

# DOE-ID NEPA CX DETERMINATION

## Idaho National Laboratory

### SECTION A. Project Title: Photo Lab Silver Recovery System Replacement

### SECTION B. Project Description and Purpose:

The proposed action procures and installs a new silver recovery system to replace the system at HFEF. The project also removes one of the two small tanks associated with the photo processing system located on the main floor of the Hot Fuels Examination Facility (HFEF) in room 124. The old silver recovery system processed the silver in batches and was collected in a holding tank in the basement. Idaho National Laboratory (INL) sampled and analyzed the wastewater prior to discharging it to the industrial wastewater system. The new silver recovery system processes the silver, and then INL samples and analyzes the wastewater and receives approval from Environmental support and Services prior to discharging wastewater to the industrial wastewater system. If needed a 75-gallon holding tank is available based on film developing usage. The old system discharged an average of about 62 gallons per year, and the new system discharges up to 92 gallons per year. Eventually, INL will move the system in room 124 to room 126, along with the developer.

The following information further describes the proposed action:

1. The new silver recovery system measures roughly 2.5' × 2.5' × 3' high. The project positions the system where the current tanks are in room 124.
2. The system has the capability to process at least 100 gallons of solution per year, but anticipated use is about 92 gallons per year.
3. The system discharges less than two parts per million (ppm) of silver in the discharge waste stream. Current regulatory levels for silver discharge is five-ppm.
4. The system interfaces with a typical 120-volt outlet.
5. The system samples the processed solution prior to discharge. INL will analyze samples to verify system performance.

The old silver recovery system included two additional 150-gallon tanks located in the basement of HFEF in room 020. These two tanks supported the HFEF photo lab, and INL will remove the tanks along with the old silver recovery columns.

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

#### Air Emissions

N/A

#### Discharging to Surface-, Storm-, or Ground Water

The new silver recovery system discharges about 92 gallons of wastewater per year to the industrial wastewater system. The effluent is sampled and analyzed prior to discharge.

#### Disturbing Cultural or Biological Resources

HFEF is eligible for listing on the National Register of Historic Places (NRHP), and all project activities associated with the building must undergo cultural resource review (CRR).

#### Generating and Managing Waste

Silver recovery columns would be hazardous waste and transferred to Waste Generator Services (WGS) for recycling at an approved facility. INL transfers waste generated to WGS for appropriate disposition, including the two 150-gallon tanks and piping associated with the photo processing system. The project will generate about 96 ft<sup>3</sup> of waste.

#### Releasing Contaminants

INL manages chemicals in accordance with laboratory procedure. All chemicals and associated Safety Data Sheets (SDS's) must be submitted in the vendor data system for approval. The Chemical Coordinator tracks these chemicals in the INL Comply Plus Chemical Management System. Chemical use has a potential for small air emissions and spills. In the event of a spill, notify MFC Environmental staff. If the MFC Environmental Manager cannot be contacted, report the release to the Spill Notification Team (208-241-6400). Clean up the spill and turn over spill cleanup materials to Waste Generator Services.

#### Using, Reusing, and Conserving Natural Resources

All materials would be reused and recycled where economically practicable. All applicable waste would be diverted from disposal in the landfill where conditions allow. 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 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. Silver recovery columns would be hazardous waste and transferred to WGS for recycling at an approved facility.

**DOE-ID NEPA CX DETERMINATION**  
**Idaho National Laboratory**

**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:**

The photo lab silver recovery system replacement identified in this ECP is covered by the Categorical Exclusion B6.8 "Modifications for waste minimization and reuse of materials".

**Justification:**

The photo lab silver recovery system replacement is consistent with CX B6.8 " minor operational changes at an existing facility to minimize waste generation and for reuse of materials. These changes include, but are not limited to, adding filtration and recycle piping to allow reuse of machining oil, setting up a sorting area to improve process efficiency, and segregating two waste streams previously mingled and assigning new identification codes to the two resulting wastes."

Is the project funded by the American Recovery and Reinvestment Act of 2009 (Recovery Act)       Yes     No

Approved by Jason Anderson, DOE-ID NEPA Compliance Officer on: 04/06/2021