

SECTION A. Project Title: INTEC - Pre-Heat Steam Coil Removal and Relocation Project

SECTION B. Project Description

The Pre-heat Steam Coil Removal and Relocation Project will modify the steam system in the Fluorinel Dissolution Process and Fuel Storage (FAST) facility (CPP-666). The project will improve diesel fuel consumption from facility boilers and also improve the overall HVAC system efficiency. CPP-666 is located at the Idaho Nuclear Technology and Engineering Center (INTEC).

The project will decrease the possibility of the pre-heat steam coils from freezing during cold weather events. During the past three winters there have been numerous maintenance issues with the pre-heat steam coils (HE-FV-388-01 and HE-FV-388-02) due to the cold temperatures from the outside air intake. The intake of cold outside air has produced frozen steam tubes and frozen condensate piping which has resulted in multiple coil repairs and replacements.

The pre-heat steam coils are currently located in the air plenum of the HVAC System located in room 210 of CPP-666 (a radioactive buffer area). The air plenum is 'upstream' of the glycol heat recovery coils. By relocating the pre-heat steam coils from the air plenum to a location 'downstream' of the glycol heat recovery coils, it is anticipated the pre-heat steam coils will not freeze.

In order to install the pre-heat steam coils 'downstream' of the glycol heat recovery coils the refrigerant heat recovery coils will be removed. The refrigerant heat recovery coils are out of service. Additionally, the removal of the refrigerant heat recovery face dampers will be required in order to provide the space needed to install new pre-heat steam coils.

The proposed project will be a modification to the FAST HVAC system in that the pre-heat stem coils will be relocated from their current location ('upstream' of the glycol heat recovery coils) to a location 'downstream' in the HVAC system where they would be less susceptible to freezing during cold weather events. The proposed project will be implemented in two phases – demolition and installation. First, during the nonstructural demolition phase, the existing the refrigerant heat recovery coils, refrigerant heat recovery face dampers, pre-heat steam coils and other related infrastructure will be removed. Second, installation, the new pre-heat steam coils 'downstream' of the glycol heat recovery coils will be installed and other modifications will be completed. Existing infrastructure like the condensate drain piping, existing inflow/outflow air piping, etc. will be modified and tied into the new system.

SECTION C. Environmental Aspects / Potential Sources of Impact

1. Air Pollution - Project activities that may generate emissions include operations of the diesel fueled construction equipment, mechanical cutting, and potential welding activities. Construction equipment (trucks, forklifts, etc.) are exempted as mobile internal combustion engines per IDAPA 58.01.01.222.02.e. No radiological emissions are anticipated from this project.

2. Asbestos Emissions - Although not anticipated, there may be a potential for disturbing asbestos containing material (ACM). Sampling will occur on any suspect material encountered during demolition and installation. For any material that will be removed or otherwise disturbed and is either presumed, or determined to contain asbestos at concentrations of 1% or more, submit Asbestos Removal Notification Form and obtain approval prior to conducting this work. If the quantity of ACM to be removed exceeds the threshold amounts identified on the form, then contact the asbestos TR for further guidance and to prepare a formal 10-day asbestos NESHAP renovation/demolition notification to DEQ.

4. Chemical Use and Storage - Chemicals include diesel fuels, glycol coolant, residual refrigerant oil, lead paint and chemicals used for welding purposes. When feasible, project personnel will use non-hazardous chemical substitutes in the place of hazardous chemicals as long as the non-hazardous substitutes meet the requirements/specifications of the requester. Spill preventions/minimization measures will be used during storage and use of chemicals.

9. Hazardous/Mixed Waste Generation and Management - Although not anticipated, hazardous and/or universal waste may be generated from project activities. Hazardous and/or universal waste disposal will be conducted at an appropriate licensed disposal facility and in accordance with the disposal facility's waste acceptance criteria (WAC) through Waste Generator Services.

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10. Hazardous/Rad. Material or Waste Handling and Trans. - Hazardous waste determinations will be performed on all generated wastes associated with the proposed project. Based on that determination, some of the materials removed during the demolition portion of the project will be evaluated for recycling (e.g. copper refrigerant piping, copper wiring, etc.). Materials that are not recycled will be managed as industrial waste.

11. Industrial Waste Generation and Management - Wastes generated from these activities will consist primarily of excess materials and wastes, including copper refrigerant piping, fiberglass insulation, refrigerant coils consisting of copper tubing and aluminum fins, control dampers consisting of galvanized metal, galvanized conduit and copper wiring, carbon steel piping, steam coils consisting of galvanized metal, carbon steel, and copper, and stainless steel instrument lines. If possible, copper refrigerant piping, copper tubing, and other materials removed from the demolition portion of the project will be recycled. Materials that are not recycled will be managed as industrial waste and disposed of through Waste Generator Services at the INL Landfill Complex.

Note: Prior to disposal of the refrigerant coils verify that all R22 has been recovered.

12. Interaction with Wildlife - Project personnel will take steps (e.g., installation of bird netting) to mitigate potential bird nesting or bat roosting in areas where nesting/roosting could be disturbed by project activities. Project personnel are not to disturb active bird/owl nesting sites. The roof area of CPP-666 has consistently been the roosting site for a pair of Great Horned Owls. Nesting season of the Great Horned Owl can start as early as January with the owlets hatching within a month. It takes approximately 6-9 weeks for the owlets to leave the nest and become competent fliers at 10 to 12 weeks old. Owlets have been present 4 out of the past 5 nesting seasons as early as late-April and as late as mid-June. Equipment access into the CPP-666 facility will be through the Westside equipment access door. Birds have been known to build nests in door tracks.

13. Managing Property and Material - Equipment and materials will be recycled or reused when practical.

SECTION D. Determine the 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 Categorical Exclusions (CXs) 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.

References: B2.5, Safety and environmental improvements of a facility, replacement/upgrade of facility components

Justification: The FAST Facility steam system modifications and improvements project will not have a significant effect on the human environment.

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

Approved by Jason Sturm, DOE-ID NEPA Compliance Officer on April 24, 2017.