PMC-EF2a

(3.04.02)

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

RECIPIENT: NREL

STATE: CO

PROJECT TITLE : Vehicle Test Location at Bone Yard; NREL Tracking No. 09-024

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
		NREL-09-024	0

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

A9 Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.

B3.6 Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The proposed project would be for the construction of a vehicle test pad and building located at the National Renewable Energy Laboratory's (NREL) South Table Mountain (STM) Complex, City of Golden, County of Jefferson, and State of Colorado. The vehicle test pad (VTP) and Vehicle Modification Facility (VMF) would be located in Site Development Zone 4 (Central Campus) in the parcel to the north of the Field Test Laboratory Building (FTLB). The proposed development area, at approximately 39.7421°N 105.1758°W, would be between the Mesa Top and Slope Conservation Easement and the main STM campus on fill material deposited at that location from the construction of the FTLB in 1984. The project would consist of a 10,000 SQFT test pad, a 2,000 SQFT Vehicle Modification Facility (VMF), a site access road, storm water controls, and required facility infrastructure. Additionally, two solar trees for vehicle charging would be installed. These solar structures would have the following dimensions from ground: Lower edge at 117" (~10FT), upper edge at 257" (~24FT), tilt angle was 30 degrees. Exhibit 1 in the PMC shows the location of the solar panels in reference to the VTP and VMF. The solar charging system would include a single point mounting system, the solar panels, charging stations, breaker boxes and a battery storage system. Conduit to charging stations and to battery energy storage would be completed with minimal disturbance (2 trenches: a. 6" by 18" by 84"; b. 6" by 18" by 60 FT.).
Additional asphalt would be poured in approximately an 800 to 900 SQFT area.

This area is one of the areas of the STM complex identified in the NREL Master Plan as developable. The development of this area (within Site Development Zone 4 – Central Campus) and the construction of a vehicle test research facility was included and assessed in the July 2003 Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's South Table Mountain Complex (DOE/EA-1440) with a Finding of No Significant Impact (FONSI) determined issued July 2003.

The proposed project would cause approximately 54,000 SQFT of land disturbance during the site development and

construction phases. Utilities including electrical, voice/data lines, natural gas, water, and sanitary sewer would be provided to the VTP and VMF via a trenched utility line originated at the FTLB (840 feet long, 6 feet wide, disturbing approximately 5,040 SQFT). A one-lane access road with retaining walls would be created as well as two vegetative storm water swales downgradient of the test pad. The storm water runoff would be directed into the two swales, which would be designed to handle 100-yr flood events, and then conveyed via 4-inch pipes into an outfall structure at the Middle Drainage. The road would be designed to incorporate permeable material, such as gravel. As the area of land disturbance exceeds one acre, NREL would file a Notice of Intent with US EPA Region VIII for storm water associated with construction activity permit and develop a site-specific storm water pollution prevention plan (SWPPP) to supplement the STM SWPPP and NREL policy 6.2-15. Approximately 16,000 SQFT of the 54,000 SQFT area of disturbance would be restored after site construction.

Although the middle drainage swale is adjacent to the project location, no dredge or fill of Waters of the U.S. (WOUS) including wetlands or seeps is anticipated and storm water BMPs would be used as prescribed through the SWPPP required of the contractor per NREL procedures. Additionally, the U.S. Army Corps of Engineers identified no jurisdictional wetlands and no WOUS at the STM site in a recent jurisdictional determination. However, to protect the drainage swale and associated woody vegetation, a 100 ft buffer would be maintained from the center line of the drainage swale.

There are no historic properties affected by this proposed action. The development of this area, within Site Development Zone 4, was scope within the 2003 SWEA, which included formal consultations with SHPO. This proposed action would not impact the amphitheatre, foot bridge, or ammunition igloo. An additional archaeological review of the proposed site disturbance was also conduct in March 2010 by RMC Consultants, Inc. and reconfirmed no impact to historic properties or cultural resources.
Fugitive particulate emissions from the construction would be controlled in accordance with the existing STM land disturbance air permit (APCD# 08JE0889L), including mitigation measures like dust suppression. The construction phases would require the utilization of mobile point emission sources, such as front-end loaders, scrapers, paving machines, and dump trucks, but these emissions would be negligible given the size and duration of the construction activity. Once operational, the vehicle test pad and VMF would have some minor air emissions as well from vehicle idling and testing. These emissions would be controlled through administrative controls limiting the number of idling events, their duration, and daily timing. Additional engineering controls, such as exhaust scrubbers, may also be considered. These controls would also help ensure no air quality impact to the fresh-air intakes of STM buildings. NREL and all contractors would follow all federal, state, local safety and security regulations.

There is a public concern with aesthetics, visible development on the slope and top of South Table Mountain, and light pollution. Therefore, impacts to visual resources are a concern with this proposed project beyond the visual resource impact of the campus development of Site Development Zone 4 as analyzed in DOE/EA-1440. In order to minimize visual impacts, the retaining walls would have earth-tone colors (see attached retaining wall example photo). Lighting at the VTP and VMF would consist of low intensity lamps, directed away from the Middle Drainage and shielded to prevent light from projecting skyward. The proposed charging facility at the VTP would be toward the back (north end) of the parcel, furthest away from the shoulder of the slope. Therefore, although the solar tree is 24 FT tall, it would not be visible from Denver West Blvd. It would be visible from I-70 but would blend with the VMF building and the hillside. This type of solar panel is non-reflective which would greatly reduce its visibility.

Based upon the information above and the findings July 2003 Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's South Table Mountain Complex (DOE/EA-1440) with a Finding of No Significant Impact (FONSI) determined issued July 2003, this project's impacts to the human and natural environment can be deemed less than significant, this project would qualify for Categorical Exclusions A9, B3.6, and B5.1.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Insert the following language in the award:

You are required to:
Should construction or geotech soil sampling be delayed until April 15th, NREL/DOE would require and perform a ground nesting bird survey prior to any activities occurring at the site. Should clearing activities occur prior to April 15th, no ground nesting bird survey would be required.

Note to Specialist :

EF2a prepared by Rob Smith on 01/21/2011

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Lori Plummer Date: 1/21/2011
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