



# Coakley Landfill Superfund Site

## North Hampton, NH

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



### MAINTAINING AND MONITORING SUPERFUND

**SITES:** After a Superfund Site or portion of a Superfund Site has been cleaned up, EPA continues to monitor the site to ensure the cleanup is operating effectively over time. Five-Year Reviews provide an opportunity to fully evaluate the implementation and performance of a cleanup and determine whether it remains protective of human health and the environment.

### INTRODUCTION:

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

This is the 2017 Addendum to the Fourth Five-Year Review for the Coakley Landfill Superfund Site located in North Hampton, NH. The FYR Report was completed on September 26, 2016. At the time there was not enough data to evaluate the protectiveness of the remedy due to uncertainty about the existence of human exposures within the southern area of the Groundwater Management Zone, and the extent of the plume in that direction was also unknown. The uncertainties in the area were identified by EPA and have been addressed by the Coakley Landfill Group and NHDES over the past year to more completely assess the protectiveness of the remedy.

### BACKGROUND

The Coakley Landfill Superfund Site (Site) includes approximately 92 acres located within the towns of Greenland and North Hampton, Rockingham County, New Hampshire. The actual landfill covers approximately 27 acres. The Site is located about 400 to 800 feet west of Lafayette Road (U.S. Route 1), directly south of Breakfast Hill Road, and about 2.5 miles northeast of the center of the town of North Hampton. The landfill borders undeveloped woodlands, wetlands, and residential properties to the north and west and commercial and residential properties to the east and south.

Landfill operations began in 1972, with waste

disposal from the municipalities of Portsmouth, North Hampton, Newington, New Castle, and Pease Air Force Base. Concurrent with landfill operations, rock quarrying was conducted from approximately 1973 through 1977. Much of the refuse disposed of at the Site was placed in open (some liquid-filled) trenches created by rock quarrying and sand/gravel mining. Also from 1982 through 1985, Pease Air Force Base, and the above mentioned municipalities among others, transported their refuse to an incineration plant operated by the City of Portsmouth, which in turn transported the incinerator residues to the Site until 1985

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## BACKGROUND

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when the landfill was closed to all disposal activities.

The Site consists of 2 Operable Units (OUs). OU-1 (Source Control) addresses the source of contamination at the Coakley Landfill Site, including the contaminated groundwater beneath and in the vicinity of the landfill. Past source control response actions included consolidation onto the landfill of wastes and sediments identified beyond the edge of the landfill and covering the landfill with an impermeable cap. OU-2 (management of migration) addresses groundwater contamination which has migrated from the landfill. The response action includes utilizing natural attenuation to remediate the contaminated groundwater plume; groundwater monitoring; and using institutional controls (ICs) to prevent use of contaminated groundwater.

## PROTECTIVENESS STATEMENTS IN 2017 ADDENDUM

Based on the investigation activities described below, including evaluation of the new data and other information obtained since the completion of the 2016 Report, the protectiveness statement for groundwater (Operable Unit 2) and the site wide protectiveness statement in the Report are accordingly revised as follows:

The remedy for the groundwater is protective in the short-term because the data indicates no human exposures to site contaminants (including per and polyfluoroalkyl substances (PFAS)) at levels exceeding either state or federal standards. This is evidenced by the data obtained from the following:

- annual monitoring events,
- the regular sampling of off-Site private drinking water supplies,
- the additional sampling for PFAS and VOCs performed by NHDES at numerous private residential wells near the Site 's GMZ,

- the initial groundwater sampling from three re-developed wells that are now the southernmost monitoring wells south/southwest of the landfill,
- a second round of sampling on those wells, and,
- sampling performed by NHDES at three private drinking water wells within close proximity to the southwestern-most edge of the GMZ

## EPA'S ADDENDUM TO 5-YR REVIEW/NEXT STEPS

Addendum to the Fourth Five Year Review finalized on 09/28/2017.

Updated the protectiveness determination for the entire Site and concluded that the Remedy at the Site is protective in the short-term.

No human exposures above cleanup standards.

Updated the status of the 2016 Five Year Review Issues/Recommendations. Identified additional actions for the remedy to be protective in the long-term:

- CLG to conduct a Deep Bedrock Investigation to further understand groundwater flow and the fate and transport of COCs and PFAS in the deep bedrock;
- EPA to further evaluate risk for the potential exposure to PFAS from the incidental consumption of surface water and/or sediments;
- Conduct fish-tissue sampling along Berrys Brook to determine whether fish pose a potential human exposure to PFAS that may be attributed to the Coakley Landfill.

## FACT

Past source control response actions included consolidation onto the landfill of wastes and sediments identified beyond the edge of the landfill and covering the landfill with an impermeable cap.