

# DOE-ID NEPA CX DETERMINATION

## Idaho National Laboratory

### **SECTION A. Project Title: Test Reactor Area (TRA)-715 Evaporation Pond Liner Replacement**

### **SECTION B. Project Description:**

The hypalon liner for the TRA-715 Evaporation Pond has reached the end of its service life and a new liner is needed. The installation would be started in calendar year 2015 and completed in 2016.

In order to install the new liner, the west side of the pond would be drained first. To drain the pond, a temporary system would be used to pump water through perforated pipe along the upper slope of the pond so it flows down the liner into the pond, increasing the evaporation rate. Low-level wastewater from the evaporation pond would be shipped to the Idaho Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Disposal Facility pond. Residual sludge and debris would be removed from the pond, boxed in waste containers, and shipped for disposal. The new liner would be installed over the old liner to reduce the spread of contamination that could occur from removal of the old liner. A layer of geotextile would be installed over the old liner to reduce the spread of radioactive contamination and to prevent damage to the old liner during installation of new layers. The new liner would be placed over the geotextile and anchored with fill along the edges after it is stretched over a new berm of sandbags.

A system to collect and remove any water passing through the upper liner and to return the water to the pond would also be installed to prevent leakage of radioactively contaminated materials through the bottom liner. The new system would include the following:

- a. A geocomposite layer to allow water to flow to the low ends of the pond under the top liner layer for collection and removal
- b. Drain rock to provide an area for any leakage to collect
- c. Pipe to reach the bottom of the deep end of the leak collection area
- d. Pumps to return any collected water to the pond
- e. Level detection instrumentation to inform the operators of collected water/pump operation

A top layer of liner material would be anchored outside of the new berm, and a level indication system installed on the side of the pond.

In order to operate leak collection pumps, a power line would be installed via trench from TRA-710. Transformers would reduce the voltage of power at each end of the pond, and breaker panels would be installed at each end of the pond to power individual electrical loads. New fiberglass enclosures would be installed to house the transformers and breaker panels and to provide storage for additional pond-related equipment. The fiberglass enclosures would be installed on concrete pads and sited on an expanded berm area where additional fill would be brought in to provide space for installation.

In addition, a staging and working area for heavy equipment would be developed by removing sagebrush between the evaporation pond fence and the evaporation pond perimeter road (approximately 20 yards from the fence to the perimeter road).

This process would then be repeated for the east side of the pond with water being transferred from the east to the finished west side.

### **SECTION C. Environmental Aspects or Potential Sources of Impact:**

**Air Emissions** – Fugitive dust may be generated. All reasonable precautions would be taken to prevent particulate matter from becoming airborne. If dust control methods are required, the method used and frequency applied must be recorded in the project records and would be used to demonstrate compliance with the Idaho National Laboratory (INL) Title V Air Permit.

Hazardous and radiological emissions may also be generated during maintenance activities such as operation of fuel burning equipment, decontamination work, use of maintenance products that contain hazardous constituents, and disturbance of contaminated soils. An APAD would be developed to evaluate air emissions.

Mobile sources such as generators, welders, and compressors may be used temporarily (less than a year) by subcontractors at the construction site. These sources would be required to meet Idaho Administrative Procedures Act (IDAPA) 58.01.01.625 visible emissions opacity requirements.

**Disturbing Cultural or Biological Resources** - Maintenance activities would be conducted both inside and outside of facility fence lines and may involve off-road travel, construction or demolition work, some of which may involve historic structures, equipment staging and storage, other soil disturbance activities, and off-road vehicle travel that could impact cultural and biological resources.

Project activities that have the potential to impact historic properties must receive approval in writing from the Cultural Resource Management Office (CRMO) prior to beginning work. Contact Brenda Pace at 526-0916. Project personnel must obtain a cultural resource review before beginning project activities that disturb soil or involve offroad vehicle travel outside established site area boundaries. This includes activities in generally observed or specifically defined rights-of-way (e.g., power lines, railroad, paved road) and in areas that appear to be previously disturbed.

Ground disturbing activities must receive a biological resource review and comply with the best management practices for the "Candidate Conservation Agreement for Greater Sage-Grouse (*Centrocercus urophasianus*) on the Idaho National Laboratory Site" (DOE/ID-11514). Revegetation with native seed and supplemental water may be required in areas showing extensive disturbance. Sagebrush removal may require funding for mitigation. Contact Jackie Hafra (227-3031) at least one week prior to beginning work.

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**Generating and Managing Waste** - Maintenance activities would generate a variety of waste including industrial, hazardous, radioactive, and mixed waste. It is anticipated that the following types of waste would be generated:

- Industrial waste includes typical maintenance wastes such as boxes, wood, wiring, paper, insulation, and non-Resource Conservation and Recovery Act (RCRA) metals. Potential waste materials would be evaluated for waste minimization prior to generation, and industrial waste generated during project activities would be evaluated for recycling opportunities prior to disposal at the INL Landfill Complex.
- Hazardous wastes have the potential to be generated during project activities on systems or equipment containing hazardous chemicals or by using hazardous chemicals to clean or decontaminate equipment and systems. All waste material generated or removed would be characterized according to applicable RCRA regulations. In all cases, potential and existing hazardous waste streams would be evaluated for minimization potential and recycling opportunities prior to disposal.
- Radioactive waste would be generated during the proposed activities inside radiologically contaminated areas. Typical types of radioactive waste would include anti-contamination clothing, radiological enclosures and barriers, contaminated materials and components, contaminated high efficiency particulate air (HEPA) filters, and contaminated absorbent used to clean up pond sludge and small spills. These wastes would be packaged and disposed through Waste Generator Services (WGS).
- Mixed waste could be generated during maintenance on equipment or structures containing both hazardous and radioactive materials. Waste minimization techniques would be practiced, and mixed waste would be stored, treated, and disposed in accordance with applicable regulations.

All waste generated needs to be managed according to laboratory procedures. Liquid low-level waste would be disposed at ICDF. Pollution prevention/waste minimization would be implemented where economically practicable to reduce the volume and/or toxicity of waste generated. All waste generated would be transferred to WGS for appropriate disposition. All waste generated from these activities would have an identified disposition path prior to it being generated.

**Releasing Contaminants** – There is the potential to release small amounts of contaminants to the environment during routine maintenance activities. These include air emissions from the use of fuel burning equipment, decontamination operations, and maintenance activities involving soil disturbance. Contaminant release to soil could occur from inadvertent leaks or spills. All chemicals typically used in construction/maintenance would be managed in accordance with laboratory procedures.

**Using, Reusing, and Conserving Natural Resources** - All material would be reused and/or recycled where economically practicable. All applicable waste would be diverted from disposal in the landfill when possible. Project personnel would use every opportunity to recycle, reuse, and recover materials and divert waste from the landfill when possible. The project would practice sustainable acquisition, as appropriate and practicable, by procuring construction materials that are energy efficient, water efficient, are bio-based in content, environmentally preferable, non-ozone depleting, have recycled content, and are non-toxic or less-toxic alternatives (see <http://www.sftool.gov/GreenProcurement>).

<p><b>SECTION D. Determine the Recommended Level of Environmental Review (or Documentation) and Reference(s):</b> Identify the applicable categorical exclusion from 10 Code of Federal Regulation (CFR) 1021, Appendix B, give the appropriate justification, and the approval date.</p>
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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 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 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, B6.3 "Improvements to environmental control systems"

**Justification:** Project activities are consistent with 10 CFR 1021, Appendix B, B6.3 "Improvements to environmental 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 that during subsequent operations (1) Any substance collected by the environmental control system 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 of CERCLA excluded petroleum or natural gas products that are collected or released in increased quantity or that were not previously collected or released.

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: 6/30/2015