

**DOE-ID NEPA CX DETERMINATION  
IDAHO NATIONAL LABORATORY**

**SECTION A. Project Title:** Materials and Fuel Complex (MFC) Infrastructure Upgrades: Sewage Lagoons Upgrades

**SECTION B. Project Description:**

MFC Infrastructure Upgrades - MFC Sewage Lagoon Upgrades

This EC focuses on upgrades to the existing 2.4 acre evaporative sewage lagoons, located north-east and outside of the MFC fenced area. These existing lagoons are currently at capacity with the approximately 800 personnel based at MFC. The number of researchers and operations personnel at MFC is projected to increase to 1150 personnel by 2020 and to 1500 in later years. This project supports designing new evaporative sewage lagoons to meet the needs of 1500 employees.

This EC evaluates the impacts of activities which include geotechnical evaluations, potential archeological and biological disturbance, Idaho Department of Environmental Quality (DEQ) approval of plans, lagoon construction, and seepage testing. This EC also evaluates impacts for the transfer of wastewater in the current lagoons to the Central Facilities Area (CFA) Sewage Treatment Ponds (STP) to avoid overflow until the new lagoons are installed; and potential impacts from operations of the lagoons following construction. Evaluation of impacts from access and security road extension/construction will also be addressed. The existing security road which currently goes through the proposed location of the new lagoons will be relocated to accommodate the proposed lagoons.

The INL is proposing to continue operating the existing lagoons in conjunction with construction of the new lagoons.

The INL and Department of Energy (DOE) met with the DEQ in March 2010 to discuss tentative plans. Parties agreed to the following:

- design plans would be submitted to the DEQ for approval
- no permit would be required
- no funding information would be required
- leak rate testing would be performed and submitted to the DEQ following construction
- additional groundwater monitoring wells would not be required
- sewage could be trucked from the existing lagoons to the CFA STP if necessary without a modification to the CFA STP permit.

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

**Air Emissions:** Project construction activities may involve the use of portable generators and equipment used by subcontractors. Environmental Support and Services (ES&S) personnel will inspect these portable generators for visible emissions during the quarterly visible emissions inspections. In addition, construction activities will disturb soil and would likely create fugitive dust that may require dust suppression by water or other means. If project activities include dust control measures, project personnel must record the method and frequency of those measures and place that information in the project record (see Section F, Project-specific Instructions)

**Discharging to Surface-, Storm-, or Ground Water:** Based on the location of this project, there is no reasonable potential for discharging into waters of the U.S. Therefore, no National Pollutant Discharge Elimination System (NPDES) permits (e.g., NPDES General Permit for Stormwater Discharges from Construction Activities) will be required. In addition, these lagoons will be lined and will not discharge to surface-, storm-, or ground water.

**Disturbing Cultural / Biological Resources:** The area proposed for the new lagoons is adjacent to the current lagoons in an area with some limited past DOE activities. The area will be evaluated for cultural and archeological resources and for biological impacts prior to geotechnical work and lagoon construction. The lagoons are anticipated to be 14 total acres with an additional estimated 20-30 acres potentially disturbed during the lagoon construction and security road relocation.

Areas with disturbed soil will be revegetated with a native seed mix following completion of the project. Priority will be given to a fall planting schedule to increase the potential for successful revegetation. When preparing the site for construction, removed soil will be stockpiled to be used later for the revegetation effort. Supplemental watering may also be needed and will be part of the revegetation plan. See Section F, Item #7. Non-native weeds may also invade disturbed areas during and following construction activities and should be expected. Weed control measures will be in place to address this potential problem.

**Generating and Managing Waste:** This project is not expected to generate hazardous or radioactive waste. If this waste is generated, however, it will be managed in accordance with INL procedures (Manual 17).

Industrial waste may be generated during the construction phase and would be disposed at the CFA landfill.

<sup>1</sup> DOE's strategic plans included the Nuclear Energy Research and Development Roadmap" (2010 Predecisional draft) and reports such as "Facilities for the Future of Nuclear Energy Research: A Twenty-year Outlook".

# ENVIRONMENTAL CHECKLIST IDAHO NATIONAL LABORATORY

**Releasing Contaminants:** During the construction phase of the project, subcontractors may use chemicals such as lubricants, fuels, adhesives, weld rod, paints, compressed gases, etc. Subcontractors will submit chemical inventory lists with corresponding Material Safety Data Sheets (MSDSs) for approval in the vendor data system before bringing chemicals on site (see Section F, Project specific Instructions). The Construction Chemical Coordinator will track chemicals using the Comply Plus Chemical Tracking System.

Standard wastewater treatment chemicals may be added to the lagoons during operations. The lagoons will be lined and leak tested to prevent migration of septage related contaminants to groundwater. Wastewater and groundwater will be sampled routinely as described in the INL's Environmental Monitoring Plan.

**Using, Reusing, and Conserving Natural Resources:** The proposed size of the lagoons is based upon IDAPA regulations and engineering standards for the population planned for MFC. The design also accounts for the possibility that the existing lagoons fail to meet IDAPA standards in the future and have to be taken out of service. As stated within Executive Order (EO) 13423 and EO 13514, all DOE sites are required to reduce their water consumption 2% annually over an 8 year period for a total reduction of 16%. Water reduction measures are being incorporated into new facility designs, procurements, and upgrades. Eliminating the condensate return lines during the MFC Energy Savings Performance Contract (ESPC) upgrade will result in nearly a 3,500,000 gallon reduction. As new ESPC projects are funded, water reduction is a key requirement. Water reduction will occur on industrial and sanitary processes as plumbing fixtures are replaced, antiquated equipment replaced, and chiller systems redesigned. Future ESPC upgrades may eliminate the future need for the fourth lagoon; however, regulations and engineering standards provide design plans/capacities requirements which must be met to gain DEQ approval.

<b>SECTION D. Determine the Level of Environmental Review (or Documentation) and Reference(s):</b> Identify the applicable categorical exclusion from 10 CFR 1021, Appendix B, give the appropriate justification, and the approval date.
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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: B1.26 Siting, construction (or expansion, modification, or replacement), operation, and decommissioning of small (total capacity less than approximately 250,000 gallons per day) wastewater and surface water treatment facilities whose liquid discharges are externally regulated, and small potable water and sewage treatment facilities.

Justification: The new MFC Sewage Lagoons are needed to support current and future DOE research programs at MFC. The projected capacity of 10,000 gallons/day of wastewater will be regulated under IDAPA and is covered appropriately under CX category B1.26.

This EC will not apply if the work is found to impact critical species or their habitat or archaeological sites. Additional NEPA review may be required depending on the potential for impacts to critical species or archaeological sites.

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 5/24/2010