Mixed Waste Landfill (MWL)

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Mixed Waste Landfill

The Mixed Waste Landfill (MWL) is a Solid Waste Management Unit at Sandia National Laboratories/New Mexico (SNL/NM). The MWL is located 4 miles south of the central facilities at SNL/NM and 5 miles southeast of Albuquerque International Sunport. The landfill is a fenced, 2.6-acre site in the north-central portion of Technical Area-III. The MWL was established in 1959 as a disposal area for low-level radioactive waste generated by SNL/NM research facilities. Low-level radioactive and minor amounts of mixed waste were disposed of at the MWL from March 1959 through December 1988. Approximately 100,000 cubic feet of low-level radioactive and mixed waste containing approximately 6,300 curies of activity (at the time of disposal) were disposed of in the landfill.

Wastes disposed of in the MWL include acids, organic compounds and oils, depleted uranium, lead shielding, activation products, beryllium, sodium, lithium, neutron generator tubes, liquid scintillation vials, assorted contaminated equipment, decontamination materials, construction debris, contaminated soils, and solid wastes. The MWL has been extensively studied and it does not represent a current or future threat to drinking water.

Long-Term Monitoring and Stewardship

The MWL is currently undergoing corrective action. The New Mexico Environment Department (NMED) has selected the final remedy to be a 3-foot vegetative soil cover underlain by a 1-foot biointrusion barrier and a subgrade layer ranging up to 40 inches in thickness. The NMED also required the identification of specific monitoring trigger levels. An extensive review (with fate and transport modeling) of the cap-in-place remedy is required every five years. The NMED approval of the Corrective Measures Implementation Plan (CMIP) (SNL/NM

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November 2005) is pending. The CMIP proposes closure of the landfill with all wastes remaining in-place; a remedy which is strongly opposed by a small group of citizen activists.

In 2008, the Department of Energy (DOE)/ Sandia updated the groundwater monitoring network at the MWL. Four of the earliest installed wells were plugged in place and four new wells were installed at locations approved by the NMED. All 7 monitoring wells at the MWL are proposed for monitoring in the Long-Term Maintenance and Monitoring Plan (LTMMP) (SNL/NM September 2007), which is also pending approval by the NMED.

The LTMMP addresses other forms of monitoring and sampling in addition to the groundwater. A maintenance schedule is proposed as well as physical and institutional controls. The long-term monitoring will ensure that the final remedy implantation (installation of the cover) is protective of human health and the environment. The following parameters will be monitored:

- Radon concentrations in the air
- Tritium, gamma-emitting radionuclides, and metal concentrations in surface soil
- Soil moisture in the vadose zone
- Volatile organic compound (VOC) concentrations in the vadose zone
- VOC, uranium, and radionuclide concentrations in groundwater
- Gamma-emitting radionuclides in biota

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Recent Activities, Current Status and Future Work at the MWL

A soil and soil-vapor survey was conducted in the spring of 2008 in order to update the characterization of soil and vadose zone conditions at the MWL. The NMED will make a final determination and approval of the CMIP upon receipt of the report for this investigation.

Surface subgrade preparations were made to the MWL in late 2006. The installation of the final vegetative cover is pending approval by the NMED. Following installation of the cover and approval of the LTMMP, the monitoring proposed in the LTMMP can begin.

No cover installation activities are currently taking place at the MWL pending approval of several items. The MWL is currently undergoing groundwater monitoring.

Contact Us!

For more information about long-term stewardship at Sandia, visit our website:

http://ltes.sandia.gov/

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