

1994

**REMOVAL #5 K-65 DECANT TANK
U.S. DOE FERNALD
OH6 890 008 976**

11-13-90

**USEPA/DOE
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LETTER**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

1994

REPLY TO ATTENTION OF:

NOV 13 1990

Andrew P. Avel
United States Department Of Energy
Feed Materials Production Center
P.O. Box 398705
Cincinnati, Ohio 45239-8705

5HR-12

RE: Removal #5
K-65 Decant Tank
U.S. DOE-Fernald
OH6 890 008 976

Dear Mr. Avel:

On October 18, 1990, the United States Department of Energy (U.S. DOE) submitted a work plan for removal action #5 - K-65 decant tank at the Feed Materials Production Center in Fernald, Ohio. The United States Environmental Protection Agency (U.S. EPA) has reviewed this document and, based on the deficiencies cited below, has disapproved the work plan.

WORK PLAN:

1. The work plan states that it is consistent with OSWER Directive 9360.0-03B, Superfund Removal Procedures -- Revision Number 3. This directive helps determine when a removal action is appropriate but has limited discussion of areas to be addressed in a remedial design (or removal action) work plan. OSWER Directive 9355.0-4A, Superfund Remedial Design and Remedial Action Guidance, should also be reviewed and used in future remedial design (removal action) work plans.
2. As discussed in the Superfund Remedial Design and Remedial Action Guidance, a preliminary design submission (approximately 30-percent complete) should be submitted.
3. U.S. EPA Superfund Remedial Design and Remedial Action Guidance requires cost estimates to be completed and submitted at the preliminary and final design stages.
4. Time-frames should be expressed in calendar days, not working days.

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Date Rec'd NOV 15 1990

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5. Eighty five working days to complete this removal action appears to be excessive. Specific activities seem to have been allocated an excessive time period when considering the description in the work plan.
6. The work plan does not specifically address the type of treatment. The discussion of treatment in the work plan seems to describe initial treatment in the general sump area. If this is correct, it is unclear how the decant sump liquid will be recollected to undergo ion exchange treatment. In addition, the work plan does not explain what will necessitate treatment of the decant sump tank liquid by ion exchange.
7. If VOC treatment is required then the schedule and activities to be completed will need to be submitted to EPA.
8. Section II - 1.0, Page 1, Paragraph 3: Although it requires no action on the part of DOE, it is interesting to note that this section of the work plan states that there is no reason to believe the integrity of the underdrain system, decant tank, or corrugated pipe have been compromised. This is contrary to the information provided by DOE in a September 26, 1990 meeting concerning the sampling of the decant sump tank.
9. Section II - 4.0, Page 2, Paragraph 7: This section mentions treatment of the liquid for volatile organic compounds (VOCs) but does not provide any specific treatment processes. The work plan must at a minimum present treatment options.
10. Section III - 2.0, Page 3, Paragraph 3: The tank was reportedly sampled on October 5, 1990 (teleconference with U.S. DOE and Westinghouse on October 4, 1990). The schedule in attachment 1 to this work plan reports it will take 22 days to complete analysis of the decant tank samples. Therefore, the results should be available to determine the need and the type of water treatment. The analytical results should be submitted to EPA along with the sampling methods and quality assurance procedures used to obtain and analyze this sample. This information should be submitted to EPA prior to collecting the liquid from the decant sump tank.
11. Section III - 3.0, Page 3, Paragraph 3: The detailed design drawings (scheduled to be completed in 38 days) seems excessive for this operation. Presumably the pump, hoses, fittings, and polypropylene tank are readily available from vendors and will not require detailed design drawings. Furthermore, 38 days for the design of the temporary berms (if needed) also seems excessive.



12. Section III - 3.0; and Section IV - 1.0: The discussion of secondary containment should be expanded to describe more fully how this containment will or will not contain air emissions. The expected air emissions, with respect to 40 CFR Part 61, should be specified. Section 3.2 of the Health and Safety Plan briefly discusses the use of a HEPA filter on the receiving tanks. Other potential release points should also be discussed. Diagrams of the actual containment would be helpful.
13. Section III - 3.0, Page 3, Paragraph 3: The work plan should state that the sampling described in this section is in addition to the sampling described in Section III - 2.0 of this work plan.
14. Section IV - Section 2.0: The work plan does not clearly state how long the decant liquid will be stored in the storage tanks in Plant 2/3 before it is treated. What will be the treatment levels for all contaminants, including uranium, radium, and thorium.
15. Section IV - 2.0, Page 5, Paragraph 2: Because the analytical results of the sampling described in Section III - 2.0 of this work plan should have been available on October 27, 1990. EPA should be notified of the results and the need for VOC treatment. If VOC treatment is necessary then plans should specifically describe the type of treatment to be used.
16. Section IV - 2.0, Page 5, Paragraph 2: Because radionuclides are expected to be in the decant sump tank liquid, DOE should provide specific treatment processes which will be needed. In addition the design and procurement of this treatment unit should be considered in the specific design activities section of this work plan.
17. Section IV - 3.0, Page 5, Paragraph 4: The work plan should specify the construction of the tank (covered or uncovered) as well as a program to meet requirements of 40 CFR 264 Subpart J (tanks).
18. Section V, Page 6, Paragraph 1: The monthly sampling should also include monthly measurements of the water level elevation in side the corrugated pipe.
19. Section V, Page 6, Paragraph 2: Two samples of the effluent should be taken to document the removal efficiency of the treatment system. Sampling should occur at the start-up and near the completion of treatment
20. Section V, Page 6, Paragraph 2: Analysis of liquid from the decant sump tank should also include chloride, sulfate, and Pb-210. These are some of the major constituents of the K-

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65 Silos which have been detected at elevated level in the ground water near the silos.

21. Section VII, Page 6, Paragraph 4: This section should reference that sampling and analysis will be conducted in accordance of the RI/FS Quality Assurance Project Plan.
22. Attachment 1: Three tasks in the schedule seem to have excessive time frames. First, the design of this removal action appears to be straight forward and does not require the production of detailed design drawings. Secondly, it is not clear why the it requires 15 days to install and hook up the pump and set up the collection system. If existing tanks are not to be used, then constructing the collection tanks can be started as soon as EPA approval is received and does not have to wait 45 after EPA approval to start. Finally, it is not clear why it will take 22 days to pump the liquid from the decant sump tank. Using the information provide no more than six to eight days would seem to be sufficient to complete this task.

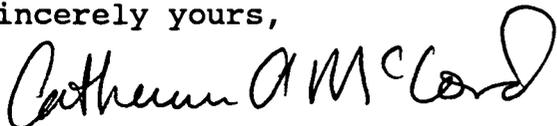
HEALTH AND SAFETY PLAN:

23. Section 3.2, Table 1: This table does not list radon-222 gas as an expected inhalation hazard, along with its limit and action level.

As required by the 1990 Consent Agreement, U.S. DOE must revise the work plan to address the above deficiencies within thirty (30) days of the date of this letter.

Please contact me at (312/FTS) 886-4436 if there are any questions regarding this matter.

Sincerely yours,



Catherine A. McCord
On-Scene Coordinator

cc: Richard Shank, OEPA
Graham Mitchell, OEPA - SWDO
Joe LaGrone, U.S. DOE - ORO
Leo Duffy, U.S. DOE - HDQ