



Department of Energy

**Ohio Field Office
Fernald Area Office**

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



JUL 14 2003

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V, SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0430-03

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

Dear Mr. Saric and Mr. Schneider:

**TRANSMITTAL OF RESPONSE TO UNITED STATE ENVIRONMENTAL PROTECTION
AGENCY COMMENT RESPONSE ON THE ON-SITE DISPOSAL FACILITY PHASE V
SUPPORT PLANS, CONSTRUCTION DRAWINGS AND DESIGN CRITERIA PACKAGE**

- References:
1. Letter DOE-0323-03, J. Reising to J. Saric/T. Schneider, "Transmittal of Responses to Comments on the On-Site Disposal Facility Phase V Support Plans, Construction Documents and Design Criteria Package," dated April 10, 2003
 2. Letter, J. Saric to J. Reising, "Revised Final Design Criteria Package OSDF Phase V RTC," dated May 14, 2003

Enclosed for your final approval and record is the response to the United States Environmental Protection Agency (USEPA) comment response on the On-Site Disposal Facility (OSDF) Phase V Support Plans, Construction Drawings and Design Criteria Package. Upon approval of this comment response, the Revised Final OSDF Phase V Package will be transmitted.

Mr. James A. Saric
Mr. Tom Schneider

-2-

DOE-0430-03

If you have any questions or need further information, please contact Johnny W. Reising, at (513) 648-3139.

Sincerely,



Glenn Griffiths
Director

FCP:Reising

Enclosure: As Stated

cc w/enclosure:

R. Janke, OH/FCP
D. Pfister, OH/FCP
J. W. Reising, OH/FCP
T. Schneider, OEPA-Dayton (three copies of enclosures)
G. Jablonowski, USEPA-V, SR-6J
M. Cullerton, Tetra Tech
F. Bell, ATSDR
M. Shupe, HSI GeoTrans
R. Vandegrift, ODH
AR Coordinator, Fluor Fernald, Inc./MS78

cc w/o enclosure:

R. Greenberg, EM-31/CLOV
N. Hallein, EM-31/CLOV
J. Reising, OH/FCP
R. Abitz, Fluor Fernald, Inc./MS64
T. Beasley, Fluor Fernald, Inc./MS60
D. Carr, Fluor Fernald, Inc./MS1
J. Chiou, Fluor Fernald, Inc./MS64
T. Hagen, Fluor Fernald, Inc./MS1
U. Kumthekar, Fluor Fernald, Inc./MS64
D. Powell, Fluor Fernald, Inc./MS64
T. Poff, Fluor Fernald, Inc./MS65-2
W. Zebick, Fluor Fernald, Inc./MS60
ECDC, Fluor Fernald, Inc./MS52-7

**RESPONSE TO U.S. ENVIRONMENTAL PROTECTION AGENCY
TECHNICAL REVIEW COMMENT RESPONSE ON THE
REVISED FINAL ON-SITE DISPOSAL FACILITY PHASE V
SUPPORT PLANS, CONSTRUCTION DRAWINGS,
AND DESIGN CRITERIA PACKAGE
(20100-CA-0001, 20100-DC-0001, 20100-PL-0004, 20105)**

FERNALD CLOSURE PROJECT

SPECIFIC COMMENT

Commenting Organization: U.S. EPA

Commentor: Saric

Section #: 2.5.3.A

Page #: 2-47

Line #: NA

Original Specific Comment #: 41

Original Comment: The third bullet item states that the EPLTS gravity line should be constructed with a minimum slope of 0.25 percent. Consideration should be given to settlement of the line that would affect a 0.25 percent slope. The text should be reviewed and revised accordingly.

Revised Comment: Specific Comment No. 41 comments on technical feasibility issues inherent in the EPLTS design. If these technical issues have been previously addressed, the appropriate reference should be given or the text should be revised to state why these changes are not technically necessary.

Response: The EPLTS valve houses have been constructed in accordance with the U.S. EPA approved design.

Action: No action required.

May 14, 2003 Response to Comment Response

Original Comment: Original Specific Comment No. 41 recommends that consideration be given regarding the settlement of the Enhanced Permanent Leachate Transmission System (EPLTS) gravity line with a 0.25 [percent] slope. Previous OSDF landfill cells have had problems with construction of the EPLTS, causing leachate to back up into the landfill. Although the previous EPLTS has been constructed in accordance with a U.S. EPA approved design, the text should discuss how U.S. DOE will assure proper construction of the Phase V EPLTS and prevent excessive settlement.

Response: Original Comment 41 questioned the ability to construct the EPLTS line such that settlement would not affect the required minimum slope of 0.25 percent. As constructed, the minimum slope of the EPLTS gravity line is 0.40 percent, with most sections at 0.79 percent. The minimum as-built slope of 0.40 percent is less flow restrictive than the required minimum slope of 0.25 percent. Settlement of the underlying soils necessary to impact the line such that the slope would be reduced to less than 0.25 percent is not considered to be realistic. The minimum slope of 0.40 percent will not be affected by the future construction of OSDF EPLTS Valve Houses 7 and 8 as they are to be installed along the existing EPLTS line between Valve House 6 and the Control Valve House.

Follow up commentary implies that back up of waters into the OSDF cells is related to line settlement. This is not the case. Review of the design calculations for the EPLTS Pipe Hydrograph (Geosyntec Consultants, January 10, 2000) anticipates temporary storage of waters in the cells and the EPLTS line. This temporary storage will occur, in varying volumes, any time the flow rate from the OSDF exceeds the discharge flow rate of the Permanent Lift Station (PLS). The discharge capacity of the PLS is approximately 200 gpm. When inflow exceeds outflow, the level in the PLS rises and a motor operated valve closes in the Control Valve House. This level control valve ensures that overflow of the PLS does not occur and that leachate is safely contained within the EPLTS or the OSDF. The EPLTS Pipe Hydrograph design calculations anticipate that the 25-year, 24-hour storm event will take up to a maximum of 11.8 days to drain impacted runoff from the OSDF for the worst case condition anticipated for the OSDF closure. It should be noted that the volume of impacted runoff will fluctuate as the number of cells with active catchment areas, completed caps, or in initial construction configuration changes. Intuitively, as the number of open catchments decreases, the back up of waters will decrease, until such time as all cells are capped.

These design details have all been previously reviewed and approved by the EPAs.

Action: No action required.