



State of Ohio Environmental Protection Agency

Southwest District Office

401 East Fifth Street
Dayton, Ohio 45402-2911
(513) 285-6357
FAX (513) 285-6249

FERNALD _____

LOG A-0171

Oct 29 8 40 AM '99

FILE: 5412

LIBRARY: _____

-- 2592

George V. Voinovich
Governor

October 27, 1999

Mr. Johnny Reising
U.S. DOE FEMP
P.O. Box 398705
Cincinnati, OH 45329-8705

RE: COMMENTS ON THE INTEGRATED ENVIRONMENTAL MONITORING STATUS REPORT FOR SECOND QUARTER 1999

Dear Mr. Reising:

Ohio EPA has reviewed the Integrated Environmental Monitoring Status Report for the Second Quarter 1999 submitted by DOE. This letter provides, as an attachment, the comments from the Ohio EPA.

If there are any questions, please contact me at (937) 285-6466 or Donna Bohannon at (937) 285-6543.

Sincerely,


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

- cc: Jim Saric U.S. EPA
- Terry Hagen, Fluor Daniel Fernald
- Francis Hodge, Tetrattech
- Ruth Vandegrift, ODH
- Mark Schupe, HSI Geotrans
- Manager TPSS, DERR

**INTEGRATED ENVIRONMENTAL MONITORING
STATUS REPORT FOR SECOND QUARTER 1999**

1. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: General Pg. #: Line #: Code:
 Comment: The reporting of the LDS and LCS monitoring data is too hard to follow. Information on the LDS flows is scattered throughout two figures (flow volumes), two tables (analytical data) and three pages of text. The Tables are confusing because they are titled as providing first quarter data yet a footnote indicates that the highlighted data is from the first quarter. It is not clear if the data not highlighted is from the second quarter or the first quarter.
 As much data as possible should be placed in tables. Highlighting should not be used. The following is one such data table.

Data in this table is from the 2nd Quarter 1999 IEMP.

	LCS total flows both cells gallon's	LCS cell 1	LDS cell 1	LDS cell 2	LCS cell 2
April 1999 total flow	275,262#		133.2 gallons #	455.0 gallons #	
May 1999 total flow	275,066#		0 gallon's* #	452.7 gallons #	
June 1999 total flow	287,877#		168.2 gallons #	962.2 gallons #	
First Quarter Data		ND#	20.17 ug/L total U 0.52 gpad#	50.37 ug/L# total U 4.5 gpad#	22.022 ug/L#
Second Quarter Data		up to 119 ug/L	1.5 and 20.17 ug/L	50.37# and 71 ug/L	17.1 and 22.022 ug/L
June 29, 1999				15.7ug/L #	

*Inconsistent with Figure 1-37 which states an average of 0.37 gal/acre/day was pumped from May 4 thru June 1.

Indicates data provided in text.

1-30) was in excess of the FRL. The First Quarter 1999 sampling at 12373D (Figure 1-31) was terminated at a depth with greater-than-FRL total uranium concentrations. The Geoprobe sampling should be performed consistent with the plan.

6. Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #: 1.0 Pg. #: Figure 1-31 Line #: N/A Code: C
Original Comment #:
Comment: The contouring shown on the figure should honor the data which is not the case for the 20 ug/L contour line.

7. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 1.2 OSDF Leak detection Monitoring Pg. #: 1-7 Line #: 4 Code: C
Comment: The text states that "... the liner systems for cells 1 nad2 are performing as designed in that the accumulation rates are far below the on-site disposal facility design-established an initial response leakage rate of 20 gpad." While we don't necessarily disagree with that statement, it is not completely accurate. The OSDF was designed to leak at rates very much less than the initial action leakage rate. Actually, the Workshop referenced in this Section describes a study that measured field performance of landfills comparable in design to the OSDF. Cell 1's performance as measured by volumes in the leak detection system per unit Ara is inferior to all but one of the landfills in the study.

8. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 1.2 Pg. #: 1-7 Line #: 33 Code: C
Comment: The Text states that monitored constituents in the LCS were undetectable except for boron and total organic halogens. According to Table 1-6, total uranium in the Cell 1 LCS was detected in four of five samples at concentrations up to 119 ug/L. Resolve the discrepancy.

9. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 1.2 Pg. #: 1-6 Line #: 38 Code: C
Comment: The text states that in May 0 gallons were pumped from the Cell 1 leak detection system but Figure 1-37 indicates that 0.37 gal/acre/day was pumped from the LDS of Cell 1 between May 4 and June 1. Resolve this discrepancy.

10. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 2.2 Pg. #: 2-2 Line #: 31 Code: C
Original Comment #:
Comment: Construction activities associated with the WPRAP also potentially impact STRM 4005. The pumped discharge from the storm water management pond has been

redirected to discharge to Paddys Run through this NPDES discharge point.

11. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 2.2 Pg. #: 2-2 Line #: 33 Code: C
Original Comment #:
Comment: Loading and shipping of trains could also potentially impact Paddys Run and location SWP-02.

12. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2 Pg. #: 3-2 Line #: 21-31 Code: C
Original Comment #:
Comment: The assumption that equilibrium between Th-232 and daughters is a good assumption, but stating that this supported by background results is not a good idea. Background results are assumed to be not affected by site emissions, where as fence line monitors are affected. The assumptions should be based on the results from fencing monitors only, and should only be used when laboratory results are rejected.

13. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2 Pg. #: 3-2, 3-3 Line #: 33-48, 1-4 Code: C
Original Comment #:
Comment: The fact that at the present time, thorium is the leading contributor to dose is interesting. Has any research been performed that would support that ambient air provides a higher thorium dose than uranium? Or is this an artifact of sampling with very low yields? If the trend persists, what type of changes may be expected in the IEMP?

14. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2 Pg. #: 3-3 Line #: 21-27 Code: C
Original Comment #:
Comment: Is a current detailed status report for DOE-EML Air Monitoring Research Project available? If yes, please provide a copy to OEPA/OFFO.

15. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2 Pg. #: 3-8, 3-9 Line #: Tables 3-3 & 3-4 Code: C
Original Comment #:
Comment: Please add a row at the bottom of each table showing the dose from each individual isotope. (This is always a good QA/QC practice, ensuring the sums are equal in both directions).

16. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2 Pg. #: 3-10 Line #: Table 3-5 Code: C
Original Comment #:
Comment: Please provide a footnote stating that the LLD for any single hourly measurement is a nominal 0.3 pCi/L per manufacturer's specification.
17. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2 Pg. #: 3-13 Line #: Table 3-8 Code: E
Original Comment #:
Comment: The footnotes a, b, c, etc. appear to have been cut off the left side of the page.
18. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2 Pg. #: Figure 3-4 Line #: na Code: C
Original Comment #:
Comment: The scale for AMS-3 is twice the scale for other tables in the figure. To aid in quick comparison of the data, please keep the scales uniform by reducing the AMS-3 scale and adding a note to show the one point that falls outside the range.
19. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2 Pg. #: Figures 3-10 & 3-11 Line #: na Code: C
Original Comment #:
Comment: Plot the four locations: WPTH-1, WPTH-2, AMS-12, and AMS-16 on same graph for each isotope of thorium. This will aid in efficient review of data.
20. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2 Pg. #: Figure 3-17 Line #: na Code: C
Original Comment #:
Comment: This graph indicates that the direct radiation measurement's AMS-6 continue to increase, but the silo concentrations during the same period have decreased. DOE has maintained that direct radiation readings at AMS-6 are due to silo head space concentrations. This inconsistency, evidenced this quarter, warrants a closer look at the silo radon measurement instrumentation. Please investigate any inconsistencies with the silo radon instrumentation. Small factors, such as moisture, daughter plate out on the lucas cell, and leaking sample lines could affect the measurement.
21. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 4.0 Pg. #: 4.3 Line #: 5-11 Code: C
Original Comment #:
Comment: This states that turbidity greater than that in Paddys Run was observed in the

northern drainage ditch. This indicates potential problems up gradient with storm water controls or soil stabilization. Were any observations made of controls upgrading to determine the cause of the increased turbidity? What were the outcomes of these observations if they occurred and if they were not made, are their plans to make such observations in the future?

22. Commenting Organization: Ohio EPA Commentor: DSW
Section #: Data disk Pg. #: Surface waterline #: 35, 215, 218, 229, 230, 231, 232, 352.
Code: C
Original Comment #:
Comment: The following observations were made on the surface water date provided:

A) On 5/26/1999 there was an unusually high nitrate/nitrite result at PF. 4000 (line 35). Has the reason for this been determined?

B) The results for Technetium-99 (lines 215, 229, and 352) show up in the top 10 (of 91) results since the third quarter of 1997. The results are for SWP-02, SWD-02, and SWD-03. Additionally the total uranium results for SWD-02 and SWD-03 (lines 218, 230, 231, 232) are in the upper end of the results from these sites. As isolated results, these are not of much concern, however taken together they may indicate an upward trend. Has any investigation been done to see if there may be a readily identifiable cause of these results?