

**RESPONSES TO OEPA COMMENTS
ON THE INTEGRATED ENVIRONMENTAL
MONITORING STATUS REPORT FOR
SECOND QUARTER 1998**

**FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO**

DECEMBER 1998

**U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE**

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Commenting Organization: OEPA

Commentor: HSI GeoTrans, Inc.

Section#: 1.0

Pg.#: 1-3Line#: 40

Code: C

Original Comment # 4

Comment: The eastward groundwater flow vector indicated by the June 1 boroscope measurement in Well 2551 does support the contention that groundwater flow in the general vicinity of this well is to the east-southeast toward the South Plume recovery wells. The existence of elevated total uranium concentrations in this well during recent sampling events, however, require additional investigation. For example, do the observed concentrations in 2551 represent a western extension of the existing plume to the north or do they result from transient westward flow during storm events? Although the results reported at 2551 are encouraging, it is clear that the plume is not particularly well understood in this area. Comparison of 2551's location with the interpreted capture zone (Biweekly Update Attachment 4 dated 10/2/98) with all the restoration modules operating shows that the well is located near the edge of the zone. Plume uncertainties in this area, therefore, may result in contaminant migration beyond the current capture zone.

Response: The uranium plume in the vicinity of Monitoring Well 2551 has been the subject of several discussions over the past year. DOE, the Ohio Environmental Protection Agency (OEPA), HSI GeoTrans, and Fluor Daniel Fernald have all participated in these discussions. The agreed path forward was to collect quarterly flow direction measurements from Monitoring Well 2551, then re-evaluate this area after one year of quarterly measurements are obtained. DOE will continue to monitor total uranium concentrations in Monitoring Well 2551 as part of the IEMP monitoring program to see how concentrations change at this location as the plume is remediated.

Action: These results (from Monitoring Well 2551) will continue to be reported in quarterly status reports.

Commenting Organization: OEPA

Commentor: HSI GeoTrans, Inc.

Section#: 1.0

Pg.#: 1-5Line#: 6

Code: C

Original Comment # 5

Comment: The text notes that "chromium and nickel FRL exceedances at Monitoring Well 2398 have been previously observed and were discussed in Appendix A, page A.4-4, of the 1997 Integrated Site Environmental Report." That report states that "during 1998, DOE will further investigate the role of chloride as a corrosive agent that may be contributing to increases in nickel and chromium in monitoring wells at the FEMP." The 3Q98 Summary Report should report on the status of these investigations because the chromium FRL exceedances in 1997 show some evidence of spatial correlation.

Response: DOE is conducting a database review to determine if there is a correlation between chloride concentrations in the aquifer and an increase in nickel and chromium concentrations which is being observed in a few monitoring wells. The chlorides may be serving as a corrosive agent and attacking the stainless steel well casings.

Action: The status of these investigations will be briefly discussed in the Integrated Environmental Monitoring Status Report for Third Quarter 1998, and results should be available in the first quarter of 1999.

Commenting Organization: OEPA

Commentor: OFFO

Section#: 1.2

Pg.#: 1-5Line#: 33

Code: C

Original Comment # 6

Comment: Ohio EPA concurs with the Report's conclusion that the total uranium concentrations in the leachate collection system, leak detection system, and the horizontal till well are not consistent with a release from Cell 1. We will all be re-evaluating this conclusion as more data is collected.

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Next week Ohio EPA will send comments on the "Technical Memorandum for the On-Site Disposal Facility Cell 1 Baseline Groundwater Conditions". At that time we will request some additional data to be contained in future Summary Reports.

Response: DOE acknowledges the comment.

Action: No action required.

Commenting Organization: OEPA

Commentor: OFFO

Section#: 1.2

Pg.#: 1-6Line#: 10

Code: C

Original Comment # 7

Comment: How/where were the leachate volumes measured? Do the volumes include non-contact rain water which should not have been pumped to the AWWT?

Response: Leachate volumes are measured at a meter located at a manhole near the Biosurge Lagoon within the on-site disposal facility's leachate conveyance system. The volumes do not include non-contact rain water.

Action: No action required.

Commenting Organization: OEPA

Commentor: OFFO

Section#: 3.2

Pg.#: 3-1Line#: 36-38

Code: C

Original Comment # 8

Comment: The increasing trends in biweekly uranium data observed at AMS-3 and AMS-9C, are attributed to the increased activity at the OSDF and other remediation projects. As noted, construction managers must be aware that controlling fugitive dust is paramount to keeping dose to the public ALARA. OEPA observed visible fugitive emissions at the OSDF during the second quarter 1998.

Response: DOE acknowledges the comment. Construction managers were notified of the increasing trends observed at some monitoring locations along the east fenceline. As a result, a memorandum was issued from Fluor Daniel Fernald Soil and Water Projects construction management to construction supervisors reminding field staff to continue their aggressive efforts in controlling fugitive dust. DOE will continue to perform visual monitoring for fugitive dust and proactively apply dust suppression methods consistent with the site requirements manual RM-0047, Fugitive Dust Control Requirements, which reflects the Best Available Technology determination as approved by OEPA.

Action: No action required.

Commenting Organization: OEPA

Commentor: OFFO

Section#: 3.2

Pg.#: 3-2Line#: 19-46

Code: C

Original Comment # 9

Comment: The composite concentration attributed to AMS-25 is not consistent with the associated weekly data. Also, review of the isotopic data reveals inconsistencies. DOE should implement administrative controls to prevent the stockpiling of materials near the air samplers. This step would eliminate one of the interferences that may occur at any of the compliance air samplers.

Response: As identified in Section 3.2 of the Integrated Environmental Monitoring Status Report for Second Quarter 1998, DOE suspects that the inconsistencies in the isotopic data at AMS-25 (i.e., unusually high concentrations of thorium-230 and a larger dose at AMS-25 than what would be expected based on the biweekly uranium results at the other fenceline monitors) are due to possible influences from the construction staging area located adjacent to AMS-25 and the difficulties encountered in the thorium analysis for the AMS-25 quarterly composite sample. In the future, DOE will ensure that construction materials are not staged in the vicinity of air monitoring stations to prevent

