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Rec'd 8-10-06

August 08, 2006

Mr. Johnny Reising
US Department of Energy
Ohio Field Office
Fernald Closure Project
175 Tri County Parkway
Springdale, Ohio 45246

RE: COMMENTS - TRANSMITTAL OF THE 2005 SER AND SUMMARY

Dear Mr. Reising:

Ohio EPA has reviewed the Transmittal of the 2005 Site Environmental Report and 2005 Environmental Summary (Appendices A through D) (51350-RP-0028) Rev 0. Final, submitted on May 25, 2006. Ohio EPA's comments are enclosed.

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

Sincerely,

Donna Bohannon for

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

cc: Jim Saric, U.S. EPA
Mark Shupe, GeoTrans, Inc.
Michelle Cullerton, Tetra Tech EM Inc.

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Ohio EPA's Comments on the
2005 Site Environmental Report and Summary

Comments:

1. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.2 Pg #: A.2-2 Line #: 17 Code: C
Original Comment#
Comment: The text should note that although the bioaccumulation of manganese appears to be occurring around a couple of monitoring wells, confirmational testing has not been conducted to verify this assumption.

2. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.2 Pg #: A.2-3 Line #: 29 Code: C
Original Comment#
Comment: Previous data in the clear well area indicates the presence of perched groundwater contamination. The observed high total uranium concentrations may, therefore, be related to seasonally perched groundwater conditions.

3. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.2 Pg #: A.2-6 Line #: 24 Code: C
Original Comment#
Comment: The area defined by direct push locations 12373(K) and 13269 is in the stagnation zone that was intensified by the discontinuance of re-injection along the fence line. The additional direct-push sampling effort noted in the text should focus on delineating the southward extent of the elevated concentrations. Comparison of the 100.7 Ug/L concentration measured in Geoprobe 12196A measured in 2005 to the 0.7 concentration measured in 1996 shows that the current position of the plume's leading edge at this location is unknown.

4. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.2 Pg #: A.2-10 Line #: 13 Code: C
Original Comment#
Comment: In order to evaluate the ability of the model to match the plume in all three dimensions, the residuals should be calculated for all monitoring wells, regardless of layer.

5. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.2 Pg #: A.2-10 Line #: 23 Code: C
Original Comment#
Comment: The residual calculation should use the simulated concentrations taken directly from the model, not model results that have been post-processed using kriging. Textual discussion can be used to explain the occurrence of large residuals, such as in the case of where steep concentration gradients exist. Kriging models by necessity require the specification of a number of additional parameters, over and above the parameters specified in the transport model. As a result, use of the kriging model as an intermediate

step in the calculation of the transport model residuals may tend to obscure true trends in the residuals.

6. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.2 Pg #: A.2-10 Line #: 23 Code: C
Original Comment#
Comment: A scaled symbol map with a simplified map of the plume would be useful to help with the spatial interpretation of the residuals.

7. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.2 Pg #: A.2-10 Line #: 24 Code: C
Original Comment#
Comment: As evidenced by the positive average residual for the two model runs, the model is typically under-predicting the true concentration. In addition, the amount of error increases with time, from 19.06 to 30.54 Ug/L. This too-rapid of a decline in the simulated dissolved concentration is likely related to inaccurate assumptions regarding the transition of uranium from the sorbed to the dissolved phase.

8. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.5 Pg #: A.5-11 Line #: 15 Code: C
Original Comment#
Comment: A more thoroughly documented evaluation of the annual LCS chemistry results is needed regarding consideration of possible adjustments to the leak detection monitoring parameter list. OAC 3745-27-10(D) provides guidance for the specification of alternative parameter lists. According to these regulations, a key factor to consider is the concentrations of Appendix I constituents in the leachate. The number of detected Appendix I constituents for the eight OSDF disposal cells is ranges from 21 to 35 and averages 27. All detected constituents should be used as leak detection monitoring parameters unless appropriate justification exists to exclude some of the parameters. This report, therefore, needs to document why any detected Appendix I parameter is not carried forward as a leak detection monitoring parameter.

9. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.5 Pg #: A.5-11 Line #: 15 Code: C
Original Comment#
Comment: Please provide a reference for the source of the concentration data used to compute the perched water background concentration listed in the annual LCS sample summary information table for each cell (for example, for Cell 1, the concentrations listed in the column entitled "PW BACKGROUND"in Table A.5.1-3). Also, please indicate what statistical parameter is represented by this concentration and discusses the approach used for its calculation. Specifically, please note any assumptions regarding the statistical distribution of the data.

10. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.5 Pg #: A.5-11 Line #: 15 Code: C
Original Comment#
Comment: Please provide a reference for the source of the concentration data used to compute the groundwater background concentration listed in the annual LCS sample summary information table for each cell (for example, for Cell 1, the concentrations listed in the column entitled "GW BACKGROUND"in Table A.5.1-3). Also, please indicate what statistical parameters are represented by this concentration and discuss the approach used for its calculation. Specifically, please note any assumptions regarding the statistical distribution of the data.

11. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.5 Pg.#: A.5.1-3 Line #: 24 Code: C
Original Comment #:
Comment: Based on Table A.5.1-3, there are 27 constituents that have been detected in the Cell 1 LCS and are, therefore, potential leak detection monitoring constituents for this cell.

12. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.5 Pg.#: A.5.2-3 Line #: 5 Code: C
Original Comment #:
Comment: Based on Table A.5.2-3, there are 29 constituents that have been detected in the Cell 2 LCS and are, therefore, potential leak detection monitoring constituents for this cell.

13. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.5 Pg.#: A.5.3-6 Line #: 36 Code: C
Original Comment #:
Comment: Based on Table A.5.3-3, there are 35 constituents that have been detected in the Cell 3 LCS and are, therefore, potential leak detection monitoring constituents for this cell.

14. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.5 Pg.#: A.5.4-2 Line #: 32 Code: C
Original Comment #:
Comment: Based on Table A.5.4-3, there are 23 constituents that have been detected in the Cell 4 LCS and are, therefore, potential leak detection monitoring constituents for this cell.

15. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.5 Pg.#: A.5.5-2 Line #: 27 Code: C
Original Comment #:
Comment: Based on Table A.5.5-2, there are 21 constituents that have been detected in the Cell 5 LCS and are, therefore, potential leak detection monitoring constituents for this cell.

16. Commenting Organization: OEPA Commenter: GeoTrans, Inc.
Section #: Attach. A.5 Pg.#: A.5.6-2 Line #: 26 Code: C
Original Comment #:
Comment: Based on Table A.5.6-2, there are 24 constituents that have been detected in the Cell 6 LCS and are, therefore, potential leak detection monitoring constituents for this cell.

17. Commenting Organization: OEPA Commenter: Geo Trans, Inc.
Section #: Attach. A.5 Pg.#: A.5.7-3 Line #: 1 Code: C
Original Comment #:
Comment: Based on Table A.5.7-3, there are 31 constituents that have been detected in the Cell 7 LCS and are, therefore, potential leak detection monitoring constituents for this cell.

18. Commenting Organization: OEPA Commenter: Geo Trans, Inc.
Section #: Attach. A.5 Pg.#: A.5.8-2 Line #: 12 Code: C
Original Comment #:
Comment: Based on Table A.5.8-2, there are 24 constituents that have been detected in the Cell 8 LCS and are, therefore, potential leak detection monitoring constituents for this cell.