



Department of Energy
National Nuclear Security Administration
Categorical Exclusion Determination Form



Categorical Exclusion ID#: NV-2021-014

Proposed Action Title: Nuclear Accident Dosimetry (NAD) Laboratory

Program or Field Office: NNSA Nevada Field Office

Location(s) (City/County/State): Nevada National Security Site, Nye County, NV

Proposed Action Description

Note: This checklist is an updated version and replacement of NV-2017-053. There have been no changes to processes or operations discussed in NV-2017-053.

The Lawrence Livermore National Laboratory (LLNL) Nuclear Accident Dosimetry (NAD) Laboratory is in Area 23, Building 703, at the Nevada National Security Site (NNSS). The NAD Laboratory is used to measure activated materials that have been exposed to a critical burst of radiation from the National Criticality Experiments Research Center (NCERC) critical machines as part of NAD experimental exercises. The activated materials consist of various foils, powders, and liquids. These materials are components in dosimetry systems that rely on activation analysis as a method of calculating yield and dose of criticality accidents (simulated by the critical machines in NCERC).

The dosimetry systems are transported from the Device Assembly Facility to the NAD Laboratory, where they would be separated into the individual components for measurement or further processing. Hoods are used to further process activated material before measurement. The processing of material includes possible melting or burning of powders (likely sulfur compounds). Measurement would occur using both electronically and nitrogen-cooled gamma radionuclide identifiers as well as beta counting systems.

The NAD Laboratory operates under the auspices of LLNL, but many other dosimetry teams may participate in the NAD exercises and utilize the facility, including other National Laboratories, Foreign Nationals, and commercial nuclear facility personnel. All activities associated with this project would be unclassified.

Categorical Exclusion(s) Applied

10 CFR 1021: B3.6 Small-scale research and development, laboratory operations, and pilot projects

Regulatory Requirements in 10 CFR 1021

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of 10 CFR 1021.



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To find that a proposal is categorically excluded, DOE shall determine the following:

- (1) The proposal fits within a class of actions listed in Appendix A or B to 10 CFR Part 1021, Subpart D;
- (2) There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal; and
- (3) The proposal has not been segmented to meet the definition of a categorical exclusion. The proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, include the following conditions as integral elements of the classes of actions. To fit within the classes of actions in Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.

NEPA Compliance Officer Determination

Based on my review of information conveyed to me and in my possession concerning the proposed action, as NEPA Compliance Officer (as authorized under NNSA NAP 451.1 and DOE P 451.1), I have determined that the proposed action fits within the specified class(es) of action and I have reviewed the proposal for integral elements. I have determined that there are no extraordinary circumstances present and that the proposal has not been segmented to meet the definition of a categorical exclusion. Therefore, the application of a categorical exclusion is appropriate.

NEPA Compliance Officer: Carrie Stewart

Date Determined: 1/11/2021