

DOE-ID NEPA CX DETERMINATION
IDAHO NATIONAL LABORATORY

SECTION A. Project Title: Geotechnical Investigation for INL Remote-Handled Low-Level Waste Disposal

SECTION B. Project Description:

The proposed action would conduct geotechnical investigations at two 4-6 acre candidate sites for a Remote-Handled Low-Level Waste (RH LLW) Facility at the Idaho National Laboratory (INL). One site is located southwest of the Advanced Test Reactor (ATR)-Complex and the other site is located west of and across Lincoln Blvd. from the Idaho Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Disposal Facility (ICDF).

The RH LLW Facility is one alternative being analyzed to address an anticipated shortfall of disposal capability following cessation of RHLLW disposal operations at the existing Subsurface Disposal Area (SDA) located within the Radioactive Waste Management Complex (RWMC), which will continue until it is full or until it must be closed in preparation for final remediation (approximately at the end of Fiscal Year 2017). Development of the proposed onsite disposal facility, the highest ranked alternative, would provide necessary RH LLW disposal capability and would ensure continuity of operations that generate RH LLW. A Draft Environmental Assessment (DOE/EA-1793) has been previously prepared (July 2010) to address the potential impacts associated with alternatives for the construction and operation of the RHLLW Facility but does not contain specific geotechnical data for the two candidate sites.

Geotechnical investigations to be conducted under this Environmental Checklist (EC) are needed to determine the soil characteristics and major strata in the subsurface. The major items for this work include the following:

- Soil boring
- Complete boring logs
- Collecting soil samples
- Laboratory testing

The proposed investigations would collect approximately 18 soil boring samples from the candidate sites. The borings would extend through the alluvium to the top of competent bedrock; it is anticipated that competent bedrock is approximately 65 ft below the ground surface. Soil samples would be analyzed for properties such as dry density, moisture content, grain size distribution, direct shear, Atterberg limits, resistivity, chlorides, sulfates, pH, and total dissolved solids. The soil borings would be collected by a subcontractor using appropriate mechanical equipment.

The proposed action would be performed during November 2010 – March 2011 at an estimated cost of \$165,000.

SECTION C. Environmental Aspects / Potential Sources of Impact:

Air Emissions – Soil boring activities would involve the use of a drill rig or other portable boring equipment that would generate internal combustion engine emissions and fugitive dust. If project activities require dust control measures, project personnel will record the method and frequency of those measures and place that information in the project file.

Disturbing Cultural / Biological Resources – Soils will be disturbed by off-road equipment movement and boring activities. The investigation areas have been surveyed for cultural resources and sensitive sites have been marked and will be avoided by the proposed activities. Seismic investigation corridors have been mowed to remove tall vegetation. To the extent practicable, the proposed activities will limit disturbance to the mowed corridors. Since the proposed action will be performed during winter months, no nesting birds would be affected.

Generating and Managing Waste – A small amount of industrial waste may be generated by the proposed activities in the form of empty lubricant containers, spent boring tools, etc. No hazardous or radioactive waste generation is expected from sample collection activities. Industrial waste would be collected for disposal and transferred to the CFA landfill under management of Waste Generator Services (WGS).

Small amounts of sample analysis residue will be generated by the use of laboratory chemicals and would be managed in accordance with analytical laboratory requirements.

Releasing Contaminants – Although not expected, there is the potential for release of small amounts of potentially hazardous contaminants (diesel fuel, lubricants) at the sample collection sites. There will also be small amounts of air contaminants released from the use of fuel burning vehicles and boring equipment.

SECTION D. Determine the Level of Environmental Review (or Documentation) and Reference(s): Identify the level 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: Appendix B to Subpart D, Part 1021, B3.1

Justification: This work is necessary to help ensure that soil depth and characteristics are appropriate for construction of the RH LLW Facility at the proper location within the Idaho National Laboratory. This geotechnical investigation is covered under Appendix B to Subpart D, Part 1021, B3.1 "Onsite and offsite characterization, ... including (f) Sampling and characterization of water, soil, rock, or contaminants;"

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 11/12/2010.