

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 19-039 University of Arizona SETO Co-Locate Ag & Solar - Oracle, AZ

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-19-039	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.)

A11 Technical advice and assistance to organizations

Technical advice and planning assistance to international, national, state, and local organizations.

B3.1 Site characterization and environmental monitoring

Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

Rationale for determination:

The U.S. Department of Energy's (DOE) Solar Energy Technology Office (SETO) is proposing to provide funding to the National Renewable Energy Laboratory (NREL) to partner with the University of Arizona (UA) and Biosphere2 (owned by UA) as part of InSPIRE 2.0 Task 2, "Conduct Co-Located Field Research at Test Plots". The purpose of the proposed project is to evaluate the performance of different crop types under varying configurations of solar infrastructure to identify crop types that are ideal for sites with co-located solar and agriculture.

The proposed project would occur at Biosphere2 Agrivoltaics Learning Lab, located in Oracle, AZ. The site is

currently used for co-located solar and agriculture. NREL would manage the overall project and provide technical support for the study design. UA would conduct the field and desktop studies.

The solar array site at Biosphere2 covers approximately 0.25 acres of land. UA would plant crops under the solar array in test plots, covering approximately 0.2 acres. UA would also install monitoring equipment to measure sunlight, shading, soil moisture content, and rainfall. UA would collect additional measurements, such as vegetation height, cover, and crop production. At the conclusion of the study, the monitoring equipment would be removed and the study plots returned to the facility owner for continued operation.

Project activities would occur on previously disturbed land, would not involve modification or construction of facilities, and would not result in a change to the use, mission, or operation of the site. The proposed action would not affect cultural resources, threatened or endangered species, wetlands, floodplains, or prime farmlands. No permits would be required. Non-hazardous wastes generated during planting and tending would be reused, recycled, or disposed of in a sanitary landfill as appropriate.

Workers could be exposed to physical hazards during the course of the proposed project. Existing corporate health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, proper material handling, monitoring, and internal assessments. Additional policies and procedures would be developed if additional health and safety risks are identified.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

NREL
Nicole Serio 7/12/2019

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: Kristin Kerwin
NEPA Compliance Officer

Date: 7/16/2019

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: _____