

# DOE-ID NEPA CX DETERMINATION

## Idaho National Laboratory

**SECTION A. Project Title:** Replacement of Test Reactor Area (TRA)-671 Chemistry Monitoring Unit and Modification of Piping and Components

**SECTION B. Project Description:**

Nalco has been awarded the secondary chemistry support contract for the Advanced Test Reactor (ATR). To implement the Nalco chemistry program, the following replacements and modifications must be made to the ATR Cooling Tower Pumphouse (TRA-671):

1. The chemistry monitoring unit in TRA-671 pump room would be replaced with a new secondary chemistry monitoring and control unit; adding the ability to not only monitor secondary coolant chemistry, but also control chemical additions.
2. An automated bleach addition system would be installed to improve the process of adding bleach manually into the system. A new storage tank would be installed in the southeast corner of the pump room with a secondary containment underneath to contain any spills. A new pump and associated piping would be installed on the wall to pump directly into the cold well. A hole would be drilled through the unpainted concrete wall, directly behind the storage tank, to install a pipeline for refilling the tank. A second line would be run through the wall to serve as a vent.
3. The corrosion and scale control piping and components in TRA-671 would be modified and/or replaced. Scope of work includes installing new pumps and replacing all the stainless steel and chlorinated polyvinyl chloride (CPVC) piping currently downstream of the corrosion and scale control chemical storage tanks. Stainless steel piping would be replaced with CPVC piping; therefore, no welding would be involved.
4. A different algacide would be added via new automated equipment. The barrel pump would be replaced with a smaller, easier to use electric pump to add chemicals from the drums to the secondary coolant.
5. A chemical bio-reporter would be added to track biological activity in the system.

Chemicals added to the secondary coolant for corrosion control would be replaced with a single chemical. As part of the process, chemicals would be removed from the corrosion inhibitor tanks and stored in drums for use while the tanks are cleaned and piping modifications are completed. A temporary system would be used to add the new corrosion control chemical to facilitate the changeover to the new chemical.

Project Start Date: April 2015  
Project End Date: October 2015  
Project Cost: Approximately \$20,000.00

**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.

**Disturbing Cultural or Biological Resources** - TRA-671 is eligible for nomination to the National Register of Historic Places; however, the activities as identified in the project description are exempted from cultural resource review ("Idaho National Laboratory [INL] Cultural Resource Management Plan" Table 2, exemptions 2 and 5 [Department of Energy Idaho Operations (DOE/ID)-10997 rev. 5]). Therefore, the project may proceed as described without further cultural resource review.

**Generating and Managing Waste** - This activity has the potential to generate Resource Conservation and Recovery Act (RCRA) hazardous waste that needs to be managed according to laboratory procedures. Pollution prevention/waste minimization will be implemented where economically practicable to reduce the volume and/or toxicity of waste generated. All waste generated will be transferred to Waste Generator Services (WGS) for appropriate disposition. All waste generated from these activities will have an identified disposition path prior to it being generated.

**Releasing Contaminants** – All chemicals typically used in construction/maintenance, if used, will be managed in accordance with laboratory procedures.

**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. 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. New equipment will meet either the Energy Star or Significant New Alternatives Policy (SNAP) requirements as appropriate (see <https://sftool.gov/green-products/0?agency=7>).

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**SECTION D. Determine the Recommended Level of Environmental Review (or Documentation) and Reference(s):** 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 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 item B2.5 "Facility safety and environmental improvements"

**Justification:** Project activities are consistent with 10 CFR 1021, Appendix B, B2.5 "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 and 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 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 Jack Depperschmidt, DOE-ID NEPA Compliance Officer on: 4/16/2015