

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: Idaho National Laboratory (INL) Site Characterization and Environmental Monitoring (Overarching)

SECTION B. Project Description and Purpose:

This environmental checklist (EC) covers environmental monitoring and site characterization activities at Idaho National Laboratory (INL) through 2017.

Environmental monitoring at INL is conducted in accordance with Department of Energy (DOE) Order 458.1, Radiation Protection of the Public and the Environment. The purpose of DOE Order 458.1 is to establish requirements to protect the public and the environment against undue risk from radiation associated with radiological activities conducted under the control of DOE pursuant to the Atomic Energy Act of 1954, as amended. The objectives of the order include 1) conducting DOE radiological activities so that exposure to members of the public is maintained within the dose limits established in the order, 2) controlling radiological clearance of DOE real and personal property, 3) ensuring that potential radiation exposures to members of the public are as low as reasonably achievable, 4) ensuring DOE sites have the capabilities, consistent with the types of radiological activities conducted, to monitor routine and non-routine radiological releases and to assess the radiation doses to members of the public, and 5) protecting the environment from the effects of radiation and radioactive material.

Environmental monitoring activities include INL Site-wide sampling, monitoring, and characterization activities. Site-wide sampling, monitoring, and characterization activities are needed to support INL operations, including day-to-day monitoring activities (i.e., measurement of liquid or gaseous effluents for purposes of characterizing and quantifying contaminants, collection and analysis of samples, direct measurement of air, soil, water, biota and other media, etc.); characterization of sites suspected of being contaminated with hazardous, radioactive, and mixed wastes, and characterization of sites to support environmental impact analyses. Data developed from sampling and monitoring activities assists in identifying and delineating contaminated areas. Data collected may verify process knowledge and identify particular technologies for remediation of contaminated sites. Data collected during routine sampling, monitoring, and characterization activities demonstrate compliance with federal, state, and local laws and regulations, and DOE Orders, and is reported annually.

Furthermore, INL is home to a wide variety of important cultural resources representing at least 13,500 years of human occupation. These resources are nonrenewable, bear valuable physical and intangible legacies, and yield important information about the past, present, and perhaps the future. The Cultural Resource Management Office (CRMO) is committed to preserving cultural and historical resources in a spirit of stewardship for the future as outlined in various federal preservation laws, regulations, and guidelines such as the National Historic Preservation Act (NHPA), the Archaeological Resources Protection Act (ARPA), and the National Environmental Policy Act (NEPA). This includes, but is not necessarily limited to: archaeological survey and recording of previously unknown resources, assessment and updated documentation of previously recorded archaeological resources, National Register nominations, artifact analyses, and archival research. All of these activities enhance resource protection and preservation.

Archaeological sites are identified through intensive, systematic pedestrian surface survey in most INL areas. Limited test excavation may also be employed to assess the nature and extent of subsurface cultural deposits at potentially significant archaeological sites. Historic architectural properties, structures, and objects generally exhibit some type of surface manifestation as well, but not always, and INL historic archives are often consulted to assist with identification of these cultural resources. Direct communication is necessary to identify and characterize most American Indian cultural resources such as sacred sites or traditional use areas.

Specific activities associated with environmental monitoring and site characterization include, but is not limited to, the following:

- 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 do 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 wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices.
- d) Testing aquifer and underground reservoir response.
- 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 Code of Federal Regulation (CFR) part 800 and 43 CFR part 7.

The proposed action would support sampling, environmental monitoring, and site characterization that may fall under the Rules for the Reclamation and Reuse of Municipal and Industrial Wastewater (Idaho Administrative Procedures Act [IDAPA] 58.01.17), the City of Idaho Falls Industrial Wastewater Acceptance permit, Clean Water Act (CWA), Safe Drinking Water Act (SDWA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), the Toxic

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Substances Control Act (TSCA), the National Historic Preservation Act (NHPA), DOE Orders 450.1 and 5400.5, the Clean Air Act (CAA) (IDAPA 58.01.01) and DOE-HDBK-1216-2016.

For new CERCLA sites a specific EC would be generated.

In addition, activities not covered by this EC include, but may not be limited to, the following:

- a) Actions that require a permit or permit modification
- b) Actions that remove or disturb sagebrush anywhere on the INL Site, unless approved by biological resource review
- c) Actions that disturb any type of vegetation within the Sage Grouse Conservation Area.

Activities with the potential to disturb sagebrush are not authorized by this EC, unless approved in writing during biological review in compliance with the "Candidate Conservation Agreement for Greater Sage Grouse (*Centrocercus urophasianus*) on the Idaho National Laboratory Site."

Activities that would disturb vegetation or nesting birds from April 1 to September 1 must have nesting bird survey(s) and written approval to proceed, and time-of-day restrictions (6:00 PM to 9:00 AM between March 15 and May 15) are in effect within 1 km (0.6 mi) of a sage-grouse lek.

Certain activities conducted under this EC may require preparation of project specific 2nd tier ECs, including, but not limited to, activities involving ground disturbance, sagebrush disturbance outside of exempted corridors, drilling and abandoning wells, installing and operation of meteorological towers and associated activities, and off-road vehicle travel.

If proposed activities do not fall under this overarching EC, prepare a 1st tier EC for DOE approval. Project personnel should note approval of 1st tier ECs can take three weeks or longer, and should prepare accordingly.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Project activities have the potential to contribute to air emissions through the following:

- Generating hazardous emissions, such as by operation of fuel burning equipment, decontamination work, use of products that contain hazardous constituents, and disturbance of contaminated soils.
- Acquiring and dispositioning chemicals.
- Disturbing asbestos.
- Generating fugitive dust or other fugitive emissions.
- Purchasing, relocating, operating, modifying or maintaining portable air emission sources, including non-road internal combustion engines.

Discharging to Surface-, Storm-, or Ground Water

Activities addressed by this EC have the potential to impact waters of the U.S. or groundwater through conduct of the following:

- Maintaining, repairing, or altering drinking water systems and cross connection at the INL and in-town facilities
- Using drinking water systems and cross connections at the INL and in-town facilities
- Maintaining or repairing septic tanks or septic systems
- Discharging Wastewaters
- Managing storm water discharges.

Disturbing Cultural or Biological Resources

Activities included in this EC have the potential to disturb cultural or biological resources as follows:

- Maintaining or repairing facilities, structures, equipment or processes
- Management of migratory birds and bird nests on the INL and at in-town facilities
- Disturbing vegetation and soil.

Generating and Managing Waste

Routine maintenance activities have the potential to generate waste from conducting the following activities:

- Disposing asbestos-containing material
- Disturbing asbestos or removing asbestos-containing material
- Other activities that generate waste.

Releasing Contaminants

Activities addressed by this EC have the potential to release contaminants through the following:

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- Acquiring, using, storing and dispositioning chemicals
- Managing and dispositioning excess property and materials
- Reporting and cleaning up spills and releases.

Using, Reusing, and Conserving Natural Resources

Activities addressed by this EC have the potential for use, reuse and conservation of natural resources related to the following:

- Generating greenhouse gasses
- Building energy use
- Consuming potable, industrial or irrigation water
- Generating storm water
- Generating landfill waste or construction and demolition wastes
- Generating recyclable materials
- Engaging in sustainable acquisition practices.

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, B3.1 "Site characterization and environmental monitoring"

Justification: Project activities are consistent with 10 CFR 1021, Appendix B, 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:

- a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, 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;
- e) 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);
- f) Sampling and characterization of water effluents, air emissions, or solid waste streams;
- g) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources);
- h) Sampling of flora or fauna; and
- i) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7."

Is the project funded by the American Recovery and Reinvestment Act of 2009 (Recovery Act) Yes No

Approved by Jack Depperschmidt, DOE-ID NEPA Compliance Officer on: 12/5/2016