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**REMOVAL #7 & OU #3
U.S. DOE FERNALD
OH6 890 008 976**

12-13-90

**USEPA/DOE-FSO
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LETTER**



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Vincent Work Log

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

DEC 13 1990

REPLY TO ATTENTION OF:

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

5HR-12

RE: Removal #7 & OU#3
 U.S. DOE Fernald
 OH6 890 008 976

Dear Mr. Avel:

→ The United States Department of Energy (U.S. DOE) submitted an Outfall Pipeline Investigation to the United States Environmental Protection Agency (U.S. EPA). The effluent line is a part of Operable Unit (OU) #3 and the investigation of the line needs to be included in a proposed work plan addendum. Work plans and resulting reports need to be included in the administrative record. U.S. EPA has reviewed U.S. DOE submittal and has the following comments:

1. U.S. DOE should state the purpose of the field work in the work plan addendum.
2. The procedures used to test the integrity of the pipeline are capable only of detecting leaks under low-pressure conditions, such as gravity flow in sewer pipe constructed of vitrified clay or concrete. The outfall pipeline is constructed of cast iron and sections have operated under pressure flow conditions. Therefore, testing procedures may not have been sufficient to determine structural weaknesses under past operating conditions. Also, the integrity testing is not adequate to determine the outfall pipeline's potential to leak under proposed operating conditions.
3. A more appropriate test method, such as pressure testing of the ductile iron, must be proposed.
4. None of the manholes were pressure tested. All manholes (especially those not designed for pressure flow) need to be pressure tested. Historic information indicates that effluent has backed up into the areas surrounding the effluent line (manhole 180).
5. The results of the integrity testing cannot be used to determine the potential for leaks under proposed operating

conditions. Additional testing should be proposed (as stated above) to include pressure testing to 150 percent of the maximum expected flow. This is necessary to demonstrate that the effluent line is suitable to handle the proposed added flows.

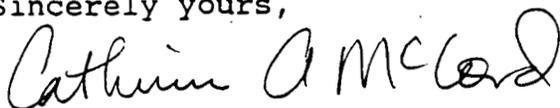
6. Two methods of testing the last section of the effluent line (from manhole 180 to the Great Miami River) would provide additional information. First, it may be possible to position a plug at the end of the last section of the pipeline from an upstream location (i.e., manhole 179). Second, the river may provide enough pressure at high water stages to conduct the low-pressure integrity test.
7. The section of pipeline between manholes 179 and 180 failed the integrity testing; however, no soil samples were collected from this section. Soil sampling and possibly groundwater monitoring is required.

U.S. DOE should submit a revised proposed work plan addendum to address the Remedial Investigation (RI) activities. This addendum should address the above deficiencies and present proposal for any other work that is required to address current or past releases from the effluent line. This work plan must be submitted within thirty (30) days of the date of this letter.

Additionally, the effluent line work that has been performed indicates that a removal action is necessary. This removal action is designated removal #7 under the 1990 Consent Agreement. U.S. DOE should submit the work plan for this time-critical removal 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