



U.S. Department of Energy Categorical Exclusion Determination Form

Proposed Action Title: Upgraded Injector Test Facility Project – TJSO-SC-15-02

Program or Field Office: Thomas Jefferson Site Office

Location(s) (City/County/State): Newport News, VA

Proposed Action Description:

This project involves the combination of the Injector Test Facility (ITF) and Cryomodule Test Facility (CMTF) into the same area (northern portion of Test Lab located in central portion of Thomas Jefferson National Accelerator Facility) by expanding the existing ITF and therefore, allowing for increased development and testing capabilities. This will include the installation of shielding blocks, infrastructure associated with the proposed CMTF, the installation of a 350 KV photo-electron gun, and the development of a small-scale accelerator capable of generating up to 5-10 MeV of electron beam. The goal of this project is to provide an increase in the effective beam time available for Nuclear Physics experiments, provide for simulations to assist in further knowledge of beam dynamics, and to develop beam diagnostics instrumentation and control systems.

There would be minor impacts to the environment during the project. Once high voltage is applied to the electron gun and the cryomodule testing begins, portions of the project will be designated as a Radiologically Controlled Area. The installation of shielding blocks along with an upgraded Personal Safety System will be utilized to mitigate risks associated with radiation in the area. Sulfur Hexafluoride will be utilized to operate the proposed 350 KV electron gun and the proposed mitigation includes the use of a SF6 gas reclaiming unit that will be utilized to recapture, recycle, and reuse excess gas that is used for the process. Minor volumes of solid waste will also be generated in the form of construction debris and will be properly disposed of at an authorized landfill.

The proposed action would not impact any threatened/endangered species or protected habitat, wetlands or waters of the U.S., or cultural/historical resources. The proposed action would not be part of an ongoing Environmental Assessment or Environmental Impact Statement. The proposed action would not be related to any extraordinary circumstances or other actions with potentially significant impacts.

Categorical Exclusion(s) Applied:

B3.10 - Particle accelerators

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 Part 1021.

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

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

To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, 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 listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.

The proposal has not been segmented to meet the definition of a categorical exclusion. This 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 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.

Program Point of Contact: Patricia Hunt

Patricia Hunt

Date Determined: 10-22-15

Based on my review of 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: James Lewis Elmore

James L. Elmore

Date Determined: 10/23/15