Nevada National Security Site

Overview

The Nevada National Security Site (NNSS) was used from 1951 to 1992 to conduct a total of 100 atmospheric and 828 underground nuclear weapons tests. As a result, some groundwater, surface soils, and industrial-type facilities were contaminated on the NNSS and the surrounding Nevada Test and Training Range. The EM Nevada Program is responsible for completing cleanup actions at these historic nuclear testing locations. EM Nevada also manages the safe and secure disposal of waste at the NNSS, in support of cleanup and activities at federal sites across the United States involved in nuclear research, development, testing, and ongoing national security and science missions.

Calendar Year 2022 Accomplishments

- Continued characterization and hazard reduction activities to prepare two legacy facilities for demolition
- Obtained regulatory approval of data completeness for the Pahute Mesa groundwater region – the last active groundwater corrective action area at the NNSS
- Safely and securely disposed of more than 635,000 cubic feet of LLW, MLLW, and classified waste



Planned Cleanup Scope 2023–2033

The last active groundwater corrective action area at the NNSS is Pahute Mesa, where the investigation phase, including completion of the flow and transport model, was completed in 2022. The external peer review started in 2022 is expected to be completed early 2023. By the end of 2027, EM anticipates completing the model evaluation phase for Pahute Mesa, including the drilling of groundwater wells. By the end of 2028, EM anticipates transitioning the Pahute Mesa groundwater corrective action area into long-term monitoring. This action will complete EM Nevada's groundwater mission at the NNSS. It is anticipated that long-term stewardship responsibilities for closed groundwater corrective action areas will thereafter be transferred to the site landlord, NNSA.

In 2022, the EM Nevada Program continued characterization and hazard reduction activities in preparation for the demolition and closure of two large, unique, and complex legacy nuclear facilities. The facilities are the Engine Maintenance, Assembly, and Disassembly (EMAD) and Test Cell C (TCC) complexes, which supported historical nuclear propulsion rocket development and testing programs. EMAD and TCC represent the last major demolition and closure efforts currently identified in EM Nevada's environmental remediation mission. Demolition of EMAD and TCC will be handled in two phases; the first phase is expected to be complete in 2025 and includes full demolition of TCC and demolition of certain structures at EMAD and the second phase includes demolition of the remaining EMAD superstructure and is scheduled to begin in 2029.

Long-term monitoring of sites closed with contamination left in place will remain the responsibility of EM Nevada until the program completes its environmental restoration mission at the NNSS site. It is currently anticipated that long-term stewardship responsibilities for closed sites will be transferred to NNSA.

The EM Nevada Program will continue to support cleanup and activities at federal sites across the United States involved in nuclear research, development, testing, and ongoing national security and science missions, by disposing of up to 1.2 million cubic feet



annually of LLW, MLLW, and classified waste through at least 2030.

Key Regulatory Milestones 2023–2033

EM Nevada Program activities are primarily regulated by the Federal Facility Agreement and Consent Order (FFACO), an agreement between the State of Nevada and the Department of Energy governing environmental corrective actions at sites impacted by historical nuclear activities. A supplemental Agreement in Principle between the Department and the State exists to provide a role for the Nevada Division of Environmental Protection in oversight of NNSS LLW disposal operations. The federal Resource Conservation and Recovery Act, which regulates hazardous waste management, also governs certain aspects of MLLW disposal at the NNSS.

- Submit the TCC facility closure report 2023
- Submit the EMAD facility closure report 2024
- Submit closure reports for the Pahute Mesa groundwater corrective action area 2030

Post-2033 Cleanup Scope

The EM Nevada Program is currently scheduled to finish its cleanup mission by 2035, which will ultimately involve the completion of all active environmental restoration activities and the conveyance of remediated sites for long-term stewardship.