Executive Summary

Material Disposal Area (MDA) H is located within Technical Area 54 at Los Alamos National Laboratory (LANL) in northern New Mexico. The fenced site is about 70 feet (ft) (21 meters [m]) by 200 ft (60 m), (0.3 acres [ac] [0.12 hectares (ha)]) in size, and consists of nine inactive vertical in-ground shafts. Between 1960 and 1986, the site was used for the burial of classified containerized and non-containerized solid-form wastes, some of which were residually contaminated with radioactive, hazardous, and high-explosives constituents. The major waste placed in the subsurface shafts at MDA H was radioactive metal, of which most is either indicated to be depleted uranium (DU) or postulated to be DU.

The New Mexico Environment Department (NMED) identified the need to perform a Corrective Measure Study (CMS) at MDA H. A CMS Report prepared for MDA H evaluated various corrective measure options for MDA H. The United States Department of Energy (DOE), National Nuclear Security Administration (NNSA) now needs to implement a corrective measure for MDA H, so as to comply with the legal requirements of the *Resource Conservation and Recovery Act* (RCRA) and the *Atomic Energy Act of 1954*. The need for implementation of a corrective measure at MDA H is based on future potential for releases that might create unacceptable risks or doses to human health or the environment.

This environmental assessment (EA) has been prepared to assess the potential environmental consequences of implementing a corrective measure at MDA H. The Proposed Action has five corrective measure options. There are three containment corrective measure options, discussed in Section 2.4.1, and two excavation and removal corrective measure options, discussed in Section 2.4.2. The corrective measure option preferred by DOE is corrective measure Option 2, Replacement of the Existing Surface with an Engineered Evapotranspiration Cover. This corrective measure option was recommended for implementation to the State of New Mexico in the CMS Report.

The corrective measure options analyzed in this EA address a range of potential containment and excavation options and are intended to provide a bounding analysis of the potential environmental effects of implementing any corrective measure at MDA H. The final selection of a corrective measure option would be made by the NMED, which has been delegated RCRA corrective action authority from the Environmental Protection Agency. NMED is not obligated to select any one of the five corrective measure options analyzed in this EA. NMED could choose a combination of corrective measures or a totally different corrective measure option.

The No Action Alternative was also considered. Under this alternative, none of the corrective measure Options 1 through 5 described in Sections 2.4.1 through 2.4.2.2, would be undertaken at this site. A Long-Term Environmental Stewardship Program would be implemented at the site for the No Action Alternative, as well as for all the other containment corrective measure options considered.

Work at MDA H for any of the five corrective measure options could require the use of heavy equipment such as drill rigs, cranes, cement trucks, dump trucks, trackhoes, excavators, front-end loaders, and backhoes. Proposed corrective measure options involving waste excavation could also require the use of remote-handling equipment. A detailed engineering study, complete hazard categorization and safety analysis would be required for implementing the excavation and

removal corrective measure options. Appropriate nuclear safety analyses, authorization basis, security measures, and a site-specific security plan would also be developed, approved by DOE, NNSA, and implemented before site work commenced. New support structures and site area modifications could be required to implement either of the two proposed excavation and removal corrective measure options. Implementation of these corrective measure options would involve specific waste management requirements that would be incorporated into procedures documented in the security plan and implemented at the site. All excavation and declassification activities would be conducted consistent with this security plan. During site activities, space in the immediate vicinity would be available for vehicle parking, equipment storage, and material staging. Existing site controls (such as fencing) would limit unauthorized public access.

Best management practices (BMPs) for soil erosion control purposes would be implemented, as necessary, for any site remediation activities involving soil disturbance. BMPs could include runon and runoff controls, such as straw bales, silt fencing, ditching, and similar storm water flow controls. Special air pollution control technologies would be applied as necessary and appropriate. A National Pollutant Discharge Elimination System General Permit Notice of Intent would be filed, if required, based on the corrective measure option chosen for implementation. A Storm Water Pollution Prevention Plan would be required for the construction activity.

Implementation of the Proposed Action would not adversely affect groundwater and surface water quality, air quality in the Los Alamos airshed, human health, environmental justice, or socioeconomics. Implementation of either of the excavation and removal options would be expected to have only minor short-term and temporary effects on current traffic patterns and visual resources. Waste types and quantities generated by the excavation and removal of wastes from the MDA H shafts would be within the capacity of existing waste management systems and would not be likely to result in substantial effects to existing waste management disposal operations. When added to the much larger volume of environmental restoration waste at LANL, the Proposed Action would not contribute to significant adverse cumulative effects.

Implementation of a corrective measure option at MDA H would provide long-term beneficial impacts through the reduction of potential risks from contamination. Currently, LANL programs operate within regulatory requirements. The Proposed Action is an extension of LANL operations. DOE and LANL are pursuing an active program of reducing potential health risk through an as-low-as-reasonably-achievable (ALARA) policy for all personnel and the public. Implementation of a corrective measure option at MDA H would minimize any future potential releases that might create unacceptable risks or doses to the public or the environment.