

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: PPS 70MW Lobe Power Upgrade

SECTION B. Project Description and Purpose:

This proposed project will modify the plant protective system (PPS) in Advanced Test Reactor (ATR) to allow operation of lobe powers from 60 MW up to 70 MW. Modifications are a result of analysis performed in ECAR-5549, "ATR Loss of Commercial Power Accidents at 70 MW Lobe Powers," and ECAR-5600, "ATR Small Break Loss of Coolant Accidents at 70 MW Lobe Powers."

Required PPS modifications consist of:

- Addition of new instruments to monitor for a loss of commercial power.
- Configuration of PPS subsystem to actuate the reactor shutdown system (RSS) when a loss of commercial power is sensed.
- Increase of loss of coolant accident (LOCA) primary coolant pump (PCP) shutoff subsystem delay time.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

N/A

Discharging to Surface-, Storm-, or Ground Water

N/A

Disturbing Cultural or Biological Resources

Activities addressed by this ECP have the potential to disturb cultural or biological resources through constructing or modifying facilities, structures, equipment, or processes. Please refer to completed cultural resource report BEA-22-H103 and contact Jon Grams (719)725-1530 with any questions.

Generating and Managing Waste

Maintenance activities may generate a variety of waste. It is anticipated that the following types of waste could be generated:

- Industrial (non-hazardous, non-radioactive) waste includes typical maintenance wastes such as boxes, wood, wiring, insulation, and some metals.
- Hazardous and/or low level wastes have the potential to be generated during maintenance operations on systems or equipment containing hazardous chemicals, or by using hazardous chemicals to clean or decontaminate equipment and systems. Hazardous metal waste (e.g., lead, electronics, brass, metal containing paints, etc.) may also be generated during maintenance work or by replacement of outdated equipment.
- Polychlorinated Biphenyl (PCB) waste could be generated when performing maintenance associated with pre-1982 equipment/materials such as capacitors, lubricants/dielectric fluids, transformers/bushings, painted surfaces and other electrical equipment/components.

Releasing Contaminants

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

- 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

Project description indicates materials will need to be purchased or used that require sourcing materials from the environment. Being conscientious about the types of materials used could reduce the impact to our natural resources.

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

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“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:

B1.15 Support Buildings, B1.31 Installation or Relocation of Machinery and Equipment, and B2.5 Facility Safety and Environmental Improvements

Justification:

B1.15 Support buildings. Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities, such as activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.4, B6.5, B6.6, and B6.10 of this appendix.

B1.31 Installation or relocation of machinery and equipment. 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.

B2.5 Facility safety and environmental improvements. Safety and environmental improvements of a facility (including, but not limited to, replacement and upgrade of facility components) that do not result in a significant change in the expected useful life, design capacity, or function of the facility and during which operations may be suspended and then resumed. Improvements include, but are not limited to, replacement/upgrade of control valves, in-core monitoring devices, facility air filtration systems, or substation transformers or capacitors; addition of structural bracing to meet earthquake standards and/or sustain high wind loading; and replacement of aboveground or belowground tanks and related piping, provided that there is no evidence of leakage, based on testing in accordance with applicable requirements (such as 40 CFR part 265, “Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities” and 40 CFR part 280, “Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks”). These actions do not include rebuilding or modifying substantial portions of a facility (such as replacing a reactor vessel).

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

Approved by Jason L. Anderson, DOE-ID NEPA Compliance Officer on: 06/2/2022