

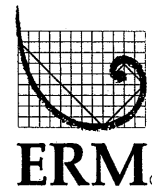
**Environmental  
Resources  
Management**

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

<http://www.erm.com>

24 November 2004  
Reference: 0013606

Mr. Benson R. Gould  
CMG Environmental, Inc.  
600 Charlton Street  
Southbridge, MA 01550



Re: Response to Public Comments  
Draft Phase IV Completion Report  
Former Raytheon Facility  
430 Boston Post Road  
Wayland, Massachusetts (the "Site")  
RTN 3-13302; Tier IB Permit No. 133939

Dear Mr. Gould:

On behalf of Raytheon Company (Raytheon), Environmental Resources Management (ERM) has prepared this letter providing responses to comments prepared by CMG Environmental, Inc. (CMG), consultant to the Town of Wayland, regarding the Draft Phase IV Completion Report, dated 6 October 2004. CMG's comment letter, dated 5 November 2004, contains four comments. This response letter includes each comment in italics and responses in plain text.

**CMG's Comments:**

*I) On Page 10, ERM indicates this Draft Phase IV comprises an As-Built Construction Report per 310 CMR 40.0875, a Final Inspection Report per 40.0878, and a Completion Statement per 40.0879. One of the requirements of a Phase IV As-Built Construction Report [cf. 40.0875(2)(c)] is to document "any significant modifications... of the Comprehensive Remedial Action."*

*Wayland Conservation Commission records indicate they believe Raytheon and ERM made several 'significant modifications' to the wetland remediation conducted at the Site, including:*

*As of February 2004 some 3,500 square feet of an area outside the approved work area for construction of the 'Limited Project' for remediation. Raytheon had excavated these wetland soils to construct an earthen berm for flood control. The*

*Order of Conditions for this project specifically authorized flood control using a water-filled berm. Furthermore, ERM had in previous permitting applications stated that "Traditional flood protection methods such as earthen berms will be avoided, as they would require extensive construction to build and dismantle, creating additional adverse environmental impacts" (May 2003 Single Environmental Impact Report and Notice of Intent).*

*Section 2.3.2 of the draft Phase IV report (page 9) provides a summary description of earthen berm construction and does indicate that this activity was a modification of the Remedy Implementation Plan. Although ERM indicates this modification is acceptable to the DEP Water Quality Certification, they do not mention discussions on this topic in March 2004 with the Wayland Conservation Commission (who did not agree on its acceptability with respect to the September 26, 2003 Order of Conditions, as amended February 10, 2004). In light of this disagreement, Wayland questions whether Raytheon has yet achieved "appropriate modifications" to the remedial plan in accordance with 310 CMR 40.0878(2)(a).*

Raytheon and ERM agree with the Town of Wayland Conservation Commission (Commission) that modifications were made during implementation of the wetland remediation project. These modifications, presented in the Phase IV Completion Report, were required to assure that the Comprehensive Remedial Action met the project design standards.

As detailed in Inspection Report #10, dated 27 February 2004, an earthen berm was constructed in response to severe weather conditions that rendered the Aqua Dam ineffective for the following reasons:

- Sudbury River water elevation rose above the Aqua Dam (Inspection Report #5, dated 19 December 2003); and
- Sub-freezing weather conditions (Inspection Report #9, dated 13 February 2004).

An earthen berm was constructed around Areas A and C to prevent flooding of the excavated area after removal of the Aqua Dam in February 2004. The material to construct the berm around the western side of Area C was taken from a 1 foot wide by 300 foot long trench dug outside the remedial area, in locations considered to be "clean." The material for the berm in Area A was taken from the bottom of Area A after the excavation was determined to be "clean." The berm was removed from the perimeter of Area C and the material replaced in the

trench on 20 February 2004. An approximate 3,500 square feet area was temporarily disturbed as a result of these activities.

ERM has modified the Final Phase IV Completion Report text to include the following, "ERM believed it was necessary to construct earthen berms as a last measure to enable continuation of excavation activities, even though the Phase IV Remedy Implementation Plan indicated that they would be avoided."

*Most seriously, the Town is concerned that the following statement recorded in Section 3.0 of the draft Phase IV Report (page 27) may be misleading:*

*In the opinion of the LSP, the wetland remediation was implemented in accordance with the Phase IV RIP (ERM, 2002b) and the federal, state, and local permits. Some modifications were required to assure that the Comprehensive Remedial Action met the project design standards.*

*Since it is not evident that the Wayland Conservation Commission agrees that Raytheon has satisfied all the Order of Conditions, as amended and applicable to date, the Town of Wayland does not believe Raytheon has fully implemented the wetland remediation in accordance with local permits.' We urge that Raytheon continue discussions with the Wayland Conservation Commission to reach concurrence with this objective.*

Raytheon and ERM appreciate the Town's concern regarding the completion of Phase IV activities. Representatives of Raytheon and ERM attended the Commission meeting on 26 August 2004 and provided an update on wetland remediation activities to the Commission. ERM submitted a letter to the Commission, dated 15 October 2004, providing additional information requested at the 26 August 2004 meeting. Raytheon and ERM conducted a Public Involvement Plan meeting on 6 October 2004 and have responded to all information requests received from the Commission and we are unaware of any outstanding requests. ERM submitted Inspection Report # 17 (Final), dated 19 November 2004, detailing the completion of wetland remediation project activities. Raytheon and ERM will continue to work with the Commission regarding the active Order of Conditions.

ERM has modified the LSP opinion statement to read "In the opinion of the LSP, the wetland remediation was implemented in accordance with the Phase IV RIP and the federal and state permits. One Notice of Violation was received from the Commission. Raytheon responded to this Notice of Violation as detailed in this report (Section 2.3.2). Some

modifications were required to assure that the Comprehensive Remedial Action met the project design standards. As a result of Comprehensive Remedial Action, the remediation goals have been met.”

*II) Another (less egregious) modification to Site wetlands remediation involved replacement of an approximately 110-foot section of corroded stormwater discharge pipe that led from the wastewater treatment facility at the property to outfall OF-1 in the remediation area. Raytheon replaced the corroded stormwater discharge pipe due to an emergency situation in November 2003. The Wayland Conservation Commission issued their February 10, 2004 Amendment to the September 26, 2003 Order of Conditions to retroactively approve these activities, with conditions. Wayland believes that for completeness, the Phase IV As-Built Construction Report should discuss this process per 310 CMR 40.0875(2)(c) and (d).*

Raytheon and ERM appreciate the Commission’s retroactive approval of replacement of outfall OF-1. The following text has been included in the Final Phase IV Completion Report: “The Town of Wayland Conservation Commission retroactively approved the repair of outfall OF-1 in an addendum, dated 10 February 2004, to the Order of Conditions.”

*A third (relatively minor) wetlands remediation modification was removal of ice from the remediation area in January 2004 using several track-mounted excavators. Section 2.4.1 of the draft Phase IV report (page 11) provides a summary description of ice removal operations, but does not identify these as a 'significant modification' to Site remediation activities. The Town requests that Raytheon note this as a 'significant modification' in the final Phase IV report.*

Raytheon and ERM disagree with the Town’s opinion that the ice removal operations be identified as a ‘significant modification.’ As stated in the response to Comment I, modifications were made during implementation of the wetland remediation project to assure that the Comprehensive Remedial Action met the project design standards. Raytheon and ERM believe that qualifying the level of modification is inappropriate. However, Raytheon and ERM will continue to work closely with the Commission to address this concern.

III) On Page 10, the Draft Phase IV presents three statements as fact:

- Figure 3 depicts the actual area of wetland excavation,
- Raytheon had each of the three areas excavated to between depth, and 1.5 and 2 feet in depth, and
- There was a total of 7,955 cubic yards of wetland soil/sediment removed.

Based on the excavation area as depicted on Figure 5 (which appears to depict exactly the same excavation areas as Figure 3, but at an expanded scale), I measure the excavated Area A as comprising 2,528± square feet, Area B as 9,286± square feet, and Area C as 69,691± square feet. This totals approximately 81,505 square feet (about 1.871 acres). Multiplying this area by 1 1/2 feet yields 4,528± cubic yards; multiplying by 2 feet yields 6,037± cubic yards. The stated volume excavated is 76% and 32% greater than these two calculated values, respectively.

Thus it seems there is a significant inaccuracy in one of the statements presented as fact in this paragraph of the draft Phase IV. Either Raytheon excavated a substantially larger area than mapped in Figures 3 and 5, or you excavated on average over 2.6 feet deep, or ERM has included material in the total volume removed that did not come from the three wetland areas. The first of these three possibilities is potentially the most troublesome. The U.S. Army Corps of Engineers wetland permit for the Site (Permit No. 200300294, issued on September 19, 2003 pursuant to Section 404 of the Clean Water Act) authorized "placement of fill within approximately 1.7 acres of wetlands." As you will recall, the Army Corps indicated that a 'significant' increase in the area addressed would require Raytheon to submit an amended Section 404 permit application, and they subsequently defined 'significant' as a 0.5 acre increase (i.e., to 2.2 acres or more). Should the total volume value be correct and the wetlands excavated to an average of 2 feet, then the actual area excavated would be 2.46 acres, well above the Army Corps' 'significant' threshold.

Wayland realizes that ERM intends the figures presented in the draft Phase IV to be illustrations rather than engineered plans. We also realize that surficial relief in the wetlands (both prior to and following excavation) varied by at least one foot. The Town also observed some excavation in the southeast portion of Area C to extend substantially deeper than two feet below the original grade. Wayland requests that Raytheon have ERM re-examine their field measurement notes and revise this section of the Phase IV for accuracy.

Raytheon and ERM understand the Town's concern regarding the excavation area. Figures 3 and 5 of the Draft Phase IV Completion Report present the final surveyed excavation area. According to the survey, the square footage of each excavated area was as follows:

- Area A = 3,151.5 square feet
- Area B = 9,623.9 square feet
- Area C = 76,052.6 square feet

The total area excavated is 88,828 square feet, which is 2.04 acres. This area is more than originally estimated but was within the Army Corps of Engineers wetland permit and was necessary to achieve project clean-up goals. The volume estimate from page 10 of the Draft Phase IV was 7,955 cubic yards. This volume was calculated using the pre- and post-excavation survey contours. Additionally, the volume excavated was calculated at 8,076 cubic yards using daily excavation logs, presented in Table 1 of the Draft Phase IV Completion Report. These volume estimates are within 1.5 percent of each other. ERM divided the excavation volume of 8,000 cubic yards by the surveyed excavation area of 88,828 square feet and determined that the average excavation depth was actually 2.4 feet. The Final Phase IV Completion Report text was modified accordingly.

*IV) On page 16, the draft Phase IV indicates that "Management of ... remedial waste... will be concluded with the last wetland soil/sediment that will be removed from the staging area in Fall 2004." Page 25 of the draft Phase IV provides further details: "An additional six inches of soil was excavated from these cells on 26 August 2004. The excavated soil was stockpiled and covered with plastic and will be transported off-site and disposed of in Fall 2004." Wayland understands that the referenced soil consists of less than 15 cubic yards of material removed from the access road post-excavation sample GRA-5 area and the remediation waste staging post-excavation sample SPA-2 area.*

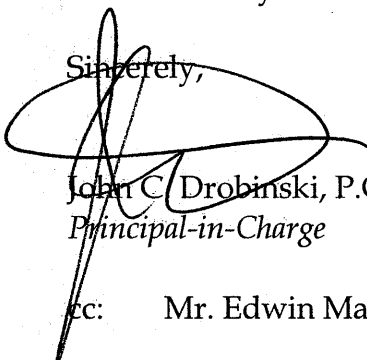
*The MCP does allow submittal of a Phase IV Completion Statement when remediation waste remains at the disposal site [provided that the Potentially Responsible Party indicates that Phase V will include proper disposition of this remediation waste; see 310 CMR 40.0879(2)(c)]. However, given that ERM has documented off-Site transport of 10,039 cubic yards of soil/sediment, asphalt, gravel sub-base, and haul road gravel from the Site in the draft Phase IV, cannot Raytheon wait long enough to include documentation of the last ~ 15 cubic*

*yards in the final Phase IV? The Town believes that this represents a more defensible endpoint for the Phase IV Completion Statement.*


Raytheon and ERM agree with the Town that it is appropriate to submit the Final Phase IV Completion Report following transport of the remaining soil from the Site. As such, the remaining 15 cubic yards of soil were transported off-Site on 27 October 2004. ERM submitted an Inspection Report # 17 (Final), dated 19 November 2004, detailing this activity to the Commission. The Final Phase IV Completion Report includes the Bill of Lading and text documenting this activity.

If you have any questions or comments please, contact Mr. Edwin Madera of Raytheon at (978) 440-1813.

Sincerely,



John C. Drobinski, P.G., LSP  
Principal-in-Charge



Jeremy J. Picard, P.G.  
Project Manager

cc: Mr. Edwin Madera, Raytheon Company, Sudbury, MA 01776

Public Repository, Wayland Public Library, Wayland, MA 01778

Public Repository, Board of Health Office, Wayland, MA 01778

Ms. Karen Stromberg, Massachusetts Department of  
Environmental Protection - Northeast Region, One Winter Street,  
Boston, MA 02108