



State of Ohio Environmental Protection Agency

**Northwest District Office**

347 North Dunbridge Road  
Bowling Green, Ohio 43402  
(419) 352-8461 FAX (419) 352-8468

Bob Taft  
Governor

RE: PLUM BROOK ORDNANCE WORKS  
ERIE COUNTY  
OHIO I.D#: 322-0552  
PENTOLITE AREA WASTE LAGOONS

October 8, 1999

Department of the Army  
U.S. Army Engineer District, Louisville  
Corps of Engineers  
Mr. Douglas Meadors  
P.O. Box 59  
Louisville, KY 40201-0059

Dear Mr. Meadors:

The Ohio Environmental Protection Agency (EPA), Division of Emergency and Remedial Response (DERR), has reviewed the draft "Limited Site Investigation, Quality Assurance Project Plan" and draft "Final Report" for the Pentolite Area Waste Lagoons at the former Plum Brook Ordnance Works, Sandusky, Ohio. These documents were submitted to the Ohio EPA by the Corps of Engineers, on July 26, 1999 and September 1, 1999 for review and comments. Ohio EPA, DERR is providing the following comments.

Limited Site Investigation, Quality Assurance Project Plan

1. General Comment: The Ohio EPA, DERR, would prefer to receive the Quality Assurance Project Plan under separate cover and have it referenced in all site investigation work plan submittals.
2. General Comment: The flow of the document is very confusing as it jumps back and forth between the entire Plum Brook Ordnance Works (PBOW) history and the history of the Pentolite Area Waste Lagoons (PAWL). Please create a Plum Brook Ordnance Works general history section and focus the remainder of the document on the Pentolite Area Waste Lagoons site investigation.
3. Section 1.2.1 General, Page 1: Please include the approximate distance from the Pentolite Area Waste Lagoons to the nearest residence.
4. Section 1.2.1 General, Page 1: Please note what landmarks border the PAWL, not the entire PBOW facility.
5. Section 1.2.3 PAWL, Site Specific, Page 2: Please change the name of this section to "Site Specific Operational History."
6. Section 1.2.3 PAWL, Site Specific, Page 3: Add a figure that shows the construction design of the waste lagoons discussed in the second paragraph.
7. Section 1.6.3 Rationale of Selected Sampling Locations, Page 9: This section states that the rationale used to select sampling locations and depths will be discussed in the Field Sampling Plan and the Data Quality Objective sections. The rationale for sample locations is not clearly defined in either of these sections. Please give justification for each of the sampling locations and depths chosen.



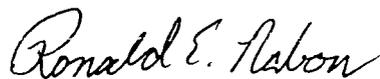
Mr. Douglas Meadors  
October 8, 1999  
Page 2

Final Report

1. Section 2.3, Hydrology, Page 2 and Section 5.1 Hydrology, Page 12: This section indicates that the surface water in the Pentolite Area Waste Lagoons flows northeast or northwest. This statement is incorrect. When the Plum Brook Reactor was constructed the entire reactor site, to include the PAWL, was engineered to capture surface water so that it could be tested. Please revise this section.
2. Section 3.1 Sampling Activities, Page 8: This section does not provide discussion as to why sample locations were selected.
3. Section 3.1 Sampling Activities, Page 8: The table located on page 10 utilizes the soil type descriptions discussed in section 3.1. However the soil type of "SM" is not discussed. Please include this classification in this section.
4. Section 3.1 Sampling Activities, Pages 8 & 9: Please provide a discussion as to why the crushed limestone layer was not sampled as part of this investigation. It is stated in the text that it is believed that this material remains from the former PAWL.
5. Section 3.1 Sampling Activities, Pages 8 & 9: Figure 5 provides plans and sections for the pentolite wastewater settling basins. Please explain why samples were not collected from the east and west inlet locations, as referenced on page 5? Please explain if any attempt was made to locate the inlet, outlet or vitreous sewer pipes. Were any samples collected in the general locations of these lines?
6. Section 3.1 Sampling Activities, Pages 8 & 9: Please clarify if any samples were collected below the crushed limestone materials in the first clay layer. The table on page 10 indicates that only three (3) samples were collected at or below the depth of four (4) feet. If this area was excavated during construction of the NASA Nuclear Reactor, the majority of the PAWL samples collected, during this site investigation, were from fill material. This would not adequately characterize the PAWL.

The Ohio EPA, DERR, is not able to approve the Quality Assurance Project Plan or the Final Report for the Pentolite Area Waste Lagoons at this time. The Army Corps of Engineers must provide the information missing from the QAPP document and address data gaps that have been identified in the Final Report. If you have any questions or concerns regarding this correspondence please contact me at (419) 373-3147.

Sincerely



Ronald E. Nabors  
Site Coordinator  
Division of Emergency and Remedial Response  
Northwest District Office  
/csr

CC: Richard Meadows, USACE, Huntington  
Bonnie Buthker, OFFO, SWDO  
Archie Lunsey, DERR NWDO  
DERR, NWDO File