

National Environmental Policy Act (NEPA) Categorical Exclusion (CX) Determination

A. SSO NEPA Control #: SS-SC-10-01

B. Brief Description of Proposed Action:

The End Station Test Beam (ESTB) is a new experimental facility that will use 5Hz of the 120 Hz 13.6 GeV electron beam from the existing Linac Coherent Light Source (LCLS) to restore test beam capabilities in End Station A (ESA), an existing building at SLAC. In Stage I of this proposal, four new kicker magnets will be added to the Beam Switchyard (BSY) to divert a small fraction of the existing LCLS beam pulses to the A-line for beam instrumentation and accelerator physics studies at full electron beam intensity. The Personnel Protection System in ESA will be rebuilt and certified before beam programs at the facility resume. In Stage II, a secondary target and beam dump will be installed at the end of the A-line, and a hadron beam line will be established in ESA with the addition of a bending magnet, two quadrupole doublets (magnets), and vacuum chambers. The kicker magnets and beamline magnets will be housed in existing Buildings 105 and Building 108, respectively. ESTB beams will provide electrons and pions over a broad range of momenta and intensities, suitable for particle physics and astrophysics detector development and calibration activities in ESA. The ESTB project is a modification of an existing experimental facility located in the Research Yard at SLAC, and does not increase primary beam energy or current.

C. Number and Title of the Categorical Exclusion Being Applied:

B.3.10: Siting, construction operation, and decommissioning of a particle accelerator, including electron beam accelerator with primary beam energy less than approximately 100 MeV, and associated beamlines, storage rings, colliders, and detectors for research and medical purposes, within or contiguous to a already developed area (where active utilities and currently used roads are readily accessible), or internal modification of any accelerator facility regardless of energy that does not increase primary beam energy or current.

D. Regulatory requirements in 10 CFR 1021.410 (b)

A. The proposed action fits within a class of actions that is listed in Appendix A or B to Subpart D in 10 CFR Part 1021.

For classes of actions listed in Appendix B, the following conditions are integral elements; i.e., to fit within a class, a proposal must not:

- A. Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive Orders;
- B. Require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities, but may include such categorically excluded facilities;
- C. Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist the environment such that there would be uncontrolled or unpermitted releases; or
- D. Adversely affect environmentally sensitive resources (including but not limited to those listed in paragraph B.(4)).

- B. There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal; and
- C. The proposal is not “connected” to other actions with cumulatively significant impacts, and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211.

D. Determination:

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 451.1A), I have determined that the proposed action fits within the specified class of actions, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

SIGNATURE ON FILE

March 13, 2010

Gary S. Hartman
SC NEPA Compliance Officer
Integrated Support Center, Oak Ridge Office

Date

SSO File: 451.1A