report: DEP File #: 322-0564

Project Number: 0033366

Prepared By: Eric J. Moore Date: 9/20/2005

Signature

Checked By: Rachel B. Leary Date: 9/21/2005

Signature:

#### **Project Activity:**

Complete well installation.

#### Summary of Activities ending on Tuesday, September 20, 2005:

Onsite: 700 Offsite: 1330

- Eric Moore on-site Boart Longyear already on-site.
- Boart on-site completing installation of shallow well @ MW-556.
- E. Moore logging sediment core from B-556.
- Boart Longyear cleaning up drilling locations and deconing all equipment in preparation to leave site. Boart will develop wells and leave site on 9/21/05.
- E. Moore covers core samples with poly sheeting and secures site for night. Boart off-site @1320. E. Moore off-site @1330.

#### Anticipated Operations for next 24 hours:

Well development.

#### **Surface Water Quality Sampling:**

None taken

Location	PH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Temp. (Celsius)	Conductivity (uS/cm)
SW-1						
SW-2						
SW-3						
SW-4						
SW-5						

#### **Inspection of Erosion Barriers:**

Intact and in place. No damage to barriers noticed.

#### **Equipment Type and Quantity / Companies Represented:**

Roto-Sonic drill rig/Boart Longyear Crane mounted flatbed truck/Boart Longyear Pickup truck/ ERM

Page 2 Report #:11 Date: 9/20/05

# Raytheon - Wayland Wetland Drilling Daily Report: **DEP File #: 322-0564**

Wetland	Drill	ing	Activities
Location	LD.:	No	Borings

**Total Depth Advanced:** Anticipated **GPS Boring** Refusal **Refusal Depth:** 

Sample I.D.	Depth Sampled (feet)	Analysis	Sp. Cond (uS/cm)	PH (standard units)	D.O. (mg/L)	O.R.P. (mV)	Hydraulic Head	I.K.
No Water samples	,		, ,	,				

Date: 9/21/05 Page 1
Report #:12

### Raytheon - Wayland Wetland Drilling Daily Report: DEP File #: 322-0564

Project Number: 0033366

Prepared By: Eric J. Moore Date: 9/21/2005

Signature

Checked By: Rachel B. Leary Date: 9/22/05

Signature:

#### **Project Activity:**

Demobilization activities

#### Summary of Activities ending on Wednesday, September 21, 2005:

Onsite: 700 Offsite: 1645

- Eric Moore on-site Boart Longyear already on-site.
- Boart on-site developing well clusters in wetland area.
- E. Moore cleaning up work area. Show Boart the location to dispose of development water upgradient of source area.
- Boart Longyear cleaning up all areas and preparing to leave site. Will pick up trucks in morning.
- E. Moore covers core samples with poly sheeting and secure site for night. Boart off-site @1320. E. Moore off-site @1330.

### **Anticipated Operations for next 24 hours:**

None scheduled

#### **Surface Water Quality Sampling:**

None taken

Location	PH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Temp. (Celsius)	Conductivity (uS/cm)
SW-1						
SW-2						
SW-3						
SW-4						
SW-5						

#### **Inspection of Erosion Barriers:**

Barriers removed. Work complete.

#### **Equipment Type and Quantity / Companies Represented:**

Roto-Sonic drill rig/Boart Longyear Crane mounted flatbed truck/ Boart Longyear Pickup truck/ ERM

Page 2 Report #:12 Date: 9/21/05

# Raytheon - Wayland Wetland Drilling Daily Report: **DEP File #: 322-0564**

Wetland	Drill:	ing	Activities
Location	I.D.:	No	Borings

**Total Depth Advanced:** Anticipated **GPS Boring** Refusal **Refusal Depth:** 

Sample	Depth	Analysis	Sp.	PH	D.O.	O.R.P.	Hydraulic	I.K.
I.D.	Sampled		Cond	(standard	(mg/L)	(mV)	Head	
	(feet)		(uS/cm)	units)				
No Water								
samples								
1								

Page 1
Report #:13

### Raytheon - Wayland Wetland Drilling Daily Report: DEP File #: 322-0564

Project Number: 0033366

Prepared By: Eric J. Moore Date: 9/23/2005

Signature

Checked By: Rachel B. Leary Date: 9/23/2005

Signature:

#### **Project Activity:**

Surveying wetland wells and surface water sampling.

#### Summary of Activities ending on Friday, September 23, 2005:

Onsite: 800 Offsite: 1530

• E. Moore on-site waiting for Chas H. Sells to arrive to survey in new wetland wells.

- 0830 Sells arrives on-site. Show them the location of the wells and the 551, 552, 553 wells to be surveyed.
- Rachel and Jeff on-site to perform PE inspection.
- 0930 Rachel and Jeff off-site.
- E. Moore conducting surface water quality readings.
- E. Moore cleaning up work areas and consolidating trash for disposal.
- 1530 E. Moore off-site, Sells will remain on-site to complete survey.

#### Anticipated Operations for next 24 hours:

None scheduled

#### **Surface Water Quality Sampling:**

Post drilling

Location	PH	Dissolved	Turbidity	ORP	Temp.	Conductivity		
		Oxygen (mg/L)	(NTU)	(mV)	(Celsius)	(uS/cm)		
SW-1	7.06	7.83	3.0	-	21.17	385		
SW-2			DRY					
SW-3		DRY						
SW-4	6.66	6.53	3.4	-	20.32	391		
SW-5	6.90	6.75	5.3	-	20.34	377		

#### **Inspection of Erosion Barriers:**

Barriers removed. Work complete.

#### **Equipment Type and Quantity / Companies Represented:**

Pickup truck/ ERM

Page 2 Report #:13 Date: 9/23/05

# Raytheon - Wayland Wetland Drilling Daily Report: **DEP File #: 322-0564**

Wetland	Drill	ing	Activities
Location	LD.:	No	Borings

**Total Depth Advanced:** Anticipated **GPS Boring** Refusal **Refusal Depth:** 

Sample	Depth	Analysis	Sp.	PH	D.O.	O.R.P.	Hydraulic	I.K.
I.D.	Sampled		Cond	(standard	(mg/L)	(mV)	Head	
	(feet)		(uS/cm)	units)				
No Water								
samples								

Date: 9/30/05 Page 1
Report #:14

### Raytheon - Wayland Subsurface Investigation Daily Report: DEP File #: 322-0564

Project Number: 0033366

Prepared By: Eric J. Moore Date: 9/30/05

Signature

Checked By: Jeremy Picard Date: 9/30/05

Signature:

### **Project Activity:**

Surface water sampling.

Summary of Activities ending on Friday, September 30, 2005:

Onsite: 1000 Offsite: 1500

- Jeff Plante on-site for weekly PE inspection
- E. Moore and L. Riley on-site to conduct post activity surface water quality readings. Start @ SW-1, then SW-2 and SW-3, finish with SW-4 and SW-5.
- Collect all readings and leave site.

### **Anticipated Operations for next 24 hours:**

None

#### **Surface Water Quality Sampling:**

Post Activity

Location	pН	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Temp. (Celsius)	Conductivity (uS/cm)	
SW-1	7.39	7.91	3.4	-	16.62	343	
SW-2		DRY					
SW-3		DRY					
SW-4	7.10	8.26	3.9	-	16.34	340	
SW-5	7.25	8.87	6.1	-	14.45	355	

#### **Inspection of Erosion Barriers:**

NA

#### **Equipment Type and Quantity / Companies Represented:**

ERM Truck

Page 2 Report #:14 Date: 9/30/05

# Raytheon - Wayland **Subsurface Investigation Daily Report:** DEP File #: 322-0564

Vertical Profiling Activities	
Location I.D.:	

Anticipated Depth to Bedrock: **GPS Boring Total Depth Advanced:** Refusal **Refusal Depth:** 

**Location: Encountered:** 

Sample	Depth	Analysis	Sp.	PH	D.O.	O.R.P.	Hydraulic	I.K.
I.D.	Sampled		Cond	(standard	(mg/L)	(mV)	Head	
	(feet)		(uS/cm)	units)				
No								
samples								

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Report #:14

# Raytheon - Wayland Subsurface Investigation Daily Report: DEP File #: 322-0564

Photos: Site conditions after matt removal

Date: 9/30/2005





Well Access Road



View toward well MW-554



View toward well MW-555

View toward well MW-556