



SUPERFUND



Cleaning Up New England
American Recovery and
Reinvestment Act of 2009

SITE SUMMARIES

Silresim Chemical Corporation

U.S. EPA | HAZARDOUS WASTE PROGRAM AT EPA NEW ENGLAND



THE SUPERFUND PROGRAM protects human health and the environment by investigating and cleaning up often-abandoned hazardous waste sites and engaging communities throughout the process. Many of these sites are complex and need long-term cleanup actions. Those responsible for contamination are held liable for cleanup costs. EPA strives to return previously contaminated land and groundwater to productive use.

SITE DESCRIPTION:

The 4.5-acre Silresim Chemical Corporation site is in an industrial area approximately one mile south of the central business district of Lowell, MA. Silresim reclaimed a variety of chemical wastes, waste oil, solvents, and sludges between 1971 and 1977 before declaring bankruptcy and abandoning 30,000 deteriorating drums and several large storage tanks. Volatile organic compounds (VOCs), semi-volatile organic compounds, pesticides, polychlorinated biphenyls (PCBs), and heavy metals contaminate the site's groundwater, which ultimately drains into the Merrimack River. Semi-volatile organic compounds, VOCs, pesticides, PCBs and low levels of dioxin contaminate the soil. Soil and groundwater contamination extend to other nearby properties.

CLEANUP ACTIVITIES TO DATE:

EPA listed the site on the Superfund Program's National Priorities List in 1983. Initial actions to fence the site and cap areas of contamination have reduced the chance for accidental exposure and further movement of contamination from the site. These actions have eliminated the site's immediate threats while final cleanup activities are underway. In 1991, EPA selected the long-term cleanup approach, which features: groundwater treatment, reducing VOC contamination in soil, consolidation of off-site contaminated soil, and construction of a final cover. EPA constructed an on-site groundwater treatment facility to address groundwater underneath the site. Operating since 1997, the facility has treated nearly 100 million gallons of groundwater and removed 90 tons of VOCs. Soil consolidation and partial construction of an on-site cap have been completed. Soil contaminated with VOCs was temporarily addressed through soil-vapor extraction (SVE). Because SVE alone did not work as desired, in 2003, EPA piloted the use of thermally enhanced SVE. To speed up and enhance the process, the contaminated soil is heated which helps evaporate the chemicals faster and more effectively. The evaluation of the use of thermally-enhanced SVE was completed in 2008 and it was decided to use this technology at the Silresim site.

Thermally enhanced SVE at the site will involve heating 67,000 cubic yards of contaminated soil over an approximately 1.25-acre area, and removing and treating its contaminated vapor.

The City of Lowell received \$100,000 in Superfund Redevelopment Initiative funds to conduct a reuse assessment and to draft a redevelopment plan for the Silresim site. The 2002 reuse plan assessed the site in the broader context of revitalizing the 120-acre Tanner Street District, which is a priority area for the City. Based on the City's potential future reuse of the site, EPA plans to construct a cover that is contoured to provide maximum reuse possibilities once the cleanup is complete.

RECOVERY ACT PROJECT ACTIVITY:

With the help of the \$14 million in Recovery Act funding for the Silresim site, EPA expects in 2010 to complete the cleanup construction. Operation of the thermally-enhanced SVE and the treatment plant will continue. Specific activities include cleaning up 67,000 cubic yards of contaminated soil using thermally-enhanced SVE and completing the final cover construction on the Silresim property, which will make a portion of the site ready for potential future reuse.

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