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**COMMENTS ON OU 2 TEST PAD WORK PLAN**

03/08/96

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OU2

DOE-FN



State of Ohio Environmental Protection Agency

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George V. Voinovich  
Governor

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RE: DOE FEMP  
MSL 531-0297  
HAMILTON COUNTY  
COMMENTS OU 2 TEST PAD  
WORK PLAN

March 8, 1996

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

Dear Mr. Reising:

This letter provides as an attachment Ohio EPAs comments on the Draft Test Pad Work Plan for the On-Site disposal Facility received by the Ohio EPA on January 16, 1996.

If you have any comments please contact Tom Ontko.

Sincerely,

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

cc: Jim Saric, U.S. EPA  
Terry Hagen, FERMCO  
Ruth Vandergrift, ODH  
Mike Proffitt, DD&GW  
Sharon McLellan, PRC  
Manager, TPSS/DERR,CO  
Dave Ward, GeoTrans

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## Ohio Environmental Protection Agency Comments on the Draft Test Pad Work Plan

Commenting Organization: OEPA                      Commentor: GeoTrans, Inc.  
 Section #: 3.2                      Pg. #: 3-3                      Line #:                      Code: C  
 Comment: Table 3-1 is missing several of the ARARs pertaining to the recompacted soil liner. The missing requirements are cited in Ohio Solid Waste Disposal Regulation OAC 3745-27-08 (C)(1). In particular, the requirements on bottom slope and slope stability criteria of the recompacted soil liner are missing from the table. These issues are not addressed in the work plan. If these requirements for the compacted clay liner are not being addressed in this study, then wording should be added to explain the reason for this omission.

Commenting Organization: OEPA                      Commentor: GeoTrans, Inc.  
 Section # 3.3                      Pg. #: 3-5 to 3-8                      Line #:                      Code: C  
 Comment: The Atterberg Limits listed in the Table 3-2 as LL, PL, and PI should be footnoted on each page with their definition (i.e., LL: liquid limit; PL: plastic limit; PI: plasticity index).

Commenting Organization: OEPA                      Commentor: GeoTrans, Inc.  
 Section # 3.3                      Pg. #: 3-5 to 3-8                      Line #:                      Code: C  
 Comment: The summary statistics at the end of Table 3-2 should include the number of samples for each column in addition to the mean value and standard deviation.

Commenting Organization: OEPA                      Commentor: GeoTrans, Inc.  
 Section # 3.3                      Pg. #: 3-5 to 3-8                      Line #:                      Code: C  
 Comment: In Table 3-2, the column titled "Percentage Coarser than No. 200 Sieve" does not seem necessary since it represents the values in the adjacent column, "Percentage Passing No. 200 Sieve" subtracted from 100%. The column titled "Percentage Passing No. 200 Sieve" specifically relates to one of the requirements for the compacted clay liner cited in OAC 3745-27-08 (C)(1).

Commenting Organization: OEPA                      Commentor: GeoTrans, Inc.  
 Section # 3.3                      Pg. #: 3-5 to 3-8                      Line #:                      Code: C  
 Comment: In Table 3-2, there is a column for reporting "Percentage Smaller than 0.005 mm" for each specimen. The requirements in OAC 3745-27-08 (C)(1) state that at least 25% of the particles, by weight, shall have a maximum dimension not greater than 0.002 mm, yet a size of 0.005 mm is reported in Table 3-2 and is also cited throughout Section 3. It is not clear from the text why the value of 0.005 mm is being used as opposed to the ARAR value of 0.002 mm.

Commenting Organization: OEPA                      Commentor: GeoTrans, Inc.  
 Section # 3.3                      Pg. #: 3-4                      Line #: 16                      Code: C  
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Comment: Natural moisture content results (from ASTM D 2216) should be reported in Table 3-2. These results are not included in Table 3-2. These values should be reported as water content of each specimen to the nearest 1% or 0.1%, as appropriate.

Commenting Organization: OEPA Commentor: GeoTrans, Inc.  
Section # 3.3 Pg. #: 3-4 Line #: 18 Code: C

Comment: Soil classification results (from ASTM D 2487) should be included in Table 3-2. They are missing from this table.

Commenting Organization: OEPA Commentor: GeoTrans, Inc.  
Section # 3.4 Pg. #: 3-9 Line #: 25 Code: C

Comment: Add to the plasticity index bulleted item the following: "In general, the plasticity index (PI) should be larger than 10 percent for clay liner materials".

Commenting Organization: OEPA Commentor: GeoTrans, Inc.  
Section # 4.2 Pg. #: 4-2 Line #: Code: C

Comment: The particle-size distribution test referred to in the first column should report the fraction of particles finer than 0.002 mm to be consistent with the Ohio Administrative Code.

Commenting Organization: OEPA Commentor: GeoTrans, Inc.  
Section # 8-2 Pg. #: Line #: Code: C

Comment: A scale for Figure 8-1 should be provided.

Commenting Organization: OEPA Commentor: GeoTrans, Inc.  
Section # 11 Pg. #: 11-1 Line #: 23 Code: C

Comment: The last bullet should be more specific in order to meet the requirements of Appendix A - Alternative to OAC Prescriptive Specifications for Compacted Soil Liners. Specifically, the second bullet on page 2 of 3 of the "white paper" states that the report will specify construction equipment types and construction procedures that result in a compacted clay liner satisfying the hydraulic conductivity performance criterion of OAC 3745-27-08(C)(1). Section 11 should specify that the report will result in this demonstration.

Commenting Organization: OEPA Commentor: GeoTrans, Inc.  
Section #: Appendix C Pg. #: 02220-3 Line #: 16 Code: C

Comment: Section 3.03 only indicates that the CQA Engineer will authorize special testing of the test pad under circumstances of improper construction (e.g. improper lift thickness, improper soil moisture, and too few passes). Emphasis should be added

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to this Field Quality Assurance section or where appropriate to indicate what the CQA Engineer will do to prevent these errors.

Commenting Organization: OEPA      Commentor: GeoTrans, Inc.  
Section #: Appendix F      Pg. #: F-1      Line #: 13      Code: C

Comment: The DQO problem statement states that the test pad will be used to evaluate the equipment, techniques, and soil conditions to be used in the construction of the liner and cap. The TPWP addresses three variations of compaction as they relate to hydraulic conductivity (Figure 2-3), but does not clearly indicate the evaluation of compaction equipment or techniques. If the DQO scope is correct, the TPWP should be clarified to indicate what other variables and evaluations are to be included.

Commenting Organization: OEPA      Commentor: GeoTrans, Inc.  
Section #: Appendix F      Pg. #: F-2      Line #: 20      Code: C

Comment: The bullets indicate that field observation will be made to evaluate optimum equipment and techniques for spreading loose clay layers, for moisture conditioning, for compaction of clay to required ranges, and for preparation of clay surface. The TPWP does not clearly specify how these observations and evaluations are to be performed. Section 4.B. "Objective" of the DQO Summary Form seems more consistent with what the TPWP specifies. This inconsistency should be resolved.