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Ohio | Environmental Protection Agency
John R. Kasich, **Governor**
Mary Taylor, **Lt. Governor**
Scott J. Nally, **Director**

June 10, 2011

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

Ms. Powell:

Ohio EPA received Fernald's "Third Five-Year Review Report for the Fernald Preserve", dated March 29, 2011. Ohio EPA has reviewed the report and our comments are enclosed.

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

Sincerely,

Thomas A. Schneider
Fernald Project Manager
Division of Environmental Response and Revitalization
Federal Facilities Section

Cc: Tim Fischer, US EPA
Bill Hertel, Stoller Corp.

Southwest District Office
401 East Fifth Street
Dayton, OH 45402-2911

937 | 285 6357
937 | 285 6249 (fax)
www.epa.ohio.gov

Ohio EPA Comments on:

Five-Year Review Report
Third Five-Year Review Report fo the Fernald Preserve
Butler and Hamilton Counties, Ohio
April 2011

1. Commenting Organization: Ohio EPA
Section: Exe Summary/General Pg#: vii Code: C
Comment: Each OU in the summary needs to be addressed individually. Each OU should include a review of the protectiveness statements, the remedy, and reference each of the OU's RODs (see US EPA guidance on Five Year Reviews dated 6-2001). In addition, a brief discussion regarding Fernald's institutional controls and monitoring program needs to be included along with a brief statement on how they are protective.

2. Commenting Organization: Ohio EPA
Section: Exe Summary Pg#: vii Code: C
Comment: In DOE's list of OU's, the OSDF needs to be included as part of the remedy. The OSDF was originally part of OU2 and contains materials from OU3 and OU5.

3. Commenting Organization: Ohio EPA
Section: Five Yr Review Summary Form Pg#: x Code: C
Comment: Use a separate Summary Form for each OU. This will provide clarity for each of the separate remedies. (see attached example)

4. Commenting Organization: Ohio EPA
Section: 1.0/Introduction Pg#: 1 Code: C
Comment: Please address the "purpose" for writing the Five Year Review. DOE needs to include a statement indicating DOE's requirements to continue monitoring, continue with care and maintenance of the site, and ensure that institutional controls are keeping the remedy in place (via the LMICP).

5. Commenting Organization: Ohio EPA
Section: 1.0/Introduction Pg#: 1, first para Code: E
Comment: The third sentence in the first paragraph is much clearer without the statement "no less often than".

6. Commenting Organization: Ohio EPA
Section: 2.0/Site Chronology Pg#: 2 Code: C
Comment: Several events are missing from Table 1 (refer to US EPA's Guidance on Five Year Reviews). Include when EPA and DOE signed the Federal Facilities

Compliance Agreement which initiated the RI/FS process since it is significant and is discussed further in the document.

7. Commenting Organization: Ohio EPA
Section #: 3.4 Pg #: 4 Code: C
Comment: Ohio EPA also sued DOE and NLO for violations of hazardous waste and water pollution laws, as well as, natural resource damages in March 1986.

8. Commenting Organization: Ohio EPA
Section #: 4.1 Pg #: 7 Code: C
Comment: The discussion of the RODs should include any ESDs and/or ROD amendments.

9. Commenting Organization: Ohio EPA
Section #: 4.2.6 Pg #: 13 Code: C
Comment: Suggest rewording the first bullet to read: Excavation of contaminated soil and sediment with conventional construction equipment that were detected as above FRLs.

The statement that "concentrations of contaminants at the entire site are below FRLs" is misleading and not true.

10. Commenting Organization: Ohio EPA
Section #: 4.2.6 Pg #: 14 Code: C
Comment: There is an environmental covenant signed in 2008 with the state of Ohio preventing the use of groundwater. This should be added as an institutional control bullet for this section.

Commenting Organization: Ohio EPA
Section: 5.4 Pg#: 20, first para/third sentence Code: E
Comment: Please reword this sentence. "For OSDF inspections, some or all of the vegetated caps are walked down" to read "For OSDF cap inspections, the entire facility is walked down during the Spring and Fall. During the other two quarters, Cells 1, 7 & 8 are inspected".

11. Commenting Organization: Ohio EPA
Section #: 5.4 Pg #: 20 Code: C
Comment: The repeated occurrence of deer stands on site is evidence that institutional controls may not be adequate for this specific activity. It is also likely that the users of these stands possessed firearms and/or other prohibited articles.

12. Commenting Organization: Ohio EPA
Section #: 5.4 Pg #: 20 Code: C
Comment: Suggest mentioning that one of the biggest challenges for the ecological restoration of the site is the continuous battle with invasive plant species.

13. Commenting Organization: Ohio EPA
Section: 6.0 Pg #: 21 Code: C
Comment: According to Section 4.0 of US EPA guidance on Five Year Reviews, "Assessing The Protectiveness of the Remedy," the Waste Pit 3 area remedy was never achieved due to not being able to meet the FRLs for surface water. DOE should answer "Question A" of Section 4.0 of the guidance as "no" due to not meeting the remedial action objectives.

14. Commenting Organization: Ohio EPA
Section #: 6.1.14 Pg #: 27 Code: C
Comment: There was concern over seeps along the toe of the OSDF draining toward the drainage swale. An engineering report was produced identifying the preferential flow patterns off the cell cap due to vehicular traffic during cell construction.

15. Commenting Organization: Ohio EPA
Section: 8.0/Table 26 Pg#: 58 Code: C
Comment: Table 26 Issue 2, requires further explanation. In addition to continuing to monitor and maintain a sampling program DOE needs to ensure that access to this area is limited as designed by existing institutional controls, i.e. public access is limited to the trails.

16. Commenting Organization: Ohio EPA
Section #: 9.0 Pg #: 59 Code: C
Comment: The phrase, "All waste materials have been removed..." should be reworded to state that all detected waste material and debris above FRLs have been removed...The fact that contaminated debris has been found on site requires a change in the wording to reflect that all detected material and debris have been removed.

17. Commenting Organization: Ohio EPA
Section #: 10 Pg #: 60 Code: C
Comment: The due dates are stated inconsistently. It is sometimes referenced as April and other times referenced as September.

According to the EPA Comprehensive Five-Year Review Guidance:

1.3.3 What are triggers for subsequent statutory and policy reviews?
After completion of the first statutory or policy five-year review, the trigger for subsequent reviews is the signature date of the previous Five-Year Review report. For reviews led by other Federal agencies, States, or Tribes, and where EPA has a concurrence role, the trigger for subsequent reviews corresponds to EPA's concurrence signature date of the preceding Five-Year Review report (see Sections 3.7.2 and 3.7.3).

EPA's concurrence date is the September 16, 2006 date. Remove/change all references to the due date for this FYR to September 16, 2011.

Table E-6
Five-Year Review Summary Form
Groundwater Operable Unit

SITE IDENTIFICATION		
Site name *(from WasteLAN)*: [redacted]		
EPA ID *(from WasteLAN)*: [redacted]		
Region: V	**State: Ohio**	**City/County: Dayton, Montgomery & Greene**
SITE STATUS		
NPL status: ☒ Final Deleted Other (specify)		
Remediation status (choose all that apply): Under Construction ☒ Operating Complete		
Multiple OUs?* ☒ YES NO	**Construction completion date:** October 1999	
Has site been put into reuse? YES ☒ NO		
REVIEW STATUS		
Lead agency: EPA State Tribe ☒ Other Federal Agency [redacted]		
Author name: [redacted]		
Author title: Project Manager	**Author affiliation:** [redacted]	
Review period:** December 2004 to April 2010		
Date(s) of site inspection: Not Applicable		
Type of review: ☒ Post-SARA Pre-SARA NPL-Removal only Non-NPL Remedial Action Site NPL State/Tribe-lead Regional Discretion		
Review number: ☐ 1 (first) ☒ 2 (second) 3 (third) Other (specify) _____		
Triggering action: Actual RA Onsite Construction at OU #____ Actual RA Start at OU#____ ☒ Construction Completion ☒ Previous Five-Year Review Report Other (specify)		
Triggering action date *(from WasteLAN)*: 20 December 2005		
Due date *(five years after triggering action date)*: 20 December 2010		

* ["OU" refers to operable unit.]
** [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]

Table E-6
Five-Year Review Summary Form
Groundwater Operable Unit, cont'd.

Issues:
There were no issues identified during the Five-Year Review.

Recommendations and Follow-up Actions:
Changes to the [redacted] sampling program were developed through the RPO process in 2009 and are presented in the Remedial Process Optimization report (Shaw, 2009). The approved revisions to the program will be implemented in FY11.

In addition, an RPO for the groundwater treatment system (GWTS) at LF5 was completed in September 2010 and is being reviewed by the agencies. This evaluation was conducted to develop a new cost effective and dependable GWTS to replace the existing unit. As part of the optimization a capture zone evaluation was performed to confirm the effectiveness of the selected remedy in capturing contaminated groundwater at the [redacted] boundary.

Recommendations of the GWOU and LF5 GWTS RPOs are as follows:

- Eliminate metals monitoring from the LTM Program,
- Reduce the sampling frequency or eliminate sampling entirely, for a total of 27 wells,
- Decrease the frequency of OU5 water level monitoring from monthly to quarterly.

Protectiveness Statement(s):
The remedy for the GWOU is protective of human health and the environment. Exposure pathways that could result in unacceptable risks are being controlled.