



US Army Corps
of Engineers®
Buffalo District

FUSRAP

Frequently Asked Questions

Formerly Utilized Sites Remedial Action Program

1. What is FUSRAP?

FUSRAP stands for the Formerly Utilized Sites Remedial Action Program. It was initiated in 1974 to identify, investigate and clean up or control sites throughout the United States that became contaminated as a result of the Nation's early atomic energy program during the 1940s, 1950s and 1960s.

2. How many sites are there?

There are currently 47 sites in 14 states that are in the program, and none of them pose an immediate threat to human health or the environment. At about half of them, remediation has been completed. At the other half, remedial action is planned, underway or pending final closeout.

3. How did the sites become contaminated?

During the 1940s, 1950s and 1960s, private companies throughout the United States under contract with the Government performed work during WWII for the Manhattan Engineer District (MED) and during peacetime for the Atomic Energy Commission (AEC). Both the MED and AEC were predecessors to the present day Department of Energy (DOE).

4. What kinds of work were these organizations contracted to do?

It varies. Because it was important to national security at the time to keep the contracts and plans as secret as possible, many companies had a relatively small task to do. We now know that each individual task was an integral step in the larger process of developing and understanding atomic energy.

5. Were any of the sites cleaned up right after the MED and AEC work was completed?

Most sites that became contaminated during the early atomic energy program were cleaned up under current guidelines in effect at the time. Because in most cases those cleanup guidelines were not as strict as today's, trace amounts of radioactive material remained at some of those sites. Over the years at some sites, contamination was spread to other locations, either by demolition of buildings, intentional movement of materials or by natural forces.

6. What contaminants are at FUSRAP sites?

FUSRAP sites are generally contaminated with low levels of uranium, thorium and radium and their associated decay products. Mixed wastes are sometimes

also present. It is important to understand that these materials are contaminated with low-levels of residual radioactivity since the raw product was shipped offsite at the time. In most cases, the contaminants currently pose no risk to human health or the environment given their current land uses. Generally speaking at Buffalo District FUSRAP sites, the contamination is in soil that is several inches below ground level, capped with vegetation and/or is in areas that are restricted from the general public.

7. How dangerous are FUSRAP sites?

Even though FUSRAP sites may contain levels of radioactivity above current regulatory guidelines, none of the sites pose an immediate health risk to the public or environment given current land uses (see number 6, above).

8. If the sites aren't dangerous, then why do they need to be cleaned up?

Although these materials are not currently a hazard, they will remain radioactive for thousands of years, and health risks could increase if the use of the land were to change. We want to ensure that each site is protective to a standard that considers possible future uses for the land.

9. How does a site become a part of the program?

When a site is thought to be contaminated, the DOE writes a letter to the Corps asking it to make a recommendation based on the potential for exposure to humans and the environment and the associated risk. The Corps then reviews old records, prepares a preliminary assessment and performs a site inspection. If contamination is found that is connected to a MED or AEC activity, cleanup is authorized under FUSRAP.

10. How did FUSRAP start?

FUSRAP was initiated in 1974 to study and take appropriate cleanup action at sites that had become contaminated because of work performed by private companies for the MED and AEC. The Energy and Water Development Appropriations Act for fiscal year 1998, signed into law on October 13, 1997, transferred responsibility for the administration and execution of FUSRAP from the DOE to the U.S. Army Corps of Engineers (USACE).

11. What are FUSRAP's objectives?

The objectives of FUSRAP are to:

- Evaluate sites that supported MED/AEC nuclear work and determine whether the sites need cleanup and/or control.
- Cleanup or apply controls to these sites so that they meet current guidelines.
- Dispose of or stabilize contamination that exceeds guidelines or causes an unacceptable risk in a radiologically and environmentally acceptable manner.
- Complete all work in a manner consistent with appropriate Federal laws and regulations and state and local environmental land use requirements (to the extent permitted by Federal law).

12. Does the Corps have to follow any rules when cleaning up sites?

Every step of the FUSRAP cleanup process is regulated by a number of Federal and state laws and their implementing regulations. Chief among these is the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

CERCLA consists of a series of very specific steps and activities that must be performed at each step to ensure a thorough cleanup process. It chronicles actions taken at a site from its initial site designation into the program to its closeout. It also requires that the public be informed and involved in the decision-making process. To learn more about the specific phases in the CERCLA process, go to www.lrb.usace.army.mil/fusrap/facts.htm.

It is also typical for many FUSRAP sites to be subject to multiple laws, depending on the type and extent of contamination at the site. Other laws may include the Resource Conservation and Recovery Act, the Toxic Substances Control Act, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, the Atomic Energy Act, the Uranium Mill Tailing Radiation Control Act and state and local laws.

13. How does FUSRAP work?

FUSRAP sites undergo several steps in the CERCLA process that lead to cleanup:

- **Preliminary Assessment/Site Inspection:** Collects and reviews information about the site. If it appears there may be contamination on site, a site investigation with sampling is performed to determine whether contamination is present on site.
- **Remedial Investigation/Feasibility Study:** Identifies the contamination at the site and its exact location. The **remedial investigation** will include a risk assessment, which is the science of defining the health effects of exposure to hazardous materials and situations. Within FUSRAP, risk assessment information helps determine what actions should be taken to clean up the site. The **feasibility study** develops and evaluates cleanup alternatives. Throughout the entire process, the public is informed about the progress toward a decision concerning cleanup alternatives and is encouraged to make comments.
- **Proposed Plan:** Evaluates the alternatives developed in the Feasibility Study against the nine CERCLA evaluation criteria. These criteria are divided into three sections. Threshold criteria must be met and calls for the alternatives to be protective of human health and the environment and comply with regulations. The next section is balancing criteria, where the alternatives are weighted against each other to see how they fit into the following standards: long-term effectiveness and performance; short-term effectiveness and environmental impacts; reduction in toxicity, mobility or volume through treatment; implementability; and cost. Finally, there is modifying criteria,

which call for state and community acceptance. Members of the public are asked to comment on the proposed plan.

- **Record of Decision:** The final decision after careful consideration of the public comments. If the selected remedy includes remediation, a remedial design follows a record of decision and includes preparation of technical drawings and specifications that direct how the cleanup will be conducted. Special care is taken to ensure the safety of workers, people on site (where applicable) and surrounding neighbors. Cleanup begins after the remedial design is complete. This phase involves site preparation and construction activities. When these activities are completed, testing is conducted to ensure that cleanup objectives for the site have been met.

14. What steps are taken to protect people during remediation at a site?

If remediation is the chosen alternative at a site, a combination of engineering, administrative and personnel protective equipment controls are put in place to ensure the safety of site workers, people on site (where applicable) and surrounding neighbors. Site workers are required to wear protective clothing and a thermoluminescent dosimeter, which is a device that measures radiation exposure. In addition, they wear personal monitors that measure daily air quality. Perimeter air monitors are placed around the site with samples taken and data evaluated on a daily basis, and engineering controls for dust management (such as watering down the material for excavation) are used as well.

15. How is FUSRAP organized?

Administrative and financial management of FUSRAP activities is the responsibility of USACE Headquarters in Washington, DC. Headquarters then delegates work to the USACE Divisions, which in the case of the Buffalo District, is the Great Lakes and Ohio River Division. Project management of the Buffalo District FUSRAP sites is done with a team approach with all team members reporting to a project manager for each site. The team members include experts from many different districts. Most site investigations and cleanups are done by contractors under the supervision of the Corps with the Corps ensuring that all FUSRAP activities comply with CERCLA requirements.

16. What kind of experts does each team within the District consist of?

Each site consists of several experts dedicated to ensuring that the site is protective of human health and the environment. Since each site is different, each team will consist of different members who have a particular area of expertise. Basic team members include a project manager, project engineer, health physicist, industrial hygienist and risk assessor.

In addition, a site will typically need support from chemists, biologists, environmental engineers, the public affairs office, office of counsel, real estate office and resource management, just to name a few. With all of these different individuals working towards a common goal, it's easy to see why working on FUSRAP sites is a collaborative effort.

17. What other agencies are involved in the investigation of FUSRAP sites in the Buffalo District?

There are several other state and Federal agencies interested in the investigation at FUSRAP sites that usually give comments at the various stages in the investigation, including the New York State Department of Environmental Conservation, The New York State Department of Health, The Ohio Environmental Protection Agency, The Ohio Department of Health and the United States Environmental Protection Agency.

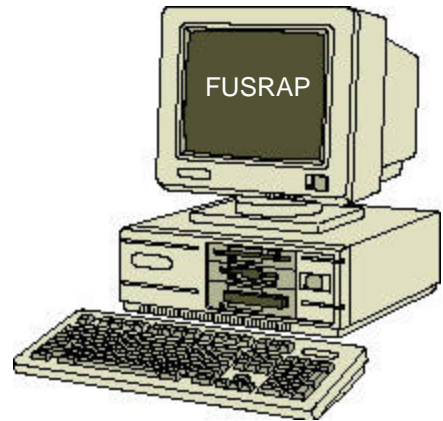
18. How can I learn more about FUSRAP and the sites that are in the Buffalo District?

The Buffalo District welcomes questions from concerned citizens. There are many ways to contact us:



Call us toll-free at:
1-800-833-6390
or locally at:
(716) 879-4124

Our e-mail address is:
fusrap@usace.army.mil



Mail: **U.S. Army Corps of Engineers
FUSRAP Public Information Center
1776 Niagara Street
Buffalo, NY 14207**

In addition, the Buffalo District FUSRAP website at www.lrb.usace.army.mil/fusrap has various types of information in regards to different sites, documents and fact sheets. You can also call or write to us at the above numbers and addresses and request the documents/fact sheets.