OhioEPA
State of Ohio Environmental Protection Agency

Southwest District Office

401 East Fifth Street
Dayton, Ohio 45402-2911

TELE: (937) 285-6357 FAX: (937) 285-6404

Bob Taft, Governor
Maureen O'Connor, Lt. Governor
Christopher Jones, Director

January 8, 2002

Mr. Johnny Reising
U.S. Department of Energy, Fernald Area Office
P.O. Box 538705
Cincinnati, OH 45253-8705

RE: COMMENTS ON PILOT PLANT DRAINAGE DITCH MONITORING WELLS

Dear Mr. Reising:

This letter provides Ohio Environmental Protection Agency comments on the Project Specific Plan for the Installation of Monitoring Wells in the Pilot Plant Drainage Ditch Plume. We have previously given verbal approval for the locations of the new monitoring wells. We also inspected the well locations and offered suggestions on implementing erosion controls and discussed ways to accomplish the installation that would minimize impacts to ecologically important trees. In addition, we observed the methods and apparatus used to construct and test the Continuous Multilevel Tubing wells.

Should you have any questions, please contact Tom Ontko or me.

Sincerely,

Tom Ontko

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

cc: Jim Saric, U.S. EPA
Terry Hagen, Fluor Fernald
Mark Shupe, GeoTrans, Inc.
Francie Hodge, Tetra Tech EM Inc.
Ruth Vandergrift, ODH

Enclosure

Q:\ou5\groundwater\ppddmonwells.wpd

1

Ohio Environmental Protection Agency Comments on the PSP for the Installation of Monitoring Wells in the Pilot Plant Drainage Ditch Plume

1) Commenting Organization: Ohio EPA Commentor: DSW
Section #: General Pg #: NA Line #: NA Code: C
Comment: The plan contains no detail about sediment and erosion control measures. Please include information on sediment and erosion control.

2) Commenting Organization: Ohio EPA Commentor: DSW
Section #: 2.0 Pg #: 2-3 Line #: NA Code: C
Comment: Not all of the key project personnel responsibilities are not readily discernable from the descriptions. For example, the ARWWP Manager's responsibilities are listed, but one must deduce from the title of "ARWWP Project Director" that Dave Brettschneider would be the ARWWP Manager. Suggest keeping the title consistent with the key technical responsibilities for clarity.

3) Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.1 Pg.#: 5 Line #: 23 Code: C
Comment: In situations where the installation of the five foot thickness of the primary gravel pack will result in the top of the primary pack extending above the water table, will its length be reduced to achieve a five foot height of the secondary pack above the water table?

4) Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.1 Pg.#: 5 Line #: 27 Code: C
Comment: The purpose of the alternating layers of sand and bentonite pellets that will be placed above the bentonite seal in the Type-2 and Type-6 wells should be explained.

5) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2.2 Pg #: 6 Line #: last paragraph Code: c
Comment: The text describes how the CMT will be constructed on either clean plastic sheeting resting on the ground or on saw horses. We agree that these methods are appropriate but we suggest that the CMT be fabricated and tested in the 'shop' rather than in the 'field'.
Similarly, elsewhere the plan states that a standard hand drill with a drill stop will be used to place the holes in the CMT. If this technology proves useful enough to warrant the deployment of enough CMT wells, it may prove worthwhile to use a drill press instead of a hand drill. Placing the CMT in a simple jig and using a drill press should reduce the potential for mis-drilled holes.

6) Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.2 Pg.#: 7 Line #: 13 Code: C
Comment: A basis is provided for the elevations of each monitoring zone. What is the basis for selecting a 10-foot length for each monitoring interval? The selection of such a long open interval with only a three foot blank zone separating the intervals may result in

cross-contamination between adjacent intervals. A reduction of the sampling interval length may achieve monitoring objectives without uncertainty regarding the independence of adjacent samples.

7) Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.2 Pg.#: 7 Line #: 17 Code: C
Comment: The pressure test referenced by the text is discussed in detail in the December 3, 2001 Weekly EPA Conference Call Information fax. This information should be included in the PSP.

8) Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.2 Pg.#: 7 Line #: 17 Code: C
Comment: The text indicates that each channel may be pressure tested for leaks. Some form of routine pressure testing should be conducted on all channels after drilling the port and drain holes. This testing is necessary to verify that the center chamber and lateral chamber walls have not been perforated accidentally during drilling. This testing is especially critical given the large number of holes (91 per each 10 foot monitoring zone, 546 per each CMT installation) that will need to be constructed using a hand-operated power drill. Are factory-installed holes and associated pressure testing/quality verification an option?

9) Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.2 Pg.#: 7 Line #: 20 Code: C
Comment: The text should clearly indicate how many 4-inch subintervals will be installed in each monitoring zone.

10) Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.2 Pg.#: Figure 4 Line #: Code: C
Comment: Text on the right side of the figure indicates that each 10-foot monitoring zone will be wrapped with three four-inch long mesh screens. Unless DOE intends to not screen some port holes, it appears, based on the distribution of holes shown on the figure, that 30 four-inch long mesh screens will be necessary. Also, the cross-sectional view should be revised to include a divider between channels 5 and 6.

11) Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.2 Pg.#: 7 Line #: 30 Code: C
Comment: The text should note that care should be taken to make sure that the glue is fully melted before extrusion to form the plug. Failure to fully melt the glue could potentially result in a poor seal. In addition, the PSP should specify that only low density polyethylene (Arrow CS-7 4" sticks of white sealer/glue) glue will be used for CMT well plug construction, as per manufacturer's recommendation.

12) Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Section #: 3.2.2 Pg.#: 8 Line #: 22 Code: C
Comment: The text should indicate that the top of the CMT tubing will be accurately surveyed for coordinates and elevation.