



Dewey Loeffel Landfill Superfund Site

Town of Nassau, Rensselaer County, NY

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If you would like information on general environmental concerns or the federal Superfund hazardous waste program, have concerns or complaints about the Superfund program, or if you seek assistance in resolving site-specific issues that were not fully addressed by the EPA, please contact:

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Water Treatment Plant Operations

In 2012 the EPA reached an agreement to perform a *removal action* at the Dewey Loeffel Landfill Superfund site with two of the parties responsible for the contamination at the site, General Electric Company (GE) and SI Group. This agreement required the companies to construct a water treatment plant adjacent to the landfill and install five additional groundwater extraction wells along the western edge of the landfill. The new extraction wells will collect additional contaminated groundwater and are located closer to the landfill than the three existing extraction wells.

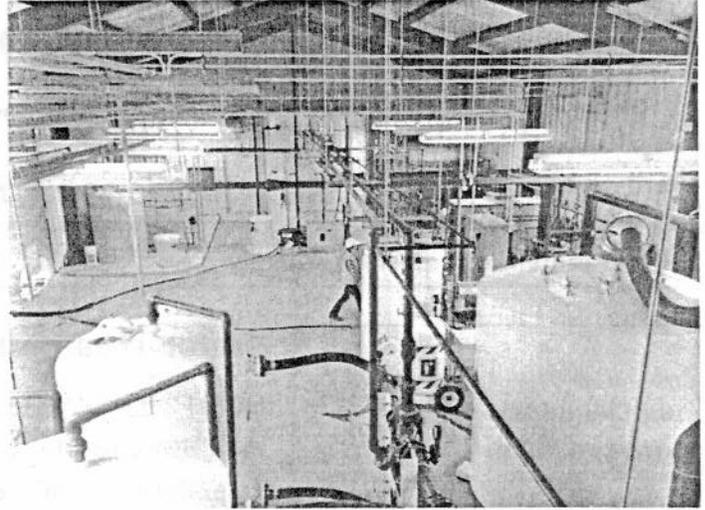
The construction of the treatment plant began in May 2013 and was completed in November 2013. The plant, which began operating in January 2014, was designed to remove contaminants from the liquids seeping from the landfill, called leachate, and groundwater (being drawn from three existing extraction wells). Since the treatment plant began operating, the EPA has required that the treated water from the plant be stored in a series of three on-site storage tanks and thoroughly tested before each individual tank is discharged to the Valatie Kill. The slow startup phase was intended to ensure that the plant is working effectively and is capable of meeting the strict discharge limits set by the New York State Department of Environmental Conservation (NYSDEC). To date, 32 tanks have been sampled, analyzed and individually discharged to the Valatie Kill. This comprehensive sampling program has demonstrated that the plant is operating very well. Sampling data from the treated water at the plant is available on the EPA's Dewey Loeffel Landfill Superfund site webpage: <http://www.epa.gov/region2/superfund/npl/dewey/>.



Treatment Building February 2014

Water Treatment Plant Operations (cont.)

In July 2014 the EPA reached another agreement with GE and SI Group to add an additional treatment technology to the existing treatment plant at the site. The new treatment system is being added to further address the long-term treatment of the chemical 1,4-dioxane, a stabilizer and solvent that is also a component of some cosmetics, detergents and shampoos. The new treatment technology should be delivered by November 2014 and installed before the end of November. The carbon filtration system, which is a component of the existing treatment plant, has been effectively removing 1,4-dioxane and will continue to be the primary treatment method until the new technology is in place this fall.



Treatment Building Interior

In order for the new treatment system to be installed, the storage tanks at the site will need to be removed so that the system can be physically brought into the water treatment plant. As a result, the tank-by-tank sampling and discharge process will end 7 to 10 days prior to delivery of the new treatment system and direct discharge of the treated water from the plant to the Valatie Kill will be approved at that time, provided the sampling data continue to meet the stringent discharge limits set by the NYSDEC.

Out of an abundance of caution, the rate of groundwater and leachate coming into the plant for treatment, called the flow rate, will also be reduced to as low as possible while the additional treatment technology is being installed. The plant needs to be kept running during the two to three week installation period to ensure that one of the treatment technologies in the plant that relies on microorganisms to treat the wastewater can continue to operate effectively. The wastewater and leachate coming into the plant provide the nutrients these microorganisms need to survive. After the new system is installed, the flow rate will slowly be increased to normal operating flow rates.

Regular sampling of the treated water will continue after direct discharge begins and surface water will also be sampled at least three times after direct discharge is approved. The EPA will have sampling data from approximately 40 individual tanks by the time it allows any direct discharges from the treatment plant. The plant, as constructed, is effectively treating 1,4-dioxane and will continue to treat 1,4-dioxane until the additional system is added.

The construction of the treatment plant was an action that was taken to address potential risks to human health and the environment, but does not represent the final cleanup decision for the site. This treatment plant may be modified in the future based on the findings of the long term investigation of the site, called the *Remedial Investigation*, and the final cleanup remedy chosen. All of the work being performed by GE and SI Group under the removal action agreement is being done under EPA oversight.

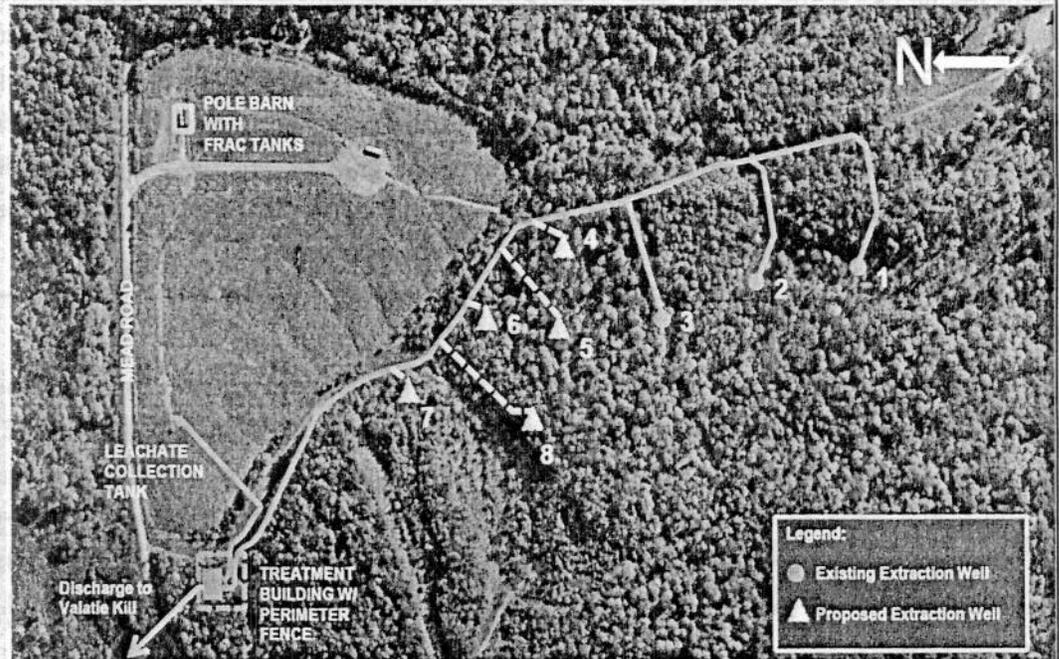
Surface Water Sampling

During the public availability sessions held in March 2014, the EPA committed to collecting surface water samples near the site and in Kinderhook Lake. Samples were collected by EPA staff in May 2014 at locations above (north) and below (south) of the water treatment plant on the Valatie Kill, on the Valatie Kill between Nassau Lake and Kinderhook Lake, and in Kinderhook Lake. The final data summary report for this data has not yet been completed. The report is expected to be available by fall 2014 and will be posted on the EPA's Dewey Loeffel Landfill Superfund site webpage. As mentioned previously, additional surface water sampling will be conducted after direct discharge is approved.

Construction of New Extraction Wells

The construction of the five new groundwater extraction wells began in March 2014 and is expected to be completed by the end of 2014. During the drilling of the extraction wells to their approximate depths of 200 to 250 feet, bedrock cores (from the rock below the surface) were collected and are being tested to determine whether site-related contaminants have become concentrated in the bedrock. Groundwater samples were also collected from different water bearing zones in the bedrock to test for site-related contaminants. Each extraction well had multiple water bearing zones sampled.

The information gathered will help inform and guide additional investigations that will be conducted as part of the *Remedial Investigation*. As part of these continuing investigations, the extraction wells will be sampled quarterly and the leachate collection tank will be sampled semi-annually.



Residential and Monitoring Well Sampling Programs

A volatile organic compounds (VOC) groundwater contamination plume has been traced to extend south of the landfill to the vicinity of Central Nassau Road, approximately 1/2 mile from the site. Monitoring of residential drinking water wells around the site is done periodically (quarterly, semi-annually, annually, or biennially) by GE. Five drinking water wells near the landfill have been impacted by VOCs from the site. The water from these wells is treated by point-of-use treatment systems installed, maintained, and routinely monitored by GE. Residents with wells impacted by the VOC plume, as well as additional residents beyond the edge of the VOC plume, are provided with bottled water by GE.

All residential wells in the sampling program were sampled in late April/May 2014 (including those sampled quarterly, semi-annually, annually, and biennially). Sampling included analysis for VOCs and 1,4-dioxane. Sampling results are communicated to the individual landowners.

Groundwater monitoring wells in and around the landfill were also sampled in May. All the information collected as part of the sampling program will be evaluated as part of the *Remedial Investigation* of the site.

EPA Agreement with Companies to Conduct Comprehensive Studies of Contamination at the Site

While a *removal action* is sometimes conducted to address immediate threats to the environment or to the people that live or work around a hazardous waste site, the *Remedial Investigation/Feasibility Study (RI/FS)* is the first step in the long-term cleanup of a site. The primary objective of a RI/FS is to determine the nature and extent of contamination, identify potential threats and evaluate options for cleaning up a site. On September 30, 2013, EPA, GE and SI Group finalized an agreement which requires GE and SI Group to perform the RI/FS for the landfill and groundwater components of the site. Under EPA oversight, GE and the SI Group will investigate and evaluate cleanup options for the landfill and the groundwater portions of the site. On October 30, 2013, the EPA and GE finalized an additional agreement which requires GE to perform the RI/FS for the drainageways (surface waters and sediments) component of the site. Under EPA oversight, GE will investigate and evaluate cleanup options for the ponds, streams and other water bodies that have been impacted by contamination from the site, including Nassau Lake. Together the two agreements will result in a comprehensive RI/FS for the site.

Landfill—Groundwater Investigation

GE and the SI Group have submitted the Site Characterization Summary Report to the EPA. The Report is a compilation, to the extent possible, of all the existing data collected at the site by GE/SI Group, NYSDEC, and the EPA, to date. The EPA has completed its review and provided comments on the Report. The Report will be used to develop the Work Plan for the *Remedial Investigation* of the landfill—groundwater. Based on the EPA's review and comments, the Report is expected to be updated and re-submitted by the beginning of September 2014. The Remedial Investigation Work Plan is expected to be submitted by the beginning of October 2014.

The *Remedial Investigation* will include, but will not be limited to, the installation of additional monitoring wells, soil sampling, the collection of landfill soil borings, an evaluation of the existing slurry wall surrounding the landfill, and an evaluation of groundwater impacts to surface water.

All work being performed by GE and SI Group under the Removal and RI/FS agreements is being done under EPA oversight.

Surface Drainageways Investigation

GE submitted, and the EPA has reviewed, the Phase 1 Remedial Investigation Work Plan, Health and Safety Plan (HASP), and Quality Assurance Project Plan (QAPP) for the investigation of surface drainageways. The EPA expects to receive revised versions of these documents from GE by the beginning of September 2014.

The investigation of the surface drainageways will include, but will not be limited to, surface water and sediment sampling in the Valatie Kill and Nassau Lake, floodplain evaluations, and bathymetric (water depth) evaluations in Nassau Lake.

The annual fish sampling in the Valatie Kill and Nassau Lake was also conducted by GE, with NYSDEC and EPA oversight, in June and July 2014. A summary report is expected by the end of the year.