



UMTRCA Title II

Maybell West, Colorado, Disposal Site

This fact sheet provides information about the Maybell West, Colorado, Disposal Site. This site is managed by the U.S. Department of Energy Office of Legacy Management under Title II of the Uranium Mill Tailings Radiation Control Act of 1978.

Site Description and History

The Maybell West disposal site is in Moffat County in northwest Colorado. The site is located in a historical uranium-mining district characterized by rolling terrain and small, dry washes that flow only during periods of intense rainfall. The washes drain to the Yampa River, about 2 miles southwest of the site. Vegetation is generally sparse and consists primarily of sagebrush, saltbush, and short grasses.

The Miocene Browns Park Formation directly underlies the site and is the host rock for the uranium ore in the area. This formation is composed of white to light gray and tan sandstone with thin layers of conglomerate, siltstone, and minor limestone lenses. The thickness of the Browns Park Formation is variable but is believed to be approximately 1,000 feet at the site. Groundwater occurs within the Browns Park Formation at a depth of about 200 feet below ground surface. Groundwater ultimately discharges to the Yampa River southwest of the site.

Umetco Minerals Corporation constructed and operated heap leach cells on the site from 1975 through 1982. During operations, low-grade uranium ore mined from local pits was placed into heap leach cells constructed from 35- to 55-foot-high berms. Sulfuric acid was used to leach the material to extract uranium minerals. Leachate was then collected by a drain system and piped to an adjacent plant for concentration. The plant consisted of a series of holding ponds where the leachate was either recycled to the heaps for upgrading or processed by ion exchange within the outdoor plant. Additional processing resulted in a uranium oxide precipitate that was sent offsite for final purification.

Processing operations ceased in 1982, but liquid waste management operations continued. Liquid waste was managed by evaporating the pond liquids and evaporating liquids from the surface of the heap leach cells. A spray



Location of the Maybell West, Colorado, Disposal Site

evaporation system, installed to increase the efficiency of liquid waste disposal, operated from 1988 until 1994. In 1991, the sides and a portion of the top of the leached ore materials, or tailings pile, were regraded, and an interim revegetated cover was placed over the pile.

The heap leach materials, or tailings, are a predominantly sandy material with lesser amounts of finer-grained particles that remain after uranium is leached from the ore. The tailings contain radionuclides and metals that were naturally occurring in the ore.

isolated in this cell. The ancillary cell was covered with a minimum of 5.5 feet of cover, including radon barrier clay, random fill, and erosion protection material.

The disposal cells and associated systems have been designed and constructed to minimize the need for routine maintenance. The cover of the disposal cell is designed to shed precipitation to an armored outlet channel, which is further protected from head-cutting by a launch rock basin. The disposal site area is fenced to prevent damage from livestock grazing in the vicinity and to discourage trespassing. If an inspection of the site reveals that an as-built feature is failing or has degraded so that site protectiveness is compromised, repairs will be conducted to reestablish or surpass the durability of the as-built condition.

Legacy Management Activities

LM manages the Maybell West disposal site according to a site-specific Long-Term Surveillance Plan to ensure that the disposal cell system continues to prevent the release of contaminants into the environment.

Under provisions of this plan, LM conducts annual inspections of the site to evaluate the condition of surface features and performs site maintenance as necessary.



View from the Disposal Cell Looking South Toward the Ancillary Cell

Contacts

Documents related to the Maybell West, Colorado, Disposal Site are available on the LM website at http://www.lm.doe.gov/maybell_west/Sites.aspx.

For more information about LM activities at the Maybell West disposal site, contact:

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