

FINDING OF NO SIGNIFICANT IMPACT**For the****ENVIRONMENTAL ASSESSMENT
LOS ALAMOS NATIONAL LABORATORY
PALEOSEISMIC RESEARCH PROPOSAL
SPECIAL USE PERMIT****RESPONSIBLE AGENCY:** U.S. Department of Energy**ACTION:** Adoption of Environmental Assessment and Issuance of Finding of No Significant Impact**SUMMARY:**

Los Alamos National Laboratory (LANL) located in north-central New Mexico is a multidisciplinary, multipurpose research institution owned and managed by the United States Department of Energy's (DOE) National Nuclear Security Administration (NNSA), Los Alamos Field Office. Per DOE orders and standards, DOE obligates its facilities to understand their seismic hazard, calculated ground motion from a seismic event, and facilities' positions relative to known faults. Therefore, LANL evaluates and updates probabilistic seismic hazard analyses¹ for existing and planned facilities as necessary to meet DOE facility design criteria identified in DOE Standard 1020.

The United States Department of Agriculture Forest Service's Española Ranger District within the Santa Fe National Forest (SFNF) has prepared an *Environmental Assessment Los Alamos National Laboratory Paleoseismic Research Proposal Special Use Permit* (EA) and subsequent *Decision Notice and Finding on No Significant Impact* for an application for a special use permit to conduct a geologic investigation submitted by the DOE on behalf of LANL, titled *DOE/LANL Paleoseismic Trenching Project*. NNSA has adopted the EA after independently reviewing the Española Ranger District's final EA.

Purpose and Need: Authorization for the LANL staff, under the authority of DOE, to conduct paleoseismic research to help assess potential for future seismic events in the area to meet DOE facility design criteria. Previous geologic trenching investigations along segments of the Pajarito fault system were conducted more than 15 years ago and the existing data have high uncertainty in terms of their ability to identify and constrain individual Holocene earthquakes. The geologic techniques and tools used in the 1990's for geologic age dating on the Pajarito fault system paleoseismic trenches have advanced significantly in the last 15 years. Conducting new trenching investigations using updated techniques would better constrain the number, timing, and magnitude of Holocene paleoearthquakes on the Pajarito fault system, thus reducing uncertainties in LANL's

¹ Probabilistic seismic hazard analysis (PSHA) is a methodology that estimates the likelihood that various levels of earthquake-caused ground motions will be exceeded at a given location in a given future time period. The results of such an analysis are expressed as estimated probabilities per year or estimated annual frequencies.

current hazard calculations.

Proposed Action: The project will permit:

- An access route from Highway 501 to the trench sites between Pajarito Canyon and Canyon de Valle which will require some earthwork on the east facing slope above the highway.
- Two access routes from Highway 501 to the bench sites south of Water Canyon.
- Excavation of up to eight trenches approximately 6-9 feet wide, 6-12 feet deep, and 330 yards long. There would be a minimum of 2 trenches at each site. Trenches would be open for about 8 weeks, allowing scientists to interpret and record data.

No Action Alternative: The No Action Alternative provides a baseline from which to compare the effects of the action alternatives. Under the No Action Alternative, there would be no trenching and no further study of the paleoseismic phenomenon that would be evaluated in the selected open trenches. The DOE would not be able to use this means to meet their facility design criteria for evaluating potential, future seismic events.

EA REVIEW AND COMMENT:

The Proposed Action for permitting the DOE/LANL Paleoseismic Trenching Project was listed in the USFS Schedule of Proposed Actions (SOPA) on July 19, 2017. The SOPA is available to the public on the USFS website, located at <https://www.fs.usda.gov/project/?project=51678>. A description of the Proposed Action was listed on the USFS public NEPA website with a copy of the scoping letter that was sent out on July 20, 2017. The scoping period was from July 20 to August 25, 2017.

No comments were received from the public. This Preliminary EA was available for a 30 day scoping period from February 16 to March 18 in compliance with 36 CFR 218. The availability of the EA for review was advertised in the Albuquerque Journal. A hardcopy of the EA was made available at the USFS Española Ranger District Office, 1710 N Riverside Drive, Española, NM 87532. After this public review, the Final EA and draft decision documents were posted on the SOPA and SFNF websites.

In addition to the public scoping, potentially affected tribal governments were notified about the proposed project on July 14, 2017 with comments requested by August 18, 2017. Tribal governments that were sent letters were Kewa Pueblo, Ohkay Owingeh Pueblo, Pueblo de Cochiti, Pueblo de San Ildefonso, Pueblo of Jemez, Pueblo of Nambé, Pueblo of Tesuque and Santa Clara Pueblo. The second round of tribal letters were sent with the EA for comment on February 12, 2018. One comment letter was received from the Santa Clara Pueblo on March 12, 2018 with concern on potential subsurface artifacts and specific vegetation. Mitigations were adjusted accordingly in the EA's proposed action.

AGENCY CONSULTATION: Formal consultation with the U.S. Fish and Wildlife Service (Service) pursuant to Section 7 of the Endangered Species Act was required. The Service's Biological Opinion stated: "After reviewing the current status of the Jemez Mountains salamander, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is the Service's biological opinion that the LANL paleoseismic trenching project, as

proposed, is not likely to jeopardize the continued existence of the Jemez Mountains salamander, and is not likely to destroy or adversely modify designated critical habitat. The Service's conclusion is predicated on the full implementation of the project as described in the EA and incorporation of all stated mitigation measures.

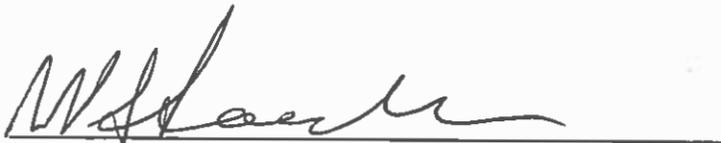
DETERMINATION: NNSA has independently reviewed the Española Ranger District's final EA and determined that the analysis meets President's Council on Environmental Quality and DOE NEPA regulations and adequately assesses and discloses the environmental impacts of the Proposed Action and No Action Alternatives. Based on the NNSA's independent evaluation, the Final EA is hereby adopted.

Based on the evaluation presented in the final EA, DOE has determined there would be no significant impact from proceeding with the Proposed Action. The basis of this determination, provided all specified mitigations are implemented, is that there are no adverse direct, indirect, or cumulative environmental effects that would likely result from the Proposed Action based on the analysis of relevant issues of environmental concern in the EA and the implementation of mitigation actions.

The DOE therefore approves this Finding of No Significant Impact with mitigation measures pursuant to the *National Environmental Policy Act* of 1969 (42 U.S.C. 4321 et seq.), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500), and DOE NEPA Implementing Procedures (10 CFR 1021). No Environmental Impact Statement is required for this proposal.

FOR FURTHER INFORMATION CONTACT: For further information on this EA, contact Ms. Kristen Dors, NEPA Program Manager, U.S. Department of Energy, National Nuclear Security Administration, Los Alamos Field Office (NA-LA), 3747 W. Jemez Road, Los Alamos, NM 87544 or via email at NA-LA_NCO@nnsa.doe.gov.

For further information on the DOE NEPA process contact the Office of NEPA Policy and Compliance (GC-54), U.S. Department of Energy, 100 Independence Avenue, SW, Washington DC 20585; telephone (202) 586-4600 or (800) 472-2756.



William S. Goodrum
Los Alamos Field Office Manager

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