



Department of Energy

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JAN 9 2007

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

EMCBC-00192-07

Mr. Thomas Schneider, Project Manager
Ohio Environmental Protection Agency
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY ADDITIONAL COMMENTS AND CHANGE PAGES TO THE FINAL CERTIFICATION REPORT FOR AREA 7 MISCELLANEOUS AREAS

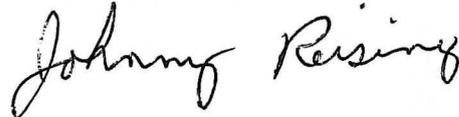
- References:
- 1) Letter DOE-0022-07, J. Reising to J. Saric/T. Schneider, "Transmittal of the Draft Certification Report for Area 7 Miscellaneous Areas," dated October 23, 2006
 - 2) Letter, J. Saric to J. Reising, "Area 7 Miscellaneous Areas Certification Report, Revision A," dated November 8, 2006
 - 3) Letter DOE-0067-07, J. Reising to J. Saric/T. Schneider, "Transmittal of Responses to U.S. Environmental Protection Agency Comments on the Draft Certification Report for Area 7 Miscellaneous Areas," dated November 16, 2006
 - 4) Letter, T. Schneider to J. Reising, "Disapproval - Draft Certification Report for Area 7 Miscellaneous Areas," dated November 20, 2006
 - 5) Letter DOE-0094-07, J. Reising to J. Saric/T. Schneider, "Transmittal of Responses to the Ohio Environmental Protection Agency Comments and the

- 6) Final Certification Report for Area 7 Miscellaneous Areas," dated December 12, 2006
- 7) Letter, T. Schneider to J. Reising, "Disapproval - Certification Report for Area 7 Miscellaneous Areas and Response to Comments," dated December 14, 2006.

Enclosed for your approval are responses to Ohio Environmental Protection Agency (OEPA) additional comments and change pages to the final Certification Report for Area 7 Miscellaneous Areas. Also, enclosed are the revised responses to the original OEPA comments as requested per reference 6. All comment responses have been incorporated into the change pages of the final report.

If you have any questions or require additional information, please contact me at (513) 648-3139.

Sincerely,



Johnny Reising
Director

Enclosures as stated

cc with enclosures:

J. Desormeau, OH/FCP
T. Schneider, OEPA-Dayton (three copies of enclosure)
G. Jablonowski, USEPA-V, SR-6J
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M. Shupe, HSI GeoTrans
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cc without enclosures:

F. Johnston, Stoller./MS12
F. Miller, Fluor Fernald, Inc./MS90
P. Mohr, Fluor Fernald, Inc./MS1
T. Terry, Fluor Fernald, Inc./MS1

**RESPONSES TO
OHIO ENVIRONMENTAL PROTECTION AGENCY
COMMENTS ON THE
CERTIFICATION REPORT AND RTCs
FOR AREA 7 MISCELLANEOUS AREAS**

**FERNALD CLOSURE PROJECT
FERNALD, OHIO**

JANUARY 2007

U.S. DEPARTMENT OF ENERGY

**RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS
ON THE CERTIFICATION REPORT AND RTCs
FOR AREA 7 MISCELLANEOUS AREAS
(20500-RP-0008, Revision 0)**

FERNALD CLOSURE PROJECT

COMMENTS

Comments:

Response to Comments

1. Commenting Organization: OEPA Commenter: OFFO
 Section #: Pg #: Line #: Code: C
 Original Comment# 13

Comment: The response states that the statistics for CU-14 Ra226 were correct in the original submittal. However, the statistics have been changed from the original submittal to what is included in the table on A.2-3 in the revised document. The response and document should be revised to clarify this change.

Response: Agreed.

Action: The original RTC will be amended to state that the statistics from Appendix A.2 were pulled forward in error for CU 14 radium-226 and that CU-14 in A.2 will be re-evaluated for accuracy and amended if necessary.

2. Commenting Organization: OEPA Commenter: OFFO
 Section #: Pg #: Line #: Code: C
 Original Comment# 14

Comment: The response refers to Comment #7 however, #7 refers to including V/FCNs in the appendix and is not relevant to the comment. It appears that Tables on pages A.2-1 and A.2-3 have changed from the original submittal but no response is provided.

Response: Agreed.

Action: The original RTC #14 will be amended to reference original comment #13 and that CUs 14 and 4 (in A.2, pages A.2-1 and A.2-3) will be re-evaluated for accuracy and amended if necessary.

3. Commenting Organization: OEPA Commenter: OFFO
 Section #: Pg #: Line #: Code: C
 Original Comment# 15

Comment: Despite what the response to comment states, no change to Appendix 3 has occurred since the original submittal.

Response: Agreed – When reviewing the original comment it was erroneously stated that the statistics from A.2 were pulled forward into Appendix A.3. This was not the case. Given the information in the clarification statement, the statistics are correct as originally presented.

Action: The original RTC will be amended to state that the statistics presented in A.3 are correct.

Certification Report

4. Commenting Organization: OEPA

Commenter: OFFO

Section #: 3.1.4.1

Pg #: 3-4

Line #: Code: C

Original Comment#

Comment: Though the section has an improved discussion of the 60" and 18" pipe sections left in place, Ohio EPA believes additional detail should be provided. Reference to whatever report was generated documenting the absence of removable contamination from within the 60" line is necessary. Include a discussion of the access restricting grates placed on the 60" line and commit to including inspections within the LMIC for ensuring the grates are maintained and that erosion does not expose portions of either pipe (due to the lack of characterization data). Additionally, reference should be made to the fact that both pipes will be addressed in the OU3 Fact Sheet on Beneficial Reuse. Finally, a commitment should be included to remove and properly dispose of the contaminated pipes at any future point when the leachate line and main effluent line cease to operate.

Response: Section 3.1.4.1 will be amended as shown below. Further, a decision relating to removal and disposition of the contaminated pipes will be made with consultations with the regulators when the time for the leachate and main effluent lines ceasing to be operated approaches.

Action: Section 3.1.4.1 will be amended as follows.

"Two below-grade structures remain in this area as shown in Figure 3-6. The first is the remaining sections of the 60-inch storm sewer pipe running north to south under the access road to the north of the Storm Water Retention Basin (SWRB). The other remaining below-grade structure is the remnant of an 18-inch storm water pipe adjacent to the 60-inch pipe. The main reason that remaining sections of these two pipelines cannot be excavated without significant risk to the ongoing CAWWT and OSDF operations is due to their location. These two pipes cross the main roadway of the site and run directly under the OSDF leachate conveyance system and the main effluent line running between the CAWWT and the Great Miami River.

There was some soil/sediment left in the southern end of the 60-inch pipe that was from the soil placed inside the down gradient end of the pipe to block the water from flowing into the SWRB when excavating the SWRB footprint. All remaining soil/sediment in the pipe was removed from this line during the restoration process and visually confirmed. Following the removal of the sediment, smear samples were collected inside the pipe by Radiological Control and documented on a radiological field survey as shown on Appendix D to ensure that there is no removable contamination left. Based on these results, it has been determined that any remaining contamination is of a fixed nature. The water flowing through the pipe into the SWRB now has levels below the site discharge limits for uranium [30 micrograms per liter ($\mu\text{g/L}$)] and does not show increased concentrations at the downstream end of the pipe. The pipe has been incorporated into the storm water management system in the restoration design as the main outlet of overflow from the former production area footprint. Due to these factors, no further remediation for the 60-inch pipe is planned. Access to this pipe will be further restricted administratively as required by

Legacy Management - steep slope, ponding water, and also by heavy vegetation in a few years. Additionally, access restricting metal grating with appropriate posting has been installed.

Only a 20-foot section of the 18-inch pipe under the main roadway is left in place and buried. However, this line is isolated and about 20 feet below ground and has no likelihood of free flowing material in it. Due to the depth of the pipe, it was unsafe to visually check or collect sediment samples (if present) from the remaining section of the pipe. However, it was reasonable to assume that the amount of sediment left in this old storm sewer pipe would not be significant and the sediment should have conditions similar to the surrounding soil because it has not been in service since the installation of the 60-inch pipe in the 1950s.

Requirements involving routine inspection of the gates placed on the 60-inch and 18-inch pipes' locations are specified in the LMICP including observation of potential exposures of buried portions of either pipe due to erosion.

A decision for removal and disposition of the pipes will be made with regulatory consultations and approvals after the leachate and main effluent lines are no longer needed.”

**REVISED RESPONSES TO
OHIO ENVIRONMENTAL PROTECTION AGENCY
COMMENTS ON THE
DRAFT CERTIFICATION REPORT
FOR AREA 7 MISCELLANEOUS AREAS**

**FERNALD CLOSURE PROJECT
FERNALD, OHIO**

JANUARY 2007

U.S. DEPARTMENT OF ENERGY

**RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS
ON THE ADDENDUM TO THE DRAFT CERTIFICATION REPORT
FOR AREA 7 MISCELLANEOUS AREAS
(20500-RP-0008, Revision A)**

FERNALD CLOSURE PROJECT

COMMENTS

1. Commenting Organization: Ohio EPA
Section #: 2 Pg #: 2-1 Line #: 29 Commenter: GeoTrans, Inc.
Code: E
Original Comment #: 1
Comment: The reference to SEP Table 2-1 in this paragraph is incorrect. The text should read "Table 2-7."

Response: Agree.

Action: Text will be revised to read Table 2-7.

2. Commenting Organization: Ohio EPA
Section #: 2 Pg #: Table 2-2 Line #: 29 Commenter: GeoTrans, Inc.
Code: C
Original Comment #: 2
Comment: The justification "No above-FRLs present" requires some elaboration. What sampling event is this statement in reference to?

Response: Table 2-2 is a copy of Table 4-2 from Certification Design Letter and Certification Project Specific Plan for Area 7 Miscellaneous Areas, which is an approved document. The table was copied into the report so the reader would not need to reference the CDL/PSP.

Action: None.

3. Commenting Organization: Ohio EPA
Section #: Figure 2-8 Pg #: Line #: Commenter: OFFO
Code: E
Original Comment #: 3
Comment: Sub-CU 5 appears to be mislabeled as sub-CU 16, which gives the CU two sub-CU's with the number 16. Please correct.

Response: Agree.

Action: Figure 2-8 will be corrected.

4. Commenting Organization: Ohio EPA
Section #: Figure 2-9 Pg #: Line #: Commenter: OFFO
Code: E
Original Comment #: 4
Comment: Sub-CU 8 appears to be missing on CU 17.

Response: Sub-CU 8 is an archive sample located on the eastern side of the CU between CUs A7-MA-C17-7 and A7MA-C17-16 as shown on figure 2-9.

Action: None.

5. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.0 Pg #: 3-1 Line #: 20-27 Code: C
Original Comment #: 5
Comment: The document references precertification sampling events conducted on a trench bottom as the result of utility removal. However, V/FCNs 20500-PSP-0009-36, 83, 97 and 20500-PSP-0010-10 are not included in the certification report. Please add them to Appendix B.

Response: Agree.

Action: The applicable variances will be added to Appendix B.

6. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: 3 Pg #: 3-1 Line #: 22 Code: C
Original Comment #: 6
Comment: The locations of the utility trenches should be shown on the figures.

Response: Agree.

Action: Figures 3-1 through 3-5 will be updated to include the location of the CU boundaries.

7. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.1.2.1 Pg #: 3-2 Line #: 29-33 Code: C
Original Comment #: 7
Comment: Since the data from sampling effort was done under V/FCN 20500-PSP-0010-03 is included in Appendix A, shouldn't the V/FCN be included in the document as well?

Response: Agree.

Action: The variance will be added to Appendix B.

8. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.1.3.1 Pg #: 3-3 Line #: 21 Code: C
Original Comment #: 8
Comment: A reference is made in regards to the Equipment Burial Area designated on Figure 1-2. However, Figure 1-2 is the FCP Certification Map. Please add the figure to the document addressing the Equipment Burial Area.

Response: Agree.

Action: Figure 3-6 will be amended to indicate the location of the Equipment Burial Area. The text will also be amended to reflect this.

9. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: 3 Pg #: 3-4 Line #: 13 Code: C
Original Comment #: 9
Comment: The locations of the buried pipes should be indicated on a figure in this document. Also, verification that all contaminated sediment was removed from the 60-inch pipe should be provided. The text should address why the decision was made to abandon the pipes in place and why the contents of the 18-pipe were not characterized.

Response: Agree. The locations of the buried pipes will be indicated on Figure 3-6. Text will be added to explain the decision to abandon portions of these two pipes in place.

11. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Attach A.1 Pg #: NA Line #: NA Code: C
Original Comment#: 11

Comment: Please provide details for *a posteriori* sample size calculations for A7MA-C04 Total Uranium, A7MA-C04 Arsenic, A7MA-C08 total Uranium, A7MA-C13 Arsenic, and A7MA-C15 Beryllium.

Response: Although minor changes occurred to the statistical data for these CUs, the *a posteriori* sample sizes remain unchanged. Further details of the basis of these statistical evaluations can be found in the Sitewide Excavation Plan.

Action: None.

12. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Attach A.1 Pg #: NA Line #: NA Code: C
Original Comment #: 12

Comment: The Est. Mean does not match the sample data for the following certification units: A7MA-C04 Arsenic (Est. Mean = 9.29 vs. 8.90 in report), A7MA-C04 Beryllium (Est. Mean = 0.75 vs. 0.72 in report), and A7MA-C08 Total Uranium (Est. Mean = 8.25 vs. 8.2 in report).

Response: Agree.

Action: The mean will be updated with the correct value for CU A7MA-C04 (Arsenic and Beryllium), and CU A7MA-C08 (Total Uranium).

13. Commenting Organization: Ohio EPA Commenter: GeoTrans, Inc.
Section #: Attach A.2 Pg #: NA Line #: NA Code: C
Original Comment #: 13

Comment: Please provide details for *a posteriori* sample size calculations for A7MA-C04 Total Uranium, A7MA-C04 Ra226, and A7MA-C14 Ra226.

Response: Upon review, the following was found.

For A7MA-C04 - Total Uranium - The statistics from Appendix A-1 were erroneously brought forward into Appendix A-2 for this parameter. The statistics for Total Uranium as they apply to A7MA-C04 will be corrected. For purposes of clarification, where multiple samples were collected from within the same sub-CU, the data used in the statistical evaluation of the CU is 1) the sample with the highest result between samples A7MA-C04-3 (the original sample) and A7MA-C04-3-D (the field duplicate) and 2) the sample with the highest result among samples A7MA-C04-6A (the excavated hotspot location), A7MA-C04-6N, A7MA-C0-6S, A7MA-C04-6E, A7MA-C04-6W (the four bounding locations), and A7MA-C04-18 (the random sample location). All six of these samples were collected from within sub-CU A7MA-C04-6.

For A7MA-C04 - Radium-226 - The statistics in Appendix A-2 are correct. For the purposes of clarification, where multiple samples were collected from within the same sub-CU, the data used in the statistical evaluation of the CU is 1) the sample with the highest result between samples A7MA-C04-3 (the original sample) and A7MA-C04-3-D (the field duplicate) and 2) the sample with the highest result among samples A7MA-C04-8A (the excavated hotspot location), A7MA-C04-8N, A7MA-C04-8S, A7MA-C04-8E, A7MA-C04-8W (the four bounding locations), and A7MA-C04-17 (the random sample location). All six of these samples were collected from within sub-CU A7MA-C04-8.

**CERTIFICATION REPORT FOR
AREA 7 MISCELLANEOUS AREAS**

**FERNALD CLOSURE PROJECT
FERNALD, OHIO**



JANUARY 2007

U.S. DEPARTMENT OF ENERGY

20500-RP-0008

REVISION 0

PCN1

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3.1.4 Area 7I and 7K - Silos Water Treatment Facility Area and Adjacent Road

3.1.4.1 Historical, Predesign and Excavation Control

Based on the results of historical data collection and evaluation, predesign sampling was done to determine the nature and extent of contamination on Areas 7I and 7K. Additionally, samples were collected to fill any data gaps left in this area. The results of these investigations are presented in the PSP for the Excavation Control and Precertification of Area 7 Silos and General Area (Supplement to 20300-PSP-0011) and the PSP for Excavation Control and Precertification of Area 7 Support and Silos Process Area (Supplement to 20300-PSP-0011).

Excavation of the Area 7I and 7K - Silos Water Treatment Facility Area began in 2006. In addition to the removal of contamination present in the areas designated as above-FRL, existing at-grade concrete and asphalt pads/roads, existing foundations, slabs, footers, and other support structures were removed.

Two below-grade structures remain in this area as shown in Figure 3-6. The first is the remaining sections of the 60-inch storm sewer pipe running north to south under the access road to the north of the Storm Water Retention Basin (SWRB). The other remaining below-grade structure is the remnant of an 18-inch storm water pipe adjacent to the 60-inch pipe. The main reason that remaining sections of these two pipelines cannot be excavated without significant risk to the ongoing CAWWT and OSDF operations is due to their location. These two pipes cross the main roadway of the site and run directly under the OSDF leachate conveyance system and the main effluent line running between the CAWWT and the Great Miami River.

There was some soil/sediment left in the southern end of the 60-inch pipe that was from the soil placed inside the down gradient end of the pipe to block the water from flowing into the SWRB when excavating the SWRB footprint. All remaining soil/sediment in the pipe was removed from this line during the restoration process and visually confirmed. Following the removal of the sediment, smear samples were collected inside the pipe by Radiological Control and documented on a radiological field survey as shown on Appendix D to ensure that there is no removable contamination left. Based on these results, it has been determined that any remaining contamination is of a fixed nature. The water flowing through the pipe into the SWRB now has levels below the site discharge limits for uranium [30 micrograms per liter ($\mu\text{g/L}$)] and does not show increased concentrations at the downstream end of the pipe. The pipe has been incorporated into the storm water management system in the restoration design as the main outlet of overflow from the former production area footprint. Due to these factors, no further remediation for the 60-inch pipe is planned. Access to this pipe will be further restricted administratively as required by Legacy Management - steep slope, ponding water, and also by heavy vegetation in a few years. Additionally, access restricting metal grating with appropriate posting has been installed.

Only a 20-foot section of the 18-inch pipe under the main roadway is left in place and buried. However, this line is isolated and about 20 feet below ground and has no likelihood of free flowing material in it. Due to the depth of the pipe, it was unsafe to visually check or collect sediment samples (if present) from the remaining section of the pipe. However, it was reasonable to assume that the amount of sediment left in this old storm sewer pipe would not be significant and the sediment should have conditions similar to the surrounding soil because it has not been in service since the installation of the 60-inch pipe in the 1950s.

Requirements involving routine inspection of the gates placed on the 60-inch and 18-inch pipes' locations are specified in the LMICP including observation of potential exposures of buried portions of either pipe due to erosion.

A decision for removal and disposition of the pipes will be made with regulatory consultations and approvals after the leachate and main effluent lines are no longer needed.”

3.1.4.2 Precertification

According to guidelines established in Section 3.3.3 of the SEP, precertification activities were conducted to evaluate residual radiological contamination patterns as specified in the PSP for the Excavation Control and Precertification of Area 7 Silos and General Area (Supplement to 20300-PSP-0011) and the PSP for Excavation Control and Precertification of Area 7 Support and Silos Process Area (Supplement to 20300-PSP-0011). Area 7I and 7K passed the requirements of precertification, and it was determined that certification of the soil could be completed.

3.2 CHANGES TO SCOPE OF WORK

The scope of work for Area 7 Miscellaneous Areas Certification Sampling required seven changes, which were documented with seven V/FCNs (see Appendix B) and discussed in the following paragraphs.

Variance 20500-PSP-0016-1 documents the collection of one additional sample at previously sampled certification boring location A7MA-C-14-15D to confirm/verify the presence or absence of above-FRL conditions in this area.

Variance 20500-PSP-0016-2 documents the collection of soil samples at previously sampled certification boring location A7MA-C-14-15D, its bounding samples, and one sample from within the same sub-CU from a random location.

Variance 20500-PSP-0016-3 documents the collection of soil samples at previously sampled certification boring location A7MA-C04-8, its bounding samples, and one sample from within the same sub-CU from a random location.

Variance 20500-PSP-0016-4 documents the collection of soil samples at previously sampled certification boring location A7MA-C04-6, its bounding samples, and one sample from within the same sub-CU from a random location.

Variance 20500-PSP-0016-5 documents the collection of soil samples at previously sampled certification boring location A7MA-C-14-15D and its bounding samples.

Variance 20500-PSP-0016-6 documents the collection of soil samples to further bound previously sampled bounding boring location A7MA-C-14-15S.

APPENDIX D

RADIOLOGICAL SURVEY FOR THE SIXTY-INCH PIPE

FEMP COVER SHEET		SURVEY NUMBER <i>06-08-08-17</i>	
DATE <i>8/23/06</i>	RCT PRINT <i>Dawn Loebker</i>	PAGE 1 of 2	
TIME <i>1330</i>	SIGNATURE <i>Dawn Loebker</i>	BADGE [REDACTED]	
RWP NUMBER <i>N/A</i>	REVIEWER PRINT <i>Foster</i>	DATE <i>8/24/06</i>	
	SIGNATURE <i>[Signature]</i>	BADGE [REDACTED]	
LOCATION: <i>SWRB</i>			
REASON FOR SURVEY	<i>Survey on 60' pipe.</i>		
	<i>N/A</i>		
SUMMARY:			

FEMP / RADIOLOGICAL SURVEY REPORT

SURVEY NUMBER: 06-08-08-17

PAGE 2 OF 2

DATE: 8/23/06	RCT PRINT: Dawn Loebker	RCT SIGNATURE: Dawn Loebker	DATE REVIEWED: 8/24/06	REVIEWED BY (PRINT): Foster	REVIEWED BY (SIGNATURE): [Signature]
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MODEL	SERIAL NUMBER	TYPE (0, 5, 7)	CALIBRATION DUE DATE	BKGD (dpm)	EFF. CF	GCOUNT TIME (min)	MDA (dpm)	INST. PERFORMANCE TEST SAT.	
								YES	NO
3	90075	B.8	2/07	40	36	NA	3K	X	NA
N A									

ITEM NUMBER	LOCATION AND/OR DESCRIPTION	DPM/100cm ² ALPHA		DPM/100cm ² BETA-GAMMA		CORRECTED DOSE RATE (mrem/hr)								
		REMOVABLE	FIXED	REMOVABLE	FIXED									
		(1)	(2)	(3)	(4)	CONTACT	NON-CONTACT	AIR	ETC.	INHALED				
1	600' Pipe	NA	NA	NA	45K									
N A														
N A														

Note: Values generated by an analyzer. If no count results are displayed, the calculated MDA.