

# DOE-ID NEPA CX DETERMINATION

## Idaho National Laboratory

**SECTION A. Project Title:** Warm Waste Effluent Radiation Monitor and Transfer Pump M-54 Recirculation Evaluation and Modification

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

The Effluent Radiation Monitor (ERM) in building Test Reactor Area (TRA)-605 at the Advanced Test Reactor (ATR) Complex experiences filter plugging after a short operating period. This restricts flow to the detector chamber and causes the pumps to shut off. Therefore, the ERM unit needs to be replaced. The unit currently pulls a side stream of representative liquid from the main flow and directs it through filters and then to a chamber where it is analyzed for radiation. New detectors would be installed so the process piping would route directly through the detector housing and monitor radiation levels without requiring any fluid being drawn from the waste stream. The proposed action would replace the ERM and associated pumps, filters, valves and detectors with new detectors and install a new discharge flow line from the M-54 Transfer pump to the warm waste tank.

The purpose of the addition of a smaller discharge line from Transfer pump M-54 is to permit a minimum flow from the pump when radiation levels DO NOT warrant discharge to the Hot Waste Tank so that the pump can be periodically exercised. This would ensure operation of the pump if the effluent radiation levels call for pumping to the Hot Waste Tank.

All work would occur at the basement level in building TRA-605. This area is currently a Radiological Control Area for both radiation and contamination.

The proposed action would perform the following activities:

- Remove Lexan barrier around ERM
- Remove ERM Assembly and interconnections to process and controls
- Fabricate and install structural support for new ERM instruments
- Install and test new process piping loop for new ERM instruments
- Install and test new demineralized water flush lines
- Connect new ERM instruments to Warm Waste System Process Controller
- Install new Lexan barrier around new ERM instruments
- Test new ERM instruments for functionality.

The Transfer Pump M-54 discharge line would include the following actions:

- Field fit and install new discharge line for the M-54 Transfer pump to the warm waste tank
- Perform a test of the new pump discharge path to verify operation.

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

#### **Air Emissions**

Maintenance activities are expected to generate fugitive dust emissions from cutting/grinding/welding. .

#### **Disturbing Cultural or Biological Resources**

TRA-670 is eligible for nomination to the National Register of Historic Places and removal and/or changes of original features may adversely impact this historical property.

#### **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, paper, insulation, and some metals.

Hazardous 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. Note: Lead has been encountered very infrequently (e.g., shielded cables)

#### **Releasing Contaminants**

There is the potential to release small amounts of contaminants to the environment during maintenance activities. These may include air emissions from the use of fuel burning equipment, decontamination operations, asbestos remediation, and maintenance activities involving soil disturbance. Contaminant release to water and/or soil may also occur from inadvertent leaks or spills.

Although not anticipated, chemical use has a potential for small air emissions and spills.

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**Using, Reusing, and Conserving Natural Resources**

All material will be reused and/or recycled where economically practicable. All applicable waste would be diverted from disposal in the landfill when possible.

**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:** National Environmental Policy Act (NEPA) Implementing Procedures, Final Rule, 10 CFR 1021, Appendix B, B2.2 "Building and equipment instrumentation"

**Justification:** Project activities are consistent with 10 CFR 1021, Appendix B, B2.2 "Installation of, or improvements to, building and equipment instrumentation (including, but not limited to, remote control panels, remote monitoring capability, alarm and surveillance systems, control systems to provide automatic shutdown, fire detection and protection systems, water consumption monitors and flow control systems, announcement and emergency warning systems, criticality and radiation monitors and alarms, and safeguards and security equipment)."

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: 12/9/2015