Site Description and History

The Attleboro, Massachusetts, Site (formerly the Shpack Landfill Superfund Site) is a 9.4-acre property located on the border between Norton and Attleboro, Massachusetts. Approximately 6 acres are located within the town of Norton, and the remainder located in Attleboro. A private landfill was operated at the site from 1946 through the 1970s, accepting domestic and industrial waste, including chemical and low-level radioactive waste.

The U.S. Nuclear Regulatory Commission (NRC) initiated an investigation of the Shpack landfill site on November 14, 1978, after receiving a telephone call from a concerned citizen. NRC's investigation concluded that material associated with nuclear fuel had been disposed of at the site from about 1957 to 1966. NRC found depleted uranium, as well as natural and enriched uranium at the landfill. NRC determined that the source of the uranium materials was probably contract work performed for the U.S. Atomic Energy Commission (AEC) by M&C Nuclear Inc., which merged with Texas Instruments Inc. in 1959.

The U.S. Department of Energy (DOE) initiated a radiological survey at the site in August 1980 and added it to the Formerly Utilized Sites Remediation Program (FUSRAP) for radiological cleanup in January 1981. The survey indicated the presence of radioactive materials throughout the landfill. The distribution of the contamination was found to be uneven and spotty, and, in many cases, extended into the groundwater. At the same time as the radiological survey, DOE conducted an interim remedial action under their regulatory authority to remove 800 to 900 pounds of drummed radioactive waste material. The waste was removed for disposal because it contained enriched uranium.

In 2002, the U.S. Army Corps of Engineers (USACE) initiated a detailed gamma walkover survey, environmental sampling, and analysis effort to characterize the radiological contaminants of concern. USACE determined that some of the radiological contamination was not a result of AEC activities and, therefore, not eligible for FUSRAP. Congress passed legislation authorizing cleanup of all remaining non-FUSRAP radiological contaminants of concern. USACE remediation activities at the site included installing and constructing temporary facilities, site infrastructure, test pitting, excavating and characterizing wastes, earth-shoring
support, post-excavation confirmatory sampling, backfilling, and packaging and shipping low-level radioactive waste for off-site disposal. USACE excavated 57,805 cubic yards of material — 50,908 cubic yards of which were transported off-site for disposal. Multiple overhead transmission lines owned by National Grid the site and low levels of inaccessible radioactive contamination remain under the power poles. Contact with the inaccessible soil is prevented by institutional controls (IC) maintained by the power line owner, National Grid.

Regulatory Setting

AEC, the predecessor agency to DOE, established FUSRAP in March 1974 to evaluate radioactive contamination at sites used in the development of nuclear weapons and atomic energy programs. DOE has the authority, under the Atomic Energy Act (AEA) of 1954, to perform radiological surveys, monitoring, and maintenance at sites used to support the activities of its predecessor agencies. DOE also has authority under AEA to remediate FUSRAP sites identified as requiring some form of response action. In 1997, Congress transferred responsibility for FUSRAP site characterization and remediation from DOE to USACE. Since 1997, response actions at FUSRAP sites have been conducted in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan. The DOE Office of Legacy Management (LM) retains responsibility for long-term stewardship of remediated FUSRAP sites. For more information about the program, please see the FUSRAP fact sheet.

The site was added to the National Priorities List (NPL) in June 1986. An investigation into the nature and extent of the contamination began in 1990. Known as Performing Defendants, fourteen potentially responsible parties identified by the U.S. Environmental Protection Agency (EPA) entered into an Administrative Order on Consent with the EPA to address chemical and hazardous materials. USACE and DOE are not identified as Performing Defendants, because they were not identified by EPA as potentially responsible parties for the chemical contamination. The selected remedy documented in the Record of Decision (ROD) was implemented in two parts. Operable Unit 1 (OU-1) addressed the FUSRAP-related radioactive contamination; OU-2 addressed non-radiological contamination to be addressed by the Performing Defendants following FUSRAP cleanup.

The implemented remedy achieved the degree of cleanup and protection specified in the ROD for all pathways of exposure. The ROD states that ICs are required to restrict future use of the property and groundwater for the site due to hazardous substances remaining on-site above levels that allow for unlimited use and unrestricted exposure.

USACE completed the FUSRAP remedial action in OU-1 in 2011 and the Performing Defendants completed the CERCLA remedial action in OU-2 in 2014. EPA declared that the entire site met cleanup requirements in November 2016, and the Massachusetts Department of Environmental Protection concurred. EPA removed the site from the NPL in September 2017.

In January 2019, USACE transferred long-term stewardship for the Attleboro site to LM.

Current Site Conditions

The site is currently maintained by the city of Attleboro. The majority of the site is grass covered with some restored wetland. The city provides a continuing presence at the site for long-term monitoring and maintenance of the ICs.

Legacy Management Activities

LM responsibilities are limited to managing site records and responding to stakeholder inquiries. Other long-term stewardship requirements, which are not the responsibility of LM, consist of groundwater monitoring, five-year reviews, and monitoring ICs. The city of Attleboro will perform groundwater monitoring, enforce the groundwater ICs, and submit annual reports to EPA and the Massachusetts Department of Environmental Protection. National Grid is responsible for the ICs regarding inaccessible soil contamination and will be required to develop a soil management plan if these areas must be disturbed in the future. The ROD states that EPA will conduct the five-year reviews.

Contacts

In case of an emergency at the site, contact 911.

Documents related to FUSRAP activities at the Attleboro site are available on the LM website at https://www.lm.doe.gov/Attleboro/Sites.aspx.

For more information on FUSRAP site history or current long-term stewardship activities, contact:

U.S. Department of Energy
Office of Legacy Management
2597 Legacy Way, Grand Junction, CO 81503
(970) 248-6070 (monitored continuously)
(877) 695-5322 (toll-free)
FUSRAPinfo@lm.doe.gov