



# Salt Lake City, Utah, Processing Site

## FACT SHEET

*This fact sheet provides information about the Uranium Mill Tailings Radiation Control Act of 1978 Title I processing site at Salt Lake City, Utah. This site is managed by the U.S. Department of Energy Office of Legacy Management.*

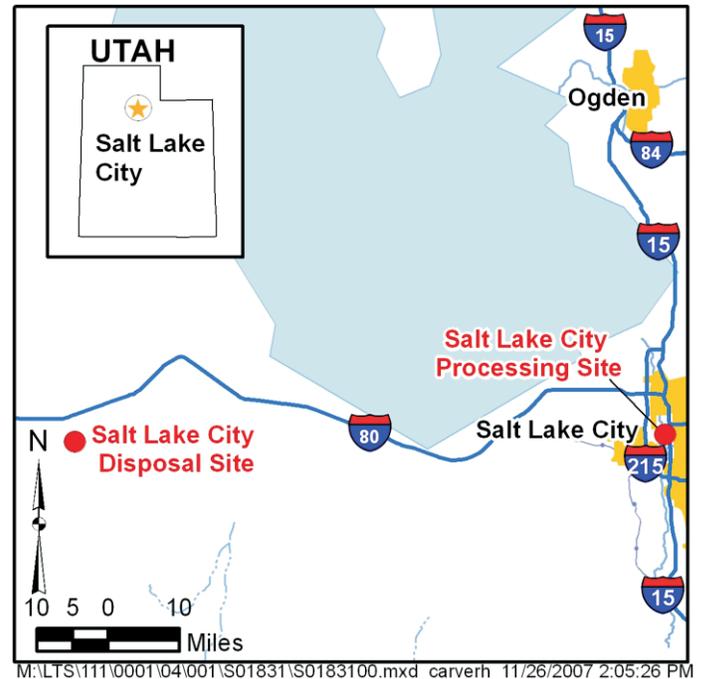
### Site Description and History

The former Salt Lake City Processing Site is located about 4 miles south-southwest of the center of Salt Lake City, Utah. The Vitro Chemical Company processed uranium and vanadium ore at the site from 1951 until 1968. The milling operations conducted at the processing site created radioactive tailings, a predominantly sandy material. Small amounts of tailings were sold and used for construction purposes on approximately 100 vicinity properties; the remainder was stored at the processing site. Cleanup of the processing site, conducted by the State of Utah under the direction of the U.S. Department of Energy (DOE), began in 1984 and was completed in 1989. Tailings and contaminated soils and building debris from the processing site and vicinity properties were moved to the Salt Lake City Disposal Site near Clive, Utah, approximately 81 miles west of Salt Lake City.

The Central Valley Water Reclamation Facility owns the former processing site property and has redeveloped the site as a regional wastewater treatment facility, a golf course, and a solid waste transfer facility. The Jordan River is 450 feet west of the site, and Mill Creek, a perennial stream, flows along the site's northern boundary. Commercial and industrial facilities dominate the surrounding area.

### Regulatory Setting

Congress passed the Uranium Mill Tailings Radiation Control Act (UMTRCA) in 1978 (Public Law 95-604), which required the cleanup of 22 inactive uranium-ore processing sites. DOE remediated these sites under the Uranium Mill Tailings Remedial Action Project in accordance with standards promulgated by the U.S. Environmental Protection Agency in Title 40 *Code of Federal Regulations* (CFR) Part 192. Subpart B of 40 CFR 192 regulated cleanup of contaminated groundwater at the processing sites. The radioactive materials were encapsulated in U.S. Nuclear Regulatory Commission (NRC)-approved disposal cells. The NRC general license for UMTRCA Title I sites is established in 10 CFR 40.27.



Location of the Salt Lake City Processing Site

### Current Site Conditions

For structural and safety reasons, several small pockets of contamination exceeding the radium-226 cleanup standard were left in place under a large-diameter, unreinforced concrete storm drain and along a gas line. Both utilities are located along the boundary between the property and a street right-of-way. Laboratory analyses of samples conducted after excavations were backfilled indicated that thorium-230 concentrations at several locations exceeded the thorium cleanup standard. The Utah Department of Environmental Quality Division of Radiation Control agreed to leave the contaminated soils in place because they pose no unacceptable risk to human health or the environment.

Past processing operations at the site have resulted in contamination in a shallow aquifer beneath the site. Site-related contaminants have not affected water quality of the deeper confined aquifer or surface waters of the Jordan River or Mill Creek. The main processing-

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related contaminants in the shallow aquifer were molybdenum and uranium.

Arsenic concentrations in the shallow aquifer exceed the maximum concentration limits in 40 CFR 192 but are not related to past milling operations at the processing site. Sources of arsenic in groundwater include leaching from landfills, tailings, and slag heaps associated with abandoned smelters in the valley that processed copper, gold, lead, and silver.

### **Compliance Strategy**

The groundwater compliance strategy for the uppermost aquifer at the Salt Lake City Processing Site is no remediation with application of supplemental standards. Supplemental standards may be applied at locations where groundwater is classified as limited use (not a current or potential source of drinking water) because it meets any of several criteria. At the processing site, groundwater is classified as limited use because of widespread ambient contamination not related to processing activities that cannot be cleaned up using treatment methods reasonably employed in public water systems (40 CFR 192.11[e][2]). Arsenic concentrations in background areas range up to 3 times the maximum concentration limit in 40 CFR 192 and are not related to uranium-milling operations performed at the site.

As a best management practice, DOE agreed to monitor groundwater and surface water locations annually for a minimum of 5 years (through 2004) to track concentrations of molybdenum and uranium in the shallow aquifer, verify that the deeper aquifer remains under artesian pressure, and verify that constituents in surface water present no unacceptable risk to human health or the environment. After this 5-year period, DOE evaluated the need to continue the monitoring program. The evaluation concluded that the deeper aquifer had remained under artesian conditions, and contaminant concentrations in surface water samples were below maximum concentration limits at all sampling locations. Consequently, DOE submitted a recommendation in 2005 to the State of Utah and NRC that monitoring be discontinued at the site. NRC approved discontinuing surface water monitoring but directed an additional 2 years of groundwater monitoring as a result of concerns raised by the State with regard to the concentration of molybdenum. In 2007, following the required additional 2 years of groundwater monitoring, DOE received regulatory approval to discontinue all monitoring at the site, and the remaining monitor wells were decommissioned in accordance with State of Utah regulations.

### **Institutional Controls**

The Central Valley Water Reclamation Facility owns the former processing site property and controls access to the land and to potentially contaminated groundwater in the shallow aquifer. Because contaminated soils were left in place in several areas on the site, a Notice of Residual Radioactive Contamination was developed and signed by DOE, the State of Utah, and the property owner. This notice functions as an institutional control to alert and inform buyers or developers that residual radioactive material remains on the property and recommends that certain actions should be taken when any construction is performed on the site DOE maintains annual contact with the Central Valley Water Reclamation Facility to verify awareness of this institutional control and that no excavation has taken place in contaminated soil areas.

### **Legacy Management Activities**

DOE will continue to contact the property owner at the former processing site to document whether excavation activities have taken place in the contaminated soils area.

### **Contacts**

Documents related to the Salt Lake City Processing Site are available on the DOE Office of Legacy Management website at [http://www.LM.doe.gov/land/sites/ut/slc/slcp/slc\\_p.htm](http://www.LM.doe.gov/land/sites/ut/slc/slcp/slc_p.htm).

For more information about DOE Legacy Management activities at the Salt Lake City Processing, contact

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