PMC-ND
(1.08.09.13)

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

RECIPIENT: 3M Company **STATE:** MN

PROJECT TITLE: Highly Active, Durable, and Ultra-low PGM NSTF Thin Film ORR Catalysts and Supports

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001224	DE-EE0007270	GFO-0007270-001	

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), 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 federal funding to the 3M Company to engineer new electrocatalysts for use in proton exchange membrane (PEM) hydrogen fuel cell cathode electrodes and develop a new class of oxygen reduction reaction (ORR) electrocatalysts with performance, durability, and costs suitable for automotive, stationary, and other relevant fuel cell applications that have better performance over the current state of the art.

The proposed project activities would include new electrocatalyst generation and characterization, electrocatalyst modeling, development of electrocatalyst fabrication and characterization methods, and project management conducted indoors at existing laboratories and research facilities. 3M would partner with Johns Hopkins University in Baltimore, MD and Purdue University in Lafayette, IN to accomplish project objectives. All research, development and testing activities would take place in existing facilities designed for this type of research; therefore, no new construction, modifications or new permits, additional licenses and/or authorizations would be necessary.

The proposed project would require the use of tens of kilograms of various materials, including solvents, alloy materials, acids, metal salts, and platinum on carbon. Nanoscale materials would be used at 3M facilities as part of the proposed project. The potential risk of these materials is skin exposure. All necessary personal protective equipment, environmental, chemical, or other hazard precautions are mandated and in use at each facility. All nanoscale materials and other hazardous waste would be disposed of in accordance with local, state and federal regulations.

Based on review of the project information and the above analysis, DOE has determined that the activities associated with the proposed project would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusions A9 "Information gathering, analysis, and dissemination" and B3.6 "small-scale research and development, laboratory operations and pilot projects and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Fuel Cell Technologies Office
This NEPA determination does not require a tailored NEPA provision.
Review completed by Logan Sholar, 12/3/2015

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 12/3/2015
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

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

Field Office Manager's Signature: _____ Date: _____
Field Office Manager