



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



June 8, 2004

Honorable Carl Amento
Mayor of Hamden
Hamden Government Center
2750 Dixwell Avenue
Hamden, CT 06518

DISAPPROVAL

RE: Comments on Phase II and III Environmental Site Investigation
Rochford Field and Mill Rock Park
Hamden, Connecticut
Consent Order No. SRD-128

Dear Mayor Amento:

The Remediation Section of the Bureau of Waste Management ("the Department") has reviewed the report titled, "Report on Phase II and III Environmental Investigations, Rochford Field and Mill Rock Park, Hamden, Connecticut," dated December 2002, prepared for the Town of Hamden ("Town") by Haley & Aldrich, Inc. and received on December 9, 2002 ("Phase III Report"). The Phase III Report presents the findings of the investigation conducted pursuant to the Work Plan titled, "Investigation Work Plan, Rochford Field and Mill Rock Park, Hamden, Connecticut," dated August 2002, prepared for the Town by Haley & Aldrich, Inc. The Phase III Report was submitted voluntarily by the Town prior to the resolution of appealed Order No. SRD-128. In accordance with paragraph B.3.a of Consent Order No. SRD-128 issued April 16, 2003, the Department has reviewed the Phase III Report and has determined that the Phase III Report does not fully characterize the extent and degree of soil and ground water pollution at the Rochford Field, Mill Rock Park and Sewer Pump Station portions of the site.

In accordance with paragraph B.3.b of Consent Order No. SRD-128, the Town must submit a scope of study for supplemental investigation of the Rochford Field, Mill Rock Park and sewage pump station portions of the site for the Commissioner's review and written approval within 30 days of receipt of this letter. Such scope of study shall address the deficiencies identified in Attachment A to this letter.

If you have any questions or comments regarding the Department's review of the Phase III Report, please contact Shannon W. Pociu of my staff at (860) 424-3546.

Sincerely,



Elsie Patton
Acting Director
Planning and Standards Division
Bureau of Waste Management

EP:SWP

Attachment

cc: Ann Catino, Esq., Halloran & Sage LLP
Chris Harriman, Haley & Aldrich, Inc.
David Silverstone, Regional Water Authority
Thomas Chaplik, Regional Water Authority
Michael Manolakas, Leggette, Brashears & Graham, Inc.
Curt Richards, Olin Corporation
Raymond Horn, Olin Corporation
Ken Cichon, Malcolm Pirnie, Inc.
Elizabeth Hayes, Community Advocate
John Looney, AAG

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ATTACHMENT A

**TECHNICAL COMMENTS TO
PHASE III ENVIRONMENTAL SITE INVESTIGATION REPORT**

During summer 2002, the Town of Hamden ("Town") completed a Phase II and III environmental site investigation of Rochford Field and Mill Rock Park within the Newhall Street Neighborhood prior to the resolution of appealed Order No. SRD-128. This voluntary investigation consisted of the advancement of test borings, excavation of test pits, and the installation of groundwater monitoring wells at Rochford Field and Mill Rock Park. Ground water samples were also collected to assess potential impacts to groundwater as a result of historic fill placement. The report titled, "Report on Phase II and III Environmental Investigations, Rochford Field and Mill Rock Park, Hamden, Connecticut," dated December 2002, prepared for the Town of Hamden ("Town") by Haley & Aldrich, Inc. and received on December 9, 2002 ("Phase III Report") summarizes the results of this investigation. The investigation was completed in substantial agreement with the Work Plan dated August 2002 prepared for the Town by Haley & Aldrich, Inc.

In accordance with paragraphs B.1.b and B.1.c of Consent Order No. SRD-128 issued April 16, 2003, the Town is required to perform the investigation and remediation of the Rochford Field, Mill Rock Park and sewage pump station portions of the site. In accordance with paragraph B.3.a of Consent Order No. SRD-128, the Department has reviewed the Phase III Report submitted by the Town for completeness and adequacy of investigation of the Rochford Field, Mill Rock Park, and sewage pump station portions of the site. While the Phase III Report is fairly comprehensive, it does not completely characterize the extent and degree of soil and ground water pollution on and emanating from these locations. Comments on the Phase III Report are addressed below and are separated into general and specific comments. In accordance with paragraph B.3.b, a scope of study for supplemental investigation of the Rochford Field, Mill Rock Park, and sewage pump station portions of the site must be prepared and submitted to the Department within 30 days of receipt of these comments. A conceptual site model with an evaluation of data gaps must be included in the scope of study. The remainder of these comments should be addressed in a comprehensive Phase III report prepared at the conclusion of the supplemental investigation.

General Comments:

1. A conceptual site model must be prepared that evaluates all information, factual and anecdotal, relating to waste disposal at the Rochford Field, Mill Rock Park, and sewage pump station portions of the site; all sampling completed to date by the Department and the Town; and identifies data gaps that exist. Additional sampling data exist for the parks that were not evaluated in the text or depicted in figures. The scope of study must include a conceptual site model as well as a discussion of identified data gaps to guide future investigation activities.
2. The Phase III Report does not fully define the extent and composition of waste materials disposed at the Rochford Field, Mill Rock Park, and sewage pump station portions of the site. Additional characterization of waste present at Mill Rock Park, including, but not

limited to, the areas beneath the asphalt pad, tennis and basketball courts, and playground is required. Supplemental investigation is necessary to better define the perimeter horizontal and vertical extent of waste materials present at the site. If technically practical, investigation of the sewage pump station property must be completed. The scope of study must provide for the sampling and analysis of potential asbestos containing materials in construction and demolition debris. The description of each fill type identified must include the chemical characteristics of the fill.

The scope of study must include the use of geophysical techniques in evaluating subsurface conditions. Additional investigation should confirm the presence or absence of large buried objects that could cause a release in the future.

3. The Phase III Report does not fully characterize the extent and degree of soil pollution throughout the Rochford Field, Mill Rock Park, and sewage pump station portions of the site. Additional characterization of soil pollution at Mill Rock Park, including, but not limited to, the areas beneath the asphalt pad, tennis and basketball courts, and playground is required. Supplemental investigation is necessary to better define the perimeter horizontal and vertical extent of soil pollution present at the site. If technically practical, investigation of the sewage pump station property must also be completed. The horizontal and/or vertical extent of petroleum hydrocarbon pollution at Rochford Field has not been defined in the vicinity of RF-HA108-MW and RF-HA110-MW. Potential impacts to native soils underlying fill must be evaluated more thoroughly in the vicinity of RF-HA108-MW. Soil samples must be analyzed for pollutants attributable to the waste materials disposed at the site.
4. The Phase III Report does not fully evaluate the impact to ground water from the leaching of all pollutants identified in soil and waste to the ground water. An insufficient number of soil and waste samples were analyzed for metals using the synthetic precipitation leaching procedure (SPLP). Additional analysis of soil and waste samples using this method is required to completely characterize the site. In addition, the volume of waste material present below the water table and its impact on groundwater quality must be evaluated.
5. The Phase III Report does not fully characterize the extent and degree of ground water pollution at the Rochford Field, Mill Rock Park, and sewage pump station portions of the site. Additional ground water monitoring wells must be installed to evaluate ground water quality at Rochford Field. The source area and extent of the petroleum hydrocarbons identified in the vicinity of monitoring well RF-HA108-MW must be defined, even if this requires additional investigation beyond the boundary of the Rochford Field portion of the site.

Ground water samples must be analyzed for landfill leachate indicator parameters and the results evaluated for other potential impacts to ground water quality that may be attributable to waste disposal at the site.

6. Additional information must be provided to support the groundwater flow gradient and direction presented in Appendix G of the Phase III Report ("Potentiometric Surface for September 12, 2002, Former New Haven Water Company Properties, Hamden, Connecticut," prepared by Leggette, Brashears, and Graham, Inc., dated 9/16/02). Groundwater elevation data for the two western-most wells at Rochford Field (RF-HA108-MW and RF-HA123-MW) were excluded in interpreting groundwater flow.

Site features including utilities and fill placement must be evaluated to determine whether they affect groundwater flow or contaminant transport at the site. The sprinkler line at Rochford Field should be tested to ensure that it is not leaking and potentially affecting groundwater elevation measurements. The location of subsurface utility conduits and storm drains should be depicted on figures, and any effects the utility conduits and storm drains may have on groundwater flow and contaminant pathways must be evaluated.

7. EPA Method 8260 must be used for the analysis of volatile organic compounds in waste, soil and ground water samples at the site.
8. The scope of study shall describe all sample collection procedures and include a quality assurance project plan.

Specific Comments

1. p. 9 and 10, Section 2.02.C, Soil Sampling and Laboratory Submittal and Section 2.02.D, Groundwater Sampling. In the future, EPA Method 8260 must be used for volatile organic compound analysis. Chemical analysis for chromium must be for total chromium. If elevated levels of total chromium are detected, then speciation for hexavalent chromium is warranted.
2. pp. 11-15, Section 2.03, Discussion of Soil and Groundwater Sampling Results. Please note that little correlation has been observed between the results of total and SPLP metals analyses for soil and waste samples collected from other portions of the Newhall site.
3. Table I, Summary of Analytical Data, Soil, Rochford Field. Please note that Residential Direct Exposure Criteria for chromium, copper and cyanide and GA/GAA Pollutant Mobility Criteria for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene cited in the table are incorrect. Also note that the GA/GAA Pollutant Mobility Criterion for arsenic has been changed to 0.01 mg/l.
4. Table II, Summary of Analytical Data, Soil, Mill Rock Park. Please note that the GA/GAA Pollutant Mobility Criterion for arsenic is 0.01 mg/l.
5. Tables III and IV, Summary of Analytical Data, Groundwater. Please note that the GA/GAA Groundwater Protection Criterion for cyanide is 0.2 mg/l.
6. Figures. For those figures that include summary data tables, please identify whether samples were collected from locations above or below the water table.