



4057

State of Ohio Environmental Protection Agency

FERNALD
LOG C-00469

Southwest District Office

401 East Fifth Street
Dayton, Ohio 45402-2911

TELE: (937) 285-6357 FAX: (937) 285-6404

2001 DEC 26 A 9:40

6446.6cbcd Bob Taft, Governor
Maureen O'Connor, Lt. Governor
FILE: Christopher Jones, Director

December 21, 2001

Mr. Johnny Reising
U.S. DOE FEMP
P.O. Box 398705
Cincinnati, OH 45329-8705

**RE: PSP FOR AREA 3A/4A EXCAVATION CHARACTERIZATION AND
PRECERTIFICATION**

Dear Mr. Reising:

Ohio EPA has reviewed the Project Specific Plan for Area 3A/4A Excavation Characterization and Precertification, 20200-PSP-0009 Rev. A Draft, submitted by DOE on October 31, 2001. Ohio EPA's comments are enclosed.

If there are any questions, please contact me at (937) 285-6466 or Michelle Waller at (937) 285-6454.

Sincerely,

Thomas A. Schneider
Fernald Project Manager
Office of Federal Facilities Oversight

cc: Jim Saric U.S. EPA
Terry Hagen, Fluor Daniel Fernald
Francis Hodge, Tetrattech
Ruth Vandegrift, ODH
Mark Schupe, HSI Geotrans

PSP For Area 3A/4A Excavation
Characterization and Precertification

General Comments:

- 1. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: General Pg. #: Line #: Code: C
 Original Comment #:
 Comment: All sections of this PSP which discusses excavation strategy for the organically contaminated soil should be revised to reflect the method approved in the document "Organically Contaminated Soil Excavation Control," approved by the OEPA on December 10, 2001, including Table 2-3.

- 2. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: General Pg. #: Line #: Code: C
 Original Comment #:
 Comment: This will be the first time a PID has been used to assist in excavation monitoring on such a large scale. A record should be kept as to the PID readings at the exact locations physical samples are taken. This will allow a comparison to be made for future reference between PID readings and actual physical sample results.

- 3. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Pg. #: Line #: Code: C
 Original Comment #:
 Comment: Action levels should be developed for the PID. COCs should be evaluated to determine if the action level should be temperature dependent depending on the volatility of the organic substance. Frozen soil would also cause the quantity of volatiles to be greatly underestimated.

- 4. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: General Pg. #: Line #: Code: C
 Original Comment #:
 Comment: The HPGe detectors used at the FEMP have been supported by a tripod. With the EMS, the detector is mounted on an excavator arm. Our concern is that motion of the detector caused by swaying of the excavator arm or relaxing of the excavator hydraulics may be large enough to skew the results. An analysis should be performed to establish that the detector can be held motionless enough to give valid results. Standards should be established that enable the Characterization project staff to determine if the amount of unintentional sway in the excavator arm during the course of the measurement is small enough to yield reliable data.

Ohio EPA Comments 3A/4A PSP

December 21, 2001

Page 2

5. Commenting Organization: Ohio EPA Commentor: ODH
Section #: General Pg. #: Line #: Code: C
Original Comment #:
Comment: Corrections for topographic effects in general are largely addressed in the "Users Manual." Specifications for how measurements on steep slopes, pits, and well-like geometry may impact MDC's, trigger levels, system uncertainties, and angular response bias needs to be documented for these systems in order to serve as a template for the remainder of the production area.
6. Commenting Organization: Ohio EPA Commentor: ODH
Section #: General Pg. #: Line #: Code: C
Original Comment #:
Comment: Have all potential contributors to gamma shine been identified in the area proximal to 3A/4A ?
7. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 1.1 Pg. #: 1-2 Line #: 28 Code: C
Original Comment #:
Comment:
a) The excavator mounted, EMS is referenced throughout the document. This scanning equipment has not been approved for use by the agencies yet. It should be clearly stated that the EMS will not be used prior to agency approval.

b) A section should be added to the User's Guide covering the EMS. The range of discussion and the depth of detail should be similar to that of topics that are currently covered. The Section should be written to assist the Characterization staff in utilizing the technology to give reliable and valid data. Topics to be addressed should include; detector field of view, influence of standing water, detector height, etc. The discussion should also reference Section 4.9 of the Users' Guide, "Topographic Effects."
8. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 1.2 Pg. #: 1-4 Line #: 15-17 Code: C
Original Comment #:
Comment: Please rephrase this sentence so it reflects the same meaning as described on page 3-2, Section 3.4.

Ohio EPA Comments 3A/4A PSP

December 21, 2001

Page 3

9. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.3.3 Pg. #: 2-6 Line #: 28-29 Code: C
 Original Comment #:
 Comment: No plan for the physical sampling of Tc-99 is discussed. What will be the sampling intervals along the side slopes and the bottom?
10. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.3.3 Pg. #: 2-7 Line #: 12 Code: C
 Original Comment #:
 Comment: "If the Nal scanning data is not downloaded to the SED, upon reaching the final design depth in the contamination zone . . . In situ gamma equipment will be used to obtain a measurement . . ." Why would the Nal scanning data not be downloaded? All characterization data should be documented and recorded. It is unacceptable to not save information on characterization, and then redo the characterization with another method. This could be seen as biasing results.
11. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.3.4 Pg. #: 2-7 Line #: 16-17 Code: C
 Original Comment #:
 Comment: "If another method of documentation that the soil is below-WAC is developed that is acceptable to WAO, this method may be employed instead of the previously described method." This sentence is found throughout the document, and is unacceptable. Only methods approved by the Agencies (i.e., approved in a document), are acceptable. No changes in method are to be made without prior approval.
12. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.3.4 Pg. #: 2-8 Line #: 20-21 Code: C
 Original Comment #:
 Comment: "In situ gamma results will not override any data obtained from redesign." This sentence is confusing. It is assumed that the intention of this sentence is to state the protocol that an area of excavation may be expanded within situ scanning, but never reduced in size. Scanning may never over ride the results of physical sampling. Please clarify this paragraph.
13. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.3.5 Pg. #: 2-8 Line #: 29-32 Code: C
 Original Comment #:
 Comment: These sentences reference finding above-FRL levels at the bottom and sides of the excavation before design depth and delineating these levels. Since

Ohio EPA Comments 3A/4A PSP

December 21, 2001

Page 4

interim scanning in above-FRL areas is for WAC determination between lifts, it is assumed these sentences should be referencing WAC, not FRL.

14. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.3.6 Pg.#: 2-9 Line #: 23 Code: E
Original Comment #
Comment: Change the words "may be collected" in this sentence to "will be collected."
15. Commenting Organization: Ohio EPA Commentor: ODH
Section #: 2.4.2 Pg.#: 2-12 Line #: Code: C
Original Comment #
Comment: Page 2-12 mentions a 50-foot interval for sampling bedding and soil from trench excavations. How was this value arrived at? Was three-dimensional mapping or other characterization data used to determine if impacted perched water has contacted utility trenches and been transported along the various lines? In addition, gamma scans are to be made on a pad of minimum 6-inch thickness of trench floor soil and bedding materials. Shouldn't this be a maximum 6-inch thickness? It also seems risky to backfill trenches before physical samples indicate FRL's have been met.
16. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.4.2 Pg. #: 2-12 Line #: 18-19 Code: C
Original Comment #:
Comment: In the interest of more complete coverage of the trenches, the following sampling is proposed: If HPGe tripod measurements are to be taken, the bucket-loads of sample material from the pipe bedding and native underlying soil should be taken at opposite 25 foot intervals. In this manner both the pipe bedding and underlying soils will be sampled at 50 foot intervals, but the pipe bedding interval will be located 25 feet from the underlying soils interval.
17. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.4.3 Pg.#: 2-12 Line #: 26-27 Code: C
Original Comment #
Comment: A physical sample **will** be collected from the bedding material for WAC attainment purposes. Please correct the language in this sentence.
18. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 2-1Pg.#: 2-31 Line #: Code: C
Original Comment #
Comment: On Table 2-1, the list of COCs for Area 3A/4A is incomplete. Additional COCs including metals, SVOCs and pesticides/PCBs are appropriate considering the numerous processes and waste handling operations that occurred within 3A/4A. The

COC list must be expanded to appropriately address all contaminants for 3A/4A.

19. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 2-3/*** Pg.#:2-33 Line #: 12-13 Code: C
Original Comment #
Comment: The last bullet below the table should be rephrased. If the action level for the PID is exceeded, shouldn't the language read "further excavation may occur and GC analysis **will** be collected" at that location?

20. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 2-4Pg.#:2-34 Line #: Code: C
Original Comment #
Comment: Several parameters appear to be missing from the Analytical Summary Table 2-4. Please include all COCs from 3A/4A in the summary table?

21. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.0 Pg.#: 3-1 Line #: 13-15 Code: C
Original Comment #
Comment: This sentence mentions that the sampling equipment will be "decontaminated by Level II methods as outlined in the applicable sampling procedure." Please include the sampling procedure number in the text.