

## Summary of 1995 Phase II Comprehensive Site Assessment completed by Haley & Aldrich (H&A)

### General

Environmental Site Assessments are usually conducted by a prospective buyer prior to a real estate transaction to determine risk of contamination. Site Assessments are also conducted in response to a spill/release or known contamination on a property that is subject to the Massachusetts Contingency Plan (MCP) Regulations 310 CMR 40.

**Phase I** - Typically includes information gathering such as:

- interviewing current and/or former property owners, employees, town officials;
- researching federal or state environmental databases (e.g. Superfund, Leaking Underground Storage Tank, Hazardous Waste Generator, etc.);
- conducting a visual inspection of the property to look for evidence of spills (stains on pavement/soil, stressed vegetation), potential sources of contamination (above ground storage tanks or containers, underground storage tank fill or vent pipes, transformers, chemical storage areas, etc.);

**Phase II** - If the Phase I indicates there is a risk that contamination exists then the next step is to Perform a Phase II, which includes actual sampling of things like:

- surface water
- ground water
- soil

The 1995 Phase II Comprehensive Site Assessment was ordered by the Massachusetts Department of Environmental Protection (DEP) under authority of the MCP. A brief history of the site in relation to MCP is provided below.

**October 15, 1988** - the DEP designated the site as a Location To Be Investigated (*it is not clear why the site was listed, but it could have been as a result of a reported spill or release of oil or hazardous materials*) and a Notice of Responsibility was delivered to the owner, James River Paper Mill.

**October 1991** - in response to the Notice of Responsibility, H&A completed a Phase I - Limited Site Investigation of the property and submitted an application for a Waiver of Approvals to DEP in **June 1992**.

**June 8, 1993** - DEP approved the Waiver Application and designated the site a Non-Priority Disposal Site (James River Paper Mill, Site No.: 2-0447) The waiver specified a number of conditions to be addressed as part of the Phase II assessment.

**February 1995** - The Phase II assessment, which included a Comprehensive Site Assessment and Risk Characterization, was completed in order to address the conditions of the 1993 Waiver Application Approval in addition to standard Phase II requirements under the MCP.

The following is a summary of findings from the 1995 Phase II Report.

### Summary of Findings

- In 1995 the Pepperell Paper Mill and Cogen Plant were listed as generators of hazardous waste (primarily oil).
- Documented releases include spill of 250 to 400-gallons fuel oil and 2 spills (10 - 25 gallons each) of transformer oil. Spill clean-up was performed and Department of Environmental Protection was properly notified.
- Oil contamination was detected under a former building where the new Cogen Plant now sits, but contaminated soil appears to have been properly managed during construction.
- A 1991 report listed a number of locations considered as potential sources of oil or hazardous materials, including former locations of underground kerosene and gasoline storage tanks, transformer banks, crawl spaces beneath the mill's machine shop and maintenance area, septic systems, a former coal bunker area, and a zone of stressed vegetation along the bank of the Nashua River. Subsequent testing of soil, groundwater, sediments, and surface water concluded that detected contaminants are the result of miscellaneous spills and housekeeping practices carried out over the long term industrial history of the site, and are not the result of a large or continuous release of oil or hazardous material. The report stated that detected contaminants do not pose an imminent threat to human health or the environment.
- Compiled data indicate that the distribution and concentrations of contaminants do not identify specific source areas or ongoing releases which have resulted in high levels of soil or groundwater contamination.
- Oil contamination has been detected in soil samples across the site. VOCs, metals, and PCBs were detected in more isolated locations. Data suggests oil contamination is a result of soil quality used to fill the site, or miscellaneous operational practices performed over the history of the facility and not a result of storage tanks or significant releases.
- In two specific areas with high oil concentrations formal clean-up has been performed and documented.
- Groundwater sampling detected low levels of VOCs, metals, and oil, but data indicates that contaminants detected in the site's soil are relatively immobile and have not significantly impacted groundwater.

- Sediment and surface water samples from the Nashua River indicate that the site has not impacted sediment and surface water in the Nashua River.
- Chemical analysis of drainage canal and effluent samples indicate that high levels of contaminants are not migrating through the site's wastewater.
- Based on results of the Risk Characterization\*, a condition of "No Significant Risk" of harm to human health, public welfare, natural resources, safety, and the environment has been achieved for this site under current conditions\*. A Remedial Response Action Completion Statement was submitted to DEP (*need to investigate if DEP approved this*).
- Risk Characterization\* identifies potential risk to human health under the unanticipated condition of redevelopment and demolition of the paper mill's buildings due to disturbance of contaminants (lead, oil and mercury) in surface soil.
- The report recommends evaluating need for a health and safety plan for on-site workers before performing work.
- Additional precautions, such as prevention of contaminated stormwater run-off should be in place.

\* The risk assessment included only soil standards developed for commercial/industrial exposures. Comparison of standards for residential uses was not considered.

An ASTM Phase I Environmental Site Assessment completed by CEA on April 29, 2003 states the following.

*This conclusion (of No Significant Risk) is contingent on the future use of the Site remaining commercial/industrial and a prohibition on the use of the Site for residential purposes. It is also contingent on the maintenance of the current Site buildings. Future construction activities involving the excavation and handling of soil at the Site would need to be conducted in accordance with MCP under a health and safety plan.*