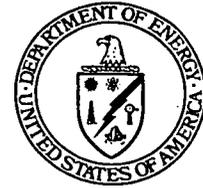




**Department of Energy**

**Ohio Field Office  
Fernald Area Office**  
P. O. Box 538705  
Cincinnati, Ohio 45253-8705  
(513) 648-3155



OCT 29 1999

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

DOE-0076-00

Mr. Tom Schneider, Project Manager  
Ohio Environmental Protection Agency  
401 East 5<sup>th</sup> Street  
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

**TRANSMITTAL OF RESPONSES TO THE U.S. ENVIRONMENTAL PROTECTION AGENCY  
AND OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS AND THE REVISED  
PROJECT SPECIFIC PLAN FOR PREDESIGN SAMPLING IN THE AREA 2, PHASE II - PARTS  
TWO AND THREE**

- References:
- 1) Letter, T. Schneider to J. Reising, "Comments - PSP for the Predesign Sampling in the A2P2 - Part Two and Three, " dated September 27, 1999
  - 2) Letter, J. Saric to J. Reising, "Area 2, Phase 2 PSP," dated September 28, 1999

Enclosed for your review are responses to the U.S. Environmental Protection Agency and Ohio Environmental Protection Agency (OEPA) comments to the draft Project Specific Plan (PSP) for Predesign Sampling in the Area 2, Phase II (A2PII) - Parts Two and Three. Also enclosed is Revision 0 of this PSP that incorporates these comment responses.

Mr. James A. Saric  
Mr. Tom Schneider

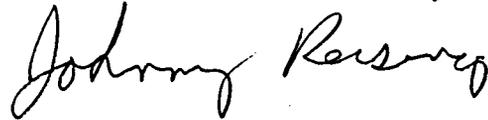
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OCT 29 1999

If you have any questions or concerns regarding these documents, please contact  
Robert Janke at (513) 648-3124.

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Sincerely,



Johnny W. Reising  
Fernald Remedial Action  
Project Manager

FEMP: R.J. Janke

Enclosure

cc w/enclosure:

T. Schneider, OEPA-Dayton (three copies of enclosure)  
F. Barker, Tetra Tech  
AR Coordinator, FDF/78

cc w/o enclosure:

D. Carr, FDF/52-2  
J. D. Chiou, FDF/52-0  
T. Crawford, FDF52-0  
D. Diallo, FDF/52-0  
T. Hagen, FDF/65-2  
M. Rolfes, FDF/60  
ECDC, FDF/52-7

2

Mr. James A. Saric  
Mr. Tom Schneider

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OCT 29 1999

bcc w/enclosure:  
R. J. Janke, OH/FEMP  
M. Davis, ANL

= 2605

**RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY  
TECHNICAL REVIEW COMMENTS ON THE  
DRAFT PROJECT SPECIFIC PLAN FOR PREDESIGN SAMPLING  
IN THE AREA 2, PHASE II – PARTS TWO AND THREE  
(20450-PSP-0001, REVISION B)**

**FERNALD ENVIRONMENTAL MANAGEMENT PROJECT**

**GENERAL COMMENT**

Commenting Organization: U.S. EPA

Commentor: Saric

Section #: Not Applicable (NA)

Pg. #: NA

Line #: NA

Original General Comment #: 1

Comment: Figure 2-2 shows that considerable portions of Area 2, Phase II—Parts 2 and 3 are inaccessible for real-time measurement scanning. The text on Page 2-4 in Section 2.3 states that these inaccessible areas will be covered by a separate precertification or certification investigation. The real-time scans are the primary way to identify “hot spots.” Many of the inaccessible areas are near the Southern Waste Units area (Area 2, Phase I), where a number of very discrete “hot spots” have been found. Future investigations of these inaccessible areas in Area 2, Phase II must therefore be carefully designed to provide coverage adequate to detect any such “hot spots.”

Response: Comment noted. Extensive clearing and removal of small trees, ground cover and other vegetation will be needed in all inaccessible areas. Initially, DOE proposed completing coverage in the inaccessible areas during precertification due to this need for extensive clearing. With a reduction in ground cover due to changes in season and the current timing of scanning, DOE has modified the predesign scanning strategy to include real-time scanning coverage of inaccessible areas in this PSP.

Action: Add text in Section 2.3, Real-Time Measurements, to include coverage of inaccessible areas in this PSP and clarify that the surface scanning in inaccessible areas will be conducted using the HPGe.

**SPECIFIC COMMENT**

Commenting Organization: U.S. EPA

Commentor: Saric

Section #: 2.2

Pg. #: 2-1

Line #: 25

Original Specific Comment #: 1

Comment: The text states that areas to be sampled at depth include those that have a topographic difference of more than 6 feet between the elevations measured in 1952 (before site activities began) and the current elevations. The basis for the selection of this difference as a rationale for sampling at depth is not stated. A decrease in elevation from erosion or removal of soil would not warrant subsurface sampling of the site. On the other hand, addition of only a few feet of soil could provide enough shielding to mask a significant radiation source. The rationale for selecting sampling locations at depth should be more fully discussed.

Response: Comment noted. A cross-sectional view at locations with less than 6 feet differences show similar ground surface profiles between the 1952 and current topography. These minor differences may be attributed to the measurement collection techniques and the

associated range in errors between the 1952 and current topography measurements. Therefore, the topographical differences of less than 6 feet were not initially proposed for further investigation with sampling.

To address any potential concern, additional borings will be located in seven areas not currently identified for sampling. These areas have topographical differences of greater than 2 feet but less than 6 feet. In addition, all suspect fill areas will be highlighted on the sample location map, Figure 2-1 than 6 feet were not proposed for further investigation with sampling.

**Action:** Add seven boring locations to investigate topographical differences of greater than 2 feet but less than 6 feet. In addition, highlight the suspect fill areas in Figure 2-1.

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RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS  
ON THE DRAFT PROJECT SPECIFIC PLAN FOR PREDESIGN SAMPLING  
IN THE AREA 2, PHASE II - PARTS TWO AND THREE  
(20540-PSP-0001, REVISION B)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Commenting Organization: Ohio EPA  
Section #: General Comment Page #: Line #: Commentor: OFFO  
Original Comment #: 1 Code: C

Comment: A figure should be included within the PSP documenting the location of all cultural resources within the study area. Additional detail should be provided regarding procedures for sampling within these areas.

Response: Phase I and II archaeological investigations were conducted in the Area 2, Phase II (A2PII) Part Two and Three, and one of these sites is considered eligible for inclusion in the National Register of Historic Places. Under the Archaeological Resource Protection Act, information regarding the location of sites cannot be given to the public. Contact the FDF Cultural Resources group for the locations referenced in the Phase I and Phase II studies.

Adherence to procedure EP-0003, Unexpected Discovery of Cultural Resources, is required during all sampling activities. In the event of an unexpected discovery of a cultural resource, the procedure directs personnel in the proper response to the finding.

Action: Add the following text to Section 2.2, Physical Sample Collection: " Adherence to procedure EP-0003, Unexpected Discovery of Cultural Resources, is required during all sampling activities. In the event of an unexpected discovery of a cultural resource, the procedure directs personnel in the proper response to the finding." Also add the procedure to list in Section 7, Applicable Documents, Methods, and Standards.

Commenting Organization: Ohio EPA  
Section #: 1.1 Page #: 1-1 Line #: 22-23 Commentor: OFFO  
Original Comment #: 2 Code: C

Comment: Visual documentation of non-native debris within the soil is basis for excavation as well. The bullet should be clarified to state that debris must be removed and is sufficient basis for additional excavation.

Response: Agree.

Action: Modify the text to include reference to excavate non-native debris.

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Commenting Organization: Ohio EPA

Commentor: OFFO

Section #: 1.2

Page #: 1-2

Line #: 1-2

Code: C

Original Comment #: 3

Comment: The areas which aerial photos have shown disturbances in the past are not shown on any map. Are there any samples in these locations? Please provide more details.

Response: The disturbances which are briefly referenced in the PSP are evident in the aerial photos included in a September 1988 Site Analysis Interim Report (TS-PIC-88088) that were conducted for the Environmental Monitoring Systems Laboratory Office of Research and Development, U.S. EPA.

Earth movement near the current location of soil pile MTL-HRD-011 and SWU equipment wash facility is evident in the 1954 photo. An investigative trench was created and soil sampling conducted in this area as part of the OU5 RI/FS and no evidence of contamination was found. In addition, certification sampling of the MTL-HRD-011 pile footprint was recently conducted as part of Area 2, Phase III (A2PIII) Part One. Results from this sampling event indicate no contamination above FRL for primary radionuclides. Based on the results from these two previous efforts, no additional predesign investigative sampling is planned in this area.

Dirt roads/paths dissecting the east field around the current meteorological tower location are especially evident in the early 1950 photos. Review of the topographical differences east of the Haul Road suggest that no fill was added in this area and, as a result, no sample locations are identified to investigate these disturbances. However, real-time surface scanning is planned to cover this footprint.

The aerial photos also indicate roads/paths and disturbances west of the current Haul Road near the former gravel pad. Several samples (A2P2-PT2-4, -5, -6, -7 and -12) are placed in suspect fill locations within this disturbance area. Also, real-time scanning along the existing road and cleared portions around the former gravel pad are planned.

Action: Modify Section 1.2, Background, in the PSP to include additional discussion of the disturbances and their locations.

Commenting Organization: Ohio EPA

Commentor: OFFO

Section #: 1.2

Page #: 1-2

Line #: 19-25

Code: C

Original Comment #: 4

Comment: Ohio EPA believes that it is appropriate to sample for all the primary radionuclide contaminants of concern. Sampling for all these parameters is necessary to bound the areas of potential excavation.

Response: Agree.

Action: Add thorium-228, thorium-232, radium-226 and radium-228 as target analytes for all samples.

Commenting Organization: Ohio EPA  
Section #: 1.2 Page #: 1-2  
Original Comment #: 5

Commentor: OFFO  
Code: C

Comment: The area used to evaluate existing data should be expanded to include samples from adjacent areas. Of particular importance would be along Paddys Run upstream and the Pilot Plant drainage ditch area. These data may provide information relevant to appropriate sampling parameters.

Response: Comment noted. Historical data and data generated during the WAC attainment sampling in support of the Silo Infrastructure (PSP for WAC Attainment Sampling of Area 7 Soils 20500-PSP-0001) have been evaluated. Since the Pilot Plant drainage ditch effectively separates A2PII Part Two and Three from adjacent northern areas, the data points along the ditch and the area west of the Silos along Paddys Run were evaluated.

Several samples located just north and within the Pilot Plant drainage ditch have total uranium concentrations (maximum result is 127 ppm) greater than the soil FRL. In addition to the Silos infrastructure data, four samples collected for the RI/FS within the Pilot Plant drainage ditch have non-validated, non-detect results greater than the FRL for thorium-232. Sampling results collected on the south bank of the Pilot Plant drainage ditch are well below the FRL for total uranium. Analytical data for technetium-99 and other Area 2 contaminants of concern are well below WAC and FRL. Expanding the target analytes to the primary radionuclides should encompass the contaminants of concern.

Action: Add thorium-232 and the other primary radionuclides as target analytes for all samples.

Commenting Organization: Ohio EPA  
Section #: 1.2 Page #: 2-1  
Original Comment #: 6

Commentor: OFFO  
Code: C

Comment: Section 2.2 is somewhat unclear as to the exact sampling strategy to be used for A2P2 Part Two "eastern segment." In addition, in Figure 2-1 there is only one proposed boring location, A2P2-PT2-16 and Figure 2-2 shows that about one-third of this area being inaccessible by the RMS scan. Please clarify how DOE will be investigating this area.

Response: Aerial photos from the 1950s show dirt roads/paths dissecting the east field around the current meteorological tower location. Review of the topographical differences east of the Haul Road suggest that no fill was added in this area. Therefore, the DOE strategy is to utilize real-time surface scanning to cover the majority of this "eastern segment." No sample locations are currently identified to further investigate these dirt road/path disturbances unless real-time scanning information warrants additional sampling. The one soil sample is placed near the current subcontractor office and storage trailers to help assess potential impact from the subcontractor activities (depth of gravel or fill beneath the work area).

Extensive clearing and removal of small trees, ground cover and other vegetation will be needed in all inaccessible areas, including the "eastern segment portion." Initially, DOE proposed completing coverage in the inaccessible areas during precertification due to the need for extensive clearing. With a reduction in ground cover due to changes in season

and the current timing of scanning, DOE has modified the predesign scanning strategy to include real-time scanning coverage of inaccessible areas in this PSP.

After clearing, GPS satellite signal interference from the tree canopy is still expected. As a result, scanning in the inaccessible areas will be conducted with the HPGe and not the RMS (RTRAK/RSS) equipment. Text will be added in Section 2.3 of the PSP to clarify that the surface scan in the inaccessible areas will be conducted using the HPGe.

Action: Add text in Section 2.3, Real-Time Measurements, to include coverage of inaccessible areas in this PSP and clarify that the surface scanning in inaccessible areas will be conducted using the HPGe.

Commenting Organization: Ohio EPA  
Section #: Figure 1-1 Page #: Line #: Commentor: OFFO  
Original Comment #: 7 Code: C

Comment: Ohio EPA has heard that OU4 is considering additional use of the former gravel pad within A2P2. Please clarify the status of the use of this area and how it may affect the PSP.

Response: Using the former gravel pad as a laydown area to erect the proposed pivoting bridge for the Silos 1 and 2 remediation is currently being evaluated. The OU4 team is looking for a radiologically-uncontrolled access area close to the Silo area. Uncontrolled access is contingent upon the ability to use the SWU construction road and Haul Road as a "clean" corridor for vehicles and personnel. The potential use is scheduled for next Spring. DOE intends to complete predesign scanning and sampling in this area before considering release of the proposed laydown area. DOE will discuss other potential concerns for using this areas such as wetlands issues with Ohio EPA.

Action: None required.

Commenting Organization: Ohio EPA  
Section #: 1-1 Page #: Line #: Commentor: OFFO  
Original Comment #: 8 Code: C

Comment: It is unclear from the drawing the exact boundaries of the investigation area. This is particularly important in areas associated with Paddys Run and the Pilot Plant Drainage Ditch. Please clarify.

Response: The proposed A2PII Part Two and Three investigation area boundary is approximately 50 feet from the Pilot Plant drainage ditch since data already exist to consider remediation in this corridor. The boundary is set back to follow the chain-link fence in the northeast corner of the area. Since this ditch will continue to receive potential runoff from OU4 (Area 7), further sampling at this time is unwarranted. Additional sampling may be necessary when Area 7 remediation is complete. Until this time, the PSP investigation boundary for real-time scanning will be modified to include coverage to the top of the southern ditch bank and north of the chain-link fence since additional scanning will be minimal.

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Commenting Organization: Ohio EPA  
Section #: 2.0 Page #: Original Comment #: 11

Commentor: OFFO  
Code: C

Line #:

Comment: In order to locate areas of past disposal, DOE should consider the use of magnetometer or ground penetrating radar. These technologies may be useful in evaluating fill areas. An additional technique that could be considered would be exploratory trenches.

Response: Agree. Investigation of the suspect fill areas with a magnetometer will be included in the approach since it is already an alternate source of information needed for penetration permits. Exploratory trenching and ground penetrating radar may be considered based on initial intrusive and non-intrusive sampling and scanning data.

Action: Add text to the PSP discussing the use of the magnetometer in the suspect fill areas and potential use of trenching and ground penetrating radar

Commenting Organization: Ohio EPA  
Section #: 2.2 Page #: 2-1 Original Comment #: 12

Commentor: OFFO  
Code: C

Line #: 25-26

Comment: No justification is provided for the six foot criteria. Ohio EPA believes that areas with less fill than six feet require some level of investigation to ensure that excavation is not necessary. The PSP should be revised. Additionally, a figure should be included to show areas of fill.

Response: A cross-sectional view at locations with less than six feet differences show similar ground surface profiles between the 1952 and current topography. These minor differences may be attributed to the measurement collection techniques and the associated range in errors between the 1952 and current topography measurements. Therefore, the topographical differences of less than 6 feet were not initially proposed for further investigation with sampling.

To address any potential concern, additional borings will be located in seven areas not currently identified for sampling. These areas have topographical differences of greater than 2 feet but less than 6 feet. In addition, all suspect fill areas will be highlighted on the sample location map, Figure 2-1.

Action: Add seven boring locations to investigate topographical differences of greater than 2 feet but less than 6 feet. In addition, highlight the suspect fill areas in Figure 2-1.

Commenting Organization: Ohio EPA  
Section #: Figure 2-2 Page #: Original Comment #: 13

Commentor: OFFO  
Code: C

Line #:

Comment: Ohio EPA has the understanding that the brush piles will be removed from the area around the met tower to allow for real time scan. Is this figure consistent with our understanding? If so, what are the factors preventing real time scan?

//

Response: Currently, Figure 2-2 is inconsistent with the brush pile configurations. Based on additional field walkdowns, Figure 2-2 will be updated to correspond with the map included in DCN 20402-095. In addition, the perimeter around the subcontractor trailers/work area will be scanned as much as possible.

Action: Update Figure 2-2 to correspond with DCN 20402-095 and scan the area around the subcontractor work area as much as possible.

Commenting Organization: Ohio EPA  
Section #: 3.0 Page #: 3-1 Line #: 3-14 Commentor: OFFO  
Original Comment #: 14 Code: C

Comment: Due to the unknown disposal history in the areas proposed for sampling, Ohio EPA believes it is appropriate for all samples to be analyzed for all primary radionuclide contaminants of concern. Ohio EPA does not believe the primary radionuclide contaminant list should be reduced, especially in areas of unknown disposal activity.

Response: Agree.

Action: Add thorium-228, thorium-232, radium-226 and radium-228 as target analytes for all samples.

Commenting Organization: Ohio EPA  
Section #: 5.2 Page #: 5-1 Line #: 17-22 Commentor: OFFO  
Original Comment #: 15 Code: C

Comment: Please note that Ohio EPA must be notified and approval given of any changes or variances due to conditions in the field.

Response: Comment noted.

Action: None required.