

CMG ENVIRONMENTAL, INC.

June 22, 2006

Mr. Louis J. Burkhardt III
Raytheon Company
528 Boston Post Road
Mail Stop 1880
Sudbury, MA 01776

**Re: Public Commentary on Draft Phase IV – Remedy Implementation Plan
Former Raytheon Facility, 430 Boston Post Road, Wayland MA
CMG ID 2002-003**

Dear Mr. Burkhardt:

The following is my public commentary on the May 17, 2006 Draft Phase IV Remedy Implementation Plan (RIP) for the former Raytheon facility in Wayland, Massachusetts (the Site) regarding Massachusetts Department of Environmental Protection (DEP) release tracking number (RTN) 3-22408, prepared by Environmental Resources Management (ERM). For the record, the Wayland Board of Selectmen has retained me to provide technical review of document submittals and other activities at the Site on behalf of the Town of Wayland, especially those that pertain to compliance with DEP requirements.

As in past document reviews, I have prefaced my comments with ERM's heading designations (where applicable) for ease of comparison, and used uppercase roman numerals to identify each comment. I also limited comments to what I believe are substantive issues. Despite these few issues, please be aware that I am in general agreement with the remedial strategy for the Site proposed by Raytheon and prepared by ERM.

2.2 ADDITIONAL SITE ASSESSMENT ACTIVITIES

2.2.1 Soil

Results

I) On Page 8 of the draft RIP, ERM notes detection of the semi-volatile organic compound (SVOC) 2,4,5-trichlorophenol in a toxicity characteristic leaching procedure (TCLP) extract. Prior investigation of the Northern Area had not identified this compound as a contaminant of concern. Table 2 indicates that the TCLP extract was of soil sample SB-529 [10-15']. ERM did not request total SVOC analysis of this sample, but they did have soil sample SB-522 [10-15'] analyzed for total SVOCs via EPA Method 8270C. Figure 5 (Northern Area Soil Boring Results) indicates soil boring B-529 was the same location as membrane interface probe sampling point MIP-529, and is about 12 feet north of boring B-522.

It would be reasonable for ERM to assume that soil samples collected at a depth of 10-15 feet below grade so close together would be essentially identical (all other things being equal). However, since TCLP testing involves a 20-fold dilution of soil into pH-adjusted extraction water, the TCLP result of 28 µg/L implies a total 2,4,5-trichlorophenol concentration in soil sample SB-529 [10-15'] of at least 560 µg/Kg (0.56 mg/Kg), and likely significantly higher (since it is improbable that TCLP extraction would leach 100% of this SVOC out of the soil

sample). Nonetheless, total SVOC analysis of soil sample SB-522 [10-15'] identified no 2,4,5-trichlorophenol above the laboratory reporting limit of 440 µg/Kg (0.44 mg/Kg).

The applicable (RCS-1) reportable concentration standard for 2,4,5-trichlorophenol is 3 mg/Kg. The Town of Wayland is concerned that there may be a reportable concentration of this SVOC present at depth in the chlorinated volatile organic compound (CVOC) release source area. Therefore, Wayland requests that Raytheon address this concern by analyzing future soil samples collected from the CVOC source area for SVOCs via EPA Method 8270C. The Town also requests Raytheon analyze groundwater in the CVOC source area for SVOCs via EPA Method 8270C.

2.4 RELEVANT CONTACTS

II) The list of contact persons tabulated on Page 12 of the draft RIP does not provide telephone numbers for the responsible party (RP) and Licensed Site Professional (LSP), as specifically required by DEP regulations set forth at 310 CMR 40.0874(3)(a). This table provides no contact person for Wayland Meadows Limited Partnership, owner of parcel 23-52D. In addition, this table does not identify “those persons who will own, operate and/or maintain the selected remedial action alternative during and following construction” as required by 310 CMR 40.0874(3)(a)3.

Wayland requests that Raytheon provide telephone numbers for Mr. Louis J. Burkhardt (for Raytheon, the RP) and Mr. John C. Drobinski (the LSP of record) in this table, and name a contact person for Wayland Meadows Limited Partnership. The Town also requests that Raytheon and ERM explicitly state who will own, operate, and maintain the proposed cofferdam structures, dewatering treatment facility, and remedial additive injection system discussed in Sections 4.0 and 5.0 of the draft RIP.

3.1 IMPACTED AREAS

3.1.2 Groundwater

III) On Page 14 of the draft RIP, ERM notes detection of chloroform in well MW-556S in the September and October 2005 sampling rounds above the applicable (RCGW-1) reportable concentration standard, but not in later testing. ERM further states that Raytheon did not submit a release notification form to DEP to report this condition.

The RCGW-1 reportable concentration standard for chloroform is 0.005 mg/L (5 µg/L). According to Table 8 of the December 16, 2005 Phase II – Comprehensive Site Assessment report for RTN 3-22408, testing identified 9.1 µg/L chloroform in the groundwater sample collected from well MW-556S on September 27, 2005 and 5.9 µg/L in the sample collected on October 28, 2005. Table 7 of the draft RIP report (Summary of Groundwater VOC Analytical Results) does not list chloroform; laboratory data sheets included electronically in Appendix C indicate that the sample collected from MW-556S on April 6, 2006 did not exhibit any chloroform above the laboratory reporting limit of 0.75 µg/L.

DEP regulations set forth at 310 CMR 40.0317(14) specify that reporting is not necessary if apparent reportable concentration exceedances are the result of sampling, analytical, or observational error(s), as established through additional sampling or preponderance of evidence. Since the October 2005 testing confirmed the RCGW-1 exceedance for chloroform in well MW-556S identified by the September 2005 testing, Wayland does not believe that Raytheon can assert a notification exemption per 310 CMR 40.0317(14), regardless of the April 2006 results.

DEP provides another reporting exemption specific to chloroform at 310 CMR 40.0317(20) if the otherwise reportable condition is due to naturally-occurring ecological processes (or leakage/discharge from a public water supply system). ERM does not provide any technical justification in the draft RIP for Raytheon to assert this particular notification exemption.

The Town requests that Raytheon either provide sufficient technical justification to assert the notification exemption set forth at 310 CMR 40.0317(20), or else provide DEP with a proper (if tardy) release notification for identification of chloroform in groundwater at well MW-556S in September 2005.

4.4 IMPLEMENTATION PROGRAM

4.4.3 Inspections and Monitoring

IV) This subsection of the draft RIP (see Page 25) asserts that Section 4.3 describes inspection and monitoring of the excavation. While Section 4.3 (Operation Parameters) does include a subsection on structural monitoring (4.3.2, Page 24), there is no information presented in Section 4.3 regarding excavation inspections.

The proposed cofferdam construction involves driving sheet piling and casting concrete walers to support the walls of the rather deep soil excavation. Such construction is not uncommon, but carries a substantial safety risk if not conducted properly. Therefore, Wayland requests that Raytheon provide “a general description of inspections ... which will be performed to ensure adequate construction and performance” in conformance with 310 CMR 40.0874(3)(b)11.

5.3 DESIGN AND IMPLEMENTATION

5.3.1 Pre-Remedial Design Activities

V) The inset to Figure 8 (Site Features and Proposed Work Areas) depicts both the location of proposed cofferdam structures and Northern Area sampling locations. These structures would encompass the following sampling points:

East Cofferdam (80-foot diameter)

- Monitoring wells MW-262S, MW-262M & MW-262D;
- Waterloo profiler locations WP-515, WP-520, WP-529, WP-530 & WP-534;
- Soil boring locations B-243, B-244, B-246, B-250, B-251, B-252, B-255, B-256, B-257, B-531B, B-534A, B-534B & B-522A; and
- Membrane interface probe locations MIP-515, MIP-516, MIP-518, MIP-519, MIP-520, MIP-521, MIP-522, MIP-524, MIP-525, MIP-529, MIP-530, MIP-531, MIP-532, MIP-533, MIP-534, MIP-535 & MIP-543.

West Cofferdam (60-foot diameter)

- Waterloo profiler locations B-241, B-242 & WP-515;
- Soil boring locations B-246, B-247, B-248, B-252, B-253, B-254, B-259 & B-260; and
- Membrane interface probe locations MIP-503, MIP-504, MIP-506, MIP-507, MIP-509, MIP-510, MIP-511, MIP-512, MIP-513, MIP-514, MIP-515, MIP-516, MIP-518, MIP-539 & MIP-543.

Monitoring well MW-261S appears to be located within 3 feet of the proposed location of the west (60-foot) cofferdam, and well MW-552 appears to be within 7 feet of this proposed structure. Therefore, construction of the second (west) cofferdam would likely destroy both of these monitoring wells.

On Page 29 of the draft RIP, ERM indicates that they intend to use wells MW-261S and MW-552 (among others) to monitor bioremediation effectiveness. ERM also notes (below the table on the same page) that they may install additional monitoring wells to replace any destroyed by source area soil excavation.

The Town requests that ERM and Raytheon provide a technical rationale for which monitoring wells would be replaced if destroyed by soil excavation. Furthermore, Wayland requests that at a minimum, Raytheon commit to placing monitoring wells in the excavation area after backfilling, with at least one well screened in the replacement fill saturated soil zone and one well screened from the bottom of excavation to 10 feet below it. The purpose of these wells would be to monitor for post-excitation contaminant rebound in the CVOC source area.

5.4 IMPLEMENTATION PROGRAM

5.4.6 Required Permits

VI) On Page 32 of the draft RIP, ERM notes that bioremediation activities will not require any DEP permit to complete pursuant to 310 CMR 40.0046. However, ERM does not here discuss whether injection of remedial additives within and proximate to a mapped area of bordering vegetative wetland would require approval from the Wayland Conservation Commission [cf. 310 CMR 40.0874(3)(f)].

The Town requests that Raytheon provide a discussion of their plan to bring this matter before the Wayland Conservation Commission, and obtain proper approval for injection of remedial additives, if necessary.

Appendix D (Design Calculations)

VII) Appendix D of the draft RIP does not contain any design calculations, merely an otherwise-blank page that states “To be inserted in final report.” This is an omission relative to DEP regulations set forth at 310 CMR 40.0874(3)(b)6.a.

Wayland requests an opportunity to review (and as appropriate, comment) on whatever design calculations Raytheon intends to place in Appendix D in the final Phase IV RIP in accordance with the time frames provided in the Site PIP Plan.

Appendix F (Spill Prevention Control and Countermeasures Plan)

VIII) The SPCC Plan included as Appendix F to the draft RIP is specific to remediation activities Raytheon previously carried out in the Southern and Western areas of the Site (RTN 3-13302, Tier IB Permit No. 133939) rather than the subject Northern Area remediation. This SPCC Plan does not discuss dewatering activities related to the proposed deep excavation in the Northern Area, nor the proposed remedial additive injection system proposed for this portion of the Site.

Wayland requests that Raytheon and ERM prepare an SPCC Plan that is specific to the remediation discussed in the Phase IV RIP for RTN 3-22408 (Tier IB Permit No. W045278) and meets the requirements set forth at 310 CMR 40.0874(3)(b)7.

As always, I thank you in advance for your timely response to this commentary on behalf of the Town of Wayland.

Sincerely,
CMG ENVIRONMENTAL, INC.



Benson R. Gould, LSP, LEP
Principal

cc: Environmental Resources Management (John C. Drobinski, P.G., LSP)
Mr. J. Andrew Irwin, Wayland
Ms. Anette Lewis, Wayland
Massachusetts DEP (Pat Donahue, Larry Immerman, Karen Stromberg)
National Parks Service (% Jamie Fosberg)
Mr. Lewis Russell, Wayland
Mr. Harvey & Ms. Linda Segal, Wayland
Ms. Kimberly Tisa, U.S. EPA Region I
Wayland Board of Health PIP Repository (% Steve Calichman, Health Director)
Wayland Board of Selectmen (% Town Administrator Frederick Turkington)
Wayland Business Center, LLC (% Paula Phillips, Congress Group Ventures)
Wayland Conservation Commission (% Brian Monahan)
Wayland Public Library PIP Repository (% Ann Knight)