This fact sheet describes the environmental cleanup activities the U.S. Department of Energy Grand Junction Projects Office is conducting at the Monticello Mill Tailings Site in Monticello, Utah. These activities are being performed in accordance with Federal and State environmental laws.

**Background**

The original Monticello mill was built in 1942 to provide an additional supply of vanadium during World War II. Vanadium, an element used to strengthen steel, and uranium were milled intermittently until 1960.

Mill tailings are sand-like material that remains after uranium has been extracted from the ore. Tailings contain naturally occurring materials that radioactively decay to radium and produce radon, a radioactive gas. If inhaled over a long period of time, particularly in enclosed areas, radon can cause damage to lung tissue, increasing the risk of lung cancer. The purpose of the Monticello cleanup projects is to minimize risks to the public and environment from exposure to the mill tailings and the radon gas they produce.

The U.S. Department of Energy (DOE) has entered into an agreement with the U.S. Environmental Protection Agency (EPA) and the State of Utah to clean up the tailings under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), known as Superfund. The activities must also comply with applicable or relevant and appropriate Federal, State, and local environmental laws and regulations.

The EPA has placed the cleanup projects in Monticello on its National Priorities List (NPL) of top-priority waste sites eligible for cleanup under Superfund.

**Site Description**

Cleanup activities at the Monticello Mill Tailings Site are divided into areas known as “operable units.”

Operable Unit I includes the 110-acre millsite, the tailings impoundment areas, and areas where tailings removed from the peripheral and vicinity properties are stockpiled. The volume of tailings at OU I will total approximately 2.6 million cubic yards after cleanup is completed on the peripheral and vicinity properties.

Operable Unit II comprises 300 acres of land adjacent to the millsite. These peripheral properties contain approximately 300,000 cubic yards of soils that contain tailings and by-product materials from mill processing.

**Cleanup Remedy**

Cleanup of OU I involves excavation of the millsite tailings and disposal in an on-site repository. The repository will cover about 80 acres on DOE-owned land, south of the former mill location. When excavations are completed, the millsite and the repository site will be revegetated. Long-term surveillance and environmental monitoring will ensure the effectiveness of the cleanup. Cleanup at peripheral properties will similarly involve removal of contaminated materials and relocation to the east millsite tailings pile for temporary storage, pending final disposal in the repository. Peripheral properties will also be revegetated following tailings removal.

**Current Activities**

**Peripheral Properties**

During fiscal year 1995, DOE will continue to remove contaminated soils and other materials from peripheral properties. About 30 percent of the work on peripheral properties has been completed; all of the work is expected to be completed in 1998.

**Current Millsite Activities**

Construction activities to prepare the millsite for excavation began in July 1992 and are completed. These activities included installation of fencing to control access.
to the millsite; piping of Halls’ Ditch carrying seasonal irrigation flows to restrict recharge into contaminated soils; and construction of a decontamination pad for construction traffic entering and leaving the millsite, a staging area for administrative offices, an interim repository and runoff collection pond, and an access road across Montezuma Creek.

As a part of millsite pre-excavation, a lined collection pond (Retention Pond No. 3) was constructed on the eastern portion of the millsite. Potentially contaminated rainwater and snowmelt will be directed to the pond by an on-site storm-water collection system. A wastewater treatment plant near Pond No. 3 will treat the potentially contaminated water so it can be released into Montezuma Creek. Treatment is required to meet the effluent discharge requirements of the State of Utah.

Maintenance activities at the millsite will continue. Maintenance includes dust suppression, weed control, and road repairs.

**Repository Site Preparation, Status**

On December 22, 1994, DOE decided to construct a repository on 80 acres of DOE-owned land south of the Monticello millsite. Design for the repository was finalized in August 1995, and the subcontract was awarded in September 1995. Repository construction begins in November 1995.