



An Electronic Newsletter
of EEA's Environmental
Consulting Activities
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EEA services include
Phase I ESAs, Haz-Mat
Testing and Remediation,
Wetlands Delineation
and Creation, Natural
Resources Inventories,
Marine Ecology Studies,
Air Quality and Noise
studies, and Environmental
Management System (ISO

Environmental Consulting

INSIGHTS

***CLEANUP OF CONTAMINATED
INDUSTRIAL PROPERTIES –
New York's New Push to Get Results***

2003 Brownfield Legislation

The State Legislature passed legislation (September 2003) establishing a statutory Brownfield Cleanup Program for hazardous waste and petroleum contaminated sites and refinancing the State's hazardous waste superfund. The goals are to revitalize thousands of Brownfield sites and to create new businesses by establishing clear standards for Brownfield cleanup, economic incentives and liability relief. The legislation also refinanced the State Superfund Program (\$120 million) for the investigation and remediation of contaminated properties and state costs for cleaning up off site contamination under the Voluntary Cleanup Program.



Hazardous Waste Clean Up Operation

The major elements of the new statute are:

- The statute defines which sites can be included in the State's program. Generally sites contaminated with Hazardous Waste or Petroleum or both are eligible for the program. However, sites where environmental enforcement activities are already ongoing are not eligible.
- The legislation creates different categories of applicants who may undertake a Brownfield cleanup program. These include participants who may already be responsible parties for the

14000) implementation.

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contamination at the site and volunteers who have no responsibility for the site or the contamination located at the sites.

- The program, the applicant and the New York State Department of Environmental Conservation (NYSDEC) enter into a written agreement in which the applicant agrees to conduct certain remedial activities that are contained in a proposed remedial work plan. This proposed remedial work plan is subject to a public comment period and may be modified.

The NYSDEC can issue grants to Not-for-Profit groups to conduct Brownfield assessments, and pre-nomination studies of sites to participate in the Brownfield Program.



Removal of Leaking Underground Petroleum Tanks

The NYSDEC will be developing “a Multi-track approach or standards for the remediation of contamination.” Regulations will be developed establishing generic tables of contaminant specific remedial action objectives for soil, based on a site’s current, intended or reasonably anticipated future use including unrestricted, commercial and industrial uses.

There are many other details regarding the new Brownfield Program that can be found on the web at the [New York State Legislature](#); enter S5702.

Phase I Environmental Site Assessments

Usually the first step in identifying potentially contaminated properties is by performing a Phase I Environmental Site Assessment following the ASTM standard (E1527-00) for due diligence or appropriate inquiry. EEA has performed approximately 5,000 Phase I assessments which include researching historical land uses for the site, checking regulatory agency records for hazardous material uses at the property and surrounding area and a visual inspection of conditions leading to conclusions regarding the need for subsurface testing.

In addition to private clients, EEA has been contracted by New York City Department of Environmental Protection to perform Phase I ESAs (1996-2006) for the land acquisition program on the City's upstate water supply reservoir watersheds and by the NYC Department of Sanitation (1998-2003) for Phase I ESAs at prospective waste transfer sites.

Phase II Testing and Phase III Remediation or Cleanup

If the Phase I ESA identifies that past or present uses on a property involved hazardous materials or petroleum products and indications of the presence or likely presence of an existing release to soils or in the structures, release to groundwater or surface water on the property, then the need for further investigation (Phase II testing) is required. The testing program must be defined in terms of appropriate sampling locations (i.e., soil, groundwater), sampling methods and specific contaminants to be tested.



*Subsurface Testing inside Building
using a Track-mounted Geoprobe*

Standard protocols (ASTM, state, etc.) provide guidance; however, experienced professionals are essential to insure a reliable program is performed.

EEA has been performing Phase II/III hazmat testing and remediation programs for over fifteen years – ranging from underground leaking tanks to large industrial complexes, including the former Phelps Dodge Copper Refinery site in Queens (for NYCDEP). For sites that have contamination levels that require remediation, EEA's staff of certified professional geologists, professional engineers and remediation specialists employ innovative cleanup techniques, including:

- Soil gas venting
- Bioventing in situ and ex situ
- Addition of chemical oxidation to groundwater
- Reductive Dehalogenation of groundwater contaminated by chlorinated solvents

... as well as the more common technique of excavating and removal of contaminated soils.

Some Cleanup Projects Take Extended Periods to Complete

EEA recently completed a soil and groundwater remediation program at a dry cleaning and laundry facility located on the south shore of Long Island. The property was listed as an Inactive Hazardous Waste site by the NYSDEC when perchloroethylene and trichloroethylene solvents were discovered by the Nassau County Department of Health during a site inspection.



Soil and Groundwater Sampling with a Geoprobe

EEA assisted the property owner's attorneys in negotiating a consent order (cleanup plan) that was acceptable to the buyer, seller and NYSDEC. EEA implemented the work plan which included closure of the sanitary leaching pools and connection to the sanitary sewer system in the street, installation of numerous groundwater monitoring wells to delineate and monitor the solvent plume, and then the design and installation of a soil vapor extraction and air sparging system appropriately sized to remediate the contamination on site.

The first phase of the project was source removal, which involved excavation and disposal of the most elevated concentrations of contaminated soils and sludges in the sanitary system. EEA then excavated a series of trenches and installed several soil vapor extraction wells on the property, to capture and recover the chlorinated solvents trapped in the subsurface soils. Additionally, two sparging (air injection) wells were installed near the source area, below the groundwater table. The entire system was inspected by the NYSDEC and approved for operation.

The system was initially run in the soil vapor extraction mode to remove the solvents trapped in the soil pore spaces. When routine analytical testing showed a significant drop in contaminants, the air

sparging system was started and operated with the soil vapor extraction system. The system was run for approximately eighteen months until routine confirmation testing and NYSDEC approval allowed the system to be turned off and dismantled.

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