

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

SECTION A. Project Title: NRAD NRS Ventilation Repairs

SECTION B. Project Description and Purpose:

Describe the purpose and need of the project; that is, why do you need to do this activity and what 'need' is it fulfilling. Include the what, when, & where, of the project, work activity, location, costs, start & end dates. Describe activities that involve emissions, discharges, soil or vegetation disturbance, use of two-track roads, waste generation and disposal (include waste types and amounts), chemical use, and radioactive material. Describe work phases and any connections to other project activities. For the location(s) of the activity include facility area, building number, and if outside facility boundaries, include a map of the location and give the GPS coordinates. **Note:** You may attach a file with the scope of work in lieu of entering the information below.

The Hot Fuel Examination Facility (HFEF) houses the Neutron Radiography Reactor (NRAD). The NRAD North Radiography Station (NRS) ventilation system is currently out of service due a failed fan. The fan housing has been damaged from excessive forces being applied to the flanges from the NRS ducting. The NRS ducting transitions through the north wall of the NRS and makes a 90-degree downward turn until it is about 10 feet underground before another 90degree elbow transitions the duct to horizontal. The root cause of the damage is soil settlement that has allowed the ducting to settle. The settling has loaded the NRS ventilation ducting passing through the wall, damaging both the ventilation ducting and the facility concrete masonry unit (CMU) wall at the location where the ducting penetrates the wall. The settling has caused the concrete sidewalk and truck door pad to settle as well. The overhead door no longer seals against the threshold.

Although the ventilation draw from the NRS by the HFEF exhaust system is adequate for habitability and current operations, the existing ventilation draw will not support programmatic work such as support for a TREAT loop or other similar work brought to the NRS for radiography. Before work that increases the radiological consequence can be brought into the NRS, the NRAD NRS exhaust ventilation must be returned to service to provide adequate ventilation in the NRS. In addition to the ventilation issue, the settling of the concrete has allowed rodents access to the facility as well as allowed water to pool and in some cases intrude into the facility. Both of these issues require resources to cleanup for health and safety reasons.

The following diagrams and photos show the areas of concern.

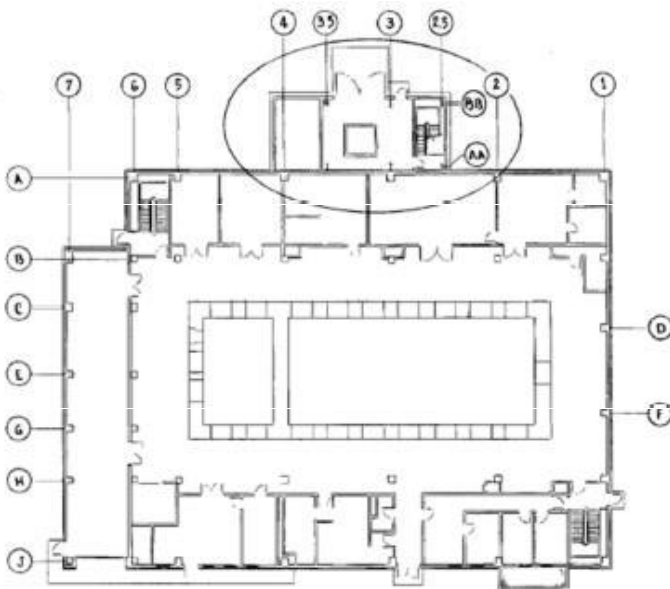


Diagram showing top view of building in question. Circled area contains piping and wall of concern.



Photo illustrating the movement of pipe at flexible connector piece.

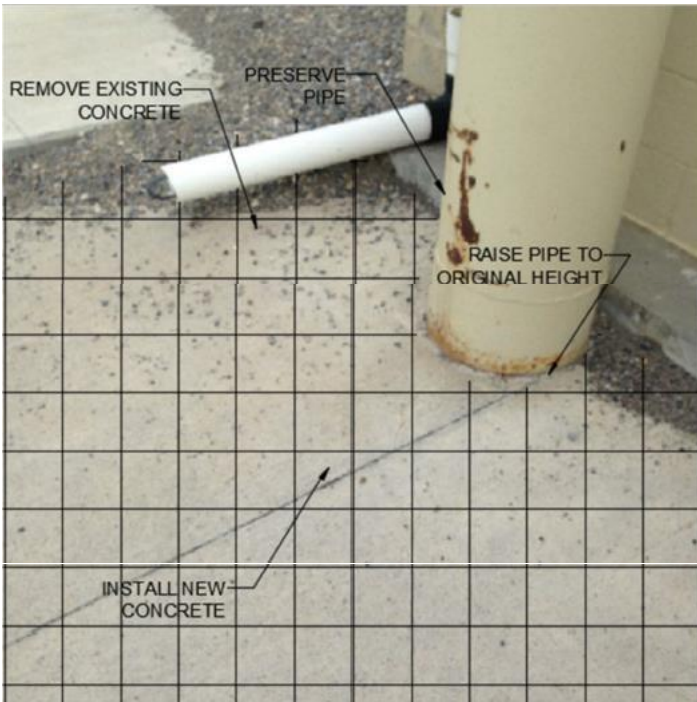


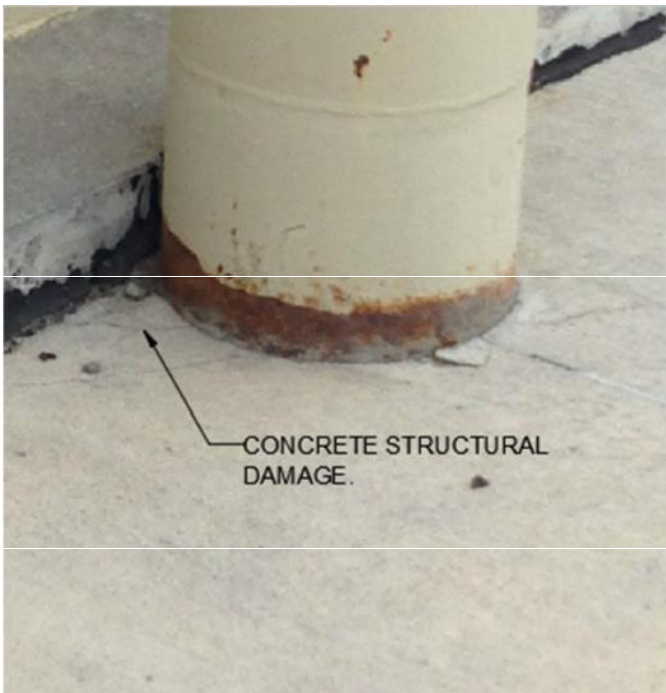
Photo of concrete at east ventilation pipe, along with recommended repairs.

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Photo of the damage done to the wall due to movement of the east pipe, along with recommended repairs.



Settlement of sidewalk around west pipe

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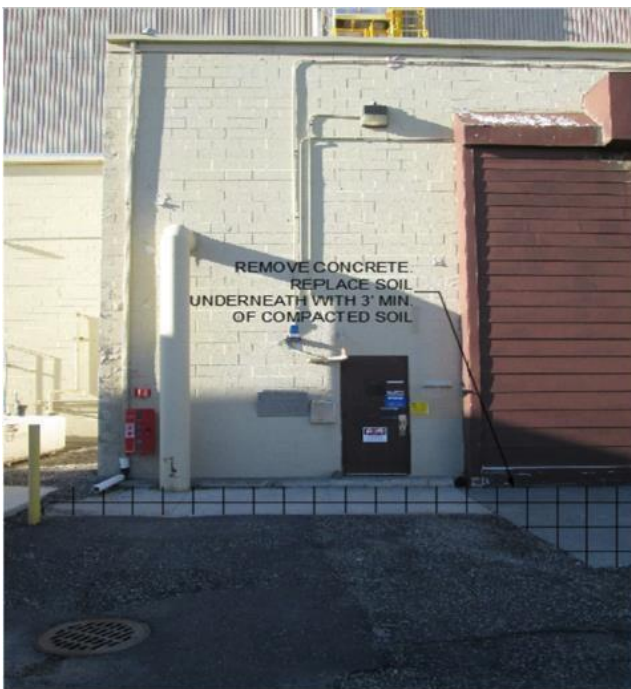
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Picture illustrating beginning of damage to wall around west pipe.



Damage done to the inside of the wall and pipe due to settlement at the east penetration, along with recommended reparations.



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Picture illustrating the roll up door with recommended repairs.

Failure to perform this work will lead to continued damage to the NRAD NRS structure and ducting. The system is currently in a condition that will not support higher radiological consequence programmatic work requiring access to the NRS. The long-term solution is to excavate the existing concrete, backfill and compact soil, repair damage to the ducting, facility wall and install new fan. A new truck pad will be poured along with additional drainage control to reduce the amount of runoff that can be deposited in and around the HFEF building.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Emissions associated with the NRS ventilation system remain the same. No Air Permitting Applicability Determination (APAD) is required.

Discharging to Surface-, Storm-, or Ground Water

N/A

Disturbing Cultural or Biological Resources

HFEF is eligible for listing on the National Register of Historic Places (NRHP), and all project activities associated with the building must undergo cultural resource review (CRR).

Generating and Managing Waste

The proposed action will generate a variety of waste streams, including radioactive and non-radioactive wastes. Non-radioactive wastes would include personal protective equipment (PPE), scrap metal, concrete, adhesives, common trash, and possibly small amounts of hazardous waste (e.g., electronic circuit boards, solvent contaminated wipes). Scrap metal will be recycled to the extent practicable. Radioactive waste would include PPE involved in entering radiation areas. Type of radioactive waste generated will be LLW. The estimated volume of LLW generated is 0.2 cubic meters and would be disposed to the Nevada National Security Site (NNSS).

Polychlorinated Biphenyl (PCB) waste could be generated when disturbing building material such as paint, caulking, adhesives, joint sealer, ventilation duct gaskets for insulation in building built before 1982 such as HFEF.

Releasing Contaminants

Chemicals will be used and will be submitted to chemical inventory lists with associated Safety Data Sheets (SDSs) for approval prior to use. The Facility Chemical Coordinator will enter these chemicals into the INL Chemical Management Database. All chemicals will be managed in accordance with laboratory procedures. When dispositioning surplus chemicals, project personnel must contact the facility Chemical Coordinator for disposition instructions.

Although not anticipated, there is a potential for spills when using chemicals. In the event of a spill, notify facility environmental staff. If environmental staff cannot be contacted, report the release to the Spill Notification Team (208-241-6400). Clean up the spill and turn over spill cleanup materials to WGS

Using, Reusing, and Conserving Natural Resources

All materials will be reused and recycled where economically practicable. All applicable waste will be diverted from disposal in the landfill where conditions allow. Scrap metal will be recycled to the extent practicable.

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

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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:

National Environmental Policy Act (NEPA) Implementing Procedures, Final Rule, 10 CFR 1021, Appendix B, B2.3 "Personnel Safety and Health Equipment" and B2.5 "Facility Safety and Environmental Improvements".

Final Waste Management Programmatic Environmental Impact Statement [WM PEIS] (DOE/EIS-0200-F), May

Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada (DOE/EIS-0243) and supplemental analysis (SA) (DOE/EIS-0243-SA-01).

Justification:

The proposed activity is consistent with CX B2.3 "Personnel Safety and Health Equipment", installation of, or improvements to, equipment for personnel safety and health (including, but not limited to, eye washes, safety showers, radiation monitoring devices, fume hoods, and associated collection and exhaust systems), provided that the covered actions would not have the potential to cause a significant increase in emissions, and

B2.5 "Safety and environmental improvements of a facility (including, but not limited to, replacement and upgrade of facility components) that do not result in a significant change in the expected useful life, design capacity, or function of the facility and during which operations may be suspended and then resumed. Improvements include, but are not limited to, replacement/ upgrade of control valves, in-core monitoring devices, facility air filtration systems, or substation transformers or capacitors; addition of structural bracing to meet earthquake standards and/or sustain high wind loading; and replacement of aboveground or belowground tanks and related piping, provided that there is no evidence of leakage, based on testing in accordance with applicable requirements (such as 40 CFR part 265, "Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities" and 40 CFR part 280, "Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks"). These actions do not include rebuilding or modifying substantial portions of a facility (such as replacing a reactor vessel)."

The environmental impacts of transferring low level waste from the INL to the Nevada National Security Site were analyzed in the 1996 Nevada Test Site EIS (DOE/EIS-0243) and supplemental analysis (SA) (DOE/EIS-0243-SA-01) and DOE's Waste Management Programmatic EIS (DOE/EIS-200). The fourth Record of Decision (ROD) (65 FR 10061, February 25, 2000) for DOE's Waste Management Programmatic EIS established the Nevada National Security Site as one of two regional LLW and MLLW disposal sites. The SA considers additional waste streams, beyond those considered in the 1996 NTS EIS, that may be generated at or sent to the Nevada National Security Site for management

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: 7/9/2020