PROJECT/ACTIVITY TITLE: Los Alamos County Landfill Cap Repair Project	**Accession No:** 22494 **PRID No:** N/A	**Date:** March 2, 2017
PURPOSE: Repair and permanently stabilize the damaged portion of the Los Alamos County Landfill cap to prevent offsite migration of landfill sediments and refuse.		
Location: Los Alamos County Landfill	**Project Contact:** Cassandra Begay, NA-LA Utilities & Sustainability Program Manager, (505) 665-4246	

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COVERAGE: Department of Energy National Environmental Policy Act Implementing Procedures 10 Code of Federal Regulations Part 1021, Appendix B to Subpart D of Part 1021—Categorical Exclusions Applicable to Specific Agency Actions:

B6.1 Cleanup Actions

Small-scale, short-term cleanup actions, under RCRA, Atomic Energy Act, or other authorities, less than approximately 10 million dollars in cost, to reduce risk to human health or the environment from the release or threat of release of a hazardous substance other than high-level radioactive waste and spent nuclear fuel, including treatment (such as incineration, encapsulation, physical or chemical separation, and compaction), recovery, storage, or disposal of wastes at existing facilities currently handling the type of waste involved in the action. These actions include, but are not limited to:

(a) Excavation or consolidation of contaminated soils or materials from drainage channels, retention basins, ponds, and spill areas that are not receiving contaminated surface water or wastewater, if surface water or groundwater would not collect and if such actions would reduce the spread of, or direct contact with, the contamination;

(b) Removal of bulk containers (such as drums and barrels) that contain or may contain hazardous substances, pollutants, contaminants, CERCLA-excluded petroleum or natural gas products, or hazardous wastes (designated in 40 CFR part 261 or applicable State requirements), if such actions would reduce the likelihood of spillage, leakage, fire, explosion, or exposure to humans, animals, or the food chain;

(c) Removal of an underground storage tank including its associated piping and underlying containment systems in accordance with applicable requirements (such as RCRA, subtitle I; 40 CFR part 265, subpart J; and 40 CFR part 280, subparts F and G) if such action would reduce the likelihood of spillage, leakage, or the spread of, or direct contact with, contamination;

(d) Repair or replacement of leaking containers;

(e) Capping or other containment of contaminated soils or sludges if the capping or containment would not unduly limit future groundwater remediation and if needed to reduce migration of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products into soil, groundwater, surface water, or air;

(f) Drainage or closing of man-made surface impoundments if needed to maintain the integrity of the structures;

(g) Confinement or perimeter protection using dikes, trenches, ditches, or diversions, or installing underground barriers, if needed to reduce the spread of, or direct contact with, the contamination;

(h) Stabilization, but not expansion, of berms, dikes, impoundments, or caps if needed to maintain integrity of the structures;

(i) Drainage controls (such as run-off or run-on diversion) if needed to reduce offsite migration of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum or natural gas products or to prevent precipitation or run-off from other sources from entering the release area from other areas;
(j) Segregation of wastes that may react with one another or form a mixture that could result in adverse environmental impacts;
(k) Use of chemicals and other materials to neutralize the pH of wastes;
(l) Use of chemicals and other materials to retard the spread of the release or to mitigate its effects if the use of such chemicals would reduce the spread of, or direct contact with, the contamination;
(m) Installation and operation of gas ventilation systems in soil to remove methane or petroleum vapors without any toxic or radioactive co-contaminants if appropriate filtration or gas treatment is in place;
(n) Installation of fences, warning signs, or other security or site control precautions if humans or animals have access to the release; and
(o) Provision of an alternative water supply that would not create new water sources if necessary immediately to reduce exposure to contaminated household or industrial use water and continuing until such time as local authorities can satisfy the need for a permanent remedy.

BACKGROUND

The Los Alamos County Landfill, which went through final closure in 2012, is located on property leased from the Department of Energy (DOE) by the Los Alamos County (County) Government. The landfill is bordered by roads on the north and west sides, a residential neighborhood on the East side and Sandia Canyon on the south side. The County government began operating the Los Alamos County landfill in 1974. Municipal solid waste from the community and Los Alamos National Lab was buried in the landfill from about 1974 to 2008. From 2008 to 2012, a limited amount of material was placed in the landfill for the purpose of reaching final contours for closure.[1]

During the September 2013 flood events substantial damage occurred on the southeast edge of the County landfill cap (Figures: 1 - 3). Flood water erosion created a chasm approximately 60 feet long by 20 feet wide deep exposing refuse previously encased by the landfill cap. Additionally, sediment washed from this area to an adjacent wetland within Sandia Canyon. The damaged area was temporally stabilized in the fall of 2013. After further site evaluation County personnel determined that permanent mitigation and repair work was required to permanently stabilize and protect the site from future flood events. During 2015, the County hired a contractor to conduct preliminary site evaluations and prepare a conceptual repair design for review by LANL and by the New Mexico Environmental Department (NMED). Both the County and NMED reviewed and approved the conceptual design report.

[1] Los Alamos County Transforming a Closed Landfill into a Sustainability Asset. Landfill Re-use Excellence Award SWANA 2013. Los Alamos County Landfill 2013 SWANA Landfill Re-use Excellence Award Application.

Figure 1: Overview of the Los Alamos County Landfill. Subject area is in the lower right hand corner at the end of the notch.

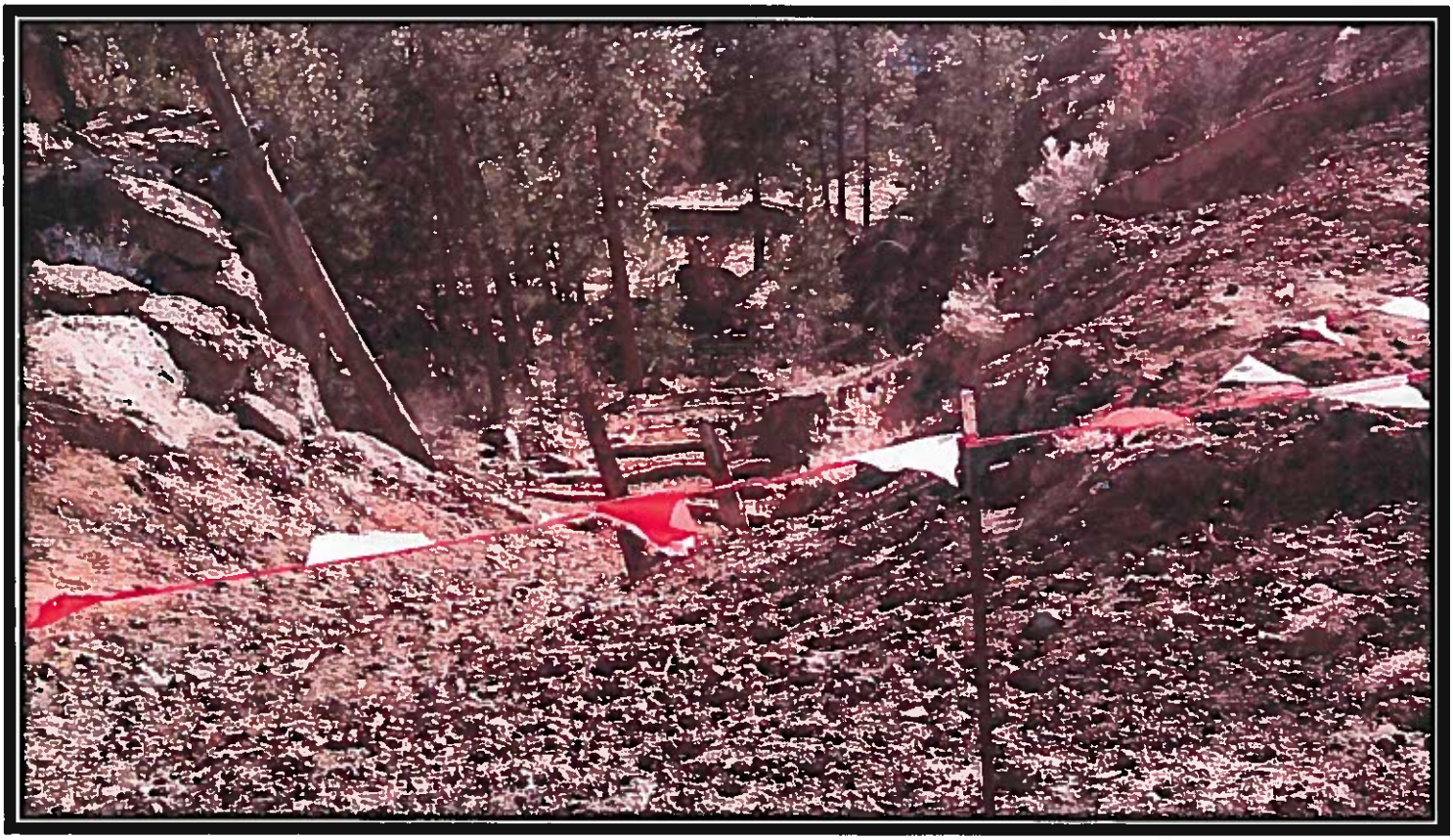


Figure 2: Los Alamos County Landfill Damage Area Requiring Remediation.

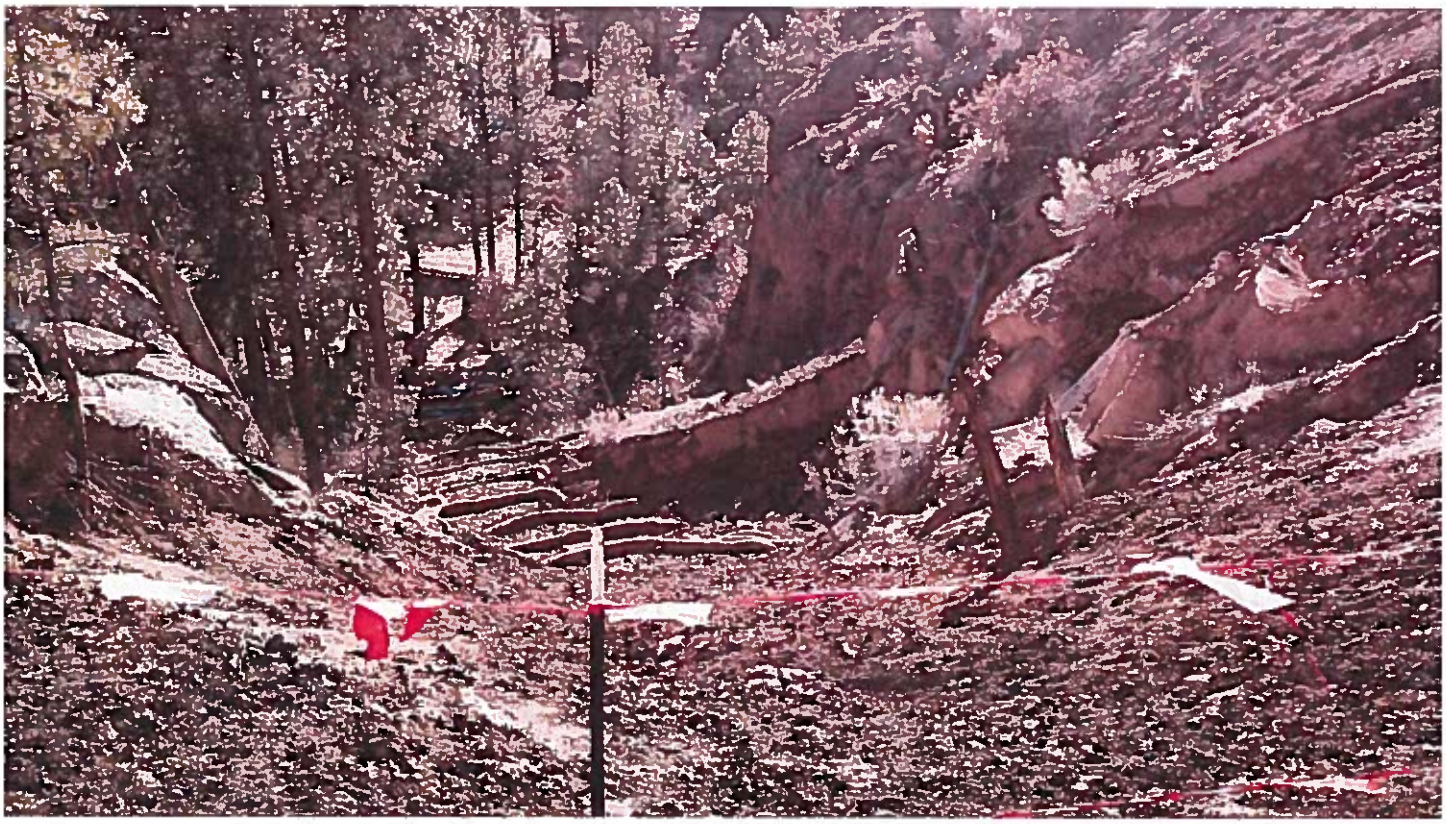


Figure 3: Los Alamos County Landfill Damage Area Requiring Remediation.

DESCRIPTION OF PROPOSED ACTION

The County proposed to hire a contractor to repair and permanently stabilize the site. Estimated repair and stabilization cost is less than 2 million dollars and a schedule of approximately 5 months. Components of the proposed work are:

- Mobilization and Demobilization
- Site Preparation: Pre-excavation topographic surveys will be required to define beginning surfaces for excavation quantity computations. De-grubbing, stripping, access ramp construction, and removal of existing concrete blocks as necessary will be performed. The contractor will store or stockpile materials at locations defined by the County. Refuse contaminated soils encountered during this process will be disposed of at the Site's waste transfer station or as directed by the County. To prevent uncontrolled sediment releases of sediments to the Sandia wetland silt fences, erosion control fiber rolls (waddles), and other measures will be installed or constructed.
- Design a Mechanically Stabilized Earth Wall (MSE)
- Excavation: In order to expose the bed rock contacts where MSE wall foundation trenches will be located, it will be necessary to excavate soils, slide materials, and possibly refuse from the proposed MSE wall area. The temporary working excavation slope will be engineered to remain stable during the duration of construction activities. Once the bedrock contact for the MSE wall foundation has been exposed, the contractor will excavate bedrock to an anticipated depth of approximately 1 foot.

- MSE Wall Construction: On-site materials (crushed concrete/roadbase) are expected to be used to backfill the geogrid component of the MSE wall. County owned soil stockpiles may be available for use as engineered fill.
- Final Cover Construction for the Repair Area
- Storm Water Control Feature Installation: The final storm water control feature installations will be permanent. The location and routing of the runoff channels and associated stilling basins with riprap apron outlets will be made once the MSE wall location is finalized.
- Surveying and As-built Drawing Preparation

IMPACT ASSESSMENT

By design the Proposed Action is to mitigate and prevent adverse environmental impacts. See Table 1 below for an assessment of potential impacts.

Table 1. Environmental Factors Checklist

Environmental Factor	Analysis
Land Use	No change to current conditions.
Visual	No change to current conditions.
Geology and Soils (geologic hazards, soil productivity, capability, erodibility, and mass failure)	Improvements will be made to stabilize the soils to withstand storm and storm runoff events and prevent uncontrolled sediment transport.
Water (surface and groundwater quality and quantity, groundwater recharge, streamflow regimes)	Stormwater control features will be installed to prevent soil and slope erosion and subsequent water contamination potential.
Non - radiological Air Quality	N/A
Radiological Air Quality	N/A
Noise	Minor increase in noise during construction.
Ecological (floodplains, wetlands, threatened or endangered species and habitat, migratory birds, exotic organisms)	Sandia wetlands will not receive uncontrolled sediment and landfill runoff.
Human Health – Radiological Impacts on the Public	N/A
Human Health – Chemical Impacts on the Public	N/A
Human Health – Worker Health	N/A
Cultural Resources (archeological and historical)	No effect.
Socioeconomics	No change to current conditions.

Environmental Factor	Analysis
Infrastructure (roads, utility corridors, communications systems, energy & fuels, distribution systems, and water)	Improved stormwater control.
Waste Management	Landfill cap will be repaired and site improvements constructed that will prevent future stormwater and stormwater runoff damage and sedime transport.
Transportation	N/A
Environmental Justice	N/A
Facility Accidents	N/A

CONCLUSION

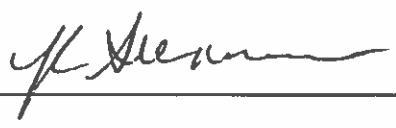
Based on this NEPA determination analysis, there are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects or threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders. Consequently, no further NEPA analysis is necessary or required.

NEPA Determination

Based on my review of the Proposed Action, as the National Nuclear Security Administration's Los Alamos Field Office (NA-LA) NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the Proposed Action as described herein, falls within the DOE NEPA Implementing Procedures listed in 10 CFR Part 1021, Subpart D, Appendix B 10 CFR Part 1021, Appendix B to Subpart D of Part 1021— Categorical Exclusions Applicable to Specific Agency Actions: Categorical exclusion *Cleanup Actions B6.1.*

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects or threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or executive orders. If changes are made to the scope of the action so that it is no longer bounded by the enclosed description, or the project is changed to encompass other actions, NEPA requirements for the action will need to be reassessed at that time and further analysis may be required.

NA-LA NEPA Compliance Officer: Jane Summerson

Signature: 

Date: 3/2/17