

DOE-ID NEPA CX DETERMINATION Idaho National Laboratory

SECTION A. Project Title: CFA Brine Fill Station

SECTION B. Project Description and Purpose:

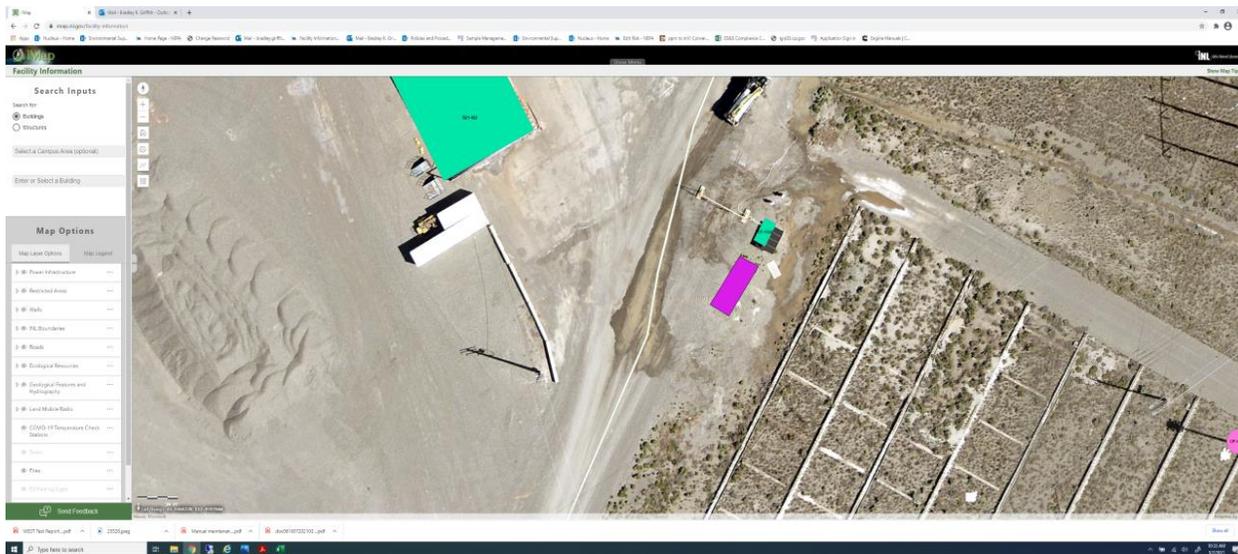
Revision 1

Previously approved Environmental Checklist INL-17-110 covered the construction and operation of a proposed Brine Storage/Fill Station at CFA. Other than purchase of a mobile mix station/storage tank trailer and a brine storage poly tank the project did not proceed due to funding limitations.

They would now like to proceed with a scaled down version of that brine storage/fill station. The proposed project would:

- Permanently park the mobile mix station/storage tank trailer south of the water fill station (CF-1602).
- Build up an approximately 15' X 15' gravel pad south of the mobile mix station/storage tank trailer.
- Place the 2000 gallon brine storage tank on the pad.
- Run a permanent hose (with backflow prevention) from the water fill station to the mobile mix station for water supply.
- Extend electrical power to the mix station from either CF-1602 or a nearby power pole (trenching required).

The resulting brine water stored in the mix station and poly tank would be pumped over to brine application trucks as needed for winter road maintenance. This would reduce the amount of salt that is used on the roads, currently applied in solid form. This work would be performed by Sitewide Utility and Facility Operations (SUFO) personnel. The location of the mix station and poly tank is the pink rectangle on the provided image.



Original Description

Sitewide Facilities and Operations (SFO) routinely use a sand/salt solid mixture for winter road maintenance throughout the INL road system. The sand and salt mixture requires material handling, loading, and personnel support. In order to expand capabilities and improve efficiency and winter road conditions, SFO needs to procure and install a brine mixing and application system. The proposed action would install a Henderson Brine Xtreme Pro salt brine system. The system includes a mixing station that has a 4.67 cu. yd. hopper where road salt is loaded, a water supply (with backflow prevention) connection for mixing, an automatic mixing system for simple brine production, two 5000 gallon above ground brine storage tanks, and a brine filling station. The system will be located to the southwest of the Central Facilities Area (CFA) salt and sand storage building (B21-622) in a gravel area void of vegetation. A brine mixing storage building, concrete fill pad, concrete tank secondary containment, and cover will also be constructed. The brine mixing building (approximately 10'x15') will require power tie-in from B21-622 (including a new pole mounted transformer) and a water service connection line that ties into the water main that runs to the nearby water truck fill station (approximately 200 ft. to the east).

The brine will be loaded into a Liquid Application System (LAS) which includes a poly storage tank (with tank support structure) and a manifold spray nozzle system that sprays the road surface with brine solution. The LAS will fit into the back of a standard dump truck. Application will primarily take place in the winter months on the main paved INL roads. Application for dust control on frequently traveled gravel roads would also occur. The two 5000 gallon brine tanks will not store a regulated substance as defined in LST-8000 and sections 4.60 and 4.61 of LWP-8000 do not apply to these tanks.

Estimated Start Date: May, 2018

Estimated End Date: September, 2018

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Approximate Cost: \$560,000

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Fugitive dust may be generated during construction excavation activities.

The brine solution may potentially be used for fugitive dust suppression activities on problem gravel roads such as the landfill entry road or similar situations.

Discharging to Surface-, Storm-, or Ground Water

The brine solution sprays a mist to the road surface with very little runoff and discharge to the road shoulder. Current sand and salt mixture application practices result in similar or more discharge. Secondary containment around the storage tanks will help prevent large quantity releases of brine solution to the ground.

Disturbing Cultural or Biological Resources

N/A

Generating and Managing Waste

General Construction debris waste such as scrap metal, wood, packaging material, concrete, asphalt, etc. may be generated during the construction phase of the project.

Operation of the brine system will generate little if any waste. Excess salt that is not suitable for road application may be generated.

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

Scrap metal will be recycled to the extent practicable during the construction phase.

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 CFR 1021, Appendix B to Subpart D, item B1.15 "Support buildings" and B1.31 "Installation or relocation of machinery and equipment."

Justification:

Project activities described in this EC are consistent with 10 CFR 1021, Appendix B to Subpart D, item B1.15 "Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria

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services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.5, B6.6, and B6.10 of this appendix;" and

B1.31 "Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that the uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts."

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

Approved by Jason Anderson, DOE-ID NEPA Compliance Officer on: 04/26/2021