

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: Irradiated Materials Harvesting and Testing Cooperation

SECTION B. Project Description and Purpose:

Nuclear Regulatory Commission (NRC) and Nuclear Science User Facilities (NSUF) are collaborating and have initiated planning activities for harvesting irradiated SS weld materials from the internals of the decommissioning San Onofre Nuclear Generating Station (SONGS). In addition, there is interest to harvest concrete from the primary reactor biological shield and structural steel from the reactor pressure vessel support columns, and these harvesting activities are included in this Scope of Work (SOW) as optional scopes. These scopes and budget will be finalized at a later date as a revision to the existing NRC task order.

The objective of this work is to harvest irradiated reactor internals (core shroud and base plate) from SONGS nuclear power plant for future testing and research. Additional scope includes harvesting planning for reactor pressure vessel (RPV) supports and primary shield wall (PSW) concrete from SONGS nuclear power plant. Optional scopes include harvesting RPV supports and PSW concrete from SONGS nuclear power plant, and subsequent testing and evaluation. These optional scopes will be finalized at a later time with new revision for this SOW.

The NRC funded scope under this task would include all materials and labor needed to transport the BRR cask from the SONGS site (including DOT route plan, truck rental, driver(s) labor, lodging, meals and incidentals, leak tester travel, labor and meals and incidentals, and law enforcement support (as needed), etc.) to the INL Materials and Fuels (MFC). NRC funded scope will also include off-loading the activated metal canister from the BRR transport trailer to the identified Radioactive Scrap and Waste Facility (RSWF) storage silo.

It is not anticipated any waste will be generated during the unloading/loading and storage activities at RSWF. A limited amount of low-level radioactive waste will be generated once the harvested material is transferred into SPL and sample sizing and machining is performed. Waste will consist of small pieces/scrap of activated stainless steel, cutting tools, paper products for cleaning, etc. Tested samples will also be disposed of through the standard SPL (or other INL facility) waste stream (metal waste). It is anticipated the waste stream would consist of remote handled as well as contact handled low-level-waste. The total amount of waste is not expected to exceed 1/2 cubic foot of metal waste (both contact and remote handled waste) and no more than 1 cubic foot of paper-product waste (contact handled waste). No high level, mixed hazardous, or TRU waste is anticipated. In the event the NRC is not interested in exercising their right to reserve the material for NRC identified research, the material custodianship will transfer to the Nuclear Science User Facilities (NSUF) and will be placed in the NSUF curated Nuclear Fuels and Materials Library which is funded by DOE-NE.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Cutting and removing the necessary pieces from the PSW concrete and structural steel during the decommissioning process may generate fugitive emissions. Air emissions will be covered under existing APAD for SPL.

Discharging to Surface-, Storm-, or Ground Water

N/A

Disturbing Cultural or Biological Resources

N/A

Generating and Managing Waste

It is not anticipated any waste will be generated during the unloading/loading and storage activities at RSWF. A limited amount of low-level radioactive waste will be generated once the harvested material is transferred into SPL and sample sizing and machining is performed. Waste will consist of small pieces/scrap of activated stainless steel, cutting tools, paper products for cleaning, etc. Tested samples will also be disposed of through the standard SPL (or other INL facility) waste stream (metal waste). It is anticipated the waste stream would consist of remote handled as well as contact handled low-level-waste. The total amount of waste is not expected to exceed 1/2 cubic foot of metal waste (both contact and remote handled waste) and no more than 1 cubic foot of paper-product waste (contact handled waste). No high level, mixed hazardous, or TRU waste is anticipated. In the event the NRC is not interested in exercising their right to reserve the material for NRC identified research, the material custodianship will transfer to the Nuclear Science User Facilities (NSUF) and will be placed in the NSUF curated Nuclear Fuels and Materials Library which is funded by DOE-NE.

Releasing Contaminants

When chemicals are used during the project there is the potential for spills that could impact the environment (air, water, soil).

Using, Reusing, and Conserving Natural Resources

All materials will be reused and recycled where economically practicable. All applicable material will be diverted from disposal in the landfill where conditions allow.

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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 B3.6, "Small-scale research and development, laboratory operations, and pilot projects"

Justification:

B3.6 Small-scale research and development, laboratory operations, and pilot projects. Siting, construction, modification, operation, and decommissioning of facilities for small-scale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

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: 10/12/2022