NPL Site Narrative for South Dayton Dump & Landfill

SOUTH DAYTON DUMP & LANDFILL
Moraine, Ohio

South Dayton Dump & Landfill (SDD) is located in Montgomery County, Ohio. SDD occupies at least 33 acres that include two 5 acre ponds, which are former extraction pits that have filled with water. Former disposal operations at SDD have resulted in soil and ground water contamination (vinyl chloride and trichloroethylene), which poses a threat to the underlying drinking water aquifer and the adjacent Great Miami River.

Extraction pits were excavated at SDD after 1936. Landfill operations conducted between 1941 and 1996 filled in the extraction pits. Before 1970, a significant disposal practice at SDD was open burning of materials, primarily vegetation and wood wastes. Between 1950 and 1970, drummed wastes were occasionally accepted at the landfill. The drums were emptied of their contents and either buried or sold to drum recyclers. Between June 1973 and July 1976, drums containing hazardous waste were accepted at SDD from two nearby Hobart Corporation (Hobart) facilities in Dayton, Ohio. The drums contained cleaning solvents (1,1,1-trichloroethane [TCA]; methyl ethyl ketone [MEK]; and xylene); cutting oils; paint; Stoddard solvent; and machine-tool, water-based coolants. In May 1978, the Montgomery County Combined General Health District (MCCGHD) and Ohio Environmental Protection Agency (OEPA) conducted an inspection of the landfill and noted several problems, including the presence of containers labeled "hazardous." Further evidence of hazardous waste disposal at SDD comes from a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Notification of Hazardous Waste Site Form submitted by Industrial Waste Disposal Company, Inc. (IWD) on June 9, 1981, indicating that SDD had been used as a disposal landfill for the industrial and municipal wastes of IWD's customers. Former landfill operations were conducted in at least the southern half of the Valley Asphalt Plant. In 2000, evidence of former landfill operations beneath the Valley Asphalt Plant was discovered when drums were encountered during excavation and installation of a new sewer line at the Valley Asphalt Plant. The drums contained: Aroclor 1254, benzene, 2-butanone, chlorobenzene, ethylbenzene, 4-methyl-2-pentanone, toluene, trichloroethylene, vinyl chloride, and xylene. The drums and associated soil contamination were removed by OEPA in 2000.

In 1985, OEPA prepared a preliminary assessment (PA) for SDD. The PA indicated that hazardous waste at SDD poses a threat to the underlying drinking water aquifer and the adjacent Great Miami River. In 1991, the U.S. EPA's field investigation team (FIT) conducted a screening site inspection (SSI). Soil analytical results indicated the presence of volatile organic compounds (VOCs), PAHs, polychlorinated biphenyls (PCBs), and metals at concentrations significantly above background concentrations. In 1996, OEPA conducted a Site Team Evaluation Prioritization (STEP) investigation, which included soil, sediment, and ground water sampling activities. Ground water analytical results indicated the presence of VOCs, including: 1,2-dichloroethylene (total) at concentrations up to 150 micrograms per liter (µg/L) (Maximum Contaminant Level 70 µg/L); 1,1-dichloroethane at concentrations up to 13 µg/L; toluene at concentrations up to 15 µg/L; and chloroethane up to 22 µg/L.

Between 1998 and 2002, SDD owners conducted several investigations at the landfill, including ground water and surface water sampling. Ground water analytical results from 2002 revealed maximum concentrations of vinyl chloride at 180 µg/L (Maximum Contaminant Level 2 µg/L) and trichloroethylene at 76 µg/L (Maximum Contaminant Level 5 µg/L).

The OEPA 1996 STEP documents elevated concentrations of VOCs in ground water beneath SDD. The ground water contamination is present in the Great Miami Aquifer, which is a sole source aquifer that provides drinking water to the following receptors within 4 miles of SDD: (1) the employees of the Delphi Automotive Systems Plant, (2) the residents of the Cities of Oakwood and West Carrollton, and (3) residents of Montgomery County served by Montgomery County's standby wells.

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) or by telephone at 1-888-42-ATSDR or 1-888-422-8737.