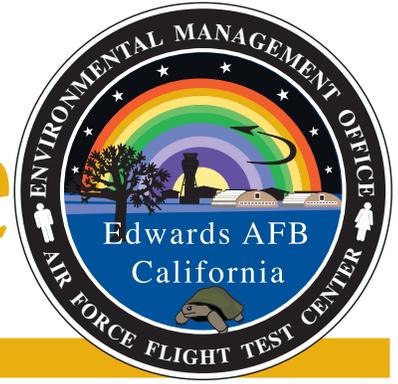


ERP Update

June 2002



This ERP Update provides information about an innovative clay liner at Site 13 that is expected to prevent potential contaminants from leaching into the groundwater.

Innovative liner brings landfill site back to natural state



Two bulldozers spread top soil over the geosynthetic liner. This is the soil in which native seeds will be mixed in hopes of revegetating the site.

Site 13, one of the first Environmental Restoration Program sites to be identified by the Air Force at Edwards in the 1980s, is almost ready for revegetation now that a \$3.6 million dollar state-of-the-art geosynthetic clay liner is in place.

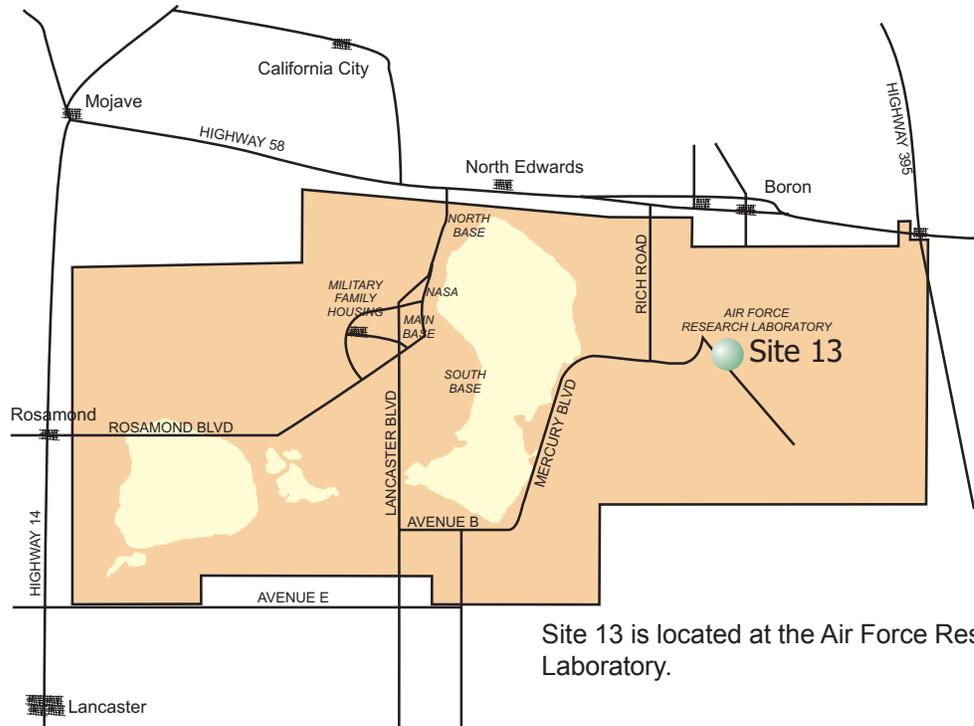
The liner, one of the few to be installed in California, is being used to block water from soaking through the soil at this landfill site after rainstorms. Keeping water out of the landfill will eliminate leaching of any potential contaminants into the groundwater. In fact, the liner was designed and built to withstand 24 continuous hours of heavy rainfall.

Site 13 is located near Mars Boulevard at the Air Force Research Laboratory. Tests have shown no chemicals of concern were at the landfill but eventual leaching of potential contaminants that might be contained in waste dumped at the site was a concern. Also, a contaminant plume from Site 133 passes beneath the landfill. This plume contains trichloroethene, or TCE, and has been addressed under groundwater cleanup for Operable Unit 4.

Building the landfill cover, or cap, involved several steps.

First, approximately 35,000 cubic yards of existing concrete, asphalt and

An old landfill, Site 13 is located on 16 acres in a remote area of the base, known as the Rocket Lab.



Site 13 is located at the Air Force Research Laboratory.

other rubble were crushed and distributed evenly throughout the landfill area.

On top of that, enough clean, local soil was added to create a 2-foot foundation. The foundation was sloped to direct water runoff.

This soil was topped with the geosynthetic clay liner, consisting of a ½-inch layer of bentonite clay sandwiched between two pieces of filter fabric. Two additional feet of soil were placed on top of the liner.

In a final step, native seeds were mixed into this soil to bring the area back to a natural state. A drainage channel and fence around the perimeter of the landfill were also constructed.

The Air Force used the landfill, located near the intersection of Mars and Mercury boulevards, between 1961 and 1990. The bulk of the material disposed of at the site was municipi-



Site 13 as it appeared in 1994, prior to any cleanup being done.

pal-type garbage, paper and construction debris.

“We’re very pleased with the design and construction of the landfill cap,” said project manager Ai Duong. “In a few years, you won’t be able to tell there was a landfill there except for the drainage channels and the fence.”

For more information on this project or the Environmental Restoration Program, contact Gary Hatch, chief, Environmental Public Affairs at (661) 277-1454 or email:gary.hatch@edwards.af.mil.