

PMC-ND
(1.08.09.13)

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**

**RECIPIENT:** Hy-Performance Materials Testing, LLC.**STATE:** OR

PROJECT TITLE: Reducing the Cost of Fatigue Crack Growth Testing for Storage Vessel Steels in Hydrogen Gas

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002022	DE-EE0008829	GFO-0008829-001	GO8829

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

A9 Information gathering, analysis, and dissemination Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

B3.6 Small-scale research and development, laboratory operations, and pilot projects Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to Hy-Performance Materials Testing (HPMT) to increase the efficiency and reduce the cost of conducting fatigue crack growth testing (FCGT) of steels used for stationary hydrogen storage tanks. HPMT would target improvements to various stages of testing. The project would be completed over three Budget Periods (BPs), with a Go/No-Go Decision Point in between each BP.

All proposed project activities would be coordinated by HPMT and performed at existing, purpose-built facilities. HPMT would perform FCGT experiments (e.g. material testing and measurements) at its laboratory space in Bend, OR. Mountain EDM would conduct machining of metal test specimens at its commercial machine shop located in Sisters, OR. Additional research/analysis would be performed by Somerday Consulting in Prussia, PA. Work at this location would be limited to computer based activities. No physical modifications to existing facilities, ground-disturbing activities, or changes to the use, mission, or operation of existing facilities would be required. Likewise, no additional permits or authorizations would be required to complete project activities.

Project work would involve the use and handling of pressurized gases and high-powered equipment with moving parts. Any hazards associated with the completion of project activities would be mitigated through adherence to established health and safety policies and procedures. Only trained personnel would operate the required laboratory equipment. A hydrogen test chamber would be used during FCGT experiments. The maximum total quantity of hydrogen used during FCGT experiments would be below flammability limits for hydrogen air mixtures. Safety protocols for the use of hydrogen would include the use of gas sensors, emergency ventilation systems, secondary containment of the primary hydrogen test chamber during FCGT experiments, and emergency shutoff valves. Gases would be vented before emission. All waste materials would be disposed of properly. HPMT and its project partners would observe all applicable Federal, state, and local health, safety, and environmental regulations.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Fuel Cell Technologies Office

This NEPA determination does not require a tailored NEPA Provision.

NEPA review completed by Jonathan Hartman, 12/6/2019

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) 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 proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action 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 proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:

 Kristin Kerwin
NEPA Compliance Officer

Date: 12/6/2019

FIELD OFFICE MANAGER DETERMINATION

- Field Office Manager review not required
- Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature:

Field Office Manager

Date: _____