PMC-ND (1.08.09.13)

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



#### **RECIPIENT: NREL**

STATE: CO

PROJECT ESIF Outdoor Hydrogen Pad Extension; NREL Tracking No. 20-010 TITLE :

Funding Opportunity Announcement Number

DE-AC36-08GO28308

Procurement Instrument Number NEPA Control Number CID Number NREL-20-010 GO28308

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:

DOE/EA-1968 SITEWIDE ENVIRONMENTAL ASSESSMENT, U.S. DOE NATIONAL RENEWABLE ENERGY (NREL STM) LABORATORY, SOUTH TABLE MOUNTAIN CAMPUS, GOLDEN, COLORADO

Rationale for determination:

The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) proposes to expand the Energy System Outdoor Test Area (ESOTA) of the Energy Systems Integration Facility (ESIF) located at the NREL South Table Mountain (STM) campus in Golden, Colorado.

The ESOTA is used to test and validate methods and processes for the production, storage, processing, and distribution of hydrogen. Currently, researchers produce gasses via electrolysis and/or bioconversion. Once produced, the gasses are compressed, stored, and dispensed at medium and high pressure for vehicle fueling research. The purpose of the project is to meet increasing hydrogen research demands at the ESIF by expanding the capabilities of the ESOTA.

The proposed project would involve the following actions:

(a) Removing existing gravel and asphalt;

(b) Grading and trenching;

(c) Expanding the concrete pad of the ESOTA from 3,730 square feet to 7,330 square feet;

(d) Installing secondary containment, water run-off collection, bollards/concrete barriers, and fencing;

(e) Extending the gravel/cobble skirt fire protection barrier to 30 feet;

(f) Extend a grate-covered trench and underground electrical duct bank from the extended concrete pad to the fenced yard just north of the ESIF; and

(g) Installation of equipment within the fenced yard.

Expanding the concrete pad of the ESOTA would include concrete structural and non-structural slabs with water collection and draining features. Stormwater and other effluents are currently captured from each project adjacent to each test article within the ESOTA, which are then tested and inspected to confirm a lack of contaminants before discharge. The new ESOTA pad design would direct all stormwater to a centralized conduit trench to facilitate ease of collection and testing for contaminants before release into the storm sewer.

Equipment that would be installed would include hydrogen and/or compressed natural gas storage tanks, compressors, and other system components being tested. All equipment that would be installed would be designed to operate at the same pressures and standards as the existing hydrogen system. Additionally, new panels (480V, and 208Y/120V), a transformer, and wiring would be installed outside and adjacent to the north wall of the ESIF.

The expansion of the ESOTA would increase the amount of compressed gasses that can be stored and used at the ESIF. The expansion does not change the mission or operation of the ESOTA; the use of the gasses and equipment are consistent with current research operations.

The approximate area of disturbance would be no more than 4,500 square feet. All ground disturbance would occur in previously disturbed areas; the project location is an existing paved area of the ESIF. All ground disturbing activities would be conducted in accordance with existing NREL policies and procedures that guide such work. Erosion control measures would be implemented and maintained during construction to minimize any potential erosion and/or stormwater impacts.

Project activities would not affect cultural resources, threatened or endangered species, wetlands, floodplains, or prime farmlands, and no permits would be required. A migratory bird nesting survey would be completed if project activities involving ground disturbance occur between March 15 and September 15. If nests or eggs are found, the area would be cordoned off with a proper buffer until nestlings fledge.

Mobile air emissions from construction equipment would be negligible and short-term. Construction-related noise would consist of a short-term, intermittent increase in ambient noise levels and would follow applicable noise ordinances. Construction waste would be reused, recycled, or disposed of in accordance with applicable regulations and NREL policy and procedures.

Individuals working on this project could be exposed to physical hazards during construction. During operation, workers could be exposed to flammable materials, high pressure systems, electrical systems and physical hazards. Existing corporate health and safety policies and procedures would be followed including employee training, work/worker authorization, proper protective equipment, engineering controls, and monitoring. Additional policies and procedures would be implemented as necessary if new health and safety risks are identified.

### **NEPA PROVISION**

DOE has made a final NEPA determination.

Include the following condition in the financial assisstance agreement:

A migratory bird nesting survey would be completed if project activities involving ground disturbance occur between March 15 and September 15.

Notes:

NREL Nicole Serio, 12/19/2019

# SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:

Restronces by: Lisa Jorgensen NEPA Compliance Officer Date: 12/19/2019

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: