

R-031-207.2

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**DISAPPROVAL OF THE PILOT PLANT SUMP
REMOVAL ACTION WP**

08-27-92

**OEPA/DOE-FN
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LETTER**



State of Ohio Environmental Protection Agency

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R-031-707.2

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George V. Voinovich
Governor

August 27, 1992

Mr. Jack R. Craig
Project Manager
U.S. DOE FEMP
P.O. Box 398705
Cincinnati, Ohio 45239

Dear Mr. Craig:

Ohio EPA has reviewed the Pilot Plant Sump Removal Action Work Plan and comments are attached. One major concern with this removal action is the apparent lack of coordination with the hazardous waste requirements even though this has been identified as a Hazardous Waste Management Unit. For this reason our hazardous waste management staff will not provide specific comments until the plan meets requirements stated in OAC 3745-66-11 (see general comment #2). If you have any questions about these comments contact Tom Schneider or me.

Sincerely,

Graham E. Mitchell
Project Manager

GEM/ycr

cc: Jenifer Kwasniewski, DERR
Tom Schneider, DERR
Paul Pardi, DHWM
Jim Saric, U.S. EPA
Dennis Carr, WEMCO
Lisa August, GeoTrans
Tom Hahne, PRC
Robert Owen, ODH

(SHAH)
ACTION RESPONSE
TO DOE-2198-92
(4721)

OEPA COMMENTS ON THE
PILOT PLANT SUMP REMOVAL ACTION WORK PLAN

General Comments

1. Due to the RCRA implications of this removal action and the requirements of RCRA closure not being met within this work plan, Ohio EPA can only accept a partial implementation of this work plan. Ohio EPA recommends DOE fully characterize the waste already removed from the sump. Additionally, DOE should remove any waste that has re-entered the sump and characterize it. Once the waste has been removed, the sump should be visually or remotely inspected to characterize the integrity of the tank. DOE should go forward with plans to remotely investigate the integrity of waste lines entering the tank.

The removal action should be divided into two phases. The first phase should characterize: 1) the waste material which has been in and continues to enter the sump, 2) the integrity of the sump and waste lines, and 3) the potential source of additional contaminant flow. The second phase of the removal action will be based upon the results of the first. This phase could either lead to the removal of the sump while meeting RCRA closure requirements or the continued pumping of the sump as a collection vehicle until the source of contamination can be determined and remediated.

2. In order for DOE to ensure adequate integration of RCRA and CERCLA at this site, it is essential that DOE send documents which contain Closure Plan Information and Data under a separate cover letter to the Director of OEPA. The district reviewer should be sent a copy of the plan. This parallel submittal will ensure that the Division of Hazardous Waste Management (DHWM) reviews these documents to ensure DOE's compliance with their RCRA requirements. Because DOE and Ohio EPA are still developing the integration of CERCLA and RCRA, the DHWM will not specifically comment on the adequateness of this document as a closure plan until such time as it meets the requirements stated in OAC 3745-66-11 (Closure Performance Standard).

Specific Comments

1. Sec. 2, pg 2-7, para 2: The intent of this removal action is abate a potential release of the sump's contents to the environment. The release is based on fluctuations of the liquid level in the sump. Attachment 1, pg. 2-3, states that the sump may not have been leaking during the sampling program.

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If the integrity of the sump has deteriorated to allow pathways for the liquid to escape then contamination from the sump should be constant. The fact that 500 gallons of liquid remain in the sump indicates that the leakage may be occurring from a different component of the system. If this is true, the sump may be serving as a collection point for the contaminants.

2. Section 3.3.4, pg. 3-4, 3rd Paragraph: Provide a definition of "soil free of contamination" and reference it back to the Removal Action 17 Work Plan.
3. Section 4.0: This section of the work plan should include a figure showing the floor drains within the Pilot Plant and their connection to the sump. This information is necessary to understand the source of waste which continues to enter the sump. Additionally, a figure needs to be included detailing the proposed area of soil excavation once the sump is removed.
4. Section 4.1, pg. 4-7, 3rd Paragraph: Provide more specific references to SOP's or sections within RA #12 and #17 which describe the methods to be used.
5. Sec.4.2, pg.4-7, Last Paragraph: DOE acknowledges the point that fluids may collect in the sump after the initial pump out. Laboratory analysis of the additional liquid, which may accumulate, would be beneficial for determining if high levels of contaminants exist in the area where the additional discharge is originating.
6. Section 4.2, Figure 4-2: Why is the excavation area off-set from the sump? The excavation will encircle the entire sump according to the work plan.
7. Section 4.3: The rationale for removal of the sump is not quite clear if material continues to enter after pumping. If this is waste material where will it accumulate after the sump has been removed. The waste may back up into the drain lines and seep out into nearby soils creating additional mixed waste. It is essential to determine the source of the waste stream prior to sump removal.
8. Section 4.4, pg. 4-10, Last Paragraph: DOE should include a copy of the referenced drawing within the work plan. See comment #2 above.
9. Sec.4, pg.4-11 para.4: During the cleaning of the drain line, material pulled from the line will accumulate at the bottom of the sump. This seems to indicate that the material will be

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- allowed to fall the 4'6" before reaching the bottom. To minimize aeration and/or splashing of this material, it should be captured at the mouth of the drain line.
10. Section 4.5, pg. 4-11, 5th Paragraph: Additional detail needs to be provided concerning the type of plug and method of attachment to be used for sealing the drain line.
 11. Section 4, pg 4-13, para.5: DOE will monitor the lower explosive limit (LEL) in the sump to ensure it is at 0%. This percentage level may not be necessary or cost effective, therefore, DOE may want to reevaluate this.
 12. Section 4.9, pg. 4-14, Last Paragraph: The backfilling of the hole prior to the removal of all contaminated soil, as defined by RCRA, will likely result in the generation of additional hazardous or mixed wastes. Because listed hazardous wastes were contained in the sump, the soils need not fail TCLP to be hazardous. The mere presence of the listed constituents within the soil or debris associated with the sump removal will make these hazardous wastes. The fact that listed wastes were contained in the sump requires that the sump liquid waste be completely characterized (HSLs) as well as any waste associated with the removal.
 13. Section 5: This section needs to incorporate a discussion of the additional waste, be it hazardous or mixed, which will likely be generated as the result of backfilling the hole prior to the removal of all contaminated soil.
 14. Section 5.5.2, pg. 5-6, 3rd Paragraph: It is not clear based upon review of the data within the RSE, what contaminants are present in concentrations high enough to result in a flash point of 118°F. Complete characterization of the liquid waste both that which remains and that which has been removed needs to be completed to answer such questions.
 15. Section 5.5.2, pg. 5-6, 4th Paragraph: The last sentence of this paragraph states that if the sump is refilling "the cause of the increase will be investigated before implementing this RAWP". At the August monthly project managers meeting Ohio EPA was informed that the sump is refilling. This work plan details no efforts to be taken under such circumstances. The work plan needs to be rewritten to address the current situation.
 16. Section 6.1.2, pg. 6-4, bullets: Would process knowledge of the Pilot Plant operations suggest that any reprocessing waste were used? Such wastes might have generated additional

radionuclide contaminants (fission products).

17. Section 6.1.2, pg. 6-4, 1st Paragraph:
 - a) Additional contaminants which failed TCLP must be included in the target analytes. These include benzene and mercury (See Attachment 3, Table 2-1).
 - b) Basing target analytes solely on TCLP results will not be sufficient nor will the use of only three organic analytes. The fact that listed wastes were discharged to the sump requires that a broader range of organic constituents be analyzed. These analyses will be required to determine the RCRA status of soils associated with the sump.
18. Attachment 1, pg. 1-1, para.4 & pg 1-7, Fig 1-7: Several references to the sump's dimension list it as being 11' x 4'dia. while other entries list it as being 9'x 2'dia. DOE needs to verify the dimension and check the calculations used to determine the weights and quantities involved with this project.
19. Attachment 3, Table 2-1:
 - a) The table fails to note that barium also failed TCLP.
 - b) The table fails to include tetrachloroethylene, which was detected in the sump liquid (See Attachment 1, VOC results).
20. Attachment 3, Section 5.12: States that no confined space work is anticipated. The document, however, indicates several tasks which seem to occur inside the sump. By definition the sump is a confined space and therefore the requirements of confined space entry will need to be followed.
21. Attachment 3, Section 6.0, Last Sentence: The last sentence needs to be reworded to state that DOE is required to comply with ARARs unless determined otherwise by OEPA and USEPA. As written it suggests compliance only when specifically determined by the agencies.