

**CONDITIONAL APPROVAL OU-4 RDWP**

**02/27/95**

**OEPA            DOE-FN**  
**5**  
**COMMENTS**



State of Ohio Environmental Protection Agency

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FILE:  
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George V. Voinovich  
Governor

February 27, 1995

RE: DOE FEMP  
MSL# 531-0297  
HAMILTON COUNTY  
CONDITIONAL APPROVAL  
OU-4 RDWP

Mr. Jack Craig  
Director  
U.S. DOE FEMP  
P.O. Box 398705  
Cincinnati, OH 45329-8705

Dear Mr. Craig:

This letter provides conditional approval of DOE's Work Plan for the Operable Unit 4 Remedial Design submitted to Ohio EPA on January 26, 1995. The approval of the work plan is contingent upon satisfactory resolution of the attached comments. If you have any questions, please contact Kelly Kaletsky at 513-285-6454 or Timothy Hull at 513-285-6075.

Sincerely,

*Kelly Kaletsky for*

Thomas A. Schneider  
Fernald Group Leader  
Office of Federal Facilities Oversight

cc w/att: Ruth H. Vandegrift, ODH  
Jim Saric, USEPA  
Jean Michaels, PRC  
Lisa August, GeoTrans  
Randi Allen, DOE  
Mike Scriba, FERMCO

*(Alex R)  
Partial  
Action response  
to O-0455  
(8634)*

COMMENTS ON THE OU4 RD WORKPLAN

- 1) Commenting Organization: Ohio EPA                      Commentor: ODH  
Section #: 2.0            Pg #: 2-7            Line #: 17-18 Code: C  
Original Comment #:  
Comment: Assumed background uranium concentrations in groundwater are given at 3ppb (average). The constraint of requiring an analytical detection limit significantly (30 times) below background is unsound, both statistically and economically.  
Response:  
Action:
  
- 2) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 3.2            Pg #: 3-1            Line #: 13            Code: C  
Original Comment #:  
Comment: Any possible reuse of the equipment utilized in the MAWS project was not mentioned in this document. DOE should consider any reuse of this equipment that would result in a savings of time and money.  
Response:  
Action:
  
- 3) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 3.2            Pg #: 3-5            Line #: 1            Code: C  
Original Comment #:  
Comment: The text states that contaminated soil and debris will be disposed of according to OU-5 and OU-3 remedies or placed in an interim storage facility. Provide a timeline describing when the remedies will be in place including when the soil will be disposed. In addition, DOE needs to provide more information on the proposed interim storage facility including design and location of the facility.  
Response:  
Action:
  
- 4) Commenting Organization: Ohio EPA                      Commentor: ODH  
Section #: 3.2            Pg #: Table 3-1            Line #:            Code: C  
Original Comment #:  
Comment: This table is unclear, i.e. U-238 has a proposed guideline of 60 pCi/g which translates into a risk factor of 1E-6. That guideline is for U-238 and it's progeny. Additional progeny have also been given risk levels which are unclear and are not well documented. How were these values calculated? This table requires clarification.  
Response:  
Action:
  
- 5) Commenting Organization: Ohio EPA                      Commentor: ODH  
Section #: 4.0            Pg #: 4-6            Line #: 3-11            Code: C  
Original Comment #:  
Comment: Will the slurry be created within the silos? If so, is there a mechanism in place to detect

potential leakage through the silo walls?

Response:

Action:

6) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 4.1.3 Pg #: 4-2 Line #: 19 Code: C  
 Original Comment #:  
 Comment: Provide a date for the submittal of the design criteria package.  
 Response:  
 Action:

7) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 4.1.5.2 Pg #: 4-7 Line #: 8 Code: C  
 Original Comment #:  
 Comment: This section states that the Silo 4 superstructure may be reutilized after further engineering studies and evaluation. As Silo 4's structural integrity will be questionable, similar to the other silos what possible beneficial use could this silo have? Since Silo 4 has never been used and is essentially "uncontaminated", it would make sense that the demolition and removal of this "uncontaminated" silo as stated in the OU4 ROD, would be the most practical and cost effective outcome.  
 Response:  
 Action:

8) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 4.2.2 Pg #: 4-12 Line #: 16 Code: C  
 Original Comment #:  
 Comment: This section of the document describes the berm being lowered as contents of the silo are emptied to equalize pressure on the silo. Provide additional information on how this is to be accomplished. If this data will be included in another document, please describe in which document this will appear.  
 Response:  
 Action:

9) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 4.2.2 Pg #: 4-12 Line #: 23-24 Code: C  
 Original Comment #:  
 Comment: This section states that water will be removed from the residue slurry to achieve a pre-determined water content ratio of the feed material for the melter. Please include in further detail the ultimate destination of this removed water. For example, (will this water be contained, sent to the AWWT, or recycled as process water), please expand.  
 Response:  
 Action:

10) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 4.2.2 Pg #: 4-13 Line #: 7 Code: C  
 Original Comment #:

Comment: Please further define within the text what is meant by the term "battery limits of the OU4 area".

Response:

Action:

- 11) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 4.2.3 Pg #: 4-13 Line #: 16-18 Code: C  
 Original Comment #:  
 Comment: This section states that an interim storage area sufficient to accommodate the handling of approximately 90 days of vitrification product will be required. Please include a brief discussion within the text which states what the anticipated volume of 90 days of vitrified product would be.  
 Response:  
 Action:
- 12) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 4.2.3 Pg #: 4-13 Line #: 19 Code: C  
 Original Comment #:  
 Comment: Provide additional information (i.e. design, capacity, location, etc.) regarding the interim storage facility for vitrified material.  
 Response:  
 Action:
- 13) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 4.5.1.2 Pg #: 4-28 Line #: 1-10 Code: C  
 Original Comment #:  
 Comment: This section states that the FEMP will conduct radiological air monitoring on a weekly basis during implementation of the RA. It seems practical that radiological air monitoring should occur on an hourly basis during implementation of the RA as different aspects of the RA could cause increased air emissions over other aspects. For example, when soil excavation occurs, this activity has the possibility of releasing particulate in to the air, especially if occurring during the summer months. Weekly monitoring would not detect a potentially harmful release to the environment which may have occurred earlier in the week. This air monitoring program should be modified accordingly.  
 Response:  
 Action:
- 14) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 4.5.1.4 Pg #: 4-35 Line #: 9 Code: C  
 Original Comment #:  
 Comment: The text states that "if existing programs are insufficient....additional wells could be added to the groundwater monitoring program to determine the effects of any remedial activity on the groundwater." If this data is being developed in accordance with OU-5, please provide a date for the review of this data. The review should be completed as soon as possible in order for new wells to be installed as early as possible before the operation of the vitrification plant if necessary.  
 Response:

Action:

15) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 4.5.1.5 Pg #: 4-39 Line #: 15 Code: C

Original Comment #:

Comment: The document states that design activities related to the demolition and decontamination of the silos will be developed consistent with the OU-3 and OU-5 RODS and RDWPs. Seeing that the OU-4 and OU-3/5 projects will be operating independently of each other and on different time tables, DOE should develop an independent program for the demolition and decontamination of the silos. The silos should be demolished as soon as possible after the completion of the vitrification project and the debris disposed of properly. OEPA feels it would be unsafe for the silos to sit empty both from the standpoint of a structural hazard and radon emissions from the silo.

Response:

Action: