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 : NREL-22-007 SERF and S&TF Ventilation Upgrades - STM

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-22-007	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 make ventilation and fume hood upgrades to laboratories within the Science and Technology Facility (S&TF) and the Solar Energy Research Facility (SERF) located at the NREL South Table Mountain campus in Golden, Colorado.

The purpose of the proposed upgrades is to extend the life of those systems, streamline maintenance activities, and to accommodate the future expansion of wet chemistry hoods. The laboratories that would be upgraded in the S&TF are 203A and 213 Bay 1, and the laboratories in the SERF are C112, C113, C116, C117, C121, C124 C125, C212, C213, C215, C219, C221, W125, W128, W129, W209, W210, W212, W213, and W214. These laboratories are used for photovoltaics (PV) research.

The proposed project would be performed in 6 phases:
• Phase 1: Two corrosive etching stations would be installed in the S&TF;
• Phase 2: The SERF's penthouse exhaust plenum would be divided into two sections, which would involve: (a) replacing two existing fans; (b) replacing exhaust risers from the second floor and ducting them into the plenum of the two fans; (c) installing a second, redundant heat recovery/exhaust and filter system; (d) reworking the second-floor risers to terminate into the plenum of the two fans; and (e) replacing exhaust risers from the first floor and ducting them and existing ductwork on the first floor into the plenum of the two fans;
• Phase 3: Fume hoods and feeder ducts in the west wing laboratories of the SERF would be replaced;
• Phase 4: Fume hoods and feeder ducts in the SERF center wing would be replaced (this work would impact some cleanroom spaces and those laboratories would be recertified to cleanroom specifications once the work is complete);
• Phase 5: Two corrosive etching stations and one chemical fume hood would be installed in the SERF;
• Phase 6: Two fume hoods in the SERF would be replaced.

Project activities would also include: (a) removing and replacing strip lights with reflectors as needed; (b) mounting receptacles on top of the fume hoods for flow control monitors; (c) installing receptables in cabinets below the fume hoods for pump connections; (d) providing conduit seals as needed; and (e) installing corrosion resistant receptables with nickel plated brass connectors.

Fume hoods and associated infrastructure (such as ductwork) in the SERF and S&TF could be contaminated with various hazardous materials such as heavy metals, acids, nanomaterials, chlorinated solvents, copper, indium, gallium, lead, selenium, arsenic, phosphorous, and gallium arsenide. Prior to the demolition and removal of fume hoods, a decommissioning plan would be developed, sampling would be performed to understand the type and levels of contamination present, and a safe work permit would be obtained before performing any decontamination and removal activities.

Work would begin in the summer of 2022 and would last approximately 24 months.

The proposed project would not involve ground disturbance as all construction activities would occur within the SERF and S&TF. The work 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.

Fume hoods would be decontaminated where possible and disposed of as non-hazardous waste as required. Other non-hazardous waste, which could include demolition debris, non-contaminated fume hood components, packing materials, and miscellaneous job site waste, would also be disposed of in accordance with requirements. Components that cannot be decontaminated would be encapsulated and disposed of as hazardous waste in accordance with NREL's hazardous waste procedures and regulatory 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 NREL 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. Work would be performed in accordance with the decommissioning plan and Safe Work Permit. 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.

Notes:

NREL
Nicole Serio, 1/11/2022

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Lisa Jorgensen Date: 1/11/2022
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