

Central Landfill Superfund site Johnston, RI

Community Update

December 2006

Construction Activities Complete at the Central Landfill Superfund site

Site History

The Central Landfill Superfund Site (the "Site") is a 154-acre landfill in the central portion of a 610-acre parcel in Providence County at 65 Shun Pike, Johnston, Rhode Island.

During the mid to late 1970's an approximate 0.5 acre area, located within the landfill area, was used for disposal of large volumes of liquid industrial waste. This area is referred to as "the hot spot". Wastes disposed of includes aqueous solutions of latex waste, acid waste, corrosive waste, water soluble oils, waste solvents such as methylene chloride, toluene, 1,1,1-trichloroethane, and tetrachloroethylene.

In 1986, the Site was placed on the EPA's National Priorities List making it eligible for cleanup under the EPA's Superfund Program. The Superfund Program targets the nations' most hazardous disposal sites for investigation and cleanup.

In 1987, Rhode Island Resource and Recovery Corporation (RIRRC), signed an Administrative Order of Consent (AOC) with EPA to investigate the extent of contamination at the Site. During the course of this investigation the project was divided into Operable Unit (OU) 1 and 2. OU1 deals with controlling the sources of contamination at the Site and OU2 addresses the off-site migration of contamination.

Overview of the OU1 and OU2 Remedies

In June 1994, an OU1 Record of Decision (ROD) was issued by EPA which required that a multi-layer cap be installed over the 121-acre inactive portion of the 154-acre landfill and, hydraulic containment and treatment of contaminated groundwater found in the hot spot area.

The cap and hydraulic containment system are designed to significantly reduce the amount of contaminants migrating from the 121-acre inactive landfill into the groundwater beneath the landfill. Contaminants detected in the groundwater include the organic contaminants benzene, chlorobenzene, toluene, vinyl chloride and heavy metals such as beryllium, cadmium and lead. High concentrations of these contaminants are found within the hot spot area of the Site. RIRRC and EPA entered into a consent decree in 1996 to address these issues.

Additional components of the OU1 remedy include:

- Implementing deed restrictions on groundwater use and land development within the property owned by RIRRC
- Initiating a long term program of sampling and analysis of groundwater, surface water and air
- Conducting a detailed evaluation of the existing landfill gas combustion system
- installing a chain link fence
- Conducting Five Year Reviews of the remedy

In September 2002 an OU2 ROD was issued by the EPA. The OU2 did not require any cleanup activities beyond those discussed above required by the OU1 ROD.

Status of the Site:

EPA has determined that all physical remedial construction activities for the Site have been completed.

RIRRC completed construction of a multi-layer landfill cap over the 121-acre inactive landfill area including the hot spot area in November 2005. EPA performed a final inspection of the cap in August 2006

The hot spot hydraulic containment system which includes a the groundwater extraction well and conveyance pipeline was completed and a final inspection performed in September 2006.

RIRRC has constructed a leachate pretreatment system that collects and treats leachate and uses chemical precipitation to remove metals before the leachate is discharged into the Cranston Waste Water Treatment Plant. Groundwater that is currently being extracted from the hot spot area of the Site is discharged into the leachate pre-treatment system. To date, over 1.5 million gallons of hot spot groundwater has been put through the pre-treatment system.

In addition to hydraulic containment and pre-treatment of groundwater, deed restrictions and long-term groundwater, surface water and air monitoring have been implemented. As part the OU1 remedy, RIRRC filed a Declaration of Covenants and Environmental Protection/ Conservation Easements which prohibits the use of groundwater except for remediation purposes, installation of groundwater wells or anything that alters or disrupts the groundwater flow. Furthermore the Town of Johnson issued a groundwater well ordinance which prohibits the construction of groundwater wells in specific areas near the landfill where a public water supply is available.

In 2005, EPA completed an evaluation of the existing landfill gas and combustion system and determined that it was in compliance with state and federal regulations and presented no risk to human health.

Next Steps:

In October 2006, operation and maintenance activities related to the OU1 remedy began. In 2008, EPA will conduct the second Five Year Review of the Site to ensure that the remedy remains protective of public health and the environment.

Central Landfill Site History

1955-1980 Site owned and operated as a waste disposal facility by Sylvestri Brothers

1978-1979 Earliest known disposal of hazardous materials (reportedly 1.5 million gallons)

1982 Hazardous Waste Disposal area closed

1984 US EPA orders a site characterization

1986 Geohydrologic study conducted

1986 121-acre portion of the Central Landfill site is placed on the Superfund National Priorities List for cleanup

1987 The EPA and Rhode Islands Resource Recovery Corporation entered into an Administrative Order on Consent for a Remedial Investigation/ Feasibility Study

1994 EPA issued a proposed plan for cleanup.

1994 EPA holds public meeting and hearing and comment period on proposed plan

1994 EPA issues a Record of Decision for the cleanup

1994 Off site groundwater (remedial) investigation begins

1996 RIRRC signs a consent decree with EPA to perform the cleanup

1998 Construction of the landfill cap on the 121-acre area of the landfill begins

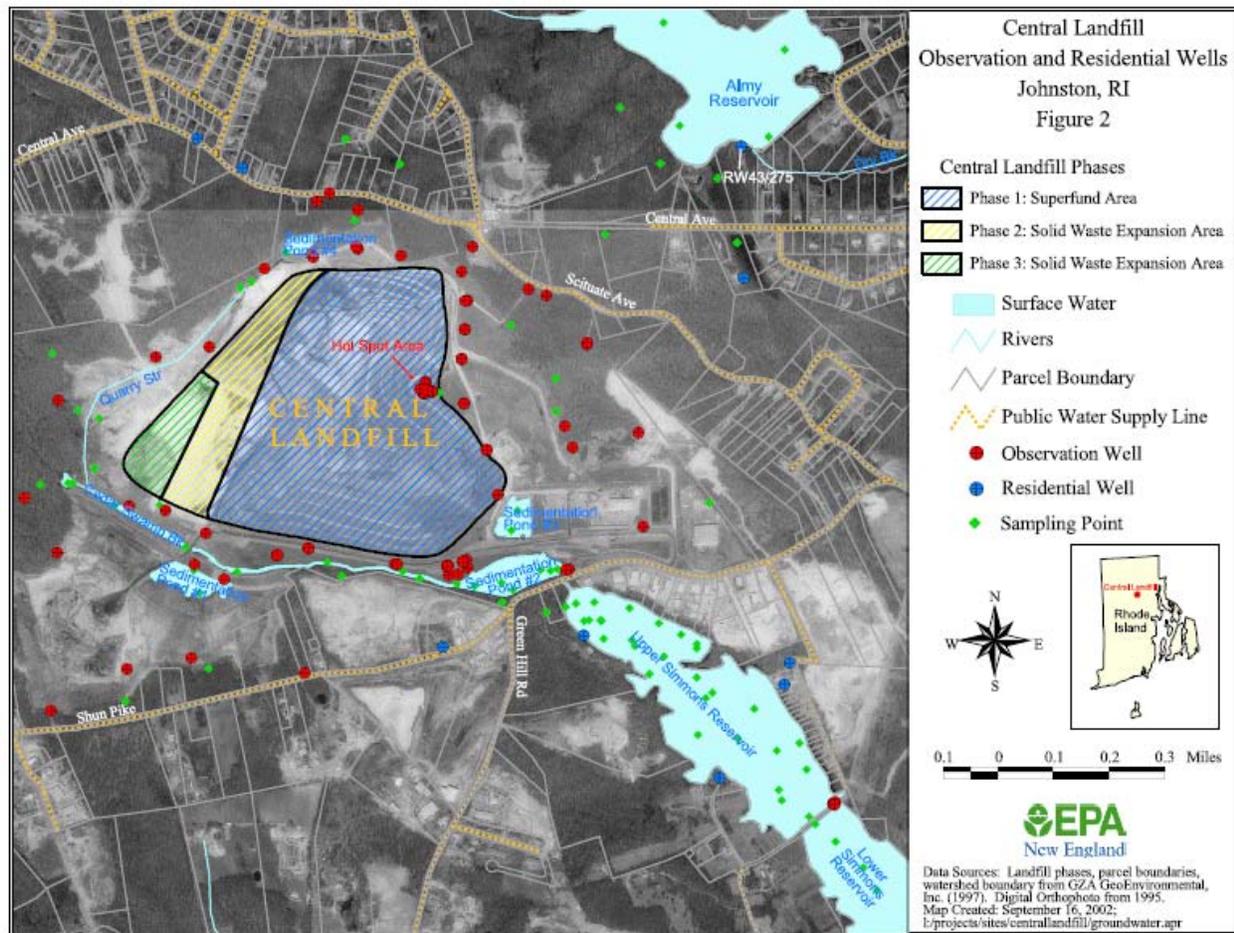
2001 EPA holds informational public meetings on groundwater investigations in Johnston, Scituate and Cranston

2001 OU 2 Remedial Investigation finalized- Studied impacts to off site groundwater, surface water and wetlands

2002 EPA proposes no additional response action for off-site groundwater and surface water issues and wetlands for the OU2 study area. EPA signs Record of Decision for OU2.

2005 RIRRC completes construction of multilayer cap.

2006 EPA signs construction completion for OU1 remedy. Operation and maintenance begins.



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For more information about the Central Landfill site go to:

www.epa.gov/superfund/sites/central

Site Information Repositories:

Marion J. Mohr Memorial Library, 1 Memorial Drive, Johnston, RI 02919

EPA New England Records Center, One Congress Street, Boston, MA 02114 (617) 918-1440