Cleaning Up Radioactive Sites

The total number of sites contaminated with radionuclides in the United States is in the thousands. Contaminated sites range in size from corners of laboratories to sprawling nuclear weapons facilities covering many square miles of land. The contamination extends to all environmental media, as well as to onsite buildings and equipment.

For many contaminated sites, cleanup programs have already been established. The following is an overview of the major cleanup programs in the US.

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Superfund Program

EPA's Radiation Protection program provides assistance to the Superfund Program for both remedial and removal actions at radiologically contaminated sites. Removal sites are those sites that require quicker action, based on threats to public health and welfare or the environment, than remedial sites, which typically allow for more planning time.

Superfund maintains the National Priority List of chemically and radiologically contaminated sites. Its primary purpose is to identify, for states and the public, which facilities, sites, or releases warrant remedial actions. The NPL also serves to notify the public of sites that EPA believes warrant further investigation. (Removal sites are not listed by name, because they are typically shorter in duration than remedial sites.)

EPA maintains a database (called CERCLIS) of all reported potentially hazardous releases to the environment. Of over 37,000 entries in CERCLIS, 1231 are listed as NPL sites. Seventy-six are radioactively contaminated (although many were actually listed because of their chemically-hazardous contamination rather than their radioactivity).

- Radiologically Contaminated Superfund Sites
  This site contains a list and the status of the radiologically contaminated sites that are being cleaned up under the the Superfund program.
Formerly Utilized Sites Remedial Action Program (FUSRAP)

The FUSRAP program was initiated in 1974 by the Atomic Energy Commission (AEC), the predecessor of the U.S. Department of Energy. The purpose of this program is to identify, evaluate sites that were previously used by the AEC or its predecessor, the Manhattan Engineering District (MED). If necessary, the program decontaminates the sites to meet current standards, or controls the site to protect people from exposure.

The MED and the AEC conducted several programs during the 1940s and 1950s that involved research, processing, and production of uranium and thorium, and the storage of residues. Although the facilities were decommissioned and decontaminated to meet the health and safety guidelines in use at the time, many do not meet current standards. Also, recent radiological surveys, show that several adjacent private properties (called "vicinity properties") are contaminated from the processing operations carried out for MED and AEC.

Uranium Mill Tailings Remedial Action Program (UMTRAP)

The Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978 authorizes DOE to cleanup inactive uranium processing sites and associated "vicinity properties." These sites contain uranium mill tailings and other residual radioactive materials from processing. The goal of the program is to stabilize and control uranium mill tailing piles and other residual radioactive materials to minimize radiation health hazards.

Defense Environmental Restoration Program (DERP)

DERP was established in 1984 to promote and coordinate evaluation and cleanup of contamination at DOD installations. The program includes the Installation Restoration Program (IRP), which identifies and investigates potential contamination at DOD installations and formerly owned or used properties. If necessary, the sites are cleaned up. The highest priority sites represent the greatest potential public health and environmental hazards.

DOD consults with EPA and must meet the requirements of CERCLA, SARA and the NCP. EPA guidelines are applied in conducting the investigation and remedial actions within the program.

Site Decommissioning Management Plan (SDMP)

The former Atomic Energy Commission (AEC), and the Nuclear Regulatory Commission have terminated approximately 33,000 radioactive material licenses during the past four decades. Most do not contain significant amounts of radioactive contamination and do not require cleanup. As part of the process, licensees must decontaminate and decommission their facilities—removing any radioactivity in land, ground water, buildings, or equipment. The cleanup must meet standards that allow for unrestricted use. Sites are inspected by NRC inspectors to verify removal of contamination, before a license is terminated.
* Site Cleanup
  This site describes the clean up activities of EPA's Radiation Protection Program.

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