

DOE-ID NEPA CX DETERMINATION  
IDAHO NATIONAL LABORATORY

**SECTION A. Project Title:** Film Processing Project at Test Reactor Area (TRA)-678

**SECTION B. Project Description**

The proposed action is to install a silver recovery unit to the film processor in the film processing area at TRA-678 for the purpose of minimizing waste generation and implementing pollution prevention. The proposed film processor (Kodak M-35A) generates approximately 90 ml of developer and 140 ml of fixer effluents per 17 inch film and approximately 40 gallons per hour of rinse water effluent. Developer and fixer effluents from the current film processing equipment are being collected in a Satellite Accumulation Area (SAA). The new equipment would eliminate the need for storing the effluent in the SAA by filtering silver from the effluent for recycling. The remaining processor effluent would then meet the acceptable discharge limits for the Advanced Test Reactor (ATR) sewage lagoon. The equipment to be purchased and utilized for silver recovery from the film processing project at ATR is equivalent in make and model to the equipment used at the film processing area at the Materials and Fuels Complex (MFC).

Guidance from SP-10.6.5.10 "Reactor Test Complex (RTC) Ponds Wastewater Acceptance Criteria" would be utilized to establish the allowable effluent quantities for discharge. The threshold set for silver under 40 Code of Federal Regulatory (CFR) 143 "National Secondary Drinking Water Regulations" is set at 0.1 mg/l. The threshold set for silver under 40 CFR 261 "Identification and Listing of Hazardous Waste" is at 5.0 mg/l. The fixer effluent would be sampled after initial set-up of the silver recovery unit and on a regular basis prior to ion column change out. Results below 0.1 mg/l would serve as justification to discharge the fixer effluent directly to the sanitary sewer drain. Sample results above 0.1 mg/l would require capture of fixer effluent after treatment through the silver recovery columns and continued use of the SAA.

A Waste Management Authority (WMA) would be reviewed and approved through the SP-10.6.5.8/SP-10.6.5.10 process to address sampling of the fixer and to serve as the basis for discharging the effluent from the ATR film processing equipment to the ATR sewage lagoon.

The used columns would be triple rinsed prior to being returned to the vendor for processing. The recovered silver would be recycled by the vendor.

Projected start date: 04/01/2012  
Projected end date: 11/30/2012  
Estimated cost: Approximately \$2,000

**SECTION C. Environmental Aspects / Potential Sources of Impact:**

**Discharging to Surface-, Storm-, or Ground Water:** Effluent would go directly to the sanitary sewer system rather than being collected in an SAA. As described in the project scope, the effluent must meet the limits set by 40 CFR 261 and 40 CFR 143. This process would be equivalent to the film processing set up at MFC.

**Generating and Managing Waste:** Pollution prevention/waste minimization would be implemented where economically practicable to reduce the volume and/or toxicity of waste generated. Silver recovery columns would be hazardous waste and transferred to Waste Generator Services (WGS) for recycling at an approved facility. All waste generated would be transferred to WGS for appropriate disposition.

**Releasing Contaminants:** All chemicals utilized by this evolution would be managed in accordance with laboratory procedure.

**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. Silver recovery columns would be hazardous waste and transferred to WGS for recycling at an approved facility.

**SECTION G. Recommended Level of Environmental Review (or Documentation) and Reference(s):** Identify the applicable categorical exclusion from 10 CFR 1021, Appendix B, give the appropriate justification, and the approval date.

Note: For projects checked above as "CX" (Categorical Exclusion) the proposed action must not: 1) threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, including requirements of DOE orders; 2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment 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) adversely affect environmentally sensitive resources. In addition, no extraordinary circumstances related to the proposal exist which would affect the significance of the action, and the action is not "connected" nor "related" (40 CFR 1508.25(a)(1) and (2), respectively) to other actions with potentially or cumulatively significant impacts. Note: The above paragraph does not apply to EA, EIS, or CERCLA related activities.

References: National Environmental Policy Act (NEPA) Implementing Procedures, Final Rule, 10 CFR 1021. Appendix B to Subpart D, Categorical Exclusion B6.8 "Modifications for waste minimization and reuse of materials."

Justification: The proposed action would provide the capability to minimize waste generation by filtering the liquid effluent for silver recovery for recycling and to meet acceptable discharge limits for the remaining effluent to be discharged to the ATR sewage lagoon and is consistent with 10 CFR 1021 Appendix B to Subpart D, item B6.8 categorical exclusion, "Modifications for waste minimization and reuse of materials" which includes "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 Jack Depperschmidt, DOE-ID NEPA Compliance Officer on: 5/21/2012