

SECTION A. Project Title: RWMC – Analytical Laboratory Operations

SECTION B. Project Description

The RWMC Analytical Laboratory operations will be expanded to provide additional sample analyses on an as needed basis. The operations could include sample analysis of operational samples, samples of an emergency nature or from material spills, as examples. The primary focus of the analytical laboratory operations will continue to provide support to WIPP certified TRU waste analysis capabilities.

The current analytical functions includes:

- VOC analysis
- SVOC and HPLC analyses
- NHVOC & metals analyses
- RH TRU radiochemical analyses

The following analytical capabilities could be performed to support the proposed action:

- Organic analyses
- Spectrochemistry (metals) analyses
- Special analyses
- Radiochemistry analyses
- Waste characterization and process development/process support

The expanded laboratory operations will begin on an as needed basis and continue through the life of the laboratory.

The laboratory operations includes the following equipment: glove boxes, hoods, a ventilation system, a water demineralization system, safety showers, eyewash stations, propane generator, liquid propane tank, refrigerators, freezers, and a liquid nitrogen tank.

SECTION C. Environmental Aspects / Potential Sources of Impact

1. Air Pollutants – Laboratory operations generate emissions including radionuclide emissions. The laboratory is equipped with laboratory hoods and HEPA exhaust units. An air permitting applicability determination has been completed and documented. The results of the analysis identified the following conclusions and conditions:

- The source maintains an exemption from state minor new source review permitting if it is operated and configured as described (IDAPA 58.01.01.223)
- Unabated emissions are under the 0.1-mrem threshold for monitoring (40 CFR 61.93(b)(4)(ii))
- Abated emissions qualify for a waiver from 40 CFR 61 permitting (40 CFR 61.96(b))
- Toxic chemical use cannot exceed the maximum allowable annual average lb/hr release rates listed.
- A new source term must be assessed if there is a change in the emission type.

The proposed action will limit the type and level of operations to those previously performed. Therefore the proposed actions will be bracketed by the existing analysis and no further analysis is required.

Radionuclide Emissions – Radiological emissions to the environment, including those from diffuse sources, must be determined for demonstrating compliance with the RAD NESHAP Standard (see 40 CFR 61 Subpart H). If any fugitive or point radiological emissions are released, the performing organization Project Manager or Source Owner/Manager shall ensure that the emissions were evaluated for permitting requirements. Calendar year emissions are determined and reported to Regulatory Integration for the preceding year.

4. Chemical Use and Storage – To support laboratory operations, typical laboratory chemicals are used. Gases such as helium, P10, nitrogen, hydrogen compressed air, and liquid argon are used in the laboratory. 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 prevention/minimization measures will be used during storage and use of chemicals/fuels.

8. Drinking Water Contamination – Due to the type of analytical work performed, there is a potential for the laboratory to become radiologically contaminated in the event of an accident. Internal protection with a reduced pressure principle backflow assembly, located upstream of the safety showers and downstream of any piping branches that supply potable water elsewhere in the laboratory, have been installed. The cross connection between the potable water system and the water demineralization system has also been adequately protected with a reduced pressure principle backflow assembly. The laboratory will be inspected for cross connections and the backflow prevention devices will be tested annually by a qualified cross connection control technician.

9. Hazardous/Mixed Waste Generation and Management – Secondary hazardous and mixed low-level waste will be generated from managing samples. This waste will contain radionuclides and hazardous constituents. Secondary waste may include personal protective equipment (PPE), decontamination debris, and equipment. Mixed low-level waste will be treated/disposed of through one of the contracted RCRA TSD facilities. Mixed TRU and TRU waste will be returned to the parent waste stream whenever possible for disposal at WIPP.

Small quantities of liquid waste are generated from the analytical processes. Waste Generator Services manages the waste storing in appropriate Satellite Accumulation Areas until it is shipped to an appropriate off-site treatment/disposal facility.

10. Hazardous/Rad. Material or Waste Handling and Trans – A hazardous waste determination will be performed for waste streams to develop the appropriate management practices. Waste streams will be evaluated to determine if any of these materials can be recycled or reused and will be evaluated to implement actions for minimizing waste entering the landfill.

11. Industrial Waste Generation and Management – Limited quantities of industrial waste will be generated from day-to-day laboratory operations. This waste stream will be disposed of at the INL Landfill Complex.

14. PCB Contamination – Samples may contain PCBs. Once samples are no longer in use, PCB-contaminated lab waste will be managed in accordance with company procedures with final disposition by Waste Generator Services. Unused sample material may be returned to the project for disposition with the source material.

15. Radioactive Materials Use and Storage - Radioactive source materials will be used and stored in the laboratory facility for radiochemical analyses.

16. Radioactive Waste Generation and Management – Secondary radioactive waste will be generated in the form of PPE and sample residues. These waste streams will be disposed of offsite.

Samples containing radioactive materials will be stored and require special considerations. TRU samples will be returned to the generator whenever practical.

17. Storage of Hazardous/Rad. Materials or Wastes in Tanks – Two tanks storing hazardous materials are used in support of the laboratory operations. The tanks and their associated information have been added to the tank database.

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.

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

References: B3.1, Site characterization and environmental monitoring

Justification: The additional analytical capabilities are similar in nature to TRU waste analyses and do not have any significant environmental impact and therefore, this action is categorically excluded from further NEPA review.

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 January 5, 2011.