



**Department of Energy**

**Ohio Field Office  
Fernald Area Office**

P. O. Box 538705  
Cincinnati, Ohio 45253-8705  
(513) 648-3155



JUN 25 1997  
DOE-1086-97

**Mr. Tom Schneider, Project Manager  
Ohio Environmental Protection Agency  
401 East 5th Street  
Dayton, Ohio 45402-2911**

**Dear Mr. Schneider:**

**THORIUM MIXED WASTE TREATMENT AND STORAGE IN BUILDINGS 64 AND 65 -  
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT**

Over the course of the last several months, the Department of Energy, Fernald Environmental Management Project (DOE-FEMP) has initiated waste characterization activities for its remaining thorium inventories at the Fernald Site. Review of preliminary characterization data indicates approximately 10% of these thorium materials (300-400 containers comprised of 5-gallon pails and 55-gallon drums) will be declared mixed waste upon completion of the characterization process. Once declared mixed waste, these thorium materials will be subject to the treatment, storage, and disposal provisions of the Ohio Environmental Protection Agency's (OEPA) hazardous waste rules promulgated in OAC 3745-50 through 3745-69.

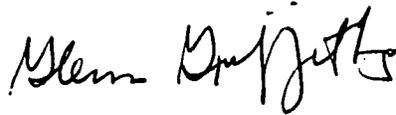
On-site treatment of thorium mixed wastes is planned to begin under the DOE-FEMP Site Treatment Plan in late 1997. Prior to initiating thorium treatment, DOE-FEMP will prepare and submit a Technology Specific Work Plan describing its proposed treatment process for U.S. Environmental Protection Agency (U.S. EPA) and OEPA review and approval. To facilitate management of thorium wastes until treatment is initiated, DOE-FEMP is seeking OEPA concurrence to remove these wastes from their current storage locations in Buildings 60 and 81 and consolidate interim storage of these wastes at the Building 64/65 complex beginning in late June, 1997. Consolidated interim storage at Building 64/65 is advantageous for the following reasons:

- Management of Resource Conservation and Recovery Act (RCRA) regulated thorium wastes can occur within the existing thorium management areas of Building 64/65, thus minimizing the potential spread of on-site thorium contamination. Thorium waste management and/or treatment at the Building 64/65 complex will also maximize use of existing thorium safety controls already in place at these facilities.

- Removal of RCRA regulated thorium wastes from Building 81 will alleviate impacts to the decommissioning and dismantling schedule for Building 81, since decontamination and decommissioning activities at that facility are scheduled to occur prior to the start of thorium treatment.
- Movement of RCRA regulated thorium wastes can be accomplished concurrently with the movement of non-regulated thorium materials to the Building 64/65 complex for centralized processing and off-site shipment, thus reducing potential occupational radiological exposures in accordance with existing DOE As Low As Reasonably Achievable (ALARA) regulations and orders.
- Storage operations at Building 64/65 can be accomplished in compliance with applicable and/or relevant and appropriate RCRA regulations, even though these facilities are not specifically addressed within the FEMP RCRA Part B Permit Application. DOE-FEMP's plans for complying with substantive RCRA storage requirements is summarized in the enclosed applicable or relevant, and appropriate requirements table.

Please contact Robert Danner of my staff at (513) 648-3167 if you wish to discuss any aspects of this project.

Sincerely,



for Jack R. Craig  
Director

FEMP:Danner

Enclosure: As Stated

cc w/enc:

N. Hallein, EM-42/CLOV  
R. Danner, DOE-FEMP  
J. Saric, U.S. EPA  
P. Pardi, OEPA  
S. Beckman, FDF/52-3  
M. Frost, FDF/66  
T. Walsh, FDF/65-2  
RCRA Operating Record  
AR Coordinator/78  
EDC, FDF/52-7

**SUBSTANTIVE RCRA STORAGE REQUIREMENTS  
THORIUM MIXED WASTE STORAGE BLDG. 64/65**

PERMIT THAT WOULD BE REQUIRED	PERMIT REQUIREMENTS (ARARS)	COMPLIANCE PLAN
Resource Conservation and Recovery Act (U.S.C. 6901 et. seq.)	Interim Status: Treatment, Storage, and Disposal General Facility Standards (OAC 3745-65-13 through 16) (40 CFR 265.13 through 265.16)	Thorium mixed waste storage will be conducted at the Building 64/65 complex in accordance with substantive RCRA regulations. Existing site security measures will be utilized. Inspections of the outside of the Building 64/65 complex will be conducted on a weekly basis to minimize occupation doses in accordance with DOE's ALARA requirements. Personnel will be trained in accordance with Fernald Site requirements. Appropriate warning signs will be posted in all waste storage areas associated with the project.
	Interim Status: Treatment, Storage, and Disposal Facility Preparedness and Prevention (OAC 3745-65-31 through 35, 3745-65-37) (40 CFR 265.31 through 265.35, 265.37)	Preparedness and prevention equipment, as specified in regulations, will be on-site, available, and in operating condition throughout the duration of thorium mixed waste storage. The existing site-wide internal communications/alarm systems will be used. Portable fire extinguishers and spill control equipment will be placed in accessible locations to assist in emergency response. Warning signs will be posted at all entrances. The site emergency preparedness and spill response procedures will be followed in the event of a spill or release. A minimum aisle space of 22-inches will be maintained between containers. A four foot main aisle space will also be maintained.
	Interim Status: Treatment, Storage and Disposal Facility Contingency Plan and Emergency Procedures (OAC 3745-65-51 through 56) (40 CFR 265.51 through 265.56)	The existing RCRA FEMP Contingency Plan and Emergency Procedures will be followed for any hazardous waste emergency associated with thorium mixed waste storage.
	Container Storage (OAC 3745-52-34, 3745-66-70 through 77) (40 CFR 262.34, 265.170 through 265.177)	Containers of thorium mixed wastes will be managed at the Building 64/65 complex. To minimize occupational dose to site personnel, waste inspections will be limited to the outsides of the Building 64/65 facility and will only be conducted on a weekly basis. Secondary containment will be provided for thorium mixed wastes upon segregation of these wastes from the non-RCRA regulated thorium inventory. Containers will be handled in a manner to prevent rupture, leakage, or spillage. Wastes will be compatible with their containers and containers will be properly labeled and will remain closed during storage.