

**U.S. Department of Energy
Naval Reactors Representative Office**

Kesselring Site

National Environmental Policy Act (NEPA) Categorical Exclusion (CX)
Determination Summary Form

S8G Prototype Refueling Overhaul

REFERENCE

10 CFR Part 1021, Department of Energy National Environmental Policy Act
Implementing Procedures, Subpart D, Typical Classes of Actions

PROJECT SCOPE DISCUSSION

The scope of the S8G-P-ROH to be executed on the Kesselring Site in West Milton, New York from September 2018 to May 2021 includes S8G prototype refueling work and overhaul work as outlined below.

S8G Prototype Refueling Work: The refueling of the S8G Prototype includes removing the naval spent nuclear fuel assemblies and other supporting equipment from inside and outside the reactor vessel. Once the existing core is removed, it will be replaced with a new core and supporting equipment. The core to be installed in the S8G Prototype has been designated as the Technology Demonstration Core (TDC). The TDC will be designed and built using established Naval Nuclear Propulsion Program (NNPP) processes. The spent nuclear fuel removed from the S8G Prototype will be placed into an M-140 shipping container and shipped off site; therefore, there will be no spent nuclear fuel stored at the Kesselring Site. The refueling work will be conducted in accordance with stringent NNPP requirements for controlling refueling work, handling radioactive materials and ensuring compliance with applicable environmental, safety and health standards.

This refueling work fits within the class of actions for Categorical Exclusion B1.14, and no extraordinary circumstances are expected to affect the significance of the environmental effects.

S8G Prototype Overhaul Work: The S8G Prototype plant will receive an overhaul to replace, repair, and upgrade many pieces of equipment and systems within the plant. The work will be typical of NNPP plant overhaul work and does not include the replacement of the reactor vessel. The overhaul directly meets the class of actions in DOE Categorical Exclusions B1.3, B1.5, B1.7, B1.30, B1.31, B2.1, B2.4, B2.5, and B6.3. The overhaul is a routine action to be performed during the extended period of time required to refuel the nuclear reactor.

The S8G Prototype Refueling Overhaul is not expected to have significant impacts or cumulatively significant impacts. The work:

- does not threaten a violation of requirements as any necessary permits would be obtained and requirements followed;
- would not be expected to disturb hazardous substances, pollutants, or contaminants which preexist in the environment such there would be an uncontrolled or unpermitted release because NNPP standards for radiological and refueling work would be followed; and
- would not be expected to adversely affect environmentally sensitive resources since all work would be within or adjacent to already disturbed and developed areas at the Kesselring Site.

The project does not violate applicable regulatory requirements, require construction or major expansion of waste handling facilities, result in unpermitted releases of hazardous substances, or adversely affect environmentally sensitive resources, including wetlands. The project does not involve genetically engineered organisms or species. There are no extraordinary circumstances related to the proposed action. The project has not been segmented to meet the definition of a categorical exclusion and is not connected to other actions with potentially significant and/or cumulative impacts.

CONCLUSION

The S8G-P-ROH meets the requirements to be categorically excluded from additional NEPA documentation under 10 CFR 1021 Subpart D, Appendix B, CX B1.3, B1.5, B1.7, B1.14, B1.30, B1.31, B2.1, B2.4, B2.5, and B6.3. Specifically, the categorical exclusions which apply are:

B1.3 Routine maintenance

Routine maintenance activities and custodial services for buildings, structures, rights-of-way, infrastructures (including, but not limited to, pathways, roads, and railroads), vehicles and equipment, and localized vegetation and pest control, during which operations may be suspended and resumed, provided the activities would be conducted in a manner in accordance with applicable requirements. Custodial services are activities to preserve facility appearance, working conditions, and sanitation (such as cleaning, window washing, lawn mowing, trash collection, painting, and snow removal). Routine maintenance activities, corrective (repaired), preventive, and predictive, are required to maintain and preserve buildings, structures, infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. Such maintenance may occur as a result of severe weather (such as hurricanes, floods, and tornados), wildfires, and other such events. Routine maintenance may result in replacement to the extent which replacement is in-kind and is not a substantial upgrade or improvement. In-kind replacement includes installation of new components to replace outmoded components, provided the replacement does not result in a significant change in the expected useful life, design capacity, or function of the facility. Routine maintenance does not include replacement of a major component which significantly extends the originally intended useful life of a facility (for example, it does not include the replacement of a reactor vessel near the end of its useful life). Routine maintenance activities include, but are not limited to:

- (a) Repair or replacement of facility equipment, such as lathes, mills, pumps, and presses;
- (b) Door and window repair or replacement;
- (c) Wall, ceiling, or floor repair or replacement;
- (d) Reroofing;
- (e) Plumbing, electrical utility, lighting, and telephone service repair or replacement;
- (f) Routine replacement of high-efficiency particulate air filters;
- (g) Inspection and/or treatment of currently installed utility poles;
- (h) Repair of road embankments;
- (i) Repair or replacement of fire protection sprinkler systems;
- (j) Road and parking area resurfacing, including construction of temporary access to facilitate resurfacing, and scraping and grading of unpaved surfaces;
- (k) Erosion control and soil stabilization measures (such as reseeding, gabions, grading, and revegetation);
- (l) Surveillance and maintenance of surplus facilities in accordance with DOE Order 435.1, "Radioactive Waste Management," or its successor;
- (m) Repair and maintenance of transmission facilities, such as replacement of conductors of the same nominal voltage, poles, circuit breakers, transformers, capacitors, crossarms, insulators, and downed powerlines, in accordance, where appropriate, with 40 CFR part 761 (Polychlorinated

- Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions) or its successor;
- (n) Routine testing and calibration of facility components, subsystems, or portable equipment (such as control valves, in-core monitoring devices, transformers, capacitors, monitoring wells, lysimeters, weather stations, and flumes);
 - (o) Routine decontamination of the surfaces of equipment, rooms, hot cells, or other interior surfaces of buildings (by such activities as wiping with rags, using strippable latex, and minor vacuuming), and removal of contaminated intact equipment and other material (not including spent nuclear fuel or special nuclear material in nuclear reactors); and
 - (p) Removal of debris.

B1.5 Existing steam plants and cooling water systems

Minor improvements to existing steam plants and cooling water systems (including, but not limited to, modifications of existing cooling towers and ponds), provided the improvements would not: (1) Create new sources of water or involve new receiving waters; (2) have the potential to significantly alter water withdrawal rates; (3) exceed the permitted temperature of discharged water; or (4) increase introductions of, or involve new introductions of, hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products.

B1.7 Electronic equipment

Acquisition, installation, operation, modification, and removal of electricity transmission control and monitoring devices for grid demand and response, communication systems, data processing equipment, and similar electronic equipment.

B1.14 Refueling of nuclear reactors

Refueling of operating nuclear reactors, during which operations may be suspended and then resumed.

B1.30 Transfer actions

Transfer actions, in which the predominant activity is transportation, provide (1) the receipt and storage capacity and management capability for the amount and type of materials, equipment, or waste to be moved already exists at the receiving site and (2) all necessary facilities and operations at the receiving site are already permitted, licensed, or approved, as appropriate. Such transfers are not regularly scheduled as part of ongoing routine operations.

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 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, which 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.

B2.1 Workplace enhancements

Modifications within or contiguous to an existing structure, in a previously disturbed or developed area, to enhance workplace habitability (including, but not limited to, installation or improvements to lighting, radiation shielding, or heating/ventilating/air conditioning and its instrumentation, and noise reduction).

B2.4 Equipment qualification

Activities undertaken to (1) qualify equipment for use or improve systems reliability or (2) augment information on safety-related system components. These activities include, but are not limited to, transportation container qualification testing, crane and lift-gear

certification or recertification testing, high efficiency particulate air filter testing and certification, stress tests (such as "burn-in" testing of electrical components and leak testing), and calibration of sensors or diagnostic equipment.

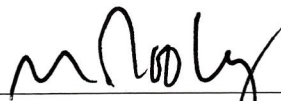
B2.5 Facility safety and environmental improvements

Safety and environmental improvements of a facility (including, but not limited to, replacement and upgrade of facility components) which 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 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).

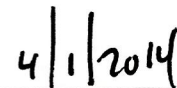
B6.3 Improvements to environmental control systems

Improvements to environmental monitoring and control systems of an existing building or structure (such as changes to scrubbers in air quality control systems or ion-exchange devices and other filtration processes in water treatment systems), provided during subsequent operations, (1) Any substance collected by the environmental control systems would be recycled, released, or disposed of within existing permitted facilities and (2) there are applicable statutory or regulatory requirements or permit conditions for disposal, release, or recycling of any hazardous substance or CERCLA-excluded petroleum or natural gas products are collected or released in increased quantity or were not previously collected or released.

NRRO Approval: _____


M. J. Dooley

Date: _____



CX Determination Date