

SLURFUND

Fact Sheet

TULALIP LANDFILL SITE
Marysville, Washington



U.S. ENVIRONMENTAL PROTECTION AGENCY

October 2000

The U.S. Environmental Protection Agency (EPA), working with The Tulalip Tribes and Waste Management, Inc., has completed construction activities at the Tulalip Landfill. These actions were designed to stem the migration of contaminants from the 147-acre site.

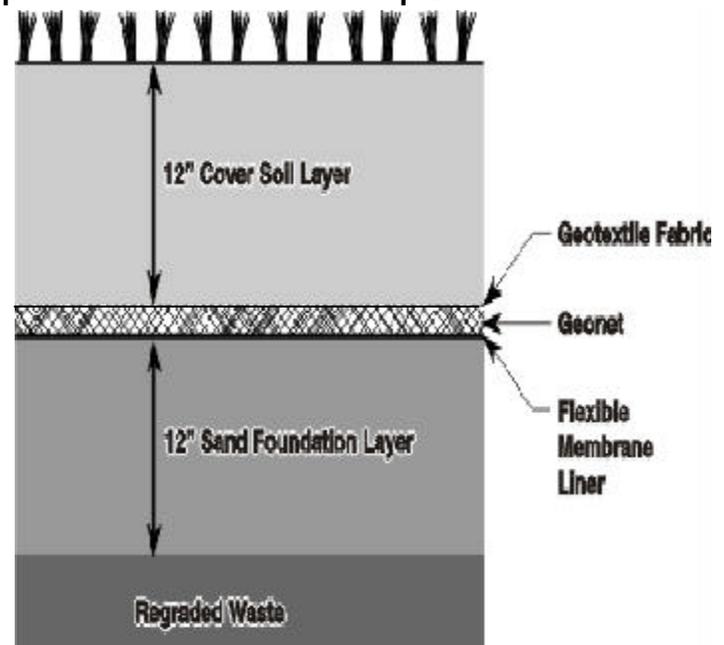
Landfill Cover System Completed

Workers began construction of a cover system for the landfill in June 1998 and completed it in September 2000. EPA and the Tulalip Tribes inspected the cover system in mid-October and agreed that it meets design specifications. From bottom to top, the cover system consists of the following layers:

- Crown-shaped sub-base of regraded waste and clean fill.
- 12" sand foundation layer.
- Heavy plastic sheeting called a flexible membrane liner, which minimizes infiltration of water into the landfill.
- Plastic netting called a geonet, which allows water to drain off the membrane liner.
- Fabric layer called a geotextile, which keeps soil out of the geonet.
- 12" layer of topsoil.
- Vegetation.

The system also includes a surface water drainage system to direct rainwater off the cover and a gas collection system to allow future addition of an active gas treatment system, if necessary. In addition, workers constructed a locking gate to prevent unauthorized persons and equipment from gaining access to the landfill and posted signs to warn people of the potential dangers of eating fish and shellfish from Ebey and Steamboat Sloughs adjacent to the landfill.

Typical Cross Section of Tulalip Landfill



Aerial View of Tulalip Landfill Near End of Construction



Construction Estimates and Costs Compared

In 1996 and 1998 decisions, EPA selected a cover as the method for controlling the hazardous wastes at the landfill and warning signs as the method for responding to the contamination surrounding the landfill. At that time, EPA estimated the capital costs of the design and construction to be almost \$20,000,000.

During settlements with parties responsible for the landfill contamination, most settling parties made payments toward the total costs of the site. Waste Management, Inc. (WMI) agreed to do the actual cleanup work and assume any cost overruns. EPA has requested final cost documentation from WMI, which has stated that the design and construction costs are close to \$35,000,000. WMI has indicated that the costs increased during construction, primarily because the amount of fill dirt, sand, and topsoil needed was significantly greater than estimated, and the market price of these fill materials increased sharply.

Future Actions Required

Because hazardous substances remaining at the landfill restrict use of the area, EPA is required by law to review the cleanup five years after it began. The review, which will take place in 2003, will ensure that the cleanup continues to provide adequate protection of human health and the environment. In addition, the landfill cover will be maintained for a minimum of thirty years, the first four by WMI and the following twenty-six by the Tulalip Tribes.

Currently the Tulalip Tribes have no plans for future use of the landfill site. However, they have signed a legal agreement and adopted deed restrictions that prohibit activities that might disturb the landfill cover.

Background

The Tulalip Landfill is located on North Ebey Island within the Tulalip Indian Reservation. The site lies between Ebey and Steamboat Sloughs and is surrounded by wetlands. Under a lease from the Tulalip Tribes, Seattle Disposal Company operated the landfill from 1964 until 1979. During these years, three to four million tons of mixed commercial and industrial waste was deposited in the landfill.

After the landfill closed, the surface was graded and soils were added as a cover. However, insufficient grading of the cover allowed rainwater to collect and penetrate the landfill surface. As a result, a pool of contaminated groundwater, called leachate, formed within the landfill. Additional rainwater forced the leachate to seep out of the landfill into the wetlands surrounding Ebey Island and the sloughs leading to the Snohomish River.

Sampling indicated that leachate leaving the site failed to meet marine water quality standards for heavy metals and other contaminants. In addition, wetland soils and sediments near the landfill seeps contained many of the same contaminants.

Because of concerns for human health and the environment, EPA proposed the Tulalip Landfill to its National Priorities List (NPL) of hazardous waste sites in July 1991 and added the landfill to the NPL in April 1995. EPA published cleanup decisions for the site in an Interim Record of Decision (ROD) in March 1996 and a final ROD in September 1998.

More Information

For more information about the Tulalip Landfill, please contact one of the following EPA representatives:

Cindy Colgate, Community Involvement Coordinator
206-553-1815
or toll-free at 1-800-424-4372

Loren McPhillips, Project Manager
206-553-4903
or toll-free at 1-800-424-4372

Written information about this site is available at the following locations:

EPA Region 10
Superfund Records Center
1200 Sixth Avenue, ECL-076
Seattle, Washington
206-553-4494
or toll-free at 1-800-424-4372

Marysville Public Library
6120 Grove
Marysville, Washington

To ensure effective communication with everyone, additional services can be made available on request to persons with disabilities.



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