

DOE-ID NEPA CX DETERMINATION Idaho National Laboratory

SECTION A. Project Title: Net Zero Landfill Gas Monitoring

SECTION B. Project Description and Purpose:

The Net-Zero program at INL is proposing to install Soil Vapor Sampling (SVS) probes at the INL Central Facilities Area Landfills to determine the landfills' baseline greenhouse gas (GHG) emissions. To facilitate this equipment, probes will be installed on, or near, landfills CFA-I, CFA-II, CFA-IV and CFA-V (Figure 1). CFA-I and CFA-II landfills are CERCLA sites under institutional controls and probes will be installed outside the controlled boundary. The probes will be installed at various depths and locations throughout the sampling area. Probes are installed using direct push, where an annulus and sampling tube will be pushed to the desired depth and then backfilled with a soil bentonite mixture (Figure 2). Subsurface gases can then be monitored and sampled using the probes. It is anticipated the proposed activity would occur over a period of one year, where samples are collected monthly. At the conclusion of the project, the probes will remain in the landfills for future, undefined, monitoring efforts.

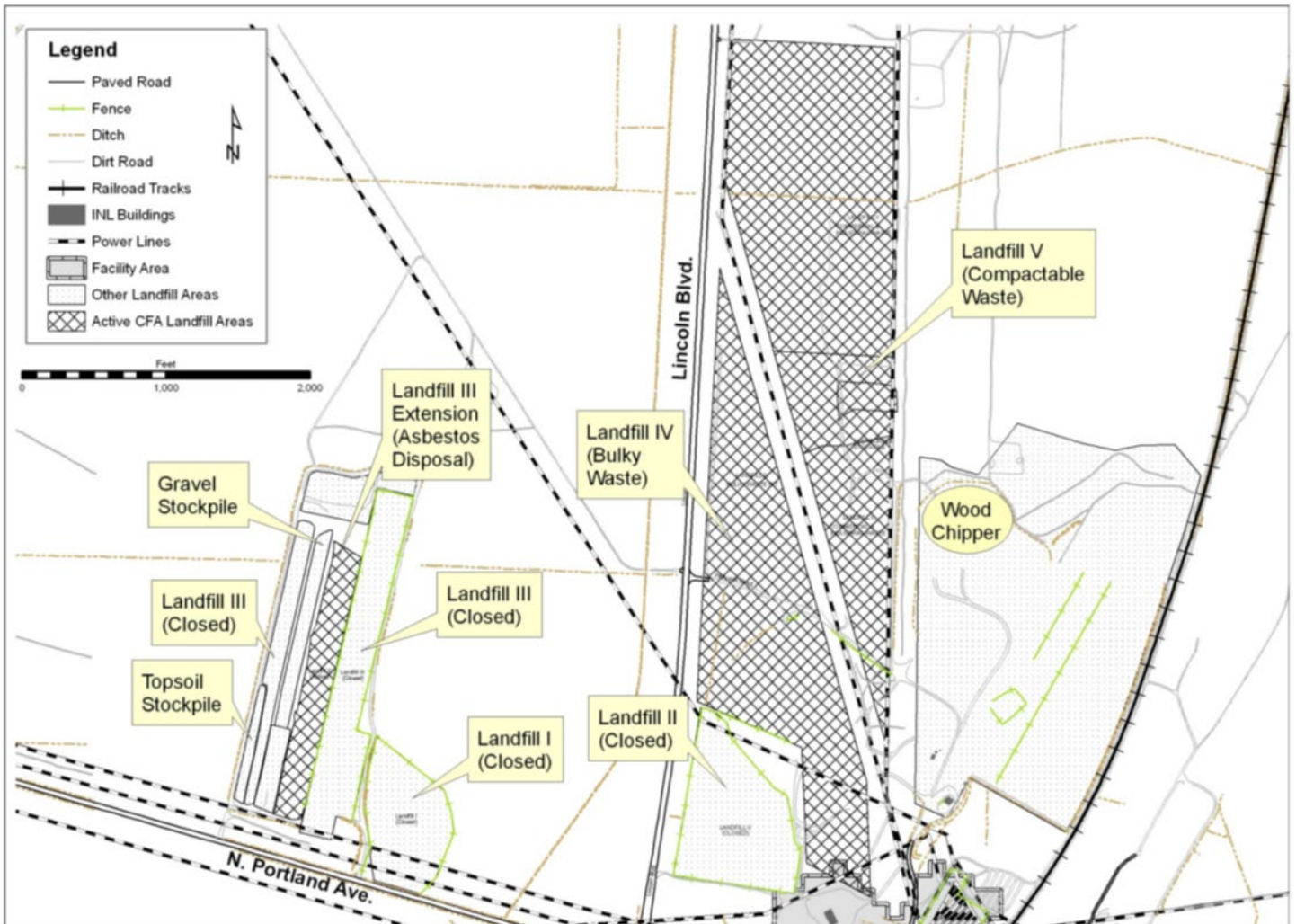
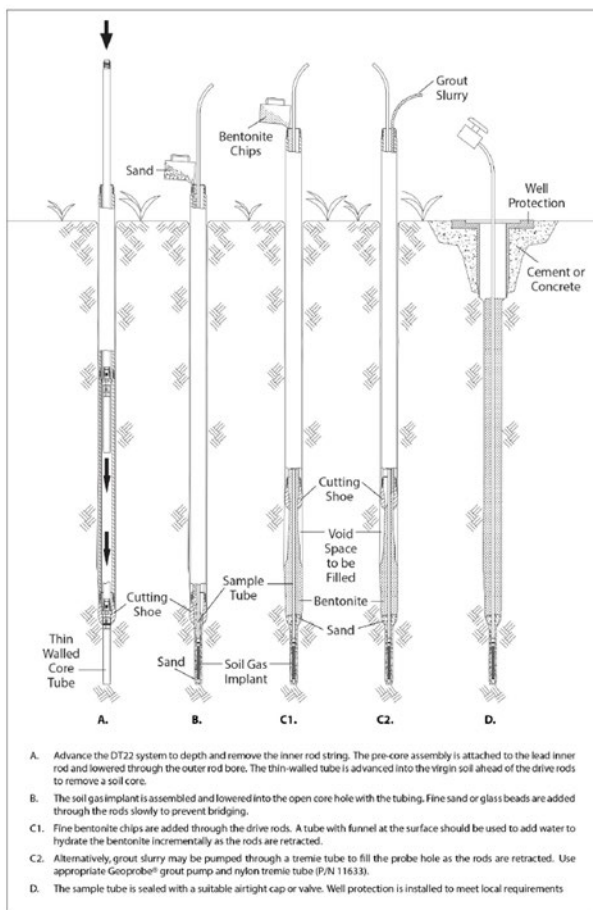


Figure 1. CFA Landfill locations.



The above illustration is from the EPA report titled "Expedited Site Assessment Tools for Underground Storage Tank Sites" Dated October 2016

<https://www.epa.gov/sites/default/files/2014-03/documents/esa-ch5.pdf>

Figure 2. SVS Probe Design.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

N/A

Discharging to Surface-, Storm-, or Ground Water

N/A

Disturbing Cultural or Biological Resources

A Cultural Resource Review was completed for this project. Please refer to BEA-22-56. There is the potential for this work to impact vegetation and for project personnel to interact with various wildlife species. A Biological Resource Review will be arranged within two weeks of the initiation of any activities that might disturb soil or vegetation as well as following project activities. A nesting bird survey is included with the Biological Resource Review for actions occurring between April 1 and October 1 per compliance with the Migratory Bird Treaty Act.

Generating and Managing Waste

When wastes are generated, how they are disposed can adversely affect the environment. Managing wastes appropriately and responsibly and implementing recycling or reuse practices, where feasible, during project activities can reduce the potential impact on the environment.

**DOE-ID NEPA CX DETERMINATION
Idaho National Laboratory**

Releasing Contaminants

When chemicals are used during the project there is the potential for spills that could impact the environment (air, water, soil).

Using, Reusing, and Conserving Natural Resources

Project activities will release known greenhouse gases (GHGs) to the atmosphere.

SECTION D. Determine Recommended Level of Environmental Review, Identify Reference(s), and State Justification: Identify the applicable categorical exclusion from 10 Code of Federal Regulation (CFR) 1021, Appendix B, give the appropriate justification, and the approval date.

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, or similar requirements of Department of Energy (DOE) or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment or facilities; (3) disturb hazardous substances, pollutants, contaminants, or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources (see 10 CFR 1021). In addition, no extraordinary circumstances related to the proposal exist that would affect the significance of the action. In addition, the action is not "connected" to other action actions (40 CFR 1508.25(a)(1) and is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1608.27(b)(7)).

References:

10 CFA 1021, Appendix B, B3.1 Site Characterization and Environmental Monitoring

Justification:

'B3.1 Site characterization and environmental monitoring. Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools);Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; Aquifer and underground reservoir response testing; Installation and operation of ambient air monitoring equipment; Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes);Sampling and characterization of water effluents, air emissions, or solid waste streams; Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources);Sampling of flora or fauna; and Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.'

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

Approved by Jason L. Anderson, DOE-ID NEPA Compliance Officer on: 09/06/2022