

NPL Site Narrative for Kim-Stan Landfill

KIM-STAN LANDFILL Selma, Virginia

Conditions at Proposal (April 23, 1999): The 24-acre Kim-Stan Landfill is located in Alleghany County, a predominately rural county of west central Virginia. The landfill is situated in a mixed commercial/residential area of Selma, Virginia. The unlined landfill, which has been inactive since 1990, lies along the southern edge of VA Route 696, approximately 1,000 feet south of the Jackson River. The landfill is bordered on the east by the Bennett Lumber Company and on the west by property formerly used by another lumber company. Across VA Route 696 lies the historic Oakland Church, CSX Railroad property with associated wetlands, and a string of ox-bow "ponds" which drain into the Jackson River.

A large volume of surface water runs onto the landfill from the Rich Patch Mountains south of the landfill. The lack of any substantial surface water runoff and leachate containment has been and continues to be a major problem at the Kim-Stan landfill. During large rain events, storm water runoff from the Kim-Stan landfill has drained northward as sheet flows and frequently flooded the highway on the northern border of the landfill, carrying runoff onto the Oakland Church and CSX Railroad properties, wetlands, and ox-bow "ponds." Sampling results indicate that hazardous substances from the landfill have contaminated nearby wetlands and the ox-bow "ponds," which the public uses as a fishery.

The Kim-Stan Landfill operated as a sanitary/industrial landfill for almost twenty years, reportedly received approximately 865,000 tons of waste between November 1972 and May 1990. Depth of the waste buried at the landfill has been estimated at over 80 feet thick. Wastes known to have been disposed of at the landfill include 5,000 gallons of waste oils contaminated with polychlorinated biphenyls, and unknown quantities of aluminum sludges containing mercury, asbestos, and medical waste. Backhoe test pit data and information collected by local citizens indicate that landfilled wastes were derived from a wide range of sources, including hospitals, light industrial plants, manufacturing plants, automobile repair shops and dry cleaners.

While the landfill was in operation, the owner/operators undertook several measures to attempt to address surface runoff and leachate inflow. None of the measures taken to contain leachate with the boundary of the landfill was successful. During the summer of 1989, a 400,000-gallon storage basin was constructed on top of the refuse to replace the two buried 4,000-gallon steel tanks that had proved inadequate to contain the large volume of leachate being generated at the landfill.

Beginning in 1982 a number of organizations, including EPA Region III and the Commonwealth of Virginia, have collected environmental media samples to assess the surface water runoff and leachate problem at the landfill. These sampling results provide evidence that hazardous substances are migrating from the landfill into the environment. Both ground water and surface water are being contaminated. The July 1997 SI sampling results show that wetlands in the area south of the CSX Railroad culvert contained elevated levels of barium and zinc. Wetlands in the ox-bow ponds also are being impacted by contamination from sources at the landfill. Cadmium was found in the pond nearest to the landfill at a concentration above environmental benchmarks. At other sampling locations within the ponds area, cadmium as well as aluminum, barium, manganese, and zinc were found to be elevated over background levels. Cadmium and zinc are of special concern because these metals tend to bioaccumulate within edible fish.

The landfill was shut down by court order on May 11, 1990. When operations ceased, the active part of the landfill remained uncovered. The thickness of the soil cover over the rest of the landfill generally did not exceed 6 inches. Although the Commonwealth of Virginia has undertaken several measures since 1990 to improve conditions at the landfill, the significant quantity of surface runoff and leachate discharge still continues to pose environmental concerns.

Status (July 1999): EPA is considering various alternatives for this site.

For more information about the hazardous substances identified in this narrative summary, including general information regarding the effects of exposure to these substances on human health, please see the Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs. ATSDR ToxFAQs can be found on the Internet at [ATSDR - ToxFAQs](http://www.atsdr.cdc.gov/toxfaqs/index.asp) (<http://www.atsdr.cdc.gov/toxfaqs/index.asp>) or by telephone at 1-888-42-ATSDR or 1-888-422-8737.