



Several facilities on the Hanford Site store or contain radiological and chemical materials that are hazardous. With continued proper storage and handling, the material is not a health hazard to site workers, visitors, or the public.

The Department of Energy operates a rigorous nuclear safety program to ensure radiological materials are well managed. The Department, along with local counties, the states of Oregon and Washington and other federal agencies participate in an emergency preparedness program, with plans in place to address extreme circumstances that could potentially result in the release of hazardous materials at the Hanford Site.

What hazardous materials are at the Hanford Site?

The Department of Energy and its contractors have been cleaning up contaminated buildings, soil, and groundwater that resulted from four decades of producing plutonium for national defense, beginning in the 1940s. Some of the nuclear materials have been packaged and sent off the site for storage or disposal. Much progress has been made in cleanup, but much work remains to be done in the coming decades to address the remaining hazardous material. The material includes a wide variety of chemical and radiological substances.

To ensure protection of Hanford Site employees, the public, and the environment, risks have been identified, hazards have been mitigated to the extent possible, and response actions have been planned in advance so they could be taken quickly. The Department of Energy, local counties, and the states of Oregon and Washington, are prepared to notify the public of an emergency at the Hanford Site immediately and are poised to act quickly to protect the public, site personnel, and the environment.

The hazardous materials at the Hanford Site are quite different from commercial nuclear reactor operations, both in type and scale, because the Hanford Site was used to produce plutonium, not generate power using commercial nuclear reactor technology. None of the Department of Energy Hanford reactors have been operational since the 1980s, and they no longer contain reactor fuel. The spent reactor fuel remaining on the site has been placed in dry storage in a facility several miles from the Columbia River, which flows through the site.

Hanford does not operate a nuclear reactor

Energy Northwest operates the Columbia Generating Station, a commercial nuclear reactor, on Hanford Site land leased from the Department of Energy. The Department of Energy is not involved in the operations of that plant but coordinates emergency planning information with the facility to the benefit of both Energy Northwest and the Department of Energy.

Areas where emergency planning is necessary

Hazardous materials are stored or are present in facilities used for producing plutonium in the past, as well as some [sites](#) where environmental remediation projects are in progress. These include the 300 Area, where uranium reactor fuel was fabricated, the 100 Area, where nuclear reactors irradiated the fuel, and the 200 Areas, where most of the chemical processing took place and also where most of the waste is stored.



Emergency Preparedness Program, continued

How are hazards managed at Hanford

Hazards are assessed to identify...

- Hazards that can potentially affect facility operations (e.g., fire, etc.) and be mitigated through design, planning, procedures, or training
- Hazards (e.g., release of contaminated material) that could potentially affect people, both on and off the Hanford Site, as well as the environment
- Facilities that require nuclear safety and emergency response planning
- Potential impacts of hazards or events

Information from these hazard assessments has been shared with local counties and the states of Oregon and Washington, as well as other federal agencies.

Hazards have been analyzed

Chemical and radiological hazards have been analyzed in detail:

- Facility-specific hazards
- Operational, natural (e.g., seismic), and security hazards

Emergency scenarios are identified in emergency preparedness planning, including potential consequences. These plans are updated when changes, such as cleanup operations, occur.

Hazard analysis is the basis for emergency preparedness

- Analysis provides the basis for emergency response procedures.
- Each facility/operation has procedures to enable quick recognition of and response to emergency conditions.

- Plans have been coordinated with county and state emergency agencies, and area counties have installed warning systems with predetermined responses planned for potential emergencies at the Hanford Site.

Hanford is prepared to respond

A response infrastructure is in place

- Dedicated equipment and response capability
- Warning and communications systems
- Emergency Operations Center (EOC)

Response staff have been trained and tested

- Facility personnel, as well as site emergency services (Hanford Fire Department, Hanford Patrol) and Emergency Operations Center personnel are trained to respond quickly.
- The Department of Energy (DOE) conducts emergency drills at facilities and evaluates preparedness on an annual basis.
- DOE conducts four site emergency exercises each year to train personnel and test site emergency services and the Emergency Operations Center.
- County and state agencies participate in one emergency exercise each year.
- Inspections of the site DOE program are conducted every 18-24 months by the DOE Headquarters Office of Health, Safety & Security. The last review occurred in February 2010, and resulted in a "Satisfactory" (highest possible) rating.

How Would I be Notified of an Emergency at Hanford?

Local counties would notify area residents via Emergency Alert messages on radio/TV and emergency sirens along the Columbia River.

The Department of Energy would activate an emergency information web page on www.hanford.gov to provide updates on Hanford Site actions.