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**CATEGORICAL EXCLUSION DETERMINATION -
CLOSURE PLAN FOR THE HF TANK CAR NEPA
DOC. NO. 401**

07/19/93

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NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

CATEGORICAL EXCLUSION (CX) DETERMINATION

Closure Plan for the HF Tank Car
NEPA Document No. 401
Fernald Environmental Management Project (FEMP)
Fernald, Ohio

Proposed Action

The United States Department of Energy (DOE) proposes closure of the Hydrofluoric Acid Tank Car (the HF Tank Car) at the Fernald Environmental Management Project (FEMP).

Location

The proposed action will take place in the Tank Farm Area. The HF Tank Car is currently located on the elevated rail siding, track 6, just northwest of the Maintenance Service Building and just east of the Main Tank Farm. The 1050 acre FEMP site is located approximately 18 miles northwest of downtown Cincinnati, Ohio.

Background

The HF Tank Car is a 50 year old rubber lined mild steel rail tank car. The hydrofluoric acid in the Tank Car is 30 percent dilute hydrofluoric acid (DHF). The Tank Car's DHF was a by-product of a process in Plant 4 involving the conversion of orange oxide (UO_3) to uranium tetrafluoride (UF_4). This process began with the hydrofluoric acid in its gaseous state (anhydrous hydrofluoric acid or AHF), water was added to retrieve the HF and resulted in the DHF which now exists in the Tank Car.

The DHF was transported to the Tank Car by pipeline and placed in the tank by pumps and acid resistant hoses. The Tank Car was used for approximately 15 years at the FEMP as an interim storage tank until the Tank Car and the DHF were sold to off-site vendors. The Tank Car was later returned because the vendors could not use the DHF due to low-level uranium contamination.

The HF Tank Car currently stores approximately 4,400 gallons of DHF. The DHF is to be removed to comply with RCRA closure of the HF Tank Car.

Description of Proposed Action

The proposed action involves the removal of the DHF from the HF Tank Car. This action will entail removal of the acid, cleaning the tank car, disposing of the HF Tank Car, sampling of the soil, and disposing of any waste generated by sampling and cleaning activities.

Closure Plan for the HF Tank Car

Removal of the DHF

Before removing the DHF from the Tank Car, the emergency pump-down lines connecting the Tank Car to the Tank Farm will be flushed with potable water and disconnected. The rinseate will be collected and sent to the Plant 8 Sump. The Tank Car will be relocated over the secondary containment pit area which is located west of the Tank Farm.

Removal of the DHF from the Tank Car will be accomplished by pumping the contents, at a controlled rate, into a neutralization tank containing a lime slurry. The slurry and DHF neutralization will be completed by removal of the precipitate through settling and filtration and recirculation. Recirculation will be continued until the pH, fluoride, and radiological contamination of the filtered aqueous portion is within a range acceptable for discharge to the waste water treatment system. Based on the preliminary test data, the filter cake generated by the precipitate will be dried, drummed, tested (to confirm waste characterizations) and stored on-site pending disposal as a low-level radioactive waste.

Cleaning the HF Tank Car

Following removal of the DHF, the interior of the HF Tank Car will be flushed thoroughly with a solution of potable water and a neutralizing agent (selected from bench scale testing). The flushing will be conducted with a water sprayer head and wand assembly capable of being moved up and down inside the Tank Car in a manner that prevents the release of mists or back spray and with sufficient pressure for the rinse to contact all interior surface areas. Following the initial neutralization rinse, the interior of the Tank Car will be pressure washed with potable water using the wand and sprayer head assembly to thoroughly flush the interior of the Tank Car. The neutralization and potable water rinseates will be pumped to the neutralizing tank and treated in the same manner as described above for the DHF residues.

A visual inspection using a remote camera will be conducted to evaluate if any solid debris (e.g., neutralization rinse precipitate or pieces of the rubber liner knocked off by the water spray) needs to be vacuum pumped out of the Tank Car and discharged to the neutralization tank. To confirm decontamination, a portion of the final potable water rinse will be collected in a drum line equipped with a compatible liner. Samples will be collected using a Coliwsa sampler or other appropriate sampling device. Field pH measurements will be made to confirm that the pH is greater than 2 and less than 12.5. At least 2 additional samples will be collected for confirmation by laboratory analyses.

Disposal of the HF Tank Car

When field pH indicates that the Tank Car is clean, two additional samples will be collected for confirmation analyses in the FEMP laboratory. The HF Tank Car will then be removed from the track and scrapped. If it is determined that the Tank Car cannot be cleaned, it will be managed consistent with the Removal Action No. 17, Soil and Debris Management Plan.

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Soil Sampling in the Work Area

To ensure worker safety prior to soil sampling, the FEMP site blueprints will be reviewed with the facility engineer to determine if there are any underground pipes, wiring, or other structures to prevent sampling in these areas.

The soil under the current location of the HF Tank Car will be sampled to determine if any hazardous waste was released from the HF Tank Car. The soil sampling will be implemented by placing a grid (6 feet by 6 feet) over the area where the Tank Car was located. The grid will be divided into 12 sections number 1 to 12. Three samples will be collected from each grid (for a total of thirty-six samples) from the following intervals: from just below the rail subbase to 6 inches below the subbase, 6 to 18 inches below the subbase, and 18 to 30 inches below the subbase. The soil samples will then be analyzed for pH.

Stockpiling of any Soil or Residue

All waste generated during the cleaning of the Tank Car and the testing of the soil will be temporarily stored at an existing RCRA storage area until the results of the other analytical laboratory verify decontamination. If decontamination is verified, the wastes will be stockpiled on site in accordance with the Soil and Debris Management Plan, Removal Action No. 17. If decontamination is not verified, the wastes will be stored according to a modified Closure Plan. It is expected that very little soil waste will be generated.

Categorical Exclusion to be Applied

The authority for finding this project to be subject to NEPA Categorical Exclusion is contained in Subpart D of the revision to 10 CFR Part 1021, entitled "National Environmental Policy Act Implementing Procedures and Guidelines." The Final Rule and Notice, effective May 26, 1992, includes a revised and expanded list of categorical exclusions that are classes of actions that normally do not require the preparation of either an Environmental Impact Statement or an Environmental Assessment.

The Final Rule and Notice specifically lists in Part 1021, Appendix B to Subpart D, Sec. 1021.410, B6.1(b), the following as types of actions that are Categorical Exclusions applicable to Specific Agency Actions:

Removal actions under CERCLA (including those taken as final response actions and those taken before remedial action) and removal-type actions similar in scope under RCRA and other authorities (including those taken as partial closure actions and those taken before corrective action), including treatment (e.g., incineration), recovery, storage, or disposal of wastes at existing facilities currently handling the type of waste involved in the removal action. These actions will meet the CERCLA regulatory cost and time limits or satisfy either of the two regulatory exemptions from those cost and time limits (National Contingency Plan, 40 CFR part 300). These actions include, but are not limited to:

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- (b) Removal of bulk containers (for example, drums, barrels) that contain or may contain hazardous substances, pollutants, contaminants, CERCLA-excluded petroleum or natural gas products, or hazardous wastes (designated in 40 CFR part 261), if such actions would reduce the likelihood of spillage, leakage, fire, explosion, or exposure to humans, animals, or the food chain.

The Closure Plan for the HF Tank Car meets the requirements for the Categorical Exclusion listed above. It is appropriate since the proposed action as described entails the removal of a bulk container, the HF Tank Car, which holds a hazardous waste, DHF. The removal of the DHF, the cleaning and disposal of the Tank Car, and the characterization and disposal of the soil or debris will reduce the likelihood of an accident or exposure involving the DHF.

Furthermore, the proposed action will not violate applicable statutory, regulatory, or permit requirements; it will not require siting and construction or major expansion of waste disposal, recovery or treatment facilities; and it will not impact any environmentally sensitive areas (e.g., wetlands, floodplains, or the sole-source aquifer).

Compliance Action

I have determined that the proposed action meets the requirements for the CX referenced. Therefore, the proposed action is categorically excluded from further NEPA review and documentation.

Approval:



Raymond J. Hansen, Acting Manager
U.S. Department of Energy, Fernald Office

Date:

7-19-93

United States Government

Department of Energy

Fernald Field Office

memorandum

DATE: JUL 20 1993
 DATE: DOE-2458-93

REPLY TO: FN:Skintik
 ATTN OF:

SUBJECT: CATEGORICAL EXCLUSION DETERMINATION (CX 401) - CLOSURE PLAN FOR THE HF TANK CAR

TO: Carol Borgstrom, EH-25, FORS

The subject categorical exclusion (attachment) under Section D of the Department of Energy's National Environmental Policy Act Guidelines has been approved and is being forwarded for your review.

The Department of Energy, Fernald Field Office (DOE-FN) requests that you notify us within two weeks, in accordance with the Interim Procedural Guidelines for implementation of SEN-15-90, whether you have any objection to this determination.

If you have any questions regarding this matter, please contact Ed Skintik at (513) 648-3151.



Raymond J. Hansen
 Acting Manager

Attachment: As Stated

cc w/att:

- R. S. Scott, EM-20, FORS
- K. A. Chaney, EM-424, TREV
- L. Harris, EM-431, TREV
- C. J. Brown, FERMCO/51-7
- A. R. Coordinator, FERMCO]

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