



# Burrell, Pennsylvania, Disposal Site Long-Term Surveillance and Maintenance Program



U.S. Department of Energy  
Grand Junction Office

## FACT SHEET

The Grand Junction Office has provided cost-effective and efficient stewardship for more than 10 years

### Overview

Uranium and other ores were processed at Canonsburg, Pennsylvania, between 1911 and 1966. This milling operation generated process-related waste and tailings, a sandlike material containing radioactive materials and other contaminants associated with the ore. In 1956 and 1957, tailings were removed from the Canonsburg site and transported for use as fill on privately owned rail-road property at Burrell Township, near Blairsville, Pennsylvania. The Federal Government acquired the Burrell Disposal Site through condemnation proceedings in 1986. The U.S. Department of Energy (DOE) encapsulated the tailings in an engineered disposal cell at the Burrell site in 1987.

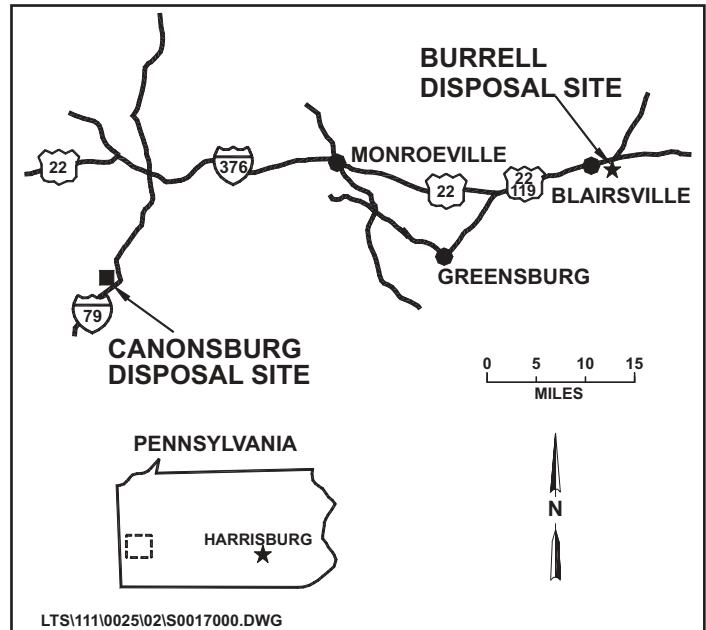
The U.S. Nuclear Regulatory Commission included the Burrell Disposal Cell under general license in 1994. DOE is responsible, under the general license, for the long-term custody, monitoring, and maintenance of the site. The DOE Long-Term Surveillance and Maintenance (LTSM) Program at the DOE Grand Junction (Colorado) Office is responsible for the long-term safety and integrity of the disposal site.

In 1988, DOE established the LTSM Program to provide stewardship of disposal cells that contain low-level radioactive material after completion of environmental restoration activities. The mission of the LTSM Program is to ensure that the disposal cells continue to prevent release of contaminated materials to the environment. These materials will remain potentially hazardous for thousands of years. As long as the cells function as designed, risks to human health and the environment are negligible.

The LTSM Program maintains the safety and integrity of the disposal cell through periodic monitoring, inspections, and maintenance; serves as a point of contact for stakeholders; and maintains an information repository at the DOE Grand Junction Office for all sites in the LTSM Program.

### Regulatory Setting

Congress passed the Uranium Mill Tailings Radiation Control Act in 1978 (Public Law 95-604) that specified remedial action for 24 inactive privately owned processing sites where uranium was produced for the Federal

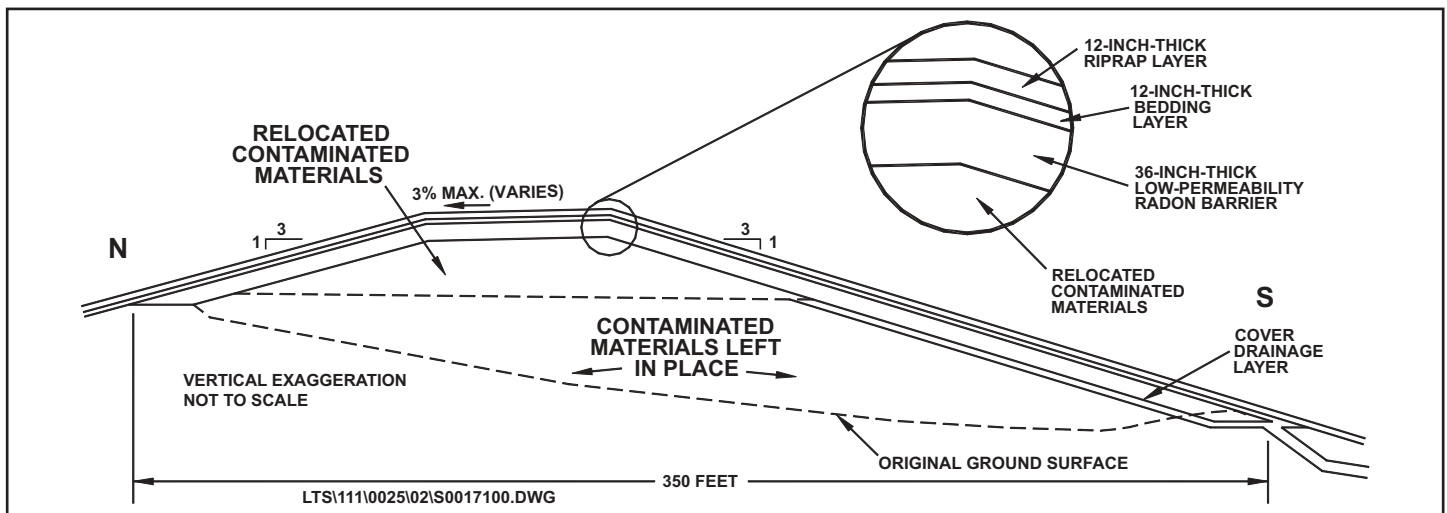


Government. The Burrell site was identified as a “vicinity property” to the Canonsburg processing site. However, because of the large volume of waste and the distance to the Canonsburg site, the contaminated material was consolidated on site at Burrell with the concurrence of the U.S. Nuclear Regulatory Commission. DOE remediated the Burrell site under the Uranium Mill Tailings Remedial Action Project and encapsulated the radioactive material in a U.S. Nuclear Regulatory Commission-approved disposal cell. Cleanup standards were promulgated by the U.S. Environmental Protection Agency in Title 40 *Code of Federal Regulations* (CFR) Part 192. The U.S. Nuclear Regulatory Commission license was issued in accordance with 10 CFR 40.

### Burrell Disposal Site

The Burrell Disposal Site is located about 1 mile east of the Borough of Blairsville, Indiana County, in southwestern Pennsylvania. The site is bordered on the south by the Conemaugh River and on the north by ConRail railroad tracks. The surrounding land is primarily open and sparsely populated.

The site is situated on as much as 50 feet of unconsolidated alluvium. Unconfined groundwater lies more than 30 feet beneath the surface in the unconsolidated materials. Confined groundwater lies beneath 30 to



North-South Cross Section of Burrell Disposal Cell

40 feet of impermeable claystone and shale of the Casselman Formation. Results of groundwater monitoring indicate that contaminant levels in the confined and unconfined groundwater zones do not exceed applicable standards.

## Cell Design

The Burrell Disposal Cell occupies about 4 acres of the 72-acre site. Contaminated materials are covered by a low-permeability layer of compacted clay, a bedding layer, and a protective rock cover. The clay layer prevents the escape of radon gas and the infiltration of precipitation. The free-draining bedding layer overlies the clay layer. Precipitation runs down the sloped cell top through the bedding layer and into surrounding rock drains. The cell design promotes runoff of precipitation to minimize leachate. The surrounding area was graded to promote drainage and was vegetated with native species to minimize erosion. The rock cover protects against erosion. The cell contains about 86,000 dry tons of contaminated material with total activity of about 4 curies of radium-226. The site is enclosed by a security fence to prevent unauthorized access.

## LTSM Program Activities

The LTSM Program manages the site according to a long-term surveillance plan (LTSP) prepared specifically

for the Burrell site. Under provisions of the LTSP, the LTSM Program (1) conducts annual inspections of this site to evaluate the condition of surface features, (2) cuts the grass and clears vegetation, as necessary, to maintain access and security, (3) performs additional maintenance as necessary, and (4) continues to monitor groundwater.

Under the provisions of the LTSP, the LTSM Program monitors groundwater at the site to demonstrate the integrity of the disposal cell in isolating the encapsulated wastes from groundwater and the local environment.

The disposal cell at Burrell is designed and constructed to last for 200 to 1,000 years. However, the general license has no expiration date, and DOE understands that its responsibility for the safety and integrity of the Burrell site will last indefinitely.

## Contacts

For more information about the LTSM Program or about the Burrell Disposal Site, contact

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<http://www.gjo.doe.gov/programs/ltsm>