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State of Ohio Environmental Protection Agency

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4591

November 5, 2002

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

Re: Comments - Silos 1 and 2 Accelerated Waste Retrieval Project Remedial Design Package, Revision 2, September 2002

Dear Mr. Reising:

Ohio EPA has reviewed DOE's submittal, "Silos 1 and 2 Accelerated Waste Retrieval Project Remedial Design Package, Revision 2, September 2002" received on September 6, 2002. Our comments are attached.

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

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Ohio EPA Comments on:

Silos 1 and 2 Accelerated Waste Retrieval Project
Draft Final
Remedial Design Package
Revision 2, September 2002

General Comments:

1. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: na Pg #: na Line #: na Code: C
Original Comment #:
Comment: The design inadequately describes measures taken to prevent spills. The silos contents will be pumped at high flows and relatively high pressure throughout the system. The headers on the TTA bridge, where silo contents and slurry water are rerouted, require additional information on spill prevention.
Response:
Action:

Section 2.1 - Process Description:

2. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.3 Pg #: 2-2 Line #: na Code: C
Original Comment #:
Comment: The lack of a contingency for potential debris that may hinder and/or prohibit sluicing operations continues to be an issue for Ohio EPA. Submit a contingency plan for debris removal in the event that these debris would prohibit further sluicing operation.
Response:
Action:

3. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.4 Pg #: 2-2 Line #: na Code: C
Original Comment #:
Comment: Present additional detail or conceptual idea on how decant sump tank solids removal will be addressed. Simple deferral to D & D Safe Shutdown is inadequate.
Response:
Action:

4. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.5 Pg #: 2-3 Line #: Code: C
Original Comment #:
Comment: The original FSMS on Silo 4 was also to provide hands-on training for operators. How will operators acquire the training originally planned for FSMS?
Response:
Action:

5. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.7.2 Pg #: 2-4 Line #: na Code: C
Original Comment #:
Comment: The reconfiguration of the HEPA filters to accommodate 2000 scfm process flow does not appear to allow for a bank of filters to be isolated for maintenance. If maintenance is required will the entire AWR be shut down?
Response:
Action:

6. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.8 Pg #: 2-4, 5 Line #: na Code: C
Original Comment #:
Comment: Have any tests/studies been performed to verify that just dry air will rejuvenate the carbon beds.
Response:
Action:

7. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.0 Pg #: 3-1 Line #: Code: C
Original Comment #: 10
Comment: In DOE's Response to Comments, original comment No. 10, it is indicated that wording will be changed in Section 3.0 to clarify the maximum total sluice water flow. In Ohio EPA's review, the wording has not been changed.
Response:
Action:

8. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1 Pg #: 3-2 Line #: na Code: C
Original Comment #:
Comment: How will the CCTV video camera and lights be kept clean? Although this appears to be a minor component of the design, visual observation of sluicing operations is critical to the successful operation of AWR.
Response:
Action:

9. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1 Pg #: 3-4 Line #: na Code: C
Original Comment #:
Comment: Provide additional detail, to include pictures/drawings of the Long Reach Manipulator Tool and how it will be inserted into the silos.
Response:
Action:

10. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1.3 Pg #: 3-5 Line #: na Code: C
Original Comment #:
Comment: The addition of a cutter ahead of the slurry pump appears to be an addition to the design, provide additional detail.
Response:
Action:

11. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1.5 Pg #: 3-6 Line #: na Code: C
Original Comment #:
Comment: What is the size and guage of the slurry pipeline?
Response:
Action:

12. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1.6 Pg #: 3-7 Line #: na Code: C
Original Comment #:
Comment: Provide additional information on the sluicer booster pumps. What drawings include them, and specifically how will they be used.
Response:
Action:

13. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1.7 Pg #: 3-7 Line #: na Code: C
Original Comment #:
Comment: Per August 26, 2002, AWR comment resolution meeting, the Silo Decant Sump Tank is to be pumped to the TTA. This is addressed in the response to comments but not in the design.
Response:
Action:

14. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1.8 Pg #: 3-8 Line #: na Code: C
Original Comment #:
Comment: Provide additional detail on the Long Reach Manipulator Arm.
Response:
Action:

15. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.3.1 Pg #: 3-11 Line #: na Code: C
Original Comment #:
Comment: The pressure relief valves on the TTA need to be monitored in a similar fashion as the pressure relief valves on the silos.
Response:
Action:

16. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.6.1 Pg #: 3-21 Line #: na Code: C
Original Comment #:
Comment: The design requirement listed in this section for Phase 1 need to be reflected in the RCS RAWP for Phase 1.
Response:
Action:

17. Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 3.6.4 Carbon Beds Pg.# 3-23 Code C
Original Comment #
Comment: The text indicates that radon has an affinity to activated carbon, and that it has a short half-life. The daughter products of radon include isotopes of polonium, lead and bismuth. Do each of these materials also have an affinity towards activated carbon? Will they stay attached to the carbon?
Response:
Action:

Section 4 - Berm Excavation Plan:

18. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 2.1 Pg #: 5 Line #: na Code: C
Original Comment #: 27
Comment: Neither drawing referenced in this section is included in section 4.
Response: Comment acknowledged.
Action: Drawings 94X-3900-G-01932(G6003) and 94X-3900-G-01933(G6004) have been added.
Comment: These drawings have been added and the following has been noted:
Drawing 94X-3900-G-01932(G6003), note 3 states:
"Remove existing K-65 trench as necessary to install foundations. Dispose of trench as specified by construction manager."
The existing trench and drain system must be maintained to control drainage from the silos, as indicated in section 2.1. Controlled drainage from the silos to the K-65 concrete sump must be maintained. Removal of any part of this system is not acceptable.
Response:
Action:

Appendix A - Process Flow Diagrams:

19. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: DWG 20FMD001 Pg #: na Line #: na Code: C
Original Comment #:
Comment: Column 17 of the mass balance table indicates "condensate to tanker truck". The design states that condensate will be pumped to the condensate hold-up tank. Make appropriate changes to DWG.
Response:
Action:

20. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: DWG 20FMD001 Pg #: na Line #: na Code: C
Original Comment #:
Comment: The radon concentration from Silo 1 and Silo 2 appear to be low by a factor of 10.
Response:
Action:

21. Commenting Organization: OEPA Commentor: GeoTrans, Inc
Section #: App. A Sheet #: F6003, Material Balance Table Code: C
Original Comment #
Comment: The densities of the solids are not consistent in the table. The density of the solids for streams numbered 1, 3, 15 and 21 is calculated to be 174.2 pounds per cubic foot ("Solids Transfer, lb/min" divided by ("Flow, gpm" minus "Water (Only) Transfer, gpm"). For stream number 6, the density is calculated to be 513.5 pounds per cubic foot. For streams numbered 11, 12 and 13, the density is calculated as 127.7 pounds per cubic foot. Because this is the same solid material, the density should remain constant.
Response:
Action: