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 TITLE : 24-003 SERF Analytical Characterization Suite Facility Upgrade – STM

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	GFO-NREL-24-003	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 (NREL STM) SITEWIDE ENVIRONMENTAL ASSESSMENT, U.S. DOE NATIONAL RENEWABLE ENERGY 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 install new analytical characterization instruments at the Solar Energy Research Facility (SERF) located at the NREL South Table Mountain campus in Golden, Colorado.

The purpose of the proposed project is to replace existing instruments that are no longer supported by manufacturers. The project would involve purchasing four new analytical microscopy systems, relocating the existing equipment, and modifying the laboratory to accommodate the new instruments.

PROJECT ACTIVITIES
The wall between E-010 and E-009 would be moved to accommodate a new scanning transmission electron microscope in E-010. Additionally, aluminum paneling would be installed on the walls within the laboratory to reduce electromagnetic interference, the flooring would be replaced with static dissipative floor tiles, the sheetrock would be replaced, and LED lights would replace existing overhead lighting. Lastly, plumbing, electrical, and ventilation systems would be rerouted as needed.

In E-009, a laser plasma focused ion beam (PFIB) would be installed. New sheetrock would be installed, LED lighting would replace existing lighting, and plumbing, electrical, and ventilation systems would be rerouted as needed.

In E-007, a cryogenic PFIB and cryogenic gallium-FIB electron microscope would be installed. A glovebox would also be installed, LED lights would be installed, and plumbing, electrical, and ventilation systems would be rerouted as needed.

In E016, a chemical hood and polishing table would be removed. The hood is likely contaminated with heavy metals and nanomaterials from previous research. Surface decontamination and/or encapsulation would be performed. New sheetrock would be installed, and plumbing, electrical, and ventilation systems would be rerouted as needed.

Work would begin in the winter of 2023 and would take approximately 18 months to complete.

ANALYSIS
The proposed project would not involve ground disturbance as all construction activities would occur within the SERF. The research performed in these laboratories would remain the same; as such, no change in the use, mission, or operation of these facilities would result from the proposed project.

The chemical hood and polishing table would be decontaminated as much as possible and disposed of as required. Associated ducting, filters, casework, and other supporting components would be assessed and characterized to determine if they can be disposed of as hazardous or non-hazardous waste. Items that cannot be decontaminated would be encapsulated and disposed of as hazardous waste in accordance with NREL's hazardous waste procedures and regulatory requirements. Non-hazardous waste, which could include construction debris, non-contaminated fume hood components, packing materials, and miscellaneous job site waste, would be disposed of in accordance with requirements.

Existing instruments that would be removed would be relocated for use elsewhere on the STM Campus or offered for free release in accordance with property management requirements.

Indoor emissions of particulate matter from construction activities that could result from project activities are expected to be de minimis and would not add to the local load of air pollutants. Controls would be implemented to ensure protection of indoor air quality in accordance with corporate health and safety protocols.

Individuals working on this project could be exposed to physical, chemical, and electrical hazards. Existing corporate health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, and monitoring. Additionally, specific health and safety controls would be documented in a decommissioning plan and Safe Work Permit, both of which would be followed by workers. Additional policies and procedures would be implemented as necessary if new health and safety risks are identified.

Based on the review of the project, DOE has determined that the proposed project fits within the scope of activities that were analyzed in the 2014 Final Site-Wide Environmental Assessment of the NREL STM (DOE/EA-1968). DOE has determined that the proposed project is bound by the environmental impact analysis contained in this EA and its respective FONSI, and no further NEPA review is required.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

NREL
Nicole Serio, 12/4/2023

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Matthew Blevins Date: 12/4/2023

NEPA Compliance Officer

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: _____ Date: _____

Field Office Manager