

**National Environmental Policy Act (NEPA) Categorical Exclusion (CX)
for IMAGINE Neutron Instrumentation Project (3641X)**

The Department of Energy Oak Ridge Office (DOE-ORO), in collaboration with Middle Tennessee State University, the National Science Foundation, and UT-Battelle, LLC, proposes to design, fabricate, install, and operate a single crystal diffractometer neutron instrument (called IMAGINE) at the Oak Ridge National Laboratory (ORNL). IMAGINE would be entered into the DOE user program where it would be used for a number of purposes ranging from the location of individual hydrogen atoms in enzymes to parametric studies of the behavior of complex materials under extremes of temperature and pressure. The proposed action would take place at Building 7970 which is the High Flux Isotope Reactor Cold Neutron Guidehall in the 7900 Area complex in Melton Valley.

The proposed action would involve designing, fabricating selected components; assembling and installing all components; and operating IMAGINE. Most of the components will be fabricated off-site by outside vendors. The IMAGINE would be assembled and operated inside the existing Building 7970 using existing infrastructure. During operation of the instrument, discarded sample materials will be generated as solid waste and will be managed according to existing waste management procedures.

The proposed action would not adversely impact architectural or historic resources and would not involve disturbing sites that provide a natural habitat for threatened or endangered animal or plant species. No wetland disturbance would take place, and the proposed action would not take place within the 100-year flood-plain of any surface water body.

This project would pose no threat of significant individual or cumulative environmental effects. The proposed 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 Categorical Exclusion (CX) under 10 CFR 1021, Subpart D, Appendix B, for this action is as 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

3/2/2011

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

3/3/2011

Gary S. Hartman
DOE-ORO NEPA Compliance Officer

Date