NPL Site Narrative for Feed Materials Production Center (USDOE)

FEED MATERIALS PRODUCTION CENTER (USDOE)
Fernald, Ohio

Conditions at proposal (July 14, 1989): The Feed Materials Production Center (FMPC), operated by the U.S. Department of Energy (USDOE), is 20 miles northwest of Cincinnati in the unincorporated town of Fernald, Ohio. The 1,450-acre site is in both Hamilton and Butler Counties. Generally, the area is rural, with a number of farms surrounding the site. The Production Area covers approximately 136 acres in the center of FMPC. Waste disposal areas are present at locations surrounding the Production Area within approximately 3,000 feet of the center of FMPC.

Since the early 1950s, FMPC has manufactured metallic uranium fuel elements, target cores, and other uranium products for use in production reactors originally operated for the Atomic Energy Commission and now for USDOE. These processes have generated large quantities of wastes, including low-level radioactive wastes, mixed hazardous and radioactive wastes, waste oils, waste solvents, and significant amounts of fly ash. Among the materials on-site are uranium, mercury, barium, thorium, tetrachloroethylene, arsenic, and PCBs.

Disposal practices and operational deficiencies have resulted in contamination of soil, ground water, surface water, and air. Major sources of contaminants include the Production Area, six waste pits, three waste storage silos, a storm sewer outfall to Paddy's Run (an intermittent stream), and an effluent line discharging into the Great Miami River. Uranium contaminates the Buried Valley Aquifer, the sole source of drinking water for FMPC workers and most area residents, according to routine monitoring conducted in 1984 by FMPC. The contamination has resulted in closing of a downgradient private well. An estimated 1,100 FMPC employees obtain drinking water and 750 acres of land are irrigated by wells within 3 miles of FMPC.

In 1985, FMPC detected high concentrations of uranium, technetium-99, and hexavalent chromium in the effluent line discharging to the Great Miami River, which is used for recreational activities within 3 miles downstream.

Radon gas was detected in the atmosphere by on-site monitoring equipment in April 1986.

USDOE is investigating FMPC under its Comprehensive Environmental Assessment and Response Program. An environmental survey has been completed at FMPC, and a remedial investigation/feasibility study (RI/FS) is underway to determine the type and extent of contamination and identify alternatives for remedial action.

Status (November 21, 1989): Work on the RI/FS continues.

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.