

**OU4 PILOT PLANT TREATABILITY WP - COMMENTS (PHASE II)**

**06/27/19**

**OEPA  
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OU4**

**DOE-FN**



State of Ohio Environmental Protection Agency

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George V. Voinovich  
Governor

June 27, 1994

Re: DOE FEMP  
MSL #531-0297  
OU4 PILOT PLANT  
TREATABILITY WP -  
COMMENTS

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

Dear Mr. Craig:

This letter provides Ohio EPA comments on the Operable Unit 4 Pilot Plant Phase II Treatability Study Work Plan submitted to Ohio EPA on May 12, 1994.

If you should have any questions, please contact Kelly Kaletsky or me.

Sincerely,

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

- cc: Jim Saric, U.S. EPA
- Ken Alkema, FERMCO
- Lisa August, GeoTrans
- Robert Owen, ODH
- Jean Michaels, PRC
- Jenifer Kwasniewski, DERR

(ALLEN(R)  
PARTIAL  
ACTION RESPONSE  
TO R-1541  
(7943)

OHIO EPA COMMENTS  
ON  
OPERABLE UNIT 4 PILOT PLANT PHASE II

- 1) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: General Comment              Pg #:    Line #:              Code: C  
Original Comment #:  
Comment: The methods used to control air emissions are difficult to follow. Potential emissions and what FEMP is proposing in order to control these emissions are spread throughout the document, therefore difficult to understand. All air issues, including potential emissions and controls, should be listed together in one section of the document.  
Response:  
Action:
- 2) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: General Comment              Pg #:    Line #:              Code: C  
Original Comment #:  
Comment: The FEMP is proposing a project utilizing data obtained from Phase I when Phase I has not been carried out. It seems as if a Phase II document should not be written until the results from Phase I have been reviewed. If the two projects are taking place within a short period of time, any changes will have to be approved by OEPA and included as an addendum to the Phase II Work Plan before the project can continue.  
Response:  
Action:
- 3) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: General Comment              Pg #:    Line #:              Code: C  
Original Comment #:  
Comment: The building design for this project should keep future demolition and decontamination activities in mind. Whenever possible, non-porous materials and materials that can be reused should be utilized.  
Response:  
Action:
- 4) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 1.3.2              Pg #: 1-7              Line #: 11              Code: C  
Original Comment #:  
Comment: Can the PNL test be a fair representation of the vitrification project to be conducted as the FEMP? The PNL test utilized only 15 lbs. of materials. The FEMP project will operate on a much larger scale. Can the data from the 15 lb. test be accurately extrapolated for the purposes of this project? The FEMP should also consider and include information in the work plan regarding the use of the Product Consistency Test.  
Response:  
Action:

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- 5) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 1.4.2      Pg #: 1-12      Line #: 12-14      Code: C  
Original Comment #:  
Comment: The text states that "small scale tests of systems for removal of radon from the off-gas stream are needed to provide data for designing a radon control system for processing operations." Yet, lines 12-14 discuss only a radon adsorption experiment utilizing activated carbon. Are other radon removal systems under experimentation? If so, please discuss these other options in detail. If the FEMP is only experimenting with activated carbon, please explain what contingencies will be used for radon control to prevent project delays.  
Response:  
Action:
- 6) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 1.4.2      Pg #: 1-12      Line #: 13      Code: C  
Original Comment #:  
Comment: The document states that data from a radon adsorption experiment utilizing granular activated carbon will be ready this summer. This data will need to be reviewed by OEPA before vitrification takes place.  
Response:  
Action:
- 7) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 1.4.3      Pg #: 1-15      Line #: 19      Code: C  
Original Comment #:  
Comment: What was the alternative to carbon as listed in the text?  
Response:  
Action:
- 8) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 2.1      Pg #: 2-2      Line #: 5      Code: C  
Original Comment #:  
Comment: Please provide detailed information regarding the control of radon and other particulate emissions when materials are removed from the silos utilizing the hydraulic removal system.  
Response:  
Action:
- 9) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 3.2.2      Pg #: 3-2      Line #: 9      Code: C  
Original Comment #:  
Comment: The document comments on the control of radon in the silo emptying and

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vitrification process. However, there is no information regarding the control of uranium and the other daughter radionuclides. Can all of the radionuclides be controlled by utilizing the same methods as radon? Also, please address the controls that will be used for volatile metals such as arsenic and mercury.

Response:

Action:

- 10) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 3.2.2      Pg #: 3-2      Line #: 9      Code: C  
Original Comment #:  
Comment: This sentence states that radon concentrations must be maintained below required levels. Please state these levels within this section.  
Response:  
Action:
- 11) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 4.1      Pg #: 4-2      Line #: Figure 4-1      Code: C  
Original Comment #:  
Comment: This diagram of the CRU4 Pilot Plant is extremely difficult to read. Please enlarge this figure or enlarge accordingly.  
Response:  
Action:
- 12) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 4.1.1      Pg #: 4-5      Line #: 13      Code: C  
Original Comment #:  
Comment: Again, FEMP needs to describe the control of radon and other emissions when removing materials from the silos. A bag-in/bag-out process is listed as radon control, but this process and the resulting control of radon emissions is not clearly understood. Please clarify the control process.  
Response:  
Action:
- 13) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 4.1.1      Pg #: 4-5      Line #: 25      Code: C  
Original Comment #:  
Comment: The exhaust from the pneumatic removal system for Silo 3 will be filtered. Clarify the filter(s) and the filtering process that will be used.  
Response:  
Action:

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- 14) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 4.1.2 Pg #: 4-6 Line #: 23 Code: C  
Original Comment #:  
Comment: Will the amount of sodium carbonate and calcium carbonate added to the vitrification process be enough to warrant particulate control measures in the area that these materials are being handled?  
Response:  
Action:
- 15) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 4.1.1 Pg #: 4-12 Line #: 9 Code: C  
Original Comment #:  
Comment: Explain the relationship between the thickener and thickener overflow water.  
Response:  
Action:
- 16) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 5.0 Pg #: 5-1 Line #: 3-5 Code: C  
Original Comment #:  
Comment: This section states that several equipment items have been identified at the FEMP site, and the feasibility for their potential use is being investigated by FERMCO. Please include a time frame within this text which describes when the analysis of this equipment will be completed, and also where the results of this analysis will be reported.  
  
Response:  
Action:
- 17) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 5.0 Pg #: 5-2 Line #: Table 5-1 Code: C  
Original Comment #:  
Comment: The design capacity of the HEPA filter and exhaust stack are rated at 200 cfm. On Page 10-2, the stack size is based on a 7000 scfm maximum flow rate. Also, on Page 5-3, a 6600 cfm stack is listed. Does FEMP anticipate running the HEPA and exhaust system above 200 cfm? Please clarify. If it is possible for more volume to run through the stack, the HEPA and exhaust system will need to be modified.  
Response:  
Action:
- 18) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 14.1 Pg #: 14-3 Line #: Figure 14.2 Code: C

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Original Comment #:

Comment: Please change the Ohio EPA project manager to Thomas A. Schneider.

Response:

Action: