



National Nuclear Security Administration Categorical Exclusion Determination Form



NEPA ID#: HEDLP 15-001-001

Proposed Action Title:

HEDLP: Line Emission from High-Z Multiply Ionized Ions Influenced by Dielectric Recombination and Polarization (University of Nevada, Reno; Grant No. DE-NA0002954), Continuation of the Application of Parallel Kinetic Simulations to Laser and Electron Transport Through High Energy Density Laboratory Plasmas (University of California, Los Angeles; Grant No. DE-NA0002953), and Continuation of Statistical Nonlinear Optics of High Energy Density Plasmas: The Physics of Multiple Crossing Laser Beams (Polymath Research, Inc.).

Program or Field Office:

Location(s) (City/County/State): Various institutions in:

Proposed Action Description:

The U.S. Department of Energy (DOE) National Nuclear Security Administration (NNSA) proposes to provide financial assistance to several University and Institutions for scientific research related to the high energy density laboratory plasmas (HEDLP) program. The financial assistance would be given to the institution for travel, fringe and indirects, supplies and materials, equipment, user fees, publication costs, tuition, stipends and salaries to support staff, undergraduate, graduate, postdoctoral students, research professors, their principle investigator(s) and other university's support (collaborators). These individuals would undertake (laboratory operations) (small-scale R&D projects) focusing in areas of interest: Line Emission from High-Z Multiply Ionized Ions Influenced by Dielectric Recombination and Polarization, Continuation of the Application of Parallel Kinetic Simulations to Laser and Electron Transport Through High Energy Density Laboratory Plasmas, and Continuation of Statistical Nonlinear Optics of High Energy Density Plasmas: The Physics of Multiple Crossing Laser Beams (Polymath Research, Inc.). Activities will be conducted in existing facilities using existing scientific equipment (either) at their Institutions, an NNSA Laboratory, or other collaborating institution. Besides physical research, other activities would include information gathering, data analysis, modeling, simulation, and information dissemination.

Categorical Exclusion(s) Applied:

- B3.6 Small-scale research and development, laboratory operations, and pilot projects
- A1 Routine DOE business actions
- A9 Information gathering, analysis, and dissemination

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 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.

Based on my review of information conveyed to me and in my possession concerning 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 and that other regulatory requirements set forth above are met. Therefore, the application of a categorical exclusion is appropriate.