

Mixed Low-Level Radioactive Waste (MLLW) Disposal at the Nevada National Security Site (NNSS)



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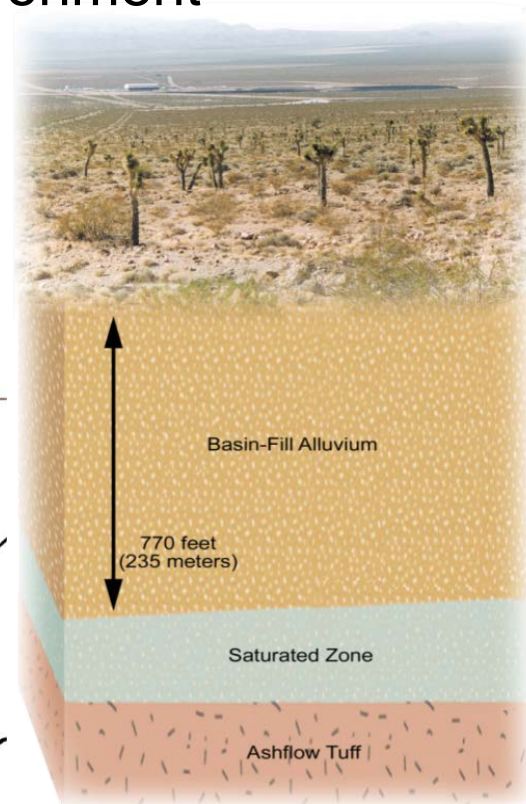
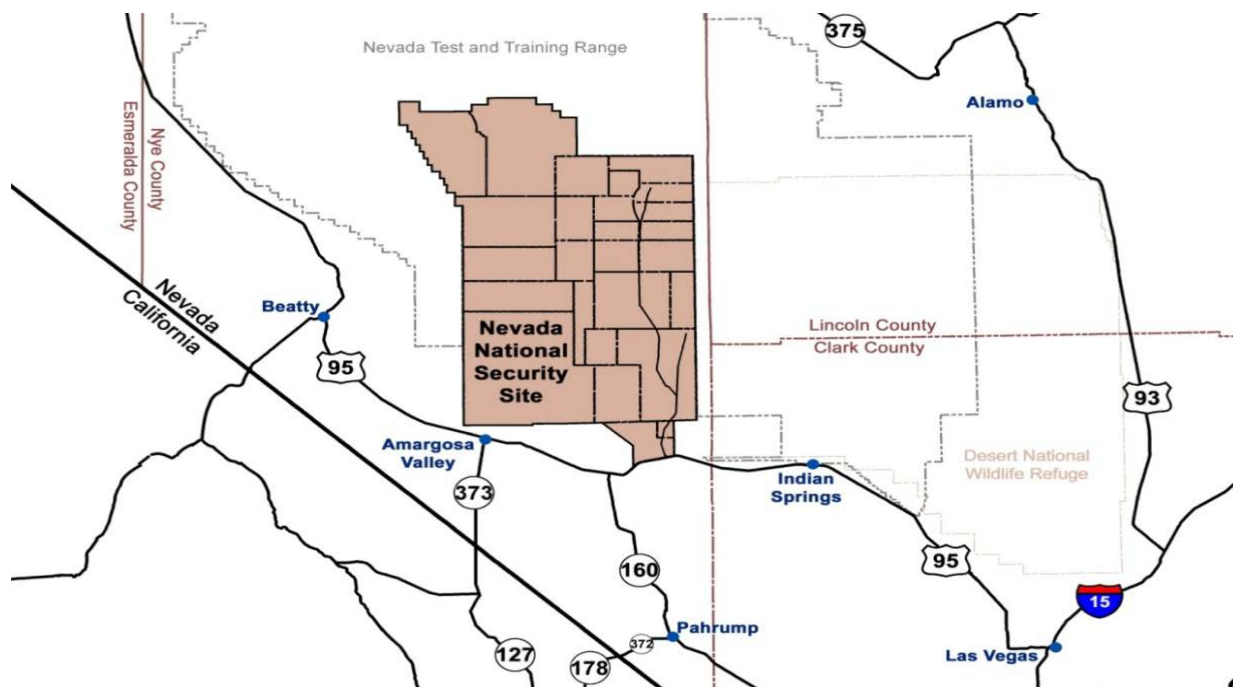
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DOE Commitment

- Safe and secure disposal of waste at the NNSSS that is protective of workers, the public, and environment

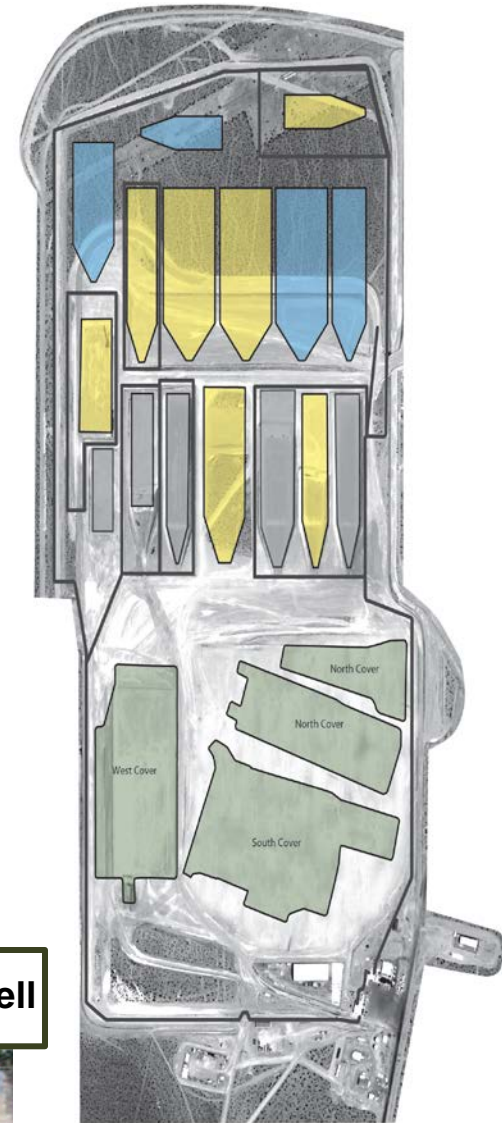


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NNSS Area 5 Disposal Facility

- Approximately 125,000 cubic meters (4.4 million cubic feet) of available capacity in existing cells
 - Seven (7) open cells
 - One (1) under construction
 - Three (3) planned for future construction
- More than 690,000 cubic meters (24.5 million cubic feet) of low-level waste (LLW) and MLLW disposed
 - 31 closed cells
- Available expansion area west of current footprint



Active Cell
 Operational Cover
 Closed Cell
 Future Cell



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Resource Conservation and Recovery Act (RCRA) MLLW Disposal Cell

- Cell capacity of 25,485 cubic meters
 - Approximately 40% full
 - Expect to reach capacity in 2018/2019
- Disposal began January 2011
- Double liner system consisting of five layers
 - Covered with select native alluvial soil
 - Floor and side slopes
 - Graded and compacted
 - Protects liner and provides soil pore capacity for precipitation



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Operational Challenges

- Ensure liner integrity
 - Waste must be packaged compliantly
 - Crane placement requires additional load distribution plates under outriggers
- Leachate monitoring
 - 87,477 liters (23,109 gallons) of leachate collected in three (3) years
 - Analysis for toxicity characteristic and polychlorinated biphenyl contaminants indicates almost all non-detects; orders of magnitude under limits



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Operational Challenges (continued)

- Non standard packaging (i.e., soft-sided bags, totes or tubs)
 - Extra time spent placing waste in stack
 - Inability to stack containers to 5.9 meters (16 feet) consumes 3-4 times more cell real estate
 - A new RCRA cell could be required before fiscal year 2019 depending on receipt of non standard packaging



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Classified Components

- NNSSS supporting disposition of classified components from the dismantlement of nuclear weapons
- RCRA permit was modified to accept non-radioactive, classified



- Approximately 400,000 cubic feet (11,326 cubic meters) of components require classified disposition
- Of this, approximately 78,000 cubic feet (2,208 cubic meters) require RCRA macroencapsulation treatment prior to disposition



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RCRA-Permitted Storage

- Available since October 2010
- 18,426 cubic meters (more than 650,000 cubic feet) of combined storage capacity for four storage areas

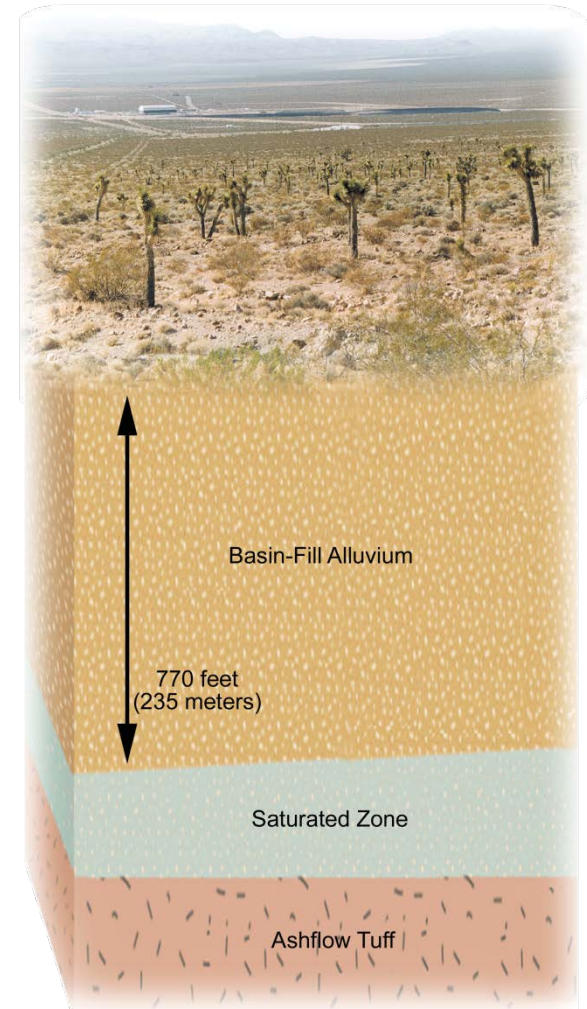


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Conclusion

- NNSS remote, secure location and arid environmental conditions makes it ideally suited to support U.S. national security waste disposal needs
- All NNSS waste disposal activities are conducted responsibly and in a transparent manner to facilitate stakeholder interactions and interest



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