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OhioEPA

State of Ohio Environmental Protection Agency

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George V. Voinovich
Governor

February 25, 1999

RE: DOE FEMP
COMMENTS OSDF
LTS LEAKS

Mr. Johnny Reising
U.S. Department of Energy, Fernald Area Office
P.O. Box 538705
Cincinnati, OH 45253-8705

Dear Mr. Reising:

This letter provides as an attachment a list of Ohio Environmental Protection Agency concerns with the recently discovered leaks in the OSDF leachate transmision lines.

If you have any questions, please contact Tom Ontko or me.

Sincerely,

Tom Ontko
for Thomas A. Schneider
Fernald Project Manager
Office of Federal Facilities Oversight

cc: Jim Saric, U.S. EPA
Ruth Vandergrift, ODH
Terry Hagen, FDF
Mark Shupe, HSI GeoTrans
Francie Hodge, Tetra Tech EM Inc.
Manager, TPSS/DERR,CO

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Ohio Environmental Agency concerns with the leaks discovered in the OSDF Leachate Transmission System

1) The Ohio EPA has serious concerns that the temporary leachate transmission system can operate as designed. The discovery of leaks less than two years after the system was installed and pressure tested causes us to doubt the integrity of the system even assuming that all known failures are repaired and satisfactorily pressure tested. A thorough analysis that satisfactorily explains the reasons for the problems and proposes solutions that address the root causes of the system failures will be required before we can determine that the system will perform as required.

2) The existence of problems in the leachate transmission system were discovered by observing water in the bottom of Manhole #3. This water was apparently leachate that had backed up the entire length of the containment pipe through the container pipe. The existence of this water was written off as weepage, condensation, *de minimis* accumulation, etc. for an indefinite period of time. Ohio Administrative Code 3745-27-08(C)(5)(a) requires that leachate transmission systems be monitored as required by the Director of the Ohio EPA. A plan should be developed to evaluate the performance of the leachate transmission system from Manhole #1 to the BSL outfall. This plan should be submitted to Ohio EPA for review and approval. Because of the ambiguities in interpreting the presence of water in the bottom of the manholes, this plan should include regularly checking the sampling valves at the fixed end seals in the permanent lift station.

3) Many sections of six-inch carrier pipe have been discovered to be drastically distorted into an oval cross-section. The pipe manufacturer should be consulted and the potential for manufacturing defects to contribute to the dimensional distortion should be evaluated if Fernald-specific causes are ruled out. During excavations in Hole #4, the long axis of the deformation was observed to not to be consistently horizontal but at times to be oriented diagonally. The explanation for the pipe deformation should address why the flattened dimension is not uniformly oriented.

4) Problems were experienced with the 10 inch electrofusion couplings during installation in 1997. The leak excavated in Hole #3 was the first time that problems were experienced with the 6 inch electrofusion couplings. Although the cause of this leak does not appear to be as intractable as the other problems, it is unclear how the pipe could have passed a pressure test in 1997 and then to have failed profoundly less than a year and a half later.

5) Hole #4 was excavated to recover the lost camera but this is also the location where the carrier pipe was found to be damaged. Given that the excavating crew are adamant in their assertion that the damage was present when the pipe was uncovered, there is no obvious explanation why the lost camera and the damaged container pipe are co-located.

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