

**U.S. DEPARTMENT OF ENERGY
 NATIONAL NUCLEAR SECURITY ADMINISTRATION NEVADA FIELD OFFICE
 NEPA ENVIRONMENTAL EVALUATION CHECKLIST**

NV-2017-002

FOLLOW ATTACHED PROCEDURES FOR COMPLETING CHECKLIST				Date			
A. Project/Activity Title (Attach a brief description of proposed project) Solar Photovoltaic Demonstration Project				October 24, 2016			
				Anticipated Start Date April 2017			
Project Location NNSS Area 23		Proposed By (if other than NNSA/NFO)					
NNSA/NFO Line Management Organization AMNS		NNSA/NFO Project/Program Manager Desiree Ang					
ENVIRONMENTAL CONSIDERATIONS: If any phase of the project/activity involves any of the following considerations, check yes and explain in project description. See NFO-16A for consideration guidelines and examples.							
CONSIDERATION	YES	NO	UNK	CONSIDERATION	YES	NO	UNK
WASTE				AIR EMISSIONS			
1. Non-Rad Solid Waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Chemical Release	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Hazardous Waste	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Dust/Particulate Matter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Low-Level Rad Waste	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Explosives	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Mixed Waste	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Diesel Generators	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. TRU/Mixed TRU Waste	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. Open Burning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Wastewater (domestic/industrial)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
HAZAROUS MATERIALS				SITE LOCATION/OTHER			
1. Petroleum/Fuel Storage/Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Environmental Restoration Site (CAU)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Underground Storage Tanks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Excavation/Land Surface Disturbance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Aboveground Storage Tanks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Off Road Travel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. PCBs/Asbestos	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Biological/Tortoise Resource Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Pesticides/Herbicides	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. Cultural/Historic Resource Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Radioactive Materials	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. Change in Existing Drainage Pattern	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Biological Materials/Simulants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Impact to Environmental Monitoring System	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Beryllium	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. Unexploded Ordnance Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Chemical Storage/Use	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. Noise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Use of Explosives/Firearms	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. Radiation Controlled Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
				11. Drinking Water System Involvement	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DO NOT TYPE OR WRITE BELOW THIS LINE. FOR NEPA COMPLIANCE OFFICER USE ONLY.							
B. Is the project/activity included in the final NNSS SWEIS and the ROD or other NEPA document? <input type="checkbox"/> Yes (complete Sections C, D, and F) <input checked="" type="checkbox"/> No (complete Sections D, E, and F)							
C. This project/activity is included in the NNSS SWEIS/ROD (or other NEPA document) under the following section and page number:							
D. Does the proposed project/activity require any local, state, or federal permits or notifications? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
E. If, based on the project description and the preliminary environmental considerations noted above, the proposed action fits within a class of action listed in Subpart D of 10 CFR 1021, write in the space below the paragraph number and short title from the appropriate table of contents of Subpart D, Appendix B, C, or D, for a CX, EA, or EIS. If the proposed action does not fit within any class of action, write "Not Listed" below. 10 CFR 1021: B5.16 Solar photovoltaic system							
F. NEPA COMPLIANCE OFFICER DETERMINATION OR RECOMMENDATION: I have determined that the proposed action as described in Item A has been adequately analyzed and meets the requirements for categorical exclusion under the citation in Item E. No further analysis or documentation is required pursuant to NEPA. Any changes or additions to this proposed action will require additional NEPA review.							

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_____ NNSA/NFO NEPA Compliance Officer	November 1, 2016 _____ Date
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Project Description:

This solar demonstration project would install a 276 kW solar photovoltaic (PV) system in Area 23 (Mercury) at the Nevada National Security Site (NNSS). Demonstration of the successful deployment of solar at the NNSS would provide the necessary introduction of a renewable-energy project at the NNSS.

The proposed PV system would be located adjacent to the Mercury Fire Station, Building 23-640 to facilitate the pursuit of a net-zero installation. The Mercury Fire Station was selected for the demonstration project because it is a critical facility that operates 24 hours per day. It was determined that 276 kW (DC) of PV capacity would produce approximately 478,584 kWh of energy per year. This amount exceeds the estimated maximum annual energy use of 460,770 kWh.

The solar demonstration system would be located directly east and adjacent to the Mercury Fire Station in a previously disturbed area. The system would be comprised of panels approximately 39 inches by 77 inches each and occupy approximately 35,000 square feet (0.8 acre).

Installation of the solar panels would require the following activities.

- Grading the solar array plot area.
- Spraying herbicide on the solar array plot area.
- Structural Activities: Installing support pylons for the solar panels.
- Power Activities:
 - Digging a trench approximately 2 feet wide by 36 inches deep by 100 feet long
 - Laying conduit
 - Installing power lines
 - Interfacing with solar panels
- Installing panels
- Using the existing driveway and bladed road.

Environmental Considerations:

Waste:

W-1 Non-RAD Solid Waste

Any non-hazardous solid waste, such as construction debris, generated during project activities would be transported to an approved State-permitted NNSS landfill for disposal.

Hazardous Materials:

H-1 Petroleum/fuel Storage/Use:

Diesel fuel would be used for heavy equipment during grading and trenching activities and during operation of a temporary diesel generator. Spill protection would be available when needed. No fuel would be stored on site.

H-5 Pesticides/Herbicides:

After grading activities, herbicides would be used to control vegetation in the solar array area.

Air Emissions:

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A-2 Dust/Particulate Matter:

Particulate emissions would be generated during operation of heavy equipment used for grading and trenching activities. These emissions would be temporary and would be controlled through the use of water sprays or foam as necessary.

A-4 Diesel Generators:

One or more generators would be used to power some of the equipment during installation. Generators would be temporary and used only during installation. The generators would be small, approximately 45 kW or less, and emissions would be similar to those produced by similar-sized, permitted generators that are on the NNSS Air Quality Operating Permit.

Site Location/Other:

S-2 Excavation/Land Surface Disturbance:

Excavation would be required for installation of conduit and power lines. Trenching would occur as described in the Project Description. Approximately 35,000 square feet of previously disturbed land would be used for installation of the solar demonstration system.

S-4 Biological/Tortoise Resource Area:

The proposed location of the solar demonstration system is in desert tortoise habitat. A FRM-0901 was submitted and a biological survey was conducted that included the solar demonstration site and access road. Since the project is within desert tortoise habitat, a tortoise clearance survey will be conducted for this project no more than 24 hours prior to clearing of vegetation and starting construction on this site. No other biological issues or concerns are associated with the site.

S-5 Cultural/Historic Resource Area:

A FRM-0901A was submitted. The solar demonstration system site was reviewed, and it was determined that no cultural resources would be affected by this action.

S-9 Noise:

Temporary elevated noise levels would result from the operation of heavy equipment during construction and installation. Exposure to elevated noise levels would be minimized by requiring personnel to wear hearing protection when heavy equipment is operating.