

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 : [Sandia National Lab UAS Flights - Albuquerque, NM](#)

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-20-011	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:

A9 Information gathering, analysis, and dissemination	Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
B3.2 Aviation activities	Aviation activities for survey, monitoring, or security purposes that comply with Federal Aviation Administration regulations.

Rationale for determination:

The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL), in collaboration with Sandia National Laboratory (SNL), is proposing to use an Unmanned Aircraft System (UAS) to characterize the environmental parameters above the heliostat field surrounding the National Solar Thermal Test Facility (NSTTF).

The NSTTF is a DOE/NNSA owned facility located on the SNL campus in Albuquerque, New Mexico. The purpose of this project would be to validate models of solar irradiance from the heliostat field using alternative aiming strategies using UAS acquired photos and video data. SNL has been subcontracted by NREL and would provide the location and UAS equipment and pilots. NREL would fund the flights, provide flight paths and receive data from the flights that would then be used to further ongoing research and development of a tool for heliostat measurements.

Multiple flights would be conducted over several days within a 4 month period – starting around the Dec. 16th, 2019 time period. SNL personnel would fly the UAS to various locations around the solar tower to validate model predictions. Flight testing would include outdoor way point navigation, sensing, deciding, and acting to avoid obstacles.

Project activities would be in accordance with the SNL ES&H aviation program and safety requirements. Flights would comply with SNL's Tier UAS Safety Plan and with a Certificate of Authorization from the FAA to fly drones at the National Lab.

SNL completed a NEPA review for the activity entitled "Use of Unmanned Aerial Vehicles for Scientific Study at the National Solar Thermal Test Facility, NEPA ID: NM19-0250". The determination indicated that there would not be any significant impacts to resources based on the proposed activities if conditions and requirements are followed. NREL's proposed action in this project would not alter these findings.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Should flight conditions change or the documented requirements are unable to be implemented, the activity will need to be paused so a reevaluation of hazards and impacts can occur.

NEPA review completed by Laura Margason on December 9, 2019.

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically Signed By: Lisa Jorgensen
NEPA Compliance Officer

Date: 12/12/2019

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: _____