National Nuclear Security Administration
Categorical Exclusion Determination Form

NEPA ID#: HEDLP 15-001-001

Proposed Action Title: DAG Series Airborne Operations

Program or Field Office: Nevada Field Office

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

Proposed Action Description:

An aerostat (a tethered aerodynamic helium balloon), a low altitude (<2000 meters [m] above ground level) drifting helium balloon, and a high altitude (>15000 m above sea level) solar powered hot air balloon would be fielded during the Dry Alluvium Geology (DAG) Project series. Balloons would carry infrasound sensing instruments and a satellite tracker for recovery purposes. Test flights of the balloons would be conducted at the Desert Rock Airport in Area 22.

Anticipated launch sites would be at Desert Rock Airport and in the vicinity of the DAG Project and the Big Explosive Experiment Facility (BEEF). The aerostat and the low altitude drifting balloon would be inflated with helium, which would be vented to the atmosphere after recovery of the aerostat and the drifting balloon. Helium is an inert gas. The solar balloon is technically a "hot air balloon", it does not have any mechanism to heat the air (no burners, fuel, etc). The balloon gets lift because it is made of dark material, and sunlight hitting this material heats the air inside enough for it to get positive buoyancy. The aerostat tether point would be located on an existing road or area of disturbed ground. No off-road driving would be required. The aerostat and drifter balloons consist of 3 mil urethane envelopes. The aerostat has a 3.8 m diameter and the drifter has a 3.6 m diameter. The high altitude solar powered hot air balloon consists of a 6 m diameter envelope of 0.31 mil high density polyethylene plastic. Flight is achieved by passive absorption by the balloon material, and no heating elements or fuel are required.

Recovery of balloon envelopes and payloads can be accomplished by two people on foot. Typically, this is accomplished by driving to the vicinity of the landing site on an existing road, then navigating (on foot) to the payload position via handheld GPS.

Categorical Exclusion(s) Applied:

10 CFR 1021, Appendix B, B3.2 Aviation activities

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions including the full text of each categorical exclusion, sec Subpart D of 10 CFR 1021. Regulatory Requirements in 10 CFR 1021.410(b): (Sec full text in regulation)

The proposal fits within a class of actions that is listed in Appendix A or B to 10 CPR Part 1021, Subpart D.

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

The proposal has not been segmented to meet the definition of a categorical exclusion.

Based on my review of information conveyed to me and in my possession concerning the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451. 1B), I have determined that the proposed action fits within the specified class(es) of action and that other-regulatory requirements set forth above are met. Therefore, the application of a categorical exclusion is appropriate.

NEPA Compliance Officer: Carrie Stewart

Date Determined: July 11, 2018