

PMC-EF2a

(20402)

**U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION**



RECIPIENT: NREL

STATE: CO

PROJECT TITLE : STM ESIF Hydrogen Fueling Station; NREL Tracking No. 13-012

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-13-012	GO28308

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:

DOE/EA**1440****(NREL****STM)**

Final Site-Site Wide Environmental Assessment of the National Renewable Energy Laboratory's (NREL) South Table Mountain Complex (February 2003)

DOE/EA**1440 S-II****(NREL****STM)**

Final Supplement-II to Final Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's (NREL) South Table Mountain Complex (November 2009)

B1.15**Support buildings**

Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities, such as activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.4, B6.5, B6.6, and B6.10 of this appendix.

Rational for determination:

BACKGROUND

This proposed project would be for the installation and operation of a hydrogen generation and fueling system (HGFS) at the Energy Systems Integration Facility (ESIF) Outdoor Testing Area (OTA) located at the National Renewable Energy Laboratory's (NREL's) South Table Mountain (STM) campus in Golden, Colorado. Originally, the HGFS was proposed to be installed at ESIF and was analyzed in the 2003 Site-Wide Environmental Assessment (DOE/EA-1440) and 2009 Site-Wide Environmental Assessment Supplement-II (DOE/EA 1440 S-II) with Findings of No Significant Impact (FONSI).

Subsequently, the proposed project location was relocated to the Vehicle Testing and Integration Facility (VTIF). The construction and operation of the VTIF was reviewed in 2011 (Tracking No. NREL-09-024). An additional NEPA determination (Tracking No. NREL-12-013) was completed in 2012 to construct and operate the HGFS at the VTIF location. The equipment was purchased and is now proposed for use in the proposed project location. DOE/EA-1440, DOE/EA 1440 S-II, NREL-09-024 and NREL 12-013 are hereby incorporated by reference. This NEPA Determination is for the installation of the previously purchased HGFS equipment at ESIF.

PROPOSED ACTION

The proposed HGFS would be located at the OTA, located adjacent to the ESIF building, along the northwest corner, at approximately 39.7434°N, 105.1713°W. The entire OTA is concrete paved. The equipment would be installed within the OTA footprint and would utilize, existing infrastructure. An existing electrolyzer located within the Energy Systems Integration Laboratory within ESIF would be used to supply hydrogen to the fueling station storage tanks. Once the hydrogen is generated by the existing electrolyzer, the gas would be compressed through a mechanical compressor and pumped through the existing piping to the OTA equipment.

The fueling station would include pressurized storage (350 bars), arranged in a three-stage cascade to allow for quick filling. Six (6) cylinders are configured in a three (3) cascade system with a total storage capacity of 80 kilograms. Each cylinder would be 20 feet long by 1.25 feet in diameter. No excavation or clearing is required; however, a small concrete pad (approximately 10 feet by 15 feet), designed as low ohm/antistatic, would be installed to accommodate

the hydrogen fueling dispenser. A mast and Ultraviolet/Infrared (UV/IR) flame detector would be installed close to the dispenser. Another UV/IR flame detector would be installed near the low pressure storage vessels. The OTA footprint would be able to accommodate the installations and the following equipment:

- Hydrogen Compressor;
- Pressure Storage vessels;
- Fuel Dispenser;
- Gas control cabinet;
- Two UV/IR flame detectors; and,
- Masts upon which to mount flame detectors.

Supporting documents are uploaded to the PMC and include a System Equipment Description, photographs, Statement of Work and the proposed layout of equipment presented in Drawing PP-001.pdf.

A fence would be erected around the HGFS area, as requested by NREL security and required by the bulk storage section of NREL's compressed gas policy. This would be a chain-link fence similar to fencing around the mesa top solar array. This facility would provide a new capability at the STM and is very similar to the hydrogen facility at the NWTC.

There are no historic properties affected by this proposed action. The development of this area, within Site Development Zone 4 – Central Campus, was analyzed under the 2003 Site-wide Environmental Assessment (DOE/EA-1440) and 2009 Site-Wide Environmental Assessment Supplement-II (DOE/EA 1440 S-II) which included formal consultations with the State Historic Preservation Office (SHPO). No public concerns were raised during the EA public comment period.

During construction, no grading or clearing would occur; therefore, an EPA stormwater permit is not warranted. However, the contractor shall follow the NREL Laboratory Level Procedure, 6-2.15 for Stormwater Pollution Prevention for Construction Activities: South Table Mountain Site, for concrete washout. Any mobile point emission sources from construction equipment would be negligible. There would be noise typical of construction equipment, such as a concrete truck. Work would be conducted only during daylight hours.

Construction-related noise would consist of a short-term increase in ambient noise levels. Construction and operation of HGFS would comply with existing NREL safety protocols and procedures and the new hydrogen standards under the National Fire Protection Association (NFPA 2).

Based upon the information above, the proposed action would be within the bounds of DOE/EA-1440, DOE/EA-1440 S-II and applicable FONSI. In addition, the proposed action would qualify for Categorical Exclusion (CX) B1.31.

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 :

Prepared by Amy L. Van Dercook 05/03/2013

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

Electronically
Signed By: Lori Gray
NEPA Compliance Officer

Date: 5/8/2013

FIELD OFFICE MANAGER DETERMINATION

Field Office Manager review required

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