**LLNL CATEGORICAL EXCLUSION DETERMINATION FORM**

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<th>ESH-EMA-ESPM Log No:</th>
<th>NNSA/LSO Log No:</th>
<th>Date:</th>
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<td>0040</td>
<td>NA-13-05</td>
<td>4/10/2013</td>
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**1. PROJECT/ACTIVITY TITLE:**
Experimental Detector Construction and Operation

**2. PROJECT DESCRIPTION:**
LLNL proposes the assembly and operation of experimental detectors at various non-LLNL research facilities in the United States including but not limited to mines, Deep Underground Science and Engineering Laboratories (DUSEL), the Kimballton Underground Research Facility (KURF), and other non-LLNL offsite locations as funding permits. Offsite locations would be existing developed facilities that operate under applicable environmental standards and requirements and maintain applicable permits.

Assembly of detectors would include commercially available tanks, gas handling systems for chemically benign gas (e.g., nitrogen), electricity supply, electronics, software and hardware components. Assembly and operation of detectors may require the use of hand tools, power tools, ladders, commercial jacks and/or overhead cranes, high voltage, and occasional handling of encapsulated lead bricks. Operation of detectors would include calibration and response measurements using commercially available sealed radioactive sources, and testing detectors in varying configurations. Sealed radioactive sources may be used for calibrations, always under the direct control of an LLNL experimenter or in a room secured against unauthorized access, and returned to the source locker.

All proposed detectors would be fully decommissioned and disassembled when the measurement is completed. Any wastewater would be disposed of in accordance with E&H procedures of the host facility.

**3. Categorical Exclusion(s) Applied:**
B3.6 Small-scale research and development, laboratory operations, and pilot projects

Siting, construction, modification, operation, and decommissioning of facilities for small-scale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

*For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, see Subpart D of 10 CFR 1021

This action would not: threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive Orders; require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities, but may include such categorically excluded facilities; disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; or adversely affect environmentally sensitive resources (including but not limited to those listed in paragraph B(4) of Appendix B to Subpart D of 10 CFR 1021). Furthermore, there are no extraordinary circumstances related to this action that may affect the significance of the environmental effects of the action; this action is not "connected" to other actions with potentially significant impacts, is not related to other proposed actions with cumulatively significant impacts, and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211.

Based on my review of information conveyed to me and in my possession (or attached) concerning the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

**NEPA Compliance Officer:**

D. A. [Signature]

**Date Determined:**

Apr. 10, 2013

LLNL NEPA Categorical Exclusion Form: Revision 1, February 4, 2010