25 March 2015

NEPA Categorical Exclusion Determination for National Laser Users Facility (NLUF) Program Funding Opportunity DE-FOA-0001109

The U.S Department of Energy (DOE) National Nuclear Security Administration's (NNSA) Office of Inertial Confinement Fusion (NA-112) manages the Inertial Confinement Fusion and High Yield (ICF) Program. This program supports national security goals by providing scientific understanding and experimental capabilities in high-energy-density (HED) physics for the validation of codes and models necessary to maintain a safe, secure, and effective nuclear weapons stockpile without underground testing; and maintains the U.S. preeminence in HED science and support for broader national science goals. The ICF Program provides this capability through research, and through development and use of advanced experimental tools and techniques, including state-of-the-art laser and pulsed power facilities.

NA-112 and the Office of Fusion Energy, Office of Science manage the Joint Program in High Energy Density Laboratory Plasmas (JPHEDLP), which supports user facility programs at ICF facilities and university research in HED science, inertial fusion, laser-plasma interactions, and diagnostic and experimental platform development, to attract and train the next generation of scientists and engineers in HED physics and fields relevant to the stockpile. This program provides research experience necessary to maintain a cadre of trained scientists to meet the Nation's future needs in these areas of science and technology.

The National Laser Users' Facility (NLUF) program is part of the JPHEDLP. The research tools and resources of the NLUF are available to scientists for state-of-the-art basic research in laser-matter interactions, ICF, HED physics, and diagnostic and experimental platform development. This includes, but is not limited to, laser plasma instabilities, hydrodynamics, properties of materials under extreme conditions, laboratory astrophysics, high intensity laser-matter interactions, advanced ignition concepts, fundamental HED physics, biology, and chemistry.

The application packages submitted in response to NLUF funding opportunity DE-FOA-0001109 and the technical reviews for the research proposals performed for the funding opportunity did not reveal any extraordinary related circumstances that might affect the significance of the environmental effects of these proposals. The proposals are not "connected" to other actions with potentially significant impacts, or to other proposed actions with cumulatively significant impacts, and are not precluded by 40 CFR 1506.1 or 10 CFR 1021.211. The proposals do not result in adverse effects to historic properties included in or eligible for inclusion in the National Register of Historic Places (National Register) and would not impact sensitive resources (e.g., threatened and endangered (T/E) species, wetlands and floodplains). Nor do these proposals threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including requirements of DOE and/or Executive Orders; require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators and facilities for treating wastewater, surface water, and groundwater); or disturb hazardous substances, pollutants, contaminants, or petroleum and natural gas products excluded from the Comprehensive Environmental Response,

Compensation, and Liability Act (CERCLA) that pre-exist in the environment such that there would be uncontrolled or unpermitted releases.

Accordingly, and pursuant to the DOE National Environmental Policy Act (NEPA) Implementing Procedures at 10 CFR 1021, Subpart D, Appendix A and Appendix B, this categorical exclusion (CX) determination applies to the proposals submitted by the following principal investigators in response to the solicitation for applications issued by the National Nuclear Security Administration.

Principal Investigator	Institution
R. Paul Drake	University of Michigan
T. Duffy	Princeton University
E. P. Liang	William Marsh Rice University
P. Hartigan	William Marsh Rice University
L. Willingale	University of Michigan
D. Q. Lamb	University of Chicago
A. Spitkovsky	Princeton University
R. D. Petrasso	Massachusetts Institute of Technology
K. Krushelnick	University of Michigan
F. Beg	University California, San Diego
R. Jeanloz	University California, Berkeley
M. Wei	General Atomics
A. Bhattacharjee	Princeton University

Based on my review, I have determined that the proposed actions are categorically excluded from further NEPA review and documentation.

A 1, A 9, A 11 and B3.6 are the applicable CXs that cover the proposed actions in the DOE NEPA Implementing Procedures, 10 CFR 1021, Subpart D, Appendix A and Appendix B.

ME Martin 3/25/2015

Mary E. Martin, NNSA HQ NEPA Compliance Officer Date