



Department of Energy
National Nuclear Security Administration
Categorical Exclusion Determination Form



Categorical Exclusion ID#: NV-2021-035

Proposed Action Title: Nevada Desert Research Center (NV Desert FACE and Mojave Global Change Facilities)

Program or Field Office: Nevada Field Office

Location(s) (City/County/State): Nevada National Security Site, Nye County, NV

Proposed Action Description

The Desert Research Institute (DRI), University of Nevada, Las Vegas (UNLV), and University of Nevada, Reno (UNR) jointly conduct ecological and climate change research at the Nevada National Security Site (NNSS). There are two projects within Area 5 of the NNSS. They are the Nevada Desert free air carbon dioxide enrichment (FACE) Facility (NDFF) and the Mojave Global Change Facility (MGCF), collectively the Nevada Desert Research Center.

These projects use a trailer on location and have several soil/vegetation study plots. Although the NDFF is no longer fumigating study plots with elevated CO₂, the plots are being maintained for future studies of carbon retention. The MGCF is a complementary research facility that examined the impact of other climate change factors, i.e., altered precipitation, nitrogen deposition, and increased soil crust disturbance. The field plots (25 meter [m] diameter for NDFF, and 14 m by 14 m for MGCF) are used to examine plant/soil/root interactions. Researchers from within Nevada as well as research institutions across the U.S. have used these facilities to examine a large number of responses, including but not limited to above- and below-ground plant responses, soil nutrient cycles, insect herbivory, and soil moisture.

Methodologies and equipment which would be employed range from something as simple as meter stick while others would use sophisticated sensors, e.g., soil moisture probes and multispectral scanners/cameras. Regardless of methodologies, all research activities would adhere to a minimal disturbance rule (no disruption of the biological soil crust and plant life).

From time-to-time, small unmanned aerial systems (sUAS; less than 55 pounds) would be flown at MGCF and NDFF to acquire standard color and near infrared images of ground conditions. The sUAS may be a gas-powered single-rotor helicopter, a battery-operated fixed wing, or some other type of sUAS. Standard operating and safety procedures would be developed and approved that comply with the Management and Operating (M&O) Contractor's Company Directive CD-0280.004, Flight Safety Operations, Standardization, and Oversight and all flights would be approved in advance by the NNSS Operations Command Center.

Categorical Exclusion(s) Applied

10 CFR 1021: B3.8 Outdoor ecological research project



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Regulatory Requirements in 10 CFR 1021

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of 10 CFR 1021.

To find that a proposal is categorically excluded, DOE shall determine the following:

- (1) The proposal fits within a class of actions listed in Appendix A or B to 10 CFR Part 1021, Subpart D;
- (2) There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal; and
- (3) The proposal has not been segmented to meet the definition of a categorical exclusion. The 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 classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, include the following conditions as integral elements of the classes of actions. To fit within the classes of actions in 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 of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.

NEPA Compliance Officer Determination

Based on my review of information conveyed to me and in my possession concerning the proposed action, as NEPA Compliance Officer (as authorized under NNSA NAP 451.1 and DOE P 451.1), I have determined that the proposed action fits within the specified class(es) of action and I have reviewed the proposal for integral elements. I have determined that there are no extraordinary circumstances present and that the proposal has not been segmented to meet the definition of a categorical exclusion. Therefore, the application of a categorical exclusion is appropriate.

NEPA Compliance Officer: Carrie Stewart

Date Determined: June 1, 2021