Monticello, Utah, Disposal and Processing Sites: Groundwater Remedy Improvement Plan

This fact sheet provides information about groundwater remedy improvements conducted at the Monticello, Utah, Disposal and Processing Sites. This site is managed by the U.S. Department of Energy Office of Legacy Management.

Site Description and History

The Monticello, Utah, Disposal and Processing Sites are located in and near the city of Monticello, Utah, in southeastern Utah approximately 250 miles southeast of Salt Lake City.

Vanadium and uranium ore were processed at the local mill site for military purposes from 1942 until 1960. During its years of operation, the mill processed approximately 900,000 tons of ore. Mill tailings that remained after the ore was processed were impounded at four locations along the local Montezuma Creek. Uranium and other inorganic substances in the tailings contaminated the underlying alluvial aquifer of these areas.

Properties in Monticello and near the mill site were contaminated by windblown tailings, tailings carried by water in Montezuma Creek, and tailings that were used for construction-related purposes such as:

- Fill for open lands
- Backfill around water, sewer, and electrical lines
- Base for driveways, sidewalks, and concrete slabs
- Backfill against basement foundations
- Sand mix in concrete, plaster, and mortar

Remediation

Remediation at the mill tailings site and at several properties located in and near Monticello, was cleaned up by the U.S. Department of Energy (DOE) according to requirements set by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986.

After the mill was closed down, site buildings were taken apart. Contaminated debris from the demolition, along with equipment that was used and other contaminated materials were buried in place and the area was graded and revegetated. By August 1999, all contaminated material on the former mill site was moved to a DOE disposal cell constructed approximately 1 mile south.

Contamination remains in the disposal cell, in soil at the locations where supplemental clean up standards have been applied, and in groundwater and surface water.
Groundwater Remedy Improvement

The purpose of groundwater remediation is to restore water quality and protect human health and the environment. The chosen groundwater remedy for the Monticello site is monitored natural attenuation, which allows natural hydrological and geochemical processes to decrease the concentrations of contaminants. Groundwater is monitored regularly to measure the progress of the remedy. Institutional controls that restrict groundwater usage have also been put in place to ensure that the selected remedy continues to be protective of human health and the environment. The affected aquifer is not to be used as a source of water for domestic purposes.

The current remedy is effective; however, the scope of groundwater treatment has been optimized to improve the progress of removing aquifer contaminants that originated from the former mill site, and help us to meet groundwater cleanup goals set by the U.S. Environmental Protection Agency.

The optimized pump-and-treatment remediation system uses eight extraction wells to remove contaminated groundwater from a focus area. A buried pipeline transports the extracted water to an evaporation pond (Pond 4), located on the DOE disposal cell property.

The remediation system is designed for year-round operation and utilizes instrumentation that provides continuous monitoring. A utility building (groundwater transfer building) to house the system controls was built on city-owned property near the focus area.

Construction began in May 2014 with the installation of new groundwater monitoring wells and extraction wells. Construction of the full system was completed in January 2015.

Operation of this remedy improvement does not increase the potential for public exposure to contaminants. Notices of planned construction activities associated with the optimized remediation system were published in The San Juan Record on March 5 and March 12, 2014.

Contacts


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