

**National Environmental Policy Act (NEPA)
Categorical Exclusion (CX) for Installation and Operation
of Majorana Underground Electro-forming Research Project (3561X)**

The Department of Energy Oak Ridge Office (DOE-ORO) proposes to perform research on electro-forming of copper parts that will be installed in ultra-low, background level, radiation detection instruments. This action is part of the Majorana Demonstrator (MJD) Research and Development Project, which is funded by the DOE Office of Nuclear Physics. Electro-forming of the copper parts would take place in an underground lab, the Sanford Underground Laboratory, in Lead, South Dakota, to prevent the formation of radionuclides in the copper due to spallation by cosmic rays.

The proposed action would involve installing and operating small electro-forming acid baths and associated power supplies inside a clean room at the Sanford Underground Laboratory. This research would be operated for a period of 2 to 4 years and produce ultra-clean copper parts for the MJD project.

ORNL personnel conducting this activity will follow all applicable Sanford underground lab operating requirements. Solid and liquid wastes generated during installation and operation will be disposed of by Sanford Laboratory waste disposal personnel. No airborne emissions will be generated as a result of the proposed action.

This project would pose no threat of significant individual or cumulative environmental effects. The described action would not be part of an ongoing Environmental Assessment or Environmental Impact Statement. No extraordinary circumstances would be related to this action, and the proposal would not be connected to other actions with potentially significant impacts.

The applicable CX under 10 CFR 1021, Subpart D, Appendix B, for this action is identified below:

B3.6 Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).

The above description accurately describes the proposed action, which reflects the requirements of the CX cited above. Therefore, I recommend that the proposed action be categorically excluded from further NEPA review and documentation.

SIGNED BY WILLIAM MARK BELVIN

4/29/2010

W. Mark Belvin
DOE-ORO Program Manager

Date

Based on my review and the recommendation of the DOE-ORO Program Manager, I have determined that the proposed action is categorically excluded from further NEPA review and documentation.

SIGNED BY GARY S. HARTMAN

5/11/2010

Gary S. Hartman
DOE-ORO NEPA Compliance Officer

Date