



ELMENDORF AFB KNIK BLUFF LANDFILL LF04

Alaska Department of Environmental Conservation • Division of Spill Prevention and Response

Site Description

The Knik Bluff Landfill (LF04) is a former landfill that was used for disposal of construction rubble, debris and other solid waste from 1945 to 1957. It parallels the Knik Arm and is located in operable unit (OU) 6 at Elmendorf Air Force Base, Alaska. It has a steep bluff that drops about 200 feet down to the shoreline. Daily tidal action erodes the base of the bluff causing it to subside into the ocean, which exposes solid wastes.

Threats and Contaminants

Contamination found to date is primarily benzene in the shallow groundwater and exposed landfill waste. The area of exposed and accessible landfill waste is estimated to be 20 acres.

Components of the Selected Remedy

The Air Force investigated this site and developed cleanup plans under a compliance agreement with DEC and EPA. The plans include groundwater use restrictions, annual groundwater monitoring to determine contaminant migration, degradation and dispersion. No drilling of wells into the shallow aquifer, except for the purposes of monitoring wells, will be allowed. The cleanup level for benzene in the groundwater is 5 ppb, which is the federal and state drinking water standard.

Access to the soil will also be institutionally controlled. It is designated a "restricted use area" in the Base Comprehensive Plan. Unmanned facilities such as parking lots, storage buildings may be built but not office buildings or residences. The landfill debris on the beach will be removed annually to prevent human exposure to the wastes. As this is a former landfill, the Air Force has agreed to maintain these land/groundwater use controls indefinitely.

The cleanup plan includes removing debris that erodes from the landfill. This involves an annual beach sweep to locate and pickup wastes which can be reasonably collected for disposal, as well as debris on the bluff slope or other low lying areas which can be safely accessed and removed. Removal of the debris is expected to continue annually for 30 years or as long

as the landfill remains subject to erosion by the tides. Five-year reviews by the EPA, Air Force and ADEC will assess the protectiveness of the remedial action, including an evaluation of any changed site conditions.

Response Actions

- The first debris removal took place in June 1997. Approximately 98 tons of metallic debris was removed from the beach area and taken to the municipal landfill.
- In 1999 for the first time, unexploded ordnance (UXO) was discovered during the beach sweep at the landfill. The UXO consisted of: small arms ammunition, ordnance up to 40 mm and empty casings (some with live primers) including a howitzer casing. The UXO was removed and cleared by the Air Force explosive ordnance and disposal team. Twenty-nine tons of solid waste were removed including car parts, electrical parts, and other metallic debris.

Current Status

- Additional institutional controls such as fencing and "no trespassing" signs will be installed to prevent people from accessing the bluff landfill from the Port of Anchorage property located to the south of the site.

Debris removals will continue and the Air Force is researching a more permanent solution to the landfill debris other than conducting annual beach sweeps.