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25 April 2005
Reference: 0026895

Massachusetts Department of Environmental Protection
Northeast Region
One Winter Street
Boston, MA 02108

Re: Response to Public Comments
Draft Phase II Comprehensive Site Assessment - Scope of Work
Former Raytheon Facility
430 Boston Post Road
Wayland, Massachusetts (the "Site")
RTN 3-22408; Tier IB Permit No. W045278

Dear Department Representative:

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 and Ms. Linda Segal, regarding the Draft Phase II Comprehensive Site Assessment - Scope of Work (Phase II SOW), dated 8 March 2005. CMG's comment letter, dated 11 April 2005, contains four comments, and Ms. Linda Segal's letter, dated 14 April 2005 contains one comment. This response letter includes each comment in italics and responses in plain text.

CMG's Comments:

I) On Page 1 of the Draft Phase II SOW, ERM defines "the Site" (DEP 'disposal site' for RTN 3-22408) as limited to the property boundaries of the two parcels that comprise the former Raytheon facility plus the former Hamlen parcel. This is entirely adequate for delineation of the arsenic reporting condition in the 'Western Area' wetlands, and may be sufficient for the MTBE reporting condition in the 'Southern Area.' However, studies ERM has conducted to date clearly demonstrate that chlorinated volatile organic compounds (VOCs) have migrated beyond the parcel property boundary in the Northern Area. To wit, ERM has reported chlorinated VOCs in off-Site sampling points as tabulated on the following page ("B" series modified Waterloo sampler results are from ERM field investigations conducted February through April 2004; "DEP" series temporary sampling points are from DEP sampling and screening analyses conducted December 2001 through April 2002).

CHLORINATED VOCS
OFF-SITE (ug/L)

SAMPLE LOCATION	PCE	TCE	cDCE	VC
B-411	0.78	6.0	8.1	BRL
B-412	3.9	45	130	4.9
B-413	38	850	1,600	BRL
B-414	BRL	2.2	13	1.7
B-417	BRL	0.56	8.2	BRL
B-419	BRL	BRL	4.7	BRL
B-422	BRL	BRL	2.8	BRL
DEP-10(S)	BRL	3.4	4.8	NT
DEP-20	1.1	12	6.2	NT
DEP-21	2.3	146	52	NT

PCE = TETRACHLOROETHENE; TCE = TRICHLOROETHENE; cDCE = cis-1,2-DICHLOROETHENE; VC = VINYL CHLORIDE; BRL = BELOW LABORATORY REPORTING LIMIT; NT = NOT TESTED FOR THAT PARAMETER

Wayland does not assert that all of these sample points must be included in the definition of 'Site' since some of the detections are clearly discontinuous and de minimus. However, the Town believes that, at a minimum, sample points B-411, B-412, B-413, DEP-20, and DEP-21 should be included because together they form a contiguous area north of the property boundary, and individually they each exhibit one or more exceedances of the applicable GW-1 groundwater criteria.

Raytheon and ERM agree with the Town's assertion that the disposal site boundary in the Northern Area extends across the northern property line of the Former Raytheon Facility, based on the detection of chlorinated volatile organic compounds (CVOCs) in groundwater north of the property line. The disposal site boundaries presented in the Phase II SOW were not modified from those presented in the Phase I –

Initial Site Assessment (Phase I), dated 17 December 2003.

The analytical data for the Waterloo Profiler "B" series borings was provided to the Town by Raytheon to address the Town's concerns regarding the potential for CVOC impacts on the Baldwin Pond Wellfield. The data will be presented in the Phase II Comprehensive Site Assessment report, due to the Massachusetts Department of Environmental Protection (Department) in December 2005, and will be used to redefine the disposal site boundary at that time.

II) *On Page 9 of the Draft Phase II SOW, ERM asserts that "the presence of arsenic in soil samples, especially samples collected within or near the wetlands, is prevalent and naturally occurring." Wayland agrees that this is very likely the case, but requests that Raytheon provide a suitable citation to published information to properly document that arsenic is 'prevalent and naturally-occurring' in the region.*

In the Phase I report, Raytheon and ERM provided information on the occurrence of naturally occurring arsenic in soil and groundwater (see Section 5.4.1). ERM has identified the following references regarding the presence of arsenic in soil and groundwater in the region:

Ayotte, J. D., M. G. Nielson, G. R. Robinson, Jr., and R. B. Moore. 1999. *Relation of Arsenic, Iron, and Manganese in Ground Water to Aquifer Type, Bedrock Lithogeochemistry, and Land Use in the New England Coastal Basins.* Water-Resources Investigations Report 99-4162, United States Geological Survey.

Ayotte, J. D., D. L. Montgomery, S. M. Flanagan, and K. W. Robinson. 2003. *Arsenic in Groundwater in Eastern New England: Occurrence, Controls, and Human Health Implications.* Environmental Science and Technology. Vol. 37: 2075-2083.

Doherty, Kevin A., Hon, Rudolph, Stein, Carol L., and McTique, David F. 2001. *Naturally Occurring Arsenic in Overburden in Central Massachusetts.* GSA Annual Meeting, November 2001, Paper Number 77-0

III) *On Page 12 of the Draft Phase II SOW, ERM notes that "historically, the area has been filled," The Town requests that Raytheon provide an approximate date of when this filling occurred, as it is relevant to the likely time that chlorinated VOC contamination has existed in 'Northern Area' groundwater.*

ERM believes that the Northern Area was filled between 1969 and 1988. There are no historical records indicating when filling occurred. The

Phase I includes a summary of the Land Disposal History (Section 3.4.1) for Release Tracking Number 3-22408. An extract from Section 3.4.1 is presented below:

Based on a review of historic aerial photographs from 1936 through 1988, potential filling activities and potential land disposal areas were identified at the following locations and periods:

- Comparison of aerials from 1936 to 1957 indicates portions of the wetlands in the Western Area had been filled.
- Surface debris and disturbed land free of vegetation were observed in the Northern Area on a 1969 photograph. In a 1988 photograph, this area of the property appears to have been filled to a higher elevation and is vegetated woodland.
- Surface debris and land disposal were apparent in the 1988 photograph in an area located adjacent to the northwest corner of the parking lot, south of the Northern Area.

IV) *On Page 20 of the Draft Phase II SOW, ERM indicates they will sample 'Southern Area' wells for MTBE and benzene. Wayland believes it is important that Raytheon continue to monitor for other gasoline-constituent VOCs as well. Furthermore, while testing for gasoline-constituent VOCs may be sufficient for the purposes of assessing RTN 3-22408, the Town is concerned that Raytheon continue to monitor chlorinated VOC contamination in this area for assessment of the Release Abatement Measure conducted under RTN 3-13302. Therefore we request that ERM specifies VOC testing via EPA Method 8260B for groundwater monitoring in the 'Southern Area.*

Raytheon and ERM assure the Town that groundwater monitoring in the Southern Area will continue to be performed for both Release Tracking Number (RTN) 3-22408 and 3-13302. ERM has reduced the VOC analyte list to include the contaminants-of-concern for each of the respective Site RTNs.

For RTN 3-22408, only MTBE and benzene have been detected in Site groundwater to date. Thus, these are the only gasoline constituents included in our analyte list. Raytheon may submit a Downgradient Property Status (DPS) submittal to address the presence of MTBE in Site groundwater prior to submission of the Phase II report in December 2005 and may discontinue future sampling for these compounds at that time.

For RTN 3-13302, groundwater sampling for CVOCs is conducted in accordance with the plan and schedule presented in the Phase IV Completion Report, dated 24 November 2004.

Ms. Linda Segal's Comments:
I) Appendix A of the Draft Phase II SOW contains the DEP Transmittal Form BWSC108. The Wayland zipcode on the form should read 01778. A also note that later sections of the form are not signed, dated, or stamped by the LSP or Raytheon.

Raytheon and ERM will sign, date and stamp the Department Transmittal Form BWSC 108 when the document is submitted as final to the Department. The Wayland zipcode will be corrected on the final Department Transmittal Form BWSC 108 when the document is submitted final to the Department.

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

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

Ms. Linda Segal, 9 Aqueduct Road, Wayland, MA 01778