Office of Environmental Management
U.S. Department of Energy
Categorical Exclusion Determination Form

Digitally Signed By DICKER, VERNARD LEE.1230892... CN=DICKER, VERNARD LEE.1230892...
Date: 2025.10.28 12:23:40 -04:00

Proposed Action Title: RF Energy Absorption in Hydride Materials

Program or Field Office: Savannah River Site

Location(s) (City/County/State): Aiken/Aiken County/South Carolina

Proposed Action Description:

This work will focus on measuring and quantifying the interaction between electromagnetic fields and hydrogen storage materials (LANA75). The purpose is to help determine if Radio Frequency (RF) energy is a viable candidate to heat hydrogen storage material and generate the release of hydrogen isotopes from hydrogen storage materials for use in Tritium Facilities. The work will be done in 999-2W (HTRL) Room 154 (High Bay) in the X-Ray booth.

Rev.1 includes the use of a silver-based conductive epoxy called H20E and an extended deadline.

Rev.2 includes the elimination of the X Ray booth, an extended end date and the addition of hydrogen gas usage.

Rev 3 restart/extend activity date.

Categorical Exclusion(s) Applied:

B3.6 SMALL-SCALE RESEARCH AND DEVELOPMENT, LABORATORY OPERATIONS, AND PILOT PROJECTS

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.

*In accordance with Executive Order 14154, effective April 11, 2025, CEQ has removed the regulations implementing NEPA (40 CFR 1500-1508). DOE will continue to comply with the National Environmental Policy Act (NEPA) of 1969, as amended, (42 U.S.C. §§ 4321 et seq.) and DOE's NEPA Implementing Procedures (10 CFR 1021).

Based on my review of the proposed action, 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: Date Determined: 10/28/2026

Comments: EEC No: TC-W-2017-0075 Rev No: 3