

Waste Management at the NNSS

safe ❖ secure ❖ successful



Waste Management at the NNSS

For decades, the Nevada National Security Site (NNSS) has served as a vital resource for research and national security. Initially established in support of historic missions, state-of-the-art waste management sites at the NNSS provide a safe, secure, and permanent disposal option for waste generated by cleanup at DOE sites across the U.S., as well as wastes generated as part of ongoing defense and research activities.

The NNSS is ideally suited for disposal due to security, remoteness, arid environment, and deep groundwater. The NNSS only accepts wastes that are **classified and/or radioactive**; radioactive wastes are classified as either **low-level waste or mixed low-level waste**. No high-level, transuranic, or commercial waste is accepted.

Fast Facts

- More than **51.9M** cubic feet of low-level waste has been safely and securely disposed at the NNSS.
- Since 1999, the NNSS has successfully processed over **32,000** LLW shipments.
- The DOE has provided more than **\$15.7M in funding** to support local emergency preparedness through a grant that offers \$.50 per cubic foot of LLW disposed at the NNSS.



Waste cells are put in a 20' x 20' grid system, using letters and numbers to mark the location of waste packages.

Waste Generators

Waste Generators are entities across the U.S. with NNSS-approved programs that produce radioactive waste in support of U.S. Department of Energy (DOE) and Department of Defense missions. They are reviewed by an independent panel of federal and contractor representatives. All generators of waste accepted at the NNSS undergo rigorous evaluation to confirm they have implemented programs to certify wastes transferred to the NNSS are compliant with applicable site, state, and federal requirements.

What is low-level waste (LLW)?

- *LLW is defined by what it is not. Specifically, it is not high-level waste, transuranic waste, spent nuclear fuel, or by-product material.*
- *While LLW is radioactive, mixed low-level waste (MLLW) is radioactive with a hazardous component subject to the Resource Conservation and Recovery Act (RCRA). MLLW is disposed in a cell constructed with multi-layered lining and a special leachate collection system.*
- *Accepted wastes typically consist of containerized debris, trash, soil, equipment, tools, and discarded personal protective clothing. Most containers can be safely handled without any special equipment.*



A waste package is surveyed prior to disposal.

Did you know?

Waste has been safely disposed at the NNSS since 1961.

Waste Management at the NNSS

Opened in 1961, the Area 5 Radioactive Waste Management Complex is a 740-acre region on the NNSS. Area 5 includes excavated disposal cells and permitted storage locations. The site provides for the disposal of classified waste requiring additional 24/7 security. A second 120-acre facility in Area 3 has historically been used for LLW disposal.



Cranes are used to place waste at Area 3.



An aerial view of Area 5

Safe, Secure, and Successful

Regular air, groundwater, and soil monitoring occurs at the waste disposal site. Results to date have shown no radiological releases above stringent regulatory limits. Along with site environmental monitoring data, incoming wastes are evaluated to ensure Performance Assessment computer models are accurate for evaluating potential short and long-term risks.

Nevada National Security Site Waste Acceptance Criteria (NNSSWAC)

The NNSSWAC establishes requirements for generators to ship waste to the NNSS for disposal.

In March 2022, the DOE completed a methodical, comprehensive, and collaborative revision of the NNSSWAC. The revisions further reinforced the continued safety of waste acceptance and disposal operations at the NNSS. Types of waste received, allowable contaminants, and waste shipment routing did not change.

Transporting Waste to the NNSS

Compliance is assessed during numerous radiation surveys conducted pre- and post-shipment. Studies assessing the surveys have concluded there are no identifiable health impacts due to radiation in communities through which waste travels en route to the NNSS. There are also rigorous training and reporting requirements for carriers and their drivers that provide additional safety measures during transportation.

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