



State of Ohio Environmental Protection Agency

Southwest District Office

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FERNALD
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MAY 30 10 17 AM '97
FILE: *[initials]*

George V. Voinovich
Governor

May 28, 1997

RE: DOE FEMP
MSL 531-0297
HAMILTON COUNTY
COMMENTS - OU4 VIT PP
PHASE I CAMPAIGN 4 REPORT

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

Dear Mr. Reising:

Ohio EPA has received DOE's Operable Unit 4 Vitrification Pilot Plant Phase I Interim
Treatability Study Report dated April 8, 1997. Attached are Ohio EPA comments.

If you have any questions, please contact Kelly Kaletsky (937-285-6454) or me.

Sincerely,

Kelly Kaletsky / for

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

- cc: Jim Saric, USEPA
- Terry Hagen, FERMCO
- Ruth Vandergrift, ODH
- Bob Geiger, PRC
- Manager, TPSS/DERR, CO
- Dave Ward, GeoTrans

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partial
action response
to doe-0779-97
(10494)*

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**OHIO EPA COMMENTS ON OPERABLE UNIT 4 VITRIFICATION PILOT PLANT
PHASE I INTERIM TREATABILITY STUDY REPORT**

- 1) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 1.3 Pg #: 1-2 Line #: Code: C
 Original Comment #:
 Comment: The text describes one of the objectives achieved in Campaign 4 was the successful handling of materials containing high lead concentrations. Seeing that one of the possible causes of the melter failure was the pooling of lead in the bottom of the chamber, Ohio EPA would tend to question the successful handling of lead in the slurry.
 Response:
 Action:
- 2) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.4.9.2 Pg #: 2-20 Line #: Code: C
 Original Comment #:
 Comment: Urea has been successfully used to treat sulfate foaming in the melter. However, the document states water can also be used for the same purpose. Since water would be cheaper and easily obtainable, please describe why urea continues to be used instead of water.
 Response:
 Action:
- 3) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.7 Pg #: 2-27 Line #: Code: C
 Original Comment #:
 Comment: Explain the term "minors".
 Response:
 Action:
- 4) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.1.2 Pg #: 3-4 Line #: Code: E
 Original Comment #:
 Comment: Complete the last sentence in the first full paragraph on the page.
 Response:
 Action:
- 5) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.4 Pg #: 3-10 Line #: Code: C
 Original Comment #:
 Comment: Please provide a schematic drawing of the modifications made to the NOG system prior to the start of Campaign 4. A drawing showing the NOG before and after modifications would be easier to understand than a verbal description of the changes.

Response:

Action:

- 6) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.5 Pg #: 3-12 Line #: Code: C
 Original Comment #:
 Comment: Is the recycle water used to flush the slurry lines the same water that is recycled for use in the off-gas system? If so, a settling or filter system is not mentioned and would be necessary to prevent damage to the off-gas system.
 Response:
 Action:
- 7) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 5.1.2.4 Pg #: 5-19 Line #: Code: C
 Original Comment #:
 Comment: Is there any explanation why the power input dropped for 10 hours during the middle of Batch 6 while the bath temperature was maintained at 1250 degrees?
 Response:
 Action:
- 8) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 5.3 Pg #: 5-48 Line #: Code: C
 Original Comment #:
 Comment: It appears the three TCLP runs were performed incorrectly. The text describes that in one run the glass was broken down into finer pieces than other batches and that runs were combined. A proper TCLP requires a constant sieve size and a separate run for each batch.
 Response:
 Action:
- 9) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 5.5.8 Pg #: 5-66 Line #: Code: C
 Original Comment #:
 Comment: Will a design change be made in the discharge chamber to keep migrating glass from blocking the discharge chamber orifice?
 Response:
 Action:
- 10) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 6.3.1 Pg #: 6-5 Line #: Code: C
 Original Comment #:
 Comment: Further describe the Melter Feed Pump seal tank, including the purpose of the tank, contents of the tank and why it had to be filled repeatedly.
 Response:
 Action:

- 11) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 7.3.3 Pg #: 7-8 Line #: Code: C
Original Comment #:
Comment: Please describe the criteria for changing a HEPA filter.
Response:
Action:
- 12) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 7.3.4 Pg #: 7-9 Line #: Code: C
Original Comment #:
Comment: The text states that only data from the second sampling period was used during isokinetic sampling in Campaign 4. Were there any abnormal occurrences during the first sampling period that might indicate elevated levels of contaminants may have been released through the stack while it was not being sampled? Could an alternative method be used to help determine the release of contaminants?
Response:
Action:
- 13) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 7.4 Pg #: 7-10 Line #: Code: C
Original Comment #:
Comment: Are the BST wastewater samples that fail TCLP treated in the AWWT?
Response:
Action:
- 14) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 7.8.2.2 Pg #: 7-16 Line #: Code: C
Original Comment #:
Comment: This section describes a "considerable time delay" between environmental sampling events and the time resulting data was available. In addition to the time delay, the text states that samples were sometimes lost. Please describe what steps are being taken to assure that these problems are being corrected.
Response:
Action: