



State of Ohio Environmental Protection Agency

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George V. Voinovich
Governor

January 27, 1998

RE: DOE FEMP/MSL #531-0297
COMMENTS-INTEGRATED
ENVIRONMENTAL MONITORING
STATUS REPORT FOR THIRD
QUARTER 1997

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

Dear Mr. Reising:

Ohio EPA has reviewed the "Integrated Environmental Monitoring Status Report for Third Quarter 1997" submitted by DOE on December 1997. This letter provides, as an attachment, the comments from Ohio EPA.

If you should have any questions, please contact me at (513) 285-6466 or Donna Bohannon at (513) 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
Ruth Vandegrift, ODH
Francis Barker, Tetratex
Mark Schupe, HSI Geotrans
Manager TPSS, DERR

**INTEGRATED ENVIRONMENTAL MONITORING
STATUS REPORT FOR THIRD QUARTER 1997**

Comments

- 1) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #:1.2 Pg. #:1-2 Line #:11-12 Code: C
Original Comment #:
Comment: The text indicates that the groundwater extraction system operated at 1400 gpm except for Recovery Well 3924 (RW-1), which was out of service for three days. Tables 1-2 to 1-4 indicate that wells RW-2, RW-3, and RW-4 were also not operational for at least one day each during this reporting period. The text should be revised to state that "Each of the recovery wells were out of service for a period of less than three days each for routine well maintenance during the reporting period."

- 2) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #:1.2 Pg. #:1-2 Line #:11 Code: C
Original Comment #:
Comment: As previously requested in the comments to the January 1-June 30, 1997 South Plume Removal Action System Evaluation Report, daily extraction rates should be provided graphically and in either an tabular appendix or in an electronic file. This would provide the reviewer with a rapid means to adequately evaluate the daily variability in groundwater extraction rates and periods of well outages.

- 3) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #:1.3.2 Pg. #: 1-3 Line #: 17-23 Code: C
Original Comment #:
Comment: As indicated in OEPA's comments to the Project Specific Plan (PSP) for the Re-injection Demonstration Test Plan for August 1997, DOE was requested to improve the development and presentation of groundwater elevation maps in future documents. For example, all groundwater elevation maps will show the location of the bedrock highs which strongly control groundwater flow directions. No such improvements are evident in the figures provided in this document. Figures 1-11 through 1-18 appear to have been contoured using computer-generated contouring without the necessary follow-up hydro geologic interpretation and correction. The right angle curve of the 524 ft contour at Well 2033 in the northwest portion of Figure 1-11, for example, is particularly suspect. In addition, page 3-79 of the IEMP specifically indicates that capture zones and divides will be provided on groundwater elevation maps. A number of groundwater divides exist on Figures 1-11 through 1-18 and are undelineated. Capture zones should also be shown to their fullest extent possible on the groundwater elevation maps.

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further.

- 8) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
 Section #: 1.3.2 Pg. #:1-4 Line #:28-29 Code: C
 Original Comment #:
 Comment: Some error exists in Figure 1-28 in that groundwater particles do not terminate at the recovery well locations, please correct.
- 9) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
 Section #: 1.6 Pg. #:1-9 Line #: 3 Code: M
 Original Comment #:
 Comment: Future Integrated Environmental Monitoring Status reports should provide sitewide coverage with respect to the total uranium plume map and groundwater elevation maps. Additionally, total analytical data and water level data for the reporting period should be provided electronically. Future reports should present analysis and discussion of plume movements and should include trend analyses in key wells.
- 10) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
 Section #: 3.0 Pg. #:3-1 Line #: 32 Code: E
 Original Comment #:
 Comment: The word "stated" should be replaced by "discussed."
- 11) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.1 Pg #: 2-2 Line #: 30 Code: C
 Original Comment #:
 Comment: This sentence seems to indicate that radiological constituents were sampled in support of the NPDES permit renewal when no radiological constituents fall under the NPDES umbrella.
- 12) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.5 Pg #: 2-6 Line #: 5 Code: C
 Original Comment #:
 Comment: Bypass events have been characterized as "routine". Bypass occurs during unusually heavy precipitation events, whereas routinely storm water is treated in the AWWT.
- 13) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Table 2-1 Pg #: 2-8 Line #: Code: C
 Original Comment #:
 Comment: It is not clear in Table 2-1 why the total number of samples is **two** for some parameters and **one** for others. For example at location STRM 4005, two samples are

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listed for total chromium and copper but one for lead. The NPDES permit specifies two samples per year for each of those parameters at this location. It would seem that if two samples were taken for total chromium and copper, than two would also have been taken for lead.

- 14) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.1 Pg #: 3-1 Line #: 12 Code: e
 Comment: Check the spelling of "thermolumiscent".
- 15) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Figures 3-2 thru 3-6 Pg #: Line #: Code: e
 Comment: The titles to these figures are not readily understood. We suggest "Total uranium particulate concentrations in air".
- 16) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Figures 3-7 thru 3-9 Pg #: Line #: Code: e
 Comment: The word "radiological" in the titles to these figures should be omitted.
- 17) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.2 Pg #: 3-2 Line #: 9-10 Code: C
 Original Comment #:
 Comment: Reword the sentence "There is no impact....". I believe the intention of this sentence was to state that the removal of this sampling location will not change the reporting requirements in 1998.
- 18) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.2 Pg #: 3-2 Line #: 13 Code: c
 Comment: The report states that both total uranium and TSP as tabulated are within historical ranges but the tables do not include any historical data. Provide a historical range of these values.
- 19) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.2 Pg #: 3-2 Line #: 17 Code: c
 Comment: The reference to the NESHAP Subpart H compliance limit is not appropriate in this discussion of monitoring results. Omit the discussion from this section (and the sidebar in Table 3-1) and defer it to the NESHAP's compliance report.
- 20) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.2 Pg #: 3-2 Line #: 25 Code: c
 Comment: There may be some evidence for increasing trends in the TSP data. AMS-3 (Figure 3-7), AMS-8A (Figure 3-8), and AMS-9B (Figure 3-9) may be showing an

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increase at the end of this reporting period. All of these air monitoring stations are along the east fence line. It will be interesting to see if more recent data also support a trend. An effort should be made to correlate these data with site construction activity or near-by farming activities.

Similarly, AMS-4 (Figure 3-3) and AMS-5 (Figure 3-4) appear to show 'spikes' in the mid-July to early August time-frame for particulate uranium. Has an attempt been made to correlate these observations to site activities? It is worth noting that the AMS-5 maximum is at least twice as large as any other off-site air monitoring station.

- 21) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.2 Pg #: 3-2 Line #: Code:
 Comment: Future quarterly status reports should include an attempt to correlate air particulate monitoring results with site activities such as excavation, demolition and construction.
- 22) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.2.1 Pg #: 3-3 Line #: 12-14 Code: C
 Original Comment #:
 Comment: AMS-17(WP) is not included as an air monitoring station that will be removed in 1998 due to the implementation of the IEMP. This air monitoring station was not in service as of January 15, 1998.
- 23) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.2.1 Pg #: 3-3 Line #: 12-14 Code: C
 Original Comment #:
 Comment: The Ohio EPA plans on operating the air monitoring stations located at AMS-13 and AMS11 beginning in early 1998.
- 24) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.2.2 Pg #: 3-3 Line #: 24 Code: c
 Comment: This section mentions project-specific air monitoring to be initiated in support of D & D of the Plant/Thorium Complex. Describe how the monitoring results will be reported in future quarterly status reports.
- 25) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.3 Pg #: 3-4 Line #: 19-22 Code: C
 Original Comment #:
 Comment: This sentence implies that the exceedances of the 100 pCi/L radon limit are caused by atmospheric inversions. The exceedances are *measurable* due to atmospheric inversions, but are caused from the release of radon from the K-65 silos. Also, although these exceedances are not associated with any operational change in the K-65 silos, it is

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important to note that the radon concentrations in the silos headspace are approaching pre-bentonite concentrations.

- 26) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.3 Pg #: 3-4 Line #: 24-28 Code: C
 Original Comment #:
 Comment: The information contained in Enclosure C of the Quarterly FFCA Report are not sufficiently summarized in this section. Silo headspace concentrations are not mentioned at all in this report, but are included in the Quarterly FFCA Report. A summary of the silo headspace data should be included in this report.
- 27) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Table 3-1 Pg #: 3-8 Line #: na Code: C
 Original Comment #:
 Comment: The tables displaying the high-volume sampling data should be complimented with a graph comparing current results with historical values and any regulatory limits. This comment is applicable throughout the data presentation sections of this report.
- 28) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Figure 3-9 Pg #: Line #: Code: e
 Comment: The concentrations in the graph should be measured in $\mu\text{g}/\text{m}^3$ not in pCi/m^3 .
- 29) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 4.2 Pg #: 4-2 Line #: 10 Code: C
 Original Comment #:
 Comment: Please add the following: "unless...or significant new soil disturbances or construction activities occur in the drainage area of STRM 4006".
- 30) Commenting Organization: OEPA Commentor: OFFO
 Section #: 4.2 Pg. #: 4-2 Line #: Code: C
 Original Comment #:
 Comment: Ohio EPA concurs with DOE's proposal to discontinue visual observations for Sloan's Crayfish but believes it should be reinstated following initiation of remedial actions within OUI.
- 31) Commenting Organization: OEPA Commentor: OFFO
 Section #: 4.4 Pg. #: 4-2 Line #: Code: C
 Original Comment #:
 Comment: Ohio EPA finds this section to be inadequate to meet the needs of the NRD efforts. The IEMP needs to monitor habitat impacts as defined in the Habitat Equivalency Analysis Bridge Document (HEA) and not just against a total acreage. Type

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of acreage, date of damage initiation, duration of damage and recovery rate are all factors which will be important in evaluating the accuracy of the HEA and the need to revise it. The IEMP monitoring needs to be revised to be more reflective of the needs of the Natural Resource Trustees. For example the impacts to Paddys Run near the K-65 silos was not covered in the HEA and present impacts not previously accounted.