

SECTION A. Project Title: INTEC – RCRA Closure of Tank System VES-NCR-171 and Bulk Nitric Acid Removal

SECTION B. Project Description

The proposed project will permanently clean-close the VES-NCR-171 tank system. VES-NCR-171 is part of the Liquid Waste Management System permitted under the Hazardous Waste Management Act/Resource Conservation Recovery Act (HWMA/RCRA). The tank system has leaked requiring the need to remove and dispose of the nitric acid waste (approximately 16,420 gallons of 12 molar nitric acid waste). VES-NCR-171 is located at Idaho Nuclear Technology and Engineering Center (INTEC) in CPP-659 at the Idaho National Laboratory.

The tank system will be prepared for the nitric acid transfers by installing a dedicated pump and hose connection on the storage vessel, removing blind flanges on the truck bay wall sleeve, installing electrical connections, and installing support equipment. Since the Decon Truck Bay is a HWMA/RCRA permitted storage space, an evaluation of the acid transfer preparations will be completed to ensure compliance with the permit.

The treatment and disposal of the nitric acid waste will be performed by a subcontractor at an off-site RCRA-permitted treatment, storage and disposal facility (TSDF). The nitric acid waste will be shipped to the off-site TSDF in acid-compatible 350-gallon stainless steel totes. The totes will be filled inside the Decon Truck Bay at CPP-659 using a dedicated pump and hose. After being filled, the totes will be surveyed for radiological contamination, loaded onto a trailer, and shipped to the off-site TSDF. It is anticipated that a total of 55 totes will be filled in order to accommodate the entire contents of the storage vessel. Each shipment will consist of 10 totes. The totes will be returned to INTEC after each shipment for reuse until the final shipment, when the totes will be treated and disposed of by the subcontractor at an off-site TSDF. The acid transfer equipment will be removed and disposed of at an off-site TSDF.

Once the nitric acid waste is removed, treated, and disposed, the VES-NCR-171 tank system and associated components will be clean-closed per HWMA/RCRA requirements. Closure actions will include decontamination of the storage vessel and components, treatment of the decontamination liquid, sampling and analyses of the decontamination rinsate to support clean closure performance standards, the physical isolation of the system components, and disposal of components that cannot meet the decontamination strategy. HWMA/RCRA clean closure of the VES-NCR-171 tank system will be achieved when the professional engineer-certified closure documentation is approved by the Idaho Department of Environmental Quality.

SECTION C. Environmental Aspects / Potential Sources of Impact

1. Air Pollutants - No radiological emissions (other than incidental emissions) are expected during the acid transfer activities from the VES-NCR-171 vessel to the stainless steel totes that will be located in the CPP-659 Decon Truck Bay. However, any potential radiological emissions within the CPP-659 Decon Truck Bay will be exhausted out the CPP-659 decontamination ventilation system whose containment system consists of pre-filters and HEPA filters in series prior to discharge from the facility. In addition, the transport totes will be equipped with individual HEPA filters.

Mobile equipment includes forklifts, cranes and transport vehicles, which are powered by diesel fuel; such equipment is exempted as mobile internal combustion engines per IDAPA 58.01.01.222.02.e.

3. Radionuclide Release/Protection of the Public and the Environment – A release of radionuclides to the environment is not expected. The totes will be surveyed and decontaminated as required prior to leaving the Decon Truck Bay. However, any potential releases would not exceed as low as reasonably achievable goals as the releases are far below applicable regulatory standards and satisfy the exemption criteria.

4. Chemical Use and Storage – Chemicals may be used for the preparation of the nitric acid tank system, potential decontamination of the transport totes, and the closure of the tank system. Project personnel will use non-hazardous chemical substitutes in place of hazardous chemicals as long as the non-hazardous substitutes meet the requirements/specifications of the requester. Spill prevention/minimization measures will be used during storage and use of chemicals.

9. Waste Generation and Management – Hazardous and mixed waste generated during the proposed project may include but not be limited to the nitric acid, transport totes, pumps and hoses, and closure generated waste. All hazardous/mixed waste will be stored, treated, and/or disposed in compliance with applicable RCRA regulations at a permitted treatment, storage, and disposal facility in accordance with the facility's waste acceptance criteria.

Although not expected, activities performed inside a contaminated area may result in some radioactive-only waste. The waste may include anti-contamination clothing, radiation enclosures and barriers, contaminated materials and components, and contaminated absorbent. This waste will be treated and/or disposed of through one of the contracted waste management vendors.

Any waste that is determined to be nonhazardous and nonradioactive waste will be recycled when possible. If it cannot be recycled then it can be disposed of at the INL Landfill Complex.

10. Material or Waste Handling and Transportation - A hazardous waste determination will be performed per MCP-1390 for all waste streams to develop the appropriate management practices. Waste streams will be evaluated to determine if any of the materials can be recycled or reused and to implement actions for minimizing waste entering the landfill.

The Decon Truck Bay is a HWMA/RCRA permitted storage space. Evaluation of the acid transfer preparations will be completed to ensure compliance with the permit.

15. Storage of Hazardous/Radioactive Materials or Waste in Tanks –The VES-NCR-171 storage vessel and associated systems are HWMA/RCRA permitted. The removal and closure of the system will be conducted per RCRA regulations and require a permit modification which is planned to be obtained from DEQ via a Class 1¹ HWMA/RCRA permit modification by ICP Core RCRA permitting staff.

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: B6.1, Small-scale, short-term cleanup actions under RCRA, Atomic Energy Act, or other authorities

Justification: Performing RCRA clean-closure of the VES-NCR-171 tank system including removing and disposing of the bulk acid waste is a small-scale, short-term RCRA cleanup action. The action will not result in significant effect to 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 July 17, 2018.