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State of Ohio Environmental Protection Agency

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October 8, 2009

Ms Jane Powell  
Fernald Preserve Manager  
DOE-LM-20.1  
10995 Hamilton Cleves Hwy  
Harrison, Ohio 45030

**RE: Standing Water in the Drainage Channels of the On-Site Disposal Facility (OSDF)**

Ms. Powell:

On September 10, 2009 Ohio EPA participated in the quarterly inspection of the OSDF. During this inspection and previous inspections large stands of cattails have been observed in the drainage channels of the OSDF. (See attached photographs). The presence of cattails indicates persistent standing water in the drainage channel.

The design criteria<sup>1</sup> or runoff/runoff for the OSDF states:

- Permanent drainage channels shall be designed to meet the following criteria (design considerations).
- The final grades of the channel should be no less than 0.5 percent to prevent sediment buildup and clogging, unless it can be established by calculation that a lesser slope will not clog or buildup sediment that will cause loss of flow capacity in the design storm event.

The drainage channel was designed to convey surface water away from the OSDF. Cattails are evidence of ponding in the drainage channel and it appears that the original grade of the channel has not been maintained or was not sufficient to meet the design criteria.

Ohio EPA also observed cattail growth up-gradient from the base of the drainage channel indicating potential seeps to the drainage channel. These areas may be an indication of preferential flow from the cover, or some other source, to the drainage channel.

Ohio EPA requests that a meeting be scheduled in the near future to discuss the inspection findings and their potential impacts to the integrity of the OSDF. The meeting should include a representative from the OSDF designer, Geosyntec; as well as, DOE-LM, Stoller, US EPA, and Ohio EPA.

If you have any questions, feel free to contact me at (937) 285-6466.

Sincerely,

Thomas A Schneider  
Fernald Project Manager  
Ohio Environmental Protection Agency



Figure 1. Cattails present along the east drainage channel of the OSDF.



Figure 2. Ponding water along the drainage channel of the OSDF.



Figure 3. Water from apparent seeps.



Figure 4. Apparent seep, east side of OSDF.

cc: Tim Fisher, USEPA

<sup>1</sup> Design Criteria Package, On-Site Disposal Facility, Revision 0, May 1997.