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(1.08.09.13)

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



RECIPIENT: Air Products and Chemicals, Inc.

STATE: PA

**PROJECT TITLE :** Advanced Hydrogen Fueling Station Supply

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0000828	DE-EE0006524	GFO-0006524-001	GO6524

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 small-scale 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 Air Products and Chemicals, Inc. to design, procure, and construct a DOT-approved composite tube trailer with  $\geq 8,500$  pounds per square inch delivery pressure, to deploy this trailer for hydrogen fueling station supply, and to collect and submit performance data to the National Fuel Cell Technology Evaluation Center (NFCTEC) at the National Renewable Energy Laboratory (NREL).

A preliminary study would be performed by both Air Products and Worthington Cylinders/Structural Composites Industries (SCI) to confirm the acceptability of the higher pressure units as a viable storage solution. After completion of the study and confirmation of the units, the design for a new  $\geq 8,500$  pounds per square inch vessel would be completed by SCI. Test vessels would be prepared, and the necessary testing would be performed on the units for DOT certification. An application would be submitted to the DOT for receipt of a special permit. Upon receipt of the special permit, Air Products would design the complete trailer unit for delivery of hydrogen to refueling stations. Once fabrication of the trailer unit is completed, Air Products would test the unit and the delivery trailer would be deployed to hydrogen stations for ongoing performance data collection.

The research and development portion of the project will occur at Air Products and Chemicals at 7201 Hamilton Blvd. in Allentown, PA 18195 and SCI at 336 Enterprise Pl. in Pomona, CA 91768. Each facility where proposed project activities would occur has existing health and safety policies in place, and all work would follow the guidelines set forth in those policies. All research and development activities would take place in existing facilities; therefore, no modifications or new permits, licenses and/or authorizations would be necessary. Specific hydrogen fueling sites suitable for the demonstration phase of this project are yet to be determined; however, each one chosen would be a pre-existing site operating under the California Energy Commission's Alternative and Renewable Fuel and Vehicle Technology program. For the purpose of this demonstration no more than one delivery trailer and the associated highway traffic and emissions would be added to the current situation for a limited time-frame, constituting a negligible increase in environmental impact.

There would be paints and epoxy/resin materials that must be controlled during the fabrication of composite reinforced vessels/cylinders. Painting would be completed within a ventilated canopy by persons wearing breathing protection. The epoxy/resin materials that would be used by SCI are not sufficiently toxic or aromatic to require special operator protection. All destructive testing of cylinders for ASME standards will take place at SCI whose facilities have been designed and built for such tests. All hydrogen fueling stations comply with appropriate safety, fire, and emergency shut off regulations.

Based on review of the project information and the above analysis, DOE has determined the research, development and testing activities 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 exclusion A9 "information gathering, analysis and dissemination," B2.4 "Equipment qualification" 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.

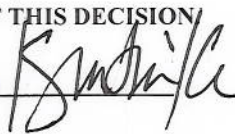
Note to Specialist :

Review completed by Rebecca McCord 07/8/2014.  
This NEPA determination does not require a tailored provision.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION**

NEPA Compliance Officer Signature: \_\_\_\_\_

Electronically  
Signed By: Kristin Kerwin  
NEPA Compliance Officer



Date: \_\_\_\_\_

7/14/2014

**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: \_\_\_\_\_

Field Office Manager

Date: \_\_\_\_\_