**Application of DOE NEPA Procedure:** Categorical Exclusions A1 and A9, Applicable to General Agency Actions (10 CFR Part 1021, Subpart D, Appendix A) and Categorical Exclusion B3.6, Applicable to Specific Agency Actions (10 CFR Part 1021, Subpart D, Appendix B).

**Rationale:** The U.S. Department of Energy (DOE) National Nuclear Security Administration (NNSA) proposes to provide financial assistance to the *Michigan State University* for scientific research related to Microscopic Description of the Fission Process. The PI is Witold Nazarewicz. Michigan State University (MSU) proposes to carry out a programmatic study of the fission process in nuclei, based on the nuclear density functional theory and its extensions, focusing on the actinide, transactinide, and superheavy regions. The principal goal is to obtain a comprehensive understanding of the nuclear fission process by taking advantage of state-of-the-art theoretical techniques and advanced computational tools. The main objectives of the project are: (i) Develop the full adiabatic time-dependent description of spontaneous and compound-nucleus fission; (ii) Investigate novel non-adiabatic methods to study fission process; (iii) Develop numerical codes and computational frameworks for fission that can be freely used by NNSA researchers and, generally, by the low-energy nuclear physics community; (iv) Train junior scientists and students to apply nuclear many-body techniques to describe low-energy nuclear phenomena. Studies are computational in nature; no laboratory work is proposed.

A more in depth discussion on the objectives and activities can be found in the technical proposal submitted by the applicant. Non-proprietary information within this document is hereby incorporated by reference.

Categorical Exclusions A1 and A9 apply in cases of:

> (A1) Routine actions necessary to support the normal conduct of DOE business limited to administrative, financial, and personnel actions.
>
> (A9) Information gathering, data analysis, modeling, simulation, applied mathematics, information dissemination ……

Categorical Exclusion B3.6 applies in cases of:

> ….operation/ decommissioning of facilities for bench-scale research, conventional laboratory operations, small-scale research and development and pilot projects

This proposal fits within the parameters of Categorical Exclusions A1, A9, & B3.6.

Based upon the information from the environmental questionnaire, the technical proposal, my knowledge, this proposal does not present any extraordinary circumstances of a unique or

uncertain nature. It is not connected to other actions with potentially or cumulatively significant impacts.[1]

Supported by the information provided by the applicant and my understanding of these activities, the proposal would not[2]:

1. threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including requirements of DOE and/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; or
4. adversely affect environmentally sensitive resources ( including but not limited to those listed in paragraph B.(4)); or
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 10CFR Part 1021, Subpart D, Appendix B.

Therefore, this proposal meets the conditions that are the Integral Elements of the Class of Actions and application of Categorical Exclusions A1, A9, & B3.6 are appropriate.

If changes are made to the scope of actions as described in the proposals, or if the scope is expanded to encompass other actions, NEPA requirements for the action will need to be reassessed at that time.

John Weckerle
NEPA Compliance Officer
NNSA Office of General Council

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[1] See 10 CFR § 1021.410(b)(2)and(3)for full text of regulation.
[2] See 10 CFR Part 1021 Subpart D Appendix B (B(1)through(5)).