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**U.S. DOE - FEMP HAZARDOUS WASTE OH6 890
008 976 HAMILTON COUNTY TSK-LQG**

12/17/93

OEPA/DOE-FN

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LETTER

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State of Ohio Environmental Protection Agency

Southwest District Office

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George V. Voinovich
Governor

December 17, 1993

RE: U.S. DOE-FEMP
HAZARDOUS WASTE
OH6 890 008 976
HAMILTON COUNTY
TSD-LQG

Mr. J. Phil Hamric
Site Manager
U.S. DOE-FEMP
P.O. Box 398705
Cincinnati, Ohio 45239-8705

Mr. Ken Alkema
V.P. Regulatory Programs
FERMCO
P.O. Box 398705
Cincinnati, Ohio 45239-8705

Dear Sirs:

The purpose of this letter is to communicate Ohio EPA Division of Hazardous Waste Management (DHWM) concerns regarding the continued storage of large quantities of uranyl nitrate (UNH) solution at the Department of Energy Fernald Environmental Management Project (FEMP). DOE-FEMP has identified this material as a hazardous waste and has designated the UNH tank systems as Hazardous Waste Management Units (HWMU No's. 46-50).

Following an April, 1992, request for a status report on the uranyl nitrate emergency removal action, the Ohio EPA was notified that DOE-FEMP intended to begin batch treatment of the UNH in May of 1992. Treatment was part of the Emergency Removal Action (RA No. 20) identified as necessary under CERCLA remediation activity. To date, the UNH has not been treated nor has it been removed from the tank systems.

Ohio EPA DHWM is aware of the difficulties and concerns expressed by DOE-FEMP in completing the removal action. However, it is our position that continual storage of the UNH in the existing tank systems may not be protective of human health and the environment. As a result of these concerns, on December 9, 1993, representatives of DHWM initiated an inspection of the UNH tank systems in order to assess DOE-FEMP's compliance with applicable state and federal hazardous waste regulations. The inspection conducted on December 9, 1993, included the visual inspection of 3 tanks located north of plant 2 and three tanks located in the digestion area. Additional information regarding these tanks and the remaining UNH tanks will be requested and reviewed.

Based on this partial inspection of the UNH tank systems, the following violations of the Ohio Administrative Code (OAC) were documented:

Mr. J. Phil Hamric
Mr. Ken Alkema
December 17, 1993
Page 2

1. OAC 3745-66-93(B)(2)&(C)(4) - Containment and Detection of Releases.

In part, these rules require that spill or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health or the environment.

During the inspection we observed accumulated liquid/precipitation within the secondary containment areas of the UNH tanks south of the cooling towers and in the digestion area. Facility representatives indicated that accumulated liquids are not removed from the containment area within a 24 hour period. Therefore, DOE-FEMP is in violation of OAC 3745-66-93(B)(2)&(C)(4).

2. OAC 3745-66-93(C)(3) - Containment and Detection of Releases.

This rule requires that secondary containment systems be provided with a leak detection system that is designed and operated so that it will detect the failure of either the primary and secondary containment structure or any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours.

DOE-FEMP's mechanism to comply with this rule involves daily inspections to detect releases of hazardous waste. The failure of DOE-FEMP to remove accumulated liquids within a 24 hour period affects the ability of DOE-FEMP's inspector to adequately determine if hazardous waste has been released into the secondary containment area. Therefore, DOE-FEMP is in violation of OAC 3745-66-93(C)(3).

3. OAC 3745-66-94(C) & OAC 3745-66-96(A)(B)&(E) - Response to Leaks or Spills and Disposition of Leaking or Unfit for Use Tank Systems.

In part, these rules require cessation of use of the tank upon detection of a leak or spill; removal of waste from tank system or secondary containment system within 24 hours of leak or spill detection; and repair of tank systems prior to returning systems to service.

At least one UNH tank (digestion area) has minor leaks into the secondary containment system. Facility representatives indicate that due to the age and condition of equipment, small

Mr. J. Phil Hamric
Mr. Ken Alkema
December 17, 1993
Page 3

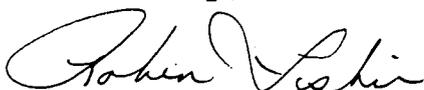
leaks have been occurring for some time. DOE-FEMP's limited response to this situation has been to collect leakage in buckets and periodically return the liquids to the tanks. The tanks have not been taken out of service nor have the leaks been repaired. Therefore, DOE-FEMP is in violation of OAC 3745-66-94(C) & OAC 3745-66-96(A)(B)&(E).

In order to complete our assessment of tank compliance issues, we request additional information as outlined in Attachment A. Additional violations of OAC may be cited following review of this information. Please provide this office with the requested information by January 31, 1994.

In view of scheduled CERCLA clean-up actions and concerns regarding UNH removal, we understand that DOE-FEMP may not be able to fully comply with the tank standards described in OAC 3745-66-91 through 991 and that abatement of the above violations may not be achievable until all waste is removed from these tanks. The DHWM is also fully aware of DOE-FEMP's current inability to remove the UNH from the tank systems. However, in order to comply with the citations described in #1 and #2 above, DOE-FEMP must immediately begin removing all spilled or leaked waste or accumulated precipitation from the secondary containment systems within 24 hours. Additionally, in order to address the citations described in #3 above, DOE-FEMP must submit documentation that describes repair measures that the facility plans to make on the leaking tank systems and a schedule for these activities. Please provide this information by January 31, 1994.

If you have any questions in regard to this correspondence, please contact either myself, Phil Harris or Paul Pardi at 513-285-6357.

Sincerely,



Robin Fisher
Division of Hazardous Waste Management

Enclosure

cc: Daniel Oug, DNFSB
Graham Mitchell, OEPA-SWDO
Laurie Stevenson, OEPA-CO

ATTACHMENT A

ADDITIONAL DATA NEEDS FOR ASSESSING DOE-FEMP'S COMPLIANCE
WITH THE OHIO EPA HAZARDOUS WASTE TANK STANDARDS

1. PROVIDE THE AGE OF EACH TANK CONTAINING UNH.
2. PROVIDE INFORMATION ON THE CONSTRUCTION MATERIALS OF THE TANKS AND THE CONTAINMENT AREAS.
3. PROVIDE CONTAINMENT CALCULATIONS FOR EACH UNH SECONDARY CONTAINMENT AREA (INCLUDING A 25 YEAR, 24 HOUR STORM EVENT).
4. SUBMIT COPIES OF ANY WRITTEN ASSESSMENTS OF TANK SYSTEM INTEGRITY THAT ARE MAINTAINED ON FILE AT DOE-FEMP. IF APPLICABLE, INDICATE HOW OFTEN THE ASSESSMENTS ARE CONDUCTED AND IF THEY ARE CERTIFIED BY AN INDEPENDENT, REGISTERED, PROFESSIONAL ENGINEER?
5. PROVIDE COPIES OF INSPECTION RECORDS FOR EACH UNH AREA FOR THE MONTH OF OCTOBER, 1993.
6. PROVIDE A DESCRIPTION OF THE PROCESS UTILIZED TO REMOVE WATER THAT HAS ACCUMULATED WITHIN THE SECONDARY CONTAINMENT AREAS. INCLUDE THE AMOUNT OF TIME THAT ELAPSES BETWEEN ACCUMULATION OF THESE LIQUIDS AND REMOVAL.
7. PROVIDE A DESCRIPTION OF THE PROCEDURES FOR HANDLING THE MATERIAL THAT IS REMOVED FROM THE SECONDARY CONTAINMENT AREA.
8. PROVIDE CALCULATIONS ON THE LOADING CAPACITY OF THE FOUNDATION OR BASE UPON WHICH THE SECONDARY CONTAINMENT AREA IS BUILT.
9. PROVIDE A PHOTOGRAPH OF THE UNH TANKS SOUTHEAST OF PLANT 2 WHICH WILL INDICATE WHETHER THE TANKS ARE SET FLAT UPON THE SECONDARY CONTAINMENT OR IF THEY ARE RAISED ABOVE THE FLOOR SURFACE.
10. PROVIDE A PHOTOGRAPH OF THE UNH TANKS LOCATED IN THE RAFFINATE BUILDING. THE PART A INDICATES THAT THERE ARE TWO LOCATIONS FOR THESE TANKS; HOWEVER, ONLY ONE PHOTOGRAPH IS INCLUDED IN THE PART A.
11. PROVIDE INFORMATION TO INDICATE IF THERE ARE ANY UNH TANKS THAT ARE LACKING SECONDARY CONTAINMENT.
12. PROVIDE INFORMATION TO INDICATE IF CHEMICALLY RESISTANT WATER STOPS ARE USED AT ALL JOINTS WITHIN THE SECONDARY CONTAINMENT AREA.
13. DESCRIBE INTERIOR COATING FOR EACH SECONDARY CONTAINMENT UNIT INCLUDING AN ASSESSMENT OF COMPATIBILITY WITH THE WASTE.

14. DESCRIBE SECONDARY CONTAINMENT STRUCTURE. IS IT COMPATIBLE WITH THE WASTE MATERIAL?
15. A) IS TANK SYSTEM ANCILLARY EQUIPMENT PROVIDED WITH SECONDARY CONTAINMENT SUCH AS DOUBLE-WALLED PIPING, JACKETING OR TRENCH?
B) PROVIDE DRAWINGS OF EACH TANK UNIT WITH THE ANCILLARY EQUIPMENT LABELLED.
16. INDICATE IF ANY RELEASES TO THE ENVIRONMENT OF GREATER THAN ONE POUND HAVE OCCURRED? IF SO, HAVE THEY BEEN REPORTED TO THE DIRECTOR OF THE OHIO EPA WITHIN 24 HOURS?