DOE-ID NEPA CX DETERMINATION Idaho National Laboratory

Page 1 of 3

CX Posting No.: DOE-ID-INL-20-042

SECTION A. Project Title: Installation of Meteorological Towers to Support Future Nuclear Reactor Programs

SECTION B. Project Description and Purpose:

The DOE is currently endeavoring to deploy new commercial reactor designs. These designs will advance available technology for the commercial nuclear industry. The aim is to improve United States influence, allow reduced carbon emissions and commercial success in the power industry.

INL is actively supporting reactor deployment as part of the NuScale/UAMPS Carbon Free Power Project (CFPP) and OKLO Aurora reactor deployment. Both these efforts are enabled by the INL Site Use Permit (SUP, 2016, *U.S. DEPARTMENT OF ENERGY USE PERMIT NO. DE-NE700065*). Additional new programs including the Advanced Reactor Deployment Program (ARDP) and the National Reactor Innovation Center (NRIC) are further advancing this effort with new resources.

As part of the overall effort, INL is looking to improve the new reactor infrastructure of the INL site. High quality, NQA-1, data on wind speed and direction is a long lead item, two years, for each site where a new reactor could be located. The long lead time and general use makes installing the required meteorological towers an infrastructure improvement INL is willing to perform to further the larger DOE mission.

The meteorological tower a 60-meters high (about 197 ft) lattice or pole tower including instruments to measure wind velocity, direction, temperature and humidity. The met tower requires a metal base plate and instrumentation placed on a graded and levelled 20 ft radius area. Four screw-in anchors hold guy wires about 150 ft from the tower are required for some tower systems.

It is not currently planned that additional access roads would be required because the deployment sites will be selected if possible near roads and in disturbed areas. Installation and periodic maintenance and decommissioning are the expected lifecycle of the activity.



Anticipated Wind Tower Installtion Locations

Figure 1. Initial meteorological deployment locations west of ATR and MFC.

DOE-ID NEPA CX DETERMINATION Idaho National Laboratory

Page 2 of 3

CX Posting No.: DOE-ID-INL-20-042

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

The proposed action has the potential to generate fugitive dust and vehicle/equipment emissions, but vehicle/equipment emissions, but vehicle/equipment emissions would be below reportable levels.

Discharging to Surface-, Storm-, or Ground Water

N/A

Disturbing Cultural or Biological Resources

Soil disturbing activities have the potential to impact cultural resources. Impacts to biological resources (e.g., vegetation, birds, nests, leks) have the potential to occur during project activities.

Generating and Managing Waste

Project activities have the potential to generate general construction waste such as scrap metal.

Releasing Contaminants

Chemicals will be used and will be submitted to chemical inventory lists with associated Safety Data Sheets (SDSs) for approval prior to use. The Facility Chemical Coordinator will enter these chemicals into the INL Chemical Management Database. All chemicals will be managed in accordance with laboratory procedures. When dispositioning surplus chemicals, project personnel must contact the facility Chemical Coordinator for disposition instructions.

Although not anticipated, there is a potential for spills when using chemicals or fueling equipment. In the event of a spill, notify facility environmental staff. If environmental staff cannot be contacted, report the release to the Spill Notification Team (208-241-6400). Clean up the spill and turn over spill cleanup materials to WGS.

Using, Reusing, and Conserving Natural Resources

Project personnel would use every opportunity to recycle, reuse, and recover materials and divert waste from the landfill when possible.

SECTION D. Determine Recommended Level of Environmental Review, Identify Reference(s), and State Justification: Identify the applicable categorical exclusion from 10 Code of Federal Regulation (CFR) 1021, Appendix B, give the appropriate justification, and the approval date.

For Categorical Exclusions (CXs), the proposed action must not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, or similar requirements of Department of Energy (DOE) or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment or facilities; (3) disturb hazardous substances, pollutants, contaminants, or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources (see 10 CFR 1021). In addition, no extraordinary circumstances related to the proposal exist that would affect the significance of the action. In addition, the action is not "connected" to other action actions (40 CFR 1508.25(a)(1) and is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1608.27(b)(7)).

References: 10 CFR 1021, Appendix B to Subpart D, items B1.19 "Microwave, meteorological, and radio towers", B1.31"Installation or relocation of machinery and equipment" and B3.1 "Site characterization and environmental monitoring."

Justification: Project activities are consistent with 10 CFR 1021, Appendix B to Subpart D, B1.19 "Siting, construction, modification, operation, and removal of microwave, radio communication, and meteorological towers and associated facilities, provided that the towers and associated facilities would not be in a governmentally designated scenic area (see B(4)(iv) of this appendix) unless otherwise authorized by the appropriate governmental entity",

B1.31 "Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts", and

DOE-ID NEPA CX DETERMINATION Idaho National Laboratory

CX Posting No.: DOE-ID-INL-20-042

B3.1 "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: 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; Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); 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; Aquifer and underground reservoir response testing; Installation and operation of ambient air monitoring equipment; 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); Sampling and characterization of water effluents, air emissions, or solid waste streams; Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); Sampling of flora or fauna; and Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7."

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Approved by Jason Sturm, DOE-ID NEPA Compliance Officer on: 6/18/2020