



State of Ohio Environmental Protection Agency

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February 12, 2008

Ms Jane Powell  
Fernald Site Mgr  
DOE-LM-20.1  
10995 Hamilton Cleves Hwy  
Harrison, Ohio 45030

**RE: COMMENTS - RESPONSES TO OEPA COMMENTS ON THE 2006 SITE ENVIRONMENTAL REPORT**

Ms Powell:

Ohio EPA has reviewed DOE's "Transmittal of Responses to Ohio Environmental Protection Agency Comments on the 2006 Site Environmental Report," dated December 20, 2007. Ohio EPA has reviewed DOE's responses and our comments are enclosed.

If there are any questions, please contact me.

Sincerely,

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

Cc: Tim Fischer, US EPA  
Michelle Cullerton, Tetra Tech  
Frank Johnston, Stoller  
Mark Shupe, Geo Trans, Inc.

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recommendations/observations for the "Estimated Dose for 2006," from the 2006 SER in response to DOE's response to original comment numbers 4 and 8:

- Table 5-3, pg 5-12, indicates only one background location was used, coincidentally, being the highest background dose, which may bias the net direct radiation dose. Trending of the other four locations may be appropriate which would lead to a range of background from 75 to 83 mrem and an average of  $79 \pm 8.9$  mrem. (Assuming a normal distribution of background data).
- The failure to report the data with the  $\pm 2\sigma$  error associated with counting statistics may lead to erroneous conclusions about the direct radiation dose from the Fernald Preserve.
- Based on the SER the maximally exposed individual was at location 8A with a dose of  $84 \pm 9.2$  mrem less background ( $79 \pm 8.9$  mrem) yields a net dose from direct radiation of  $5 \pm 13$  mrem at location 8A. This would be the maximally exposed individual at the fenceline (ignoring the very small contribution from the air pathway at this location). This dose, coincidentally, is indistinguishable from background. The most likely maximally exposed individual was at AMS-3 from the small 0.17 mrem dose from radionuclide air emissions.
- DOE needs to follow the data reporting recommendations published in EPA 520/1-80-012, Upgrading Environmental Radiation Data, in August 1980. Proper reporting and analysis of data may indicate that the conclusions reached in the SER are inaccurate and the impacts from site operations are indistinguishable from background.
- Ohio EPA recommends that data be reported and uncertainty be propagated consistent with EPA 520/1-80-012, Upgrading Environmental Radiation Data, August 1980. To allow for proper review and analysis of data to prevent drawing inaccurate conclusions.

8. Commenting Organization: Ohio EPA                      Commentor: OFFO

Section #: na              Pg #: na              Line #: na              Code: C

Comment: Considering that the site will soon go public and does not have a "fenceline", how will DOE determine the location for the maximally exposed individual in future SERS.

#### **2006 SER Summary (Appendices A-D)**

9. Commenting Organization: Ohio EPA                      Commentor: GeoTrans, Inc.

Section: Attachment A.2 Pg#: A.2-3 Line#: 27 Code: C

Original Comment# 23.

Comment: It is agreed that the drawback to adding the requested information to the figure may outweigh any benefit derived with respect to trend visualization. It is agreed that the change should not be implemented in future reports.

10. Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.  
Section: Attachment A.4 Pg#: A.4-6 Line#: 24 Code: C  
Original Comment# 30.

Comment: As noted in the report, three wells located in the same general area of the down-gradient boundary of the Fernald site have a history of manganese exceedances. Driven by the presence of an up-gradient manganese plume, the original comment questioned DOE's plan to continue monitoring as usual. This is the same approach that DOE has pursued in response to manganese exceedances in this area for nine years. In addition, it should be noted that well 22210 is located approximately 150 feet from well 2426; manganese concentrations in these two wells may not be directly comparable. DOE's reference to SSOD data in their response to the original comment is not understood since none of the wells referenced in the original comment are located in the SSOD area. It is agreed that conducting additional drive point sampling to better bound the up-gradient plume is appropriate. It should be noted, however, that the Waste Storage Area manganese plume is currently bounded by direct push location 13345 (not 13329 as noted in the response).

11. Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.  
Section: Attachment A.4 Pg#: A.4-6 Line#: 2 Code: C  
Original Comment# 31.

Comment: According to the text, Monitoring Well 2636 persistently exceeds for arsenic and also exceeds for antimony but has not been sampled since early 2005 because it has been dry. The top and bottom of the screen interval are only five and 15 feet below ground surface, respectively. Given that a continued decline in water levels is expected as pumping continues for the aquifer remedy, odds are that this well will be seldom sampled, if at all, in the future. Adjacent Monitoring Well 3236 noted in the comment response monitors a much deeper zone in the aquifer since the screen is set from 68 to 78 feet below ground surface. As a result, this well is not a substitute well for 2636; the groundwater chemistry in this much deeper zone is likely very different from the chemistry of the groundwater in the shallow zone. A deeper well, completed near the current water table reflective of pumping conditions is, therefore recommended.