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**WRITTEN REPORT ON THE POSSIBLE  
RELEASE FOR THE FERNALD  
ENVIRONMENTAL MANAGEMENT PROJECT  
(FEMP) PLANT 1 PAD**

**03-10-1992**

**DOE/OEPA  
DOE-1085-92  
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LETTER**



Department of Energy  
Fernald Environmental Management Project  
P.O. Box 398705  
Cincinnati, Ohio 45239-8705  
(513) 738-6357

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MAR 10 1992

DOE-1085-92

Mr. Donald R. Schregardus, Director  
Ohio Environmental Protection Agency  
1800 WaterMark Drive  
P.O. Box 1049  
Columbus, Ohio 43266-0149

Dear Mr. Schregardus:

**WRITTEN REPORT ON THE POSSIBLE RELEASE FROM THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP) PLANT 1 PAD**

Ohio Environmental Protection Agency (OEPA) was informed of the possible release of regulated materials from the FEMP Plant 1 Pad on February 18, 1992. Pursuant to Ohio Revised Code (ORC) 3750.06(D) and the Code of Federal Regulations [40 CFR 355.40(b)], a written report is also required. The enclosed report has been prepared to meet these requirements and provide updated information on the event.

If you or your staff have any questions, please call Ed Skintik at (513) 738-6660.

Sincerely,

A handwritten signature in cursive script that reads "R. E. Tiller".

R. E. Tiller  
Manager

FN:Skintik

Enclosure: As Stated

cc w/enc.:

E. D. Savage, WEMCO  
AR Coordinator, WEMCO

1  
*[Handwritten mark]*



**Department of Energy**  
**Fernald Environmental Management Project**  
P.O. Box 398705  
Cincinnati, Ohio 45239-8705  
(513) 738-6357

MAR 10 1992

DOE-1085-92

Mr. James A. Saric, Remedial Project Director  
U.S. Environmental Protection Agency  
Region V - HRE-8J  
77 West Jackson Street  
Chicago, Illinois 60604

Mr. Graham E. Mitchell, Project Manager  
Ohio Environmental Protection Agency  
40 South Main Street  
Dayton, Ohio 45402-2086

Dear Mr. Saric and Mr. Mitchell:

**WRITTEN REPORT ON THE POSSIBLE RELEASE FROM THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP) PLANT 1 PAD**

Ohio Environmental Protection Agency (OEPA) was informed of the possible release of regulated materials from the FEMP Plant 1 Pad on February 18, 1992. Pursuant to Ohio Revised Code (ORC) 3750.06(D) and the Code of Federal Regulations [40 CFR 355.40(b)], a written report is also required. The enclosed report has been prepared to meet these requirements and provide updated information on the event.

If you or your staff have any questions, please call Ed Skintik at (513) 738-6660.

Sincerely,

Handwritten signature of R. E. Tiller in cursive.

R. E. Tiller  
Manager

FN:Skintik

Enclosure: As Stated

cc w/enc.:

E. D. Savage, WEMCO  
AR Coordinator

40 CFR 355.40(b) AND ORC 3750.06(D) RELEASE REPORT  
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)  
FERNALD, OHIO

A. BACKGROUND INFORMATION:

The Fernald Environmental Management Project (FEMP) has been sampling materials stored in drums on the Plant 1 Pad to characterize waste materials for interim storage and/or disposal. Also, extensive efforts are ongoing to inspect containers in storage and to overpack as needed due to evident container deterioration. During these operations, 9 drums of a waste stream described as 1,1,1-Trichloroethane, had an accumulative weight loss of 24 pounds. Analytical results for this waste stream have not been received. However, the waste has been characterized as RCRA hazardous waste by process knowledge. Process knowledge indicates that this waste potentially contains Spent Solvents (specifically 1,1,1-trichloroethane), (F002 & F003) and Benzene (D018).

While overpacking and weighing of the containers, weight discrepancies (both gains and losses) were noted from the weights recorded on the original containers. A total of 9 containers of this material were reweighed and overpacked for storage resulting in an unaccounted total weight loss of 24 pounds. Since no data exist on constituent concentrations, the entire weight loss must be compared to the respective constituent Reportable Quantity (RQ) to determine reportability. Thus, the RQ for the suspected constituent of Benzene, which is 10 pounds, was exceeded by the apparent loss of 24 pounds.

Information indicates that some of the containers were in storage for 5 years, and it cannot be conclusively determined if a RQ release of a hazardous substance had occurred within any one 24 hour period. As a conservative approach, notifications were made on February 18, 1992 pursuant to CERCLA, SARA, and Ohio Revised Code reporting requirements for the release of hazardous substances. The FEMP RCRA Contingency Plan for hazardous waste releases was not implemented, since the potential release was historical in nature and no imminent threat to human health or the environment was indicated.

B. REQUIRED INFORMATION:

Pursuant to 40 CFR 355.40(b) and ORC 3750.06(D), a written report on the release is required to be submitted within 30 days of the event. The following information is provided to meet these requirements.

Updated Information

1. Location of the potential release: The potential release was from 6 containers stored in the Plant 1 Pad area located in the northwest area of the FEMP site (Attachment 1). The containers were also stored in warehouses during some period since their date of generation.
2. Chemical name and identity of any substance involved in the release and whether the substance is an extremely hazardous substance: No extremely hazardous substances have been identified in this material. The drums contain a RCRA regulated material waste stream which is suspected of containing the hazardous waste constituents of Benzene and Spent Solvents (1,1,1-trichloroethane), which have Reportable Quantities of 10 pound and 1000 pounds respectively. The RQ for Benzene was exceeded in this incident.
3. Estimate of the quantity of any hazardous substance released into the environment: A total of 6 containers showed an unaccounted for weight loss of 41 pounds. However, spilled material was not noted at the location where the drums had been previously stored.

Uranium loss could also have occurred. This potential loss cannot be calculated as no analysis exists. However, the RQ for uranium at the enrichment of, 0.5% U-235 is 385 pounds.

4. Time and duration of the release: Some of the drums have been stored in several locations for approximately 5 years, and reweighing is usually conducted when the drums are overpacked. Therefore, the exact time, location and duration of any potential release cannot be determined, nor can it be determined if any RQ release had occurred in any 24 hour period in the past.
5. Environmental media into which the substance was (potentially) released: The Plant 1 Pad drains to the FEMP storm sewer system. The storm sewer drains discharge to the Storm Water Retention Basin (SWRB) which is pumped, after retention for settling, to Manhole 175 and then to the Great Miami River. Prior to 1989, the storm sewer discharged directly to Manhole 175. Since the containers were generated prior to 1989, it is possible that released materials have gone through the FEMP storm sewer system to the Great Miami River. The storm sewer flows going to the Great Miami River are monitored for uranium on a daily basis. However, routine monitoring is not performed for RCRA hazardous waste constituents in the Great Miami River discharges.

In addition to possible storm sewer discharges, any released materials could have run off the Plant 1 Pad into an adjacent field to the west of the pad. Sampling of this area has indicated some uranium contamination in the soil. However, the source of the contamination has not been determined at this time. Analyses of soil samples for total metals have indicated isolated low level concentrations of RCRA materials, but the source of the contamination has not been

determined. [REDACTED]

6. Known or anticipated acute or chronic health risks associated with the release: There are no known or anticipated health risks as a result of the potential release. The most probable individuals with the potential to be affected, if any, would have been Plant 1 Pad workers, who are regularly monitored through a bioassay program for internal contamination. Intakes associated with the materials discussed in this report have not been noted.
7. Proper precautions to take as a result of the release: Special precautions or emergency response actions were not taken as a result of the discovery of this potential release. All FEMP workers involved in the drum movement and overpacking operation were properly trained prior to the start of this operation.
8. Name and telephone number of the person or persons to be contacted for further information: Mr. David Rast, DOE-FO, (513) 738-6357 or E. Skintik, DOE-FO, (513) 738-6660.

Information under 40 CFR 355.40(b) and ORC 3750.06(D)(1)-(5)

1. Actions taken to respond to and contain the release: The containers were overpacked. Because release of material was not noted, and visible contamination was not observed, additional response and containment actions were not taken. The Plant 1 Pad is identified as a RCRA storage unit.
2. Known or anticipated acute or chronic health risks associated with the release: There are no known or anticipated health risks as a result of the potential release.
3. Advice regarding medical attention necessary for individuals exposed to the substance release: Medical advice was not warranted as a result of the potential release.
4. Summary of all actions taken by the owner or operator to prevent a recurrence of the release: The defective containers involved were placed into overpack drums, and are being inspected daily until they are transported to an approved hazardous waste storage facility.

Additional actions that are underway include:

- \* Daily inspections of all the drums on the Plant 1 Pad are performed to identify badly deteriorated drums that present an immediate risk of leakage.
- \* Efforts are ongoing to move a portion of the drums out of the weather from outdoor storage into existing FEMP process buildings.
- \* Contamination barriers constructed of impermeable herculite and PVC piping have been erected to contain potential releases from drums to the Plant 1 Pad.
- \* Efforts are ongoing to analyze and characterize all waste drums on the Plant 1 Pad.
- \* Planning is in progress to process the non-hazardous low level radioactive wastes to allow offsite disposal.

