



Environmental  
Protection Agency

Ted Strickland, Governor  
Lee Fisher, Lt. Governor  
Chris Korleski, Director

7267

December 2, 2010

Mr. Art Kleinrath  
Fernald Site Manager  
DOE-LM-20.1  
10995 Hamilton Cleves Hwy  
Harrison, Ohio 45030

**RE: COMMENTS - COMPREHENSIVE LEGACY MANAGEMENT AND  
INSTITUTIONAL CONTROLS PLAN, VOLUMES I AND II, 2010**

Mr. Kleinrath:

Ohio EPA has received DOE's "Comprehensive Legacy Management and Institutional Controls Plan, Volumes I and II, 2010" on September 21, 2010. Ohio EPA has reviewed the plan and our comments are enclosed.

- Ohio EPA looks forward to discussing how Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (EPA 530-R-09-007), March 2009, "Unified Guidance", may be incorporated into the leak detection program for the OSDF.

If there are any questions, please contact me.

Sincerely,

Thomas A. Schneider  
Fernald Project Manager  
Division of Emergency and Remedial Response  
Federal Facilities Section

cc: Tim Fischer, US EPA  
Frank Johnston, Stoller

TAS/mab

Ohio EPA Comments on:

**Comprehensive Legacy Management and Institutional Controls Plan**  
Volumes I and II  
September 21, 2010

**Volume II**

1. Commenting Organization: Ohio EPA  
Section #: General Comment Pg #: na Line #: na  
Comment: The consent decree and environmental covenants filed in Hamilton and Butler counties between DOE and Ohio EPA need to be included as part of the institutional controls. The consent decree and covenants specifically reference the LMICP and certain requirements as follows:

5. A. Land Activity and Use Limitations. Pursuant to the EPA Superfund Record of Decision: Feed Materials Production Center (USDOE), EPA ID: OH6890008976, OU5, Fernald, OH, dated January 31, 1996, the Property shall not be used for any residential or agricultural purposes, and shall only be used in a manner consistent with the Natural Resource Restoration Plan, Fernald Preserve, Fernald, Ohio, U.S. Department of energy, Fernald Area Office, 212E-PL-003, dated June, 2008, Section 2.1.1 of Volume II of the Comprehensive Legacy Management and Institutional Controls Plan, Fernald Closure Project, Fernald, Ohio dated May 2008, and the EPA Superfund Record of Decision: Feed Materials Production Center (USDOE), EPA ID: 6890008976, OU5, Fernald, OH dated January 31, 1996.

5. B. Groundwater Activity and Use Limitations. Pursuant to the EPA Superfund Record of Decision: Feed Materials Production Center (USDOE), EPA ID: OH6890008976, OU5, Fernald, OH, dated January 31, 1996, the groundwater underlying all or any portion of the Property shall not be withdrawn or used as a drinking water supply.

*The forgoing documents shall be publically available in the Fernald Public Environmental Information Center. [emphasis added]*

**and**

9. Compliance Reporting. The Comprehensive Legacy Management and Institutional Controls Plan requires the Owner to submit to Ohio EPA on a quarterly basis a site inspection report, verifying that the activity and use limitations remain in place and are being complied with.

The consent decree clearly identifies the inclusion of the requirements of the environmental covenant as stated below:

Institutional controls for the site are outlined in a separate document, the Comprehensive Legacy Management and Institutional Control Plan (LMICP) Rev. 2 Final May 2008, and in an Environmental Covenant with OEPA.

### 3.1.9 Institutional Controls

Institutional controls are required under the OU5 Record of Decision and are further defined in the LMICP and in the Environmental Covenant.

2. Commenting Organization: Ohio EPA  
Section #: 2.1.1 Pg #: 2-2 Line #: na  
Comment: The last sentence in this section states that land use restrictions may be modified or terminated in consultation with USEPA and Ohio EPA. Major land use restrictions may be modified or terminated only with the approval of EPA and Ohio EPA. Please modify this last sentence to include that approval is necessary. Suggested text: "Land use changes that substantially alter the parameters of the Interim Residual Risk Assessment Report, Rev 1 (DOE 2007), the Environmental Covenants and/or the RODs need to be approved by USEPA and Ohio EPA."
3. Commenting Organization: Ohio EPA  
Section: 3.1.1 Pg#: 3-1 Line#: Red & blue strikeout on change pages  
Comment: Ohio EPA was not formally informed of DOE's decision to change the inspection time frame on the active outfall line soil cover. DOE's choice to reduce inspections on the 30 inch soil cover from annually to every five years is not acceptable to Ohio EPA. In addition, this inspection point is located in a farmer's field which is continually cultivated and the active line is only covered with 30 inches of soil. The decision between DOE and the Agencies to inspect the outfall line's cover was made at the inception of the LMIC. Therefore, the soil cover must be inspected on an annual basis unless all parties agree to reduce the inspections.
4. Commenting Organization: Ohio EPA  
Section #: 5.2.3 Pg #: 5-5 Line #: na  
Comment: Reinsert the deleted text until the hard copy Administrative Record (AR) issue is resolved. USEPA is requiring a written proposal from DOE before the paper AR is removed from the Fernald community. In an email from USEPA to DOE dated 10/13/10, Section 113(k) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is referenced. It is necessary that proper paper documentation be maintained in the Fernald community unless a written proposal is approved.

Additionally, an inspector general audit report released in September 2010 found that DOE has failed to ensure that its electronic records are properly stored and organized.

Attachment C: Groundwater/Leak Detection Leachate Monitoring Plan

5. Commenting Organization: Ohio EPA  
Section #: 3.2.1.2 Pg #: 3-4 Line #: na  
Comment: Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (EPA 530-R-09-007), March 2009, "Unified Guidance" has a number of statistical methods and detection monitoring program design suggestions that may offer a better approach for evaluating the water quality measurements at Fernald. DOE, Ohio EPA, and USEPA need to consider alternate methods to evaluate water quality data due to the inconsistent measurements collected to date.
6. Commenting Organization: Ohio EPA  
Section #: 3.2.1.3 Pg #: 3-5 Line #: na  
Comment: Unified Guidance does not restrict parameters based on a fixed percent of non-detect data. Instead, it may be beneficial to use nonparametric methods to assess monitoring parameters with many non-detects.
7. Commenting Organization: Ohio EPA  
Section #: 3.2.1.3 Pg #: 3-6 Line #: na  
Comment: Some of the reasons for inconsistent water quality data are listed in the first paragraph of this page. DOE should consider modeling these assertions to see if they can be supported.
8. Commenting Organization: Ohio EPA  
Section #: 3.2.1.3 Pg #: 3-7 Line #: na  
Comment: The first sentence on this page change "2010" to "2011".
9. Commenting Organization: Ohio EPA  
Section #: 3.2.1.4 Pg #: 3-7 Line #: na  
Comment: Since it appears that the water quality data is transient and difficult to predict thus far. Sampling frequency and statistical methods should be discussed with Ohio EPA and USEPA annually. The March 2009, Unified Guidance, may have a better approach to help in the understanding of the water quality data.
10. Commenting Organization: Ohio EPA  
Section #: 3.2.2 Pg #: 3-8 Line #: na  
Comment: The statistical screening process for alternate parameters should be reviewed and discussed with the regulators taking into consideration the March 2009, Unified Guidance.

11. Commenting Organization: Ohio EPA  
Section #: 4.3.2.1 Pg #: 4-6 Line #: na  
Comment: Second sentence should read, "From there, the leachate collected is periodically; and, after each sampling event, pumped to the CAWWT back wash basin..." [add underlined text above]
12. Commenting Organization: Ohio EPA  
Section #: 4.3.4.2 Pg #: 4-7 Line #: na  
Comment: This section indicates that modeling was performed for post remediation conditions of groundwater flow. What direction is groundwater flow during remediation, i.e., now?
13. Commenting Organization: Ohio EPA  
Section #: 4.5 Pg #: 4-17 Line #: na  
Comment: Ohio EPA maintains that a leak may be detected without a corresponding action leak rate and that water quality data is the regulatory driver associated with leak detection in Ohio.
14. Commenting Organization: Ohio EPA  
Section #: 4.5 Pg #: 4-17 Line #: na  
Comment: Ohio EPA recommends that DOE consider trilinear plots for assessing water quality. This suggestion is consistent with reporting requirements for landfills throughout Ohio and is a good tool for visualizing changes or lack of changes in water chemistry.

**Attachment C, Appendix B**

15. Commenting Organization: Ohio EPA  
Section #: 2.0 Pg #: App B, pg. 3 Line #: na  
Comment: Detection limits for each analyte needs to be reviewed. Detection limits set at the FRL may not be adequate for leak detection purposes.
16. Commenting Organization: Ohio EPA  
Section #: 2.1 Pg #: App B, pg. 3 Line #: na  
Comment: The sampling strategy described in this section needs to be reviewed and updated using Universal Guidance as a guide. Ohio EPA looks forward to discussing a path forward for attempting to better evaluate water quality data.
17. Commenting Organization: Ohio EPA  
Section #: Table 1 Pg #: 4-5 Line #: na  
Comment: What is the basis for the "Priority" for the analytes? A discussion of how the "priority" was determined is warranted.
18. Commenting Organization: Ohio EPA  
Section #: 2.4 Pg #: 12 Line #: na  
Comment: Considering that a couple of the HTW are dry, is there another sampling technique that could be used so that 3 well volumes do not need to be purged? DOE may want to consider micropurge methods.

19. Commenting Organization: Ohio EPA  
 Section #: 2.5 Pg #: 12 Line #: na  
 Comment: Since monthly conference call updates are no longer occurring, notification should occur via e-mail either prior to or as soon as possible if filtering is conducted. E-mail contacts are tom.schneider@epa.state.oh.us and bill.lohner@epa.state.oh.us.
20. Commenting Organization: Ohio EPA  
 Section #: 3.2 Pg #: 12 Line #: na  
 Comment: Since monthly conference call updates are no longer occurring, notification should occur via e-mail. E-mail contacts are tom.schneider@epa.state.oh.us and bill.lohner@epa.state.oh.us

**Attachment C, Appendix E**

21. Commenting Organization: Ohio EPA  
 Section #: Figure 2 Pg #: 12 Line #: na  
 Comment: This figure needs to be reviewed in conjunction with Ohio EPA being sure to take into consideration Unified Guidance.
22. Commenting Organization: Ohio EPA  
 Section #: 4.1 Pg #: 14 Line #: na  
 Comment: Ohio EPA suggests that tritium be added, as an investigational parameter. Tritium may be useful as a "tracer". Exit signs were not specifically excluded per the WAC for the OSDF. The presence of tritium, which is readily mobile with water, in the waste may prove useful in determining leachate movement through the cell and potentially the environment.

**Attachment D**

23. Commenting Organization: Ohio EPA  
 Section: 3.5 Pg#: 3-20 Line#: Last paragraph/2<sup>nd</sup> sentence  
 Comment: The second sentence in the last paragraph is clumsy. Suggest changing from "First-half yearly total uranium measurements" to "The first half of the year total uranium measurements."
24. Commenting Organization: Ohio EPA  
 Section #: 3.4.2.4 Pg #: 3-18 Line #: na

Comment: The text references a "Zone 0" on Figure 3-5. There is no "Zone 0" identified on Figure 3-5.

25. Commenting Organization: Ohio EPA  
 Section #: IEMP Pg #: 3-46 Line #: na  
 Comment: DOE should provide the five year schedule for reporting the ground water transport modeling results, both here in the LMICP and in the SER.