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State of Ohio Environmental Protection Agency

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Bob Taft, Governor
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July 19, 2002

Mr. Johnny Reising
U.S. Department of Energy, Fernald Area Office
P.O. Box 538705
Cincinnati, OH 45253-8705

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Re: **COMMENTS - Draft Revised RD Package For Silos 1 and 2 Accelerated Waste Retrieval Project**

Dear Mr. Reising:

Ohio EPA has reviewed DOE's submittal, "Draft Revised Remedial Design Package for the Silos 1 and 2 Accelerated Waste Retrieval" received on June 3, 2002. Attached are our comments on the document.

If you have any questions, please contact me at (937) 285-6466.

Sincerely,

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

cc: Jim Saric, U.S. EPA
Terry Hagen, FDF
Mark Shupe, HSI GeoTrans
Mary Wojceichowski, Tetra Tech EM Inc.
Ruth Vandergrift, ODH

**SILOS 1 AND 2 ACCELERATED WASTE RETRIEVAL PROJECT
REMEDIAL DESIGN PACKAGE, REVISION 2
Draft, June 2002**

General Comments:

1. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: na Pg #: na Line #: na Code: C
Original Comment #:
Comment: Throughout the document the TTA facility is frequently referred to as "interim storage". In order to avoid confusion with the standards for interim storage defined in DOE Order 5400.5, Ohio EPA recommends changing the description to "staging before treatment" or some other appropriate phrase. Otherwise, if the TTA is being defined as interim storage, then the requirements of DOE Order 5400.5 should apply.
Response:
Action:

2. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: na Pg #: na Line #: na Code: C
Original Comment #:
Comment: Provide a list of previously submitted DCNs that are related to this design as an appendix. The list should include a brief description of the DCN and the approval status.
Response:
Action:

3. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: na Pg #: na Line #: na Code: C
Original Comment #:
Comment: The narrative portion of the design is very general and lacking in detail.
Response:
Action:

4. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: na Pg #: na Line #: na Code: C
Original Comment #:
Comment: Near the end of the removal operation there will be very little supernatant available for sluicing. If the remediation facility is not operating before the conclusion of the AWR phase, will there be enough water to begin sluicing from the TTA to the remediation facility.
Response:
Action:

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5. Commenting Organization: Ohio EPA Commentor: DSW
 Section #: General Pg #: na Line #: na Code: C
 Original Comment #:
 Comment: Read comments and responses to comments from previous RD submittals and incorporate into the next revision. It is incredibly frustrating and a waste of time for us to continue to make the same comments in each revision. It also demonstrates a lack of attention to detail by the authors of these revisions.
 Response:
 Action:
- Section 2.1 - Process Description:**
6. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.2 Pg #: 2-1 Line #: na Code: C
 Original Comment #:
 Comment: Will the RCS be in operation prior to the removal of the plywood and steel framing silo caps? Removal of the plywood and steel framing silo caps prior to RCS operation will increase radon emissions.
 Response:
 Action:
7. Commenting Organization: Ohio EPA Commentor: DSW
 Section #: 2.3 Pg #: 2-2 Line #: na Code: C
 Original Comment #:
 Comment: Is there any history of sluicing around large objects? Do we know that this method works when there may be many very large discreet objects present?
 Response:
 Action:
8. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.3.1 Pg #: 2-2 Line #: na Code: C
 Original Comment #:
 Comment: This section describes what documents will address heel removal. What documents will address the removal of discrete objects? A brief conceptual description of this operation is warranted. The lack of a design for heel and debris removal may impede the ability for the site to reach the 2006 milestone.
 Response:
 Action:
9. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.7 Pg #: 2-4 Line #: na Code: C
 Original Comment #:

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Comment: A previously submitted DCN eliminated the heating of the carbon beds as a means to regenerate them. This DCN was disapproved by OEPA pending further information to justify the elimination of the heating of the charcoal. This change to the RCS is not reflected in this design.

Response:

Action:

10. Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 3.0 Pg #: 3-1 Line #: na Code: C

Original Comment #:

Comment: The text states that the project will utilize two 300 gpm sluicing nozzles and one 350 gpm slurry pump on each silo. This means that the amount of water being introduced into the silos will be almost double of what is being removed. It is Ohio EPA's concern that too much water will be added to the silos without immediately being removed and may pose a problem with liquid leaking from the sides of the silo or filling the decant sump tank quickly.

Response:

Action:

11. Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 3.1 Pg #: 3-4 Line #: na Code: C

Original Comment #:

Comment: The design does not address debris removal. If the debris is large enough to impede sluicing operations it will have to be removed prior to safe shut down. Debris removal that impedes sluicing operations must be incorporated in the design. How will debris that cause an obstruction be removed?

Response:

Action:

12. Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 3.1.5 Pg #: 3-7 Line #: na Code: C

Original Comment #:

Comment: Upon discovering any blockages in the transfer piping, will there be any changes in the slurry composition to keep blockages from reoccurring?

Response:

Action:

13. Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 3.1.7 Pg #: 3-8 Line #: na Code: C

Original Comment #:

Comment: The design states that if the decant sump requires pumping it will be pumped back into the silos. Since the silos are the source of the water, it is not clear why the water would be pumped to the silos rather than the TTA. Decant sump water should be pumped directly to the

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TTA.
Response:
Action:

14. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.3.2 Pg #: 3-12 Line #: na Code: C
Original Comment #:
Comment: If leaking is discovered in a TTA tank, liquids will be transferred to another TTA tank. Will there be available area in the other remaining tanks to hold the liquid?
Response:
Action:
15. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Figure 3.5.4 Pg #: 3-21 Line #: na Code: C
Original Comment #:
Comment: The document does not adequately address the issue of off-spec material. How will off-spec material be determined? How will the material be returned for reprocessing? Please provide more detailed information.
Response:
Action:
16. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.6.1 Pg #: 3-23 Line #: na Code: C
Original Comment #:
Comment: How will the site demonstrate that radon emissions do not exceed 0.5 pCi/L above background at the FEMP fence line?
Response:
Action:
17. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.6.2 Pg #: 3-24 Line #: na Code: C
Original Comment #:
Comment: Provide information regarding the additional equipment that will be added to the Phase 1 equipment for conversion to the Phase 2 system.
Response:
Action:
18. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.6.2 Pg #: 3-24 Line #: na Code: E
Original Comment #:
Comment: Third paragraph, last sentence, change "existing" to "exiting".

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Response:
 Action:

19. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.6.2 Pg #: 3-24 Line #: na Code: C
 Original Comment #:
 Comment: Stack exhaust should be minimized to just what is necessary to maintain negative pressure in the silos, TTA, and/or treatment facility.
 Response:
 Action:

20. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.6.7 Pg #: 3-26 Line #: na Code: C
 Original Comment #:
 Comment: How will "used" desiccant and carbon be handled?
 Response:
 Action:

2.2- Process Control Summary:

21. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 1.3 Pg #: 1-2 Line #: na Code: C
 Original Comment #:
 Comment: It may be prudent to have the RCS alarms directly linked to the COM center as well as the BOP Control System.
 Response:
 Action:

22. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.7 Pg #: 3-10,14 Line #: na Code: C
 Original Comment #:
 Comment: The radon discharge limits are not consistent from table to table. The understanding was that the discharge limits were based on modeling to ensure that the fence line radon concentration would be less than 0.5 pCi/L above background. If the discharge limits were based on the models, the limits should be independent of which phase the project is in.
 Response:
 Action:

23. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.7 Pg #: 3-13 Line #: na Code: C
 Original Comment #:
 Comment: The "High radon concentration in working area" set-point of 3 pCi/L seems low. Radon

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concentrations routinely exceed this concentration which would cause a continuous alarm state.

Response:

Action:

3 - Sampling Plan:

24. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.1.2 Pg #: 3 Line #: na Code: C
 Original Comment #:
 Comment: A reference to Section 5.5, Silos Environmental Monitoring Plan, should be added to this section; demonstrating changes to the IEMP in support of the Silos project.
 Response:
 Action:

25. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: App. D Pg #: A-7 Line #: na Code: C
 Original Comment #:
 Comment: Provide a brief description of these methods as well as applicable detection limits.
 Response:
 Action:

4 - Berm Excavation Plan:

26. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 1.0 Pg #: 1 Line #: na Code: C
 Original Comment #:
 Comment: What increase in direct radiation can be expected at the fence line due to berm removal? Provide an isopleth indicating the change in dose rate from the removal of the silo berm.
 Response:
 Action:
27. Commenting Organization: Ohio EPA Commentor: DSW
 Section #: 2.2 Pg #: 5 Line #: na Code: C
 Original Comment #:
 Comment: Neither drawing referenced in this section is included in Section 4.
 Response:
 Action:

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28. Commenting Organization: Ohio EPA Commentor: DSW
 Section #: 4 and 5.3 Pg #: Drawings 94X-3900-G-01936 and 35H19606-CSK-009
 Line #: na Code: C

Original Comment #:

Comment: Inlet protection does not conform to *Rainwater and Land Development* requirements for inlet protection. Please see DOE-0674-00 Response to Comments on Silos 1 and 2 Accelerated Waste Retrieval Project Site Preparation Package, dated May 15, 2000, response number 28 AND DOE-0471-01 Revised Draft Remedial Design Package for the Silos 1 and 2 Accelerated Waste Retrieval Project, dated April 5, 2001, response number 26.

Response:

Action

5 - Operational Environmental Control Plan:

29. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.1 Pg #: 5 Line #: na Code: C

Original Comment #:

Comment: In Exhibit 2-2 it states that radon stack exhaust will be 7 pCi/L during TTA ventilation. Wouldn't the RCS be in recycle mode, which would reduce the concentration to that of the head space reduction concentration of 0.85 pCi/L?

Response:

Action:

5.3 - Stormwater Drainage Plan:

30. Commenting Organization: Ohio EPA Commentor: DSW
 Section #: 5.3 Pg #: Drawing 35H19606-CSK-006 Line #: na Code: C

Original Comment #:

Comment: Is the sediment basin in the southwest corner needed? Please see DOE-0674-00 Response to Comments on Silos 1 and 2 Accelerated Waste Retrieval Project Site Preparation Package, dated May 15, 2000, response number 27.

Response:

Action:

31. Commenting Organization: Ohio EPA Commentor: DSW
 Section #: 5.3 Pg #: Drawing 35H19606-CSK-006 Line #: na Code: C

Original Comment #:

Comment: Silt fences drawn at the north side of the silos cut across rather than go along contours. Silt fence must be installed per *Rainwater and Land Development*.

Response:

Action:

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32. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 5.3 Pg #: 4 of 5 Appendix B, Calculation Number 35H19603-31B-C-003 Line
#: Summary Table Code: C

Original Comment #:

Comment: The runoff coefficients given range from 0.40 to 0.55. Dave Brettschneider has said that the runoff coefficients for the site tend to be much higher than those expected from tables. Please verify these runoff coefficients with Mr. Brettshneider and his group.

Response:

Action:

5.4 - Waste Handling Work Plan:

33. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: Line #: na Code: C

Original Comment #:

Comment: Will there be secondary wastes associated with exhausted desiccant and carbon?
How will these wastes be dispositioned?

Response:

Action: