PMC-ND

(1.08.09.13)

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

RECIPIENT: American Institute of Chemical Engineers **STATE:** NY

PROJECT TITLE : Rapid Advancement in Process Intensification Deployment (RAPID)

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001578	DE-EE0007888	GFO-0007888-BP2-OSU	GO7888

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.)
B1.31 Installation or relocation of machinery and equipment	Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts.
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.
B3.15 Small-scale indoor research and development projects using nanoscale materials	Siting, construction, modification, operation, and decommissioning of facilities for indoor small-scale research and development projects and small-scale pilot projects using nanoscale materials in accordance with applicable requirements (such as engineering, worker safety, procedural, and administrative regulations) necessary to ensure the containment of any hazardous materials. Construction and modification activities would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible).

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the American Institute of Chemical Engineers for the Rapid Advancement in Process Intensification Deployment (RAPID) Institute. RAPID is a consortium established under a Cooperative Agreement with the DOE and with participation from sub-recipients of the award, large and small private companies, universities, as well as national laboratories, and non-governmental organizations. RAPID would focus on research, development and demonstration of high-impact modular chemical process intensification solutions for U.S. Manufacturing. This project has five budget periods but only project activities within budget periods 1 and 2 (BP1 and BP2) have been defined and have NEPA determinations (GFO-0007888-BP1; 3/16/2017 and GFO-0007888-BP2; 12/12/2017). This NEPA Determination is specific to BP2 work as part of Oregon State University (OSU) activities occurring at the Advanced Technology and Manufacturing Institute (ATAMI) facility at 1110 NE Circle Blvd in Corvallis, Oregon and other OSU laboratories. Further NEPA review will be required for the remaining budget periods once those activities have been defined and negotiated.

The ATAMI facility is a 70,000 square foot advanced materials and advanced manufacturing and processes facility used by RAPID, OSU, and private sector tenants with dedicated individual laboratory and office space as well as shared spaces with tooling capabilities. In an open high-bay area, approximately 14,000 square feet would be built out with additional laboratory and office space. The build out would include upgrades to higher capacity air handling and

electrical systems and the addition of internal walls in existing laboratory and office space. Within these improvements, RAPID would occupy a space of approximately 10,200 square feet, some of which is shared space. All construction activities would be inside the building and there would be no ground disturbance. Other than building permits for the construction activities, no new or modified permits would be needed for the increased capacity of the activities once the building modifications are completed.

Activities in the ATAMI and other OSU laboratories not related to construction would include designing, building and testing a reactor and heat exchanger prototypes, a modified metal 3D printing system, and new 3D printed materials. Additional work would include the design, production and implementation of inks for modifying powder beds as well as cost modeling.

The project would involve the use and handling of various hazardous materials, including oxide nanoparticles, industrial solvents and metal powder. All such handling would occur in-lab and would be managed according to federal, state and local environmental regulations.

Existing OSU health and safety policies and procedures would be followed including employee training, proper protective equipment, monitoring and internal assessments. The ATAMI facility has full-time staff to orient and train facility users on proper hazardous material handling and disposal practices and maintains policies and procedures as new health and safety risks are identified to ensure compliance with applicable health and safety regulations. In addition, OSU Environmental Health and Safety staff perform lab safety assessments and consultation and generally oversees the use of hazardous materials on site.

Based on the review of the proposal, DOE has determined the proposal fits within the class of action(s) and the integral elements of Appendix B to Subpart D of 10 CFR 1021 outlined in the DOE categorical exclusion(s) selected above. DOE has also determined that: (1) there are no extraordinary circumstances (as defined by 10 CFR 1021.410 (2)) related to the proposal that may affect the significance of the environmental effects of the proposal; (2) the proposal has not been segmented to meet the definition of a categorical exclusion; and (3) the proposal is not connected to other actions with potentially significant impacts, related to other proposals with cumulatively significant actions, or an improper interim action. This proposal is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:
Budget Periods 3 through 5
This restriction does not preclude you from:
Budget Periods 1 and 2
If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

This NEPA Determination does require a tailored NEPA provision.
Advanced Manufacturing Office
Diana Heyder 05/21/18

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Casey Strickland Date: 5/21/2018
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