



State of Ohio Environmental Protection Agency

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George V. Voinovich
Governor

July 21, 1997

RE: DOE FEMP
MSL 531-0297
HAMILTON COUNTY
COMMENTS - OU5 AREA 2 PHASE 1
SITE PREPARATION PACKAGE

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

Dear Mr. Reising:

Ohio EPA has reviewed DOE's June 16, 1997 submittal, "Transmittal of the Site Preparation Plan for Area 2, Phase 1- Inactive Flyash Pile, South Field and Active Flyash Pile (Southern Waste Units)" Attached are Ohio EPA comments detailing our concern with the site preparation package.

If you have any questions, please contact me.

Sincerely,

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

cc: Jim Saric, U.S. EPA
Terry Hagen, FDF
Ruth Vandegrift, ODH
Bob Geiger, PRC
Manager, TPSS/DERR,CO
Dave Ward, GeoTrans

*(Janke (G))
partial
action response
to DOE-1069-97.
(10549)*

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OHIO EPA COMMENTS ON AREA 2 PHASE 1 SITE PREP PACKAGE

General Comments

1) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: Line #: Code: C

Original Comment #:

Comment: The basis for impacted and non-impacted material stockpile sizes is not clear from review of the site preparation plans. It would seem critical to the project scope as well as contractor direction to have a justifiable estimate of the volumes of both types of soil to be generated during the project. In addition this volume calculation is critical to various aspects of design including material placement and storm water controls. The revised document should include calculations based upon RI data and FRLs for estimating the volumes of impacted, non-impacted and above-WAC materials to be excavated during site preparation.

Response:

Action:

Site Preparation Plan

2) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Sketches 1, 2, & 3 Pg #: Line #: Code: C

Original Comment #:

Comment: The figures should be revised to include information such as high/low annual fluctuations in the potentiometric surface of the GMA; top of the unsaturated portion of the GMA; and differentiation between waste and native material based upon available boring data from the IAFP and Southfield.

Response:

Action:

3) Commenting Organization: Ohio EPA Commentor: DSW
Section #: 2.3 Pg #: 5 Line #: Code: C

Original Comment #:

Comment: Ohio EPA has experienced problems with leachate from woodchip stockpiles and believes the runoff to be potentially detrimental to the water quality of Paddy's Run.. Dealing with the runoff through NPDES permit regulations is reactionary and not acceptable. As a problem with the runoff can be anticipated, the issue should be addressed up front in a proactive manner, which is typically done at Fernald. Potential solutions include moving the stockpile to a location that doesn't drain directly into Paddy's Run (e.g. meteorological data tour area), capturing and treating the leachate (e.g. using the wheel wash sump to capture and return the leachate to the treatment facility on site), and moving the pile to an area within the controlled storm water area such as the non-impacted material stockpile #2.

Response:

2

Mr. Johnny Reising
July 21, 1997
Page 3

Action:

4) Commenting Organization: Ohio EPA Commentor: DSW
Section #: 2.3 Pg #: 5 Line #: 15-16 Code: C

Original Comment #:

Comment: To be consistent with the Technical Specifications the document should state that areas in which work will not occur for 45 days must be mulched and seeded. Forty-five days is the maximum an area may remain unseeded without on-going work.

Response:

Action:

5) Commenting Organization: Ohio EPA Commentor: DSW
Section #: 2.4 Pg #: 6 Line #: 20-21 Code: C

Original Comment #:

Comment: The surface water management system should remain in operation until the final phase of soil stabilization is complete. The statement that it should "continue through the excavation phase" connotes an earlier termination of the surface water management system.

Response:

Action:

6) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.7 Pg #: 7 Line #: 21-31 Code: M

Original Comment #:

Comment: Ohio EPA disagrees with DOE's proposal to open the West Field Borrow Area. Ohio EPA does not believe this is the most appropriate source for clay borrow to line the sediment basins. Ohio EPA recommends DOE evaluate other sources of clay including on-going excavations within the OSDF boundary and the OSDF sedimentation basin. Opening a new borrow area in the west field will result in creating another excavation which will require management for fugitive dust and erosion. This plan does not appear to result in the most efficient use of resources either natural and financial.

Response:

Action:

7) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2. & Sketches 1,2,3 Pg #:11-13 Line #: Code: M

Original Comment #:

Comment: Based upon the information provided it appears retention basin #1 will be over topped by Paddys Run during a 5 year flood at a minimum frequency. Such a design is insufficiently protective and unacceptable to Ohio EPA. The design should be modified such that the retention basins both retain runoff from the 10-year storm and are not over topped by a 10-year flood.

Mr. Johnny Reising
July 21, 1997
Page 4

Response:
Action:

8) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2.2 Pg #: 11 Line #: 10-12 Code: C

Original Comment #:

Comment: Is the proposed use of HDPE on top of gravel and/or waste materials, that may be encountered in the bottoms of the ditches, consistent, with the manufacturers recommendations for use of this material?

Response:
Action:

9) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2.3 Pg #: 11 Line #: 28-29 Code: C

Original Comment #:

Comment: As stated in a previous comment, it is important to consider maximum groundwater elevations when evaluating the effectiveness and construction of the basin liner system. Information regarding maximum groundwater elevation is needed.

Response:
Action:

10) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2.3 Pg #: 12 Line #: Code: C

Original Comment #:

Comment: The text discusses permeability achieved by clays in the West Field area but fails to discuss the permeability to be achieved by clay placed in the retention basin liners. The performance criteria for the clay liner should be included.

Response:
Action:

11) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2.3 Pg #: 13 Line #: 8-10 Code: C

Original Comment #:

Comment: Aggregate placed against the riser pipe should be a "minimum of 2 inches" rather than "approximately 2 inches" in order to prevent entry into the 1 inch holes within the riser pipe. Entry of aggregate into the riser will be detrimental to system effectiveness.

Response:
Action:

4

Mr. Johnny Reising
July 21, 1997
Page 5

12) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2.3 Pg #: 13 Line #: 22-23 Code: C

Original Comment #:

Comment: As stated in a previous comment, Sketches #2 & 3 as well as DOE's cover letter show the retention basins overtopped by the 5-year flood at a minimum. This is inconsistent with the text's statement that the 25-year flood will be the one to overtop the basins.

Response:

Action:

13) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2.3 Pg #: 13 Line #: 25-28 Code: C

Original Comment #:

Comment: The final statement of the paragraph is that during the periods of storm water bypass, the outlet pumps from the retention basins will not operate. Ohio EPA refers to the OU5 ROD which states that "The selected remedy includes the following key components for storm water and wastewater: Collection of contaminated storm water, using the existing FEMP retention basin, as necessary during the implementation of site-wide remedial actions to minimize discharges of contaminants to Paddy's Run and the resultant impacts to the regional aquifer." If an untreated discharge is inevitable it is preferable to have a discharge to the GMR rather than to Paddy's Run because of the greater potential for groundwater contamination through discharges to Paddy's Run. Therefore the outlet pumps from the retention basins should continue to operate to minimize the possibility of any overflows to Paddy's Run.

Response:

Action:

14) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.4 Pg #: 14 Line #: 30-31 Code: C

Original Comment #:

Comment: Previously in Section 3.2.3 the text discusses not pumping the basins during events exceeding a 10-year storm. Thus the basins would overflow and discharge runoff directly. In this instance the last sentence on this page would be incorrect.

Response:

Action:

15) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.1 Pg #: 16 Line #: 25 Code: C

Original Comment #:

Comment: Insert a third bullet stating contamination is expected from waste placement in the area of the Southfield basin.

Response:

Mr. Johnny Reising
July 21, 1997
Page 6

Action:

16) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 4-2 Pg #: 18 Line #: Code: C
Original Comment #:

Comment: Due to the pervasive nature and the relative ease of distinguishing flyash from native soils, DOE should consider including a visual screen for eliminating layers. It is likely that areas containing flyash will fail certification thus a visual screening could save valuable time and lab effort.

Response:

Action:

17) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.1 Pg #: 19 Line #: 10-11 Code: C
Original Comment #:

Comment: A brief but more detailed discussion for the basis for removal of total uranium should be included within the text.

Response:

Action:

18) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.1 Pg #: 19 Line #: 13-17 Code: C
Original Comment #:

Comment: As yet DOE's proposal to use Th-232 measurements to replace Ra-228 and Th-228 has not been approved by Ohio EPA or US EPA. Until such approval is received, incorporation into this plan is not acceptable.

Response:

Action:

19) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 4-3 Pg #: 20 Line #: Code: C
Original Comment #:

Comment: 1) It is unclear how the ASCOCs were selected. A more detailed table defining OU2 vs OU5 FRLs, risk, background values etc. should be included to clarify the selection process.
2) Ohio EPA believes the confidence level for Tc-99 should be raised to 95% due to it's presence in the area and the FRL being the same number as the WAC.

Response:

Action:

20) Commenting Organization: Ohio EPA Commentor: OFFO

Mr. Johnny Reising
July 21, 1997
Page 7

Section #: 4.2 and Table 4-5 Pg #: 21-23 Line #: Code: M

Original Comment #:

Comment: This section lacks sufficient detail regarding sampling frequency and location. In addition it is unclear when physical vs. in situ measurements will be collected. Until a PSP for Certification and WAC attainment is submitted and determined to be acceptable, Ohio EPA will not approve initiation of site preparation activities. In addition, such a PSP must include sampling for attainment of the Tc-99 WAC.

Response:

Action:

21) Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 4.2 Pg #:25 Line #: 27-29 Code: C

Original Comment #:

Comment: Is this sentence suggesting the Tc-99 "sitewide program" will be concluded prior to initiation of site preparation activities such that "above-WAC areas will be avoided during the site preparation activities"?

Response:

Action:

Technical Specifications

22) Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 02100 Pg #: 2 of 5 Line #: 1.5C Code: C

Original Comment #:

Comment: The section should include a reference to the site fugitive dust BAT policy or include a copy within the specifications.

Response:

Action:

23) Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 02100 Pg #: 4 of 5 Line #: 3.2B Code: C

Original Comment #:

Comment: Ohio EPA recommends implementation of a method of tree removal similar to that used in the norther pine plantation as a part of OSDF site prep. This method would need modification to reduce/eliminate dragging trees to the shredder location. Possibly trees could be shredded at location of cutting with chips blown into a vehicle for transport.

Response:

Action:

24) Commenting Organization: Ohio EPA Commentor: OFFO

7

Mr. Johnny Reising
 July 21, 1997
 Page 8

Section #: 02200 Pg #: 5 of 10 Line #: 2.1(A) Code: C

Original Comment #:

Comment: Use of the term "Unclassified Material" in this and subsequent sections [see 3.4(A)(2)] is confusing. Is this intended to be non-impacted material or material brought in from off-site? Additional clarification is needed or replacement of "unclassified" with non-impacted. This and all documentation must be extremely clear in stating how materials will be defined and managed.

Response:

Action:

25) Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 02200 Pg #: 9 of 10 Line #: 3.8 Code: C

Original Comment #:

Comment: The specifications provided within this section are insufficient to ensure an adequately impervious "infiltration barrier" is installed. Ohio EPA would expect specifications addressing rock/foreign material, number of compactor passes, soil type, clod sizes, etc. Additional detail should be added to ensure construction of an adequate infiltration barrier.

Response:

Action:

26) Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 02205 Pg #: 6 of 7 Line #: 3.6(A-F) Code: C

Original Comment #:

Comment: This section requires field quality control measurements but the previous sections of 02205 fail to provide any performance criteria against which to measure the testing results (e.g. in-place density and moisture tests are required but no performance criteria for the impacted material storage pile is provided). The basis for inclusion of this section is not clear.

Response:

Action:

27) Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 02270 Pg #: 5 of 6 Line #: 3.5(F) Code: C

Original Comment #:

Comment: It is unclear to the reviewer how proof rolling is to be accomplished with the 60 mil HDPE liner in place. Additional detail should be provided on protecting the liner during any such activity. In addition, details on how one can inspect to ensure "the one-foot of barrier over the GMA" is maintained with the HDPE liner in place should be included.

Response:

Action:

Mr. Johnny Reising
 July 21, 1997
 Page 9

28) Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 02270 Pg #: 4 of 5 Line #: 3.6 Code: C

Original Comment #:

Comment: This section fails to include a paragraph on required activities if testing is failed, as defined by 3.5. Previous sections, e.g., 02225 3.7(A), (B), (D), have provided directions for failures as well as notification of testing. Similar sections should be included here.

Response:

Action:

29) Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 02510 Pg #: 4 of 5 Line #: 3.5 Code: C

Original Comment #:

Comment: This section fails to include a paragraph on required activities if testing is failed, as defined by 3.2. Previous sections, e.g., 02225 3.7(A), (B), have provided directions for failures. Similar sections should be included here.

Response:

Action:

30) Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 02900 Pg #: 1 of 5 Line #: Code: M

Original Comment #:

Comment: DOE must evaluate the failures within A1P1 at revegetation and take steps to ensure they are not repeated. Attention to season, water supply, construction schedule, etc are needed. Ohio EPA will expect strict adherence to the standards within the technical specifications for percent grass coverage.

Response:

Action:

31) Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 02900 Pg #: 2 of 5 Line #: 2.1(A)1(a) Code: C

Original Comment #:

Comment: Ohio EPA recommends DOE evaluate the possibility of using native grasses for all permanent revegetation. The grass lands being created following construction/excavation areas are of lesser natural resource quality than existing grasslands due to low forage value of the reseed mixture.

Response:

Action:

32) Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 02900 Pg #: 5 of 5 Line #: 3.4(A)2 Code: C

Mr. Johnny Reising
 July 21, 1997
 Page 10

Original Comment #:

Comment: Ohio EPA believes this is an important specification and that a time limit should be established for achieving the 95% coverage. Ohio EPA recommends that 3 week and 3 month intervals should be used. Within 3 weeks germination should have occurred across 95% of the area, with no area greater than 3 square feet, if not reseeding is required. Additionally, if after 3 months a 95% coverage by mature perennial grass is not achieved then reseeding is required.

Response:

Action:

Surface Water Management Plan

33) Commenting Organization: Ohio EPA Commentor: DSW

Section #: 2.2.4 Pg#: 2-3 Line #: 2nd ¶ Code: C

Original Comment #:

Comment: The paragraph describes a cap-type trash rack/anti-vortex device. This type of device was on the original drawings, however when the drawing of the riser was modified to allow 100% drawdown, the top of the riser was also modified. The description here should be consistent with the drawing.

Response:

Action:

34) Commenting Organization: Ohio EPA Commentor: DSW

Section #: 2.2.4 Pg#: 2-3 Line #: 3rd ¶ Code: C

Original Comment #:

Comment: This paragraph contains three issues.

1) It states that preliminary calculations indicate that runoff from a storm greater than the 10 year, 24 hour storm will likely flow over the retention basins. This is also supported by Sketch #2, drawing SK-G-004548. We feel that the flow of Paddy's Run into the retention basins is an undesirable condition for many reasons. This was discussed during a conference call with DOE and FDF on June 24, 1997 and is summarized here. We have a concern about the integrity of the basins under these conditions, about the potential for flushing out of contaminants contained in the basin, and about the additional hydraulic load placed on the SWRB from such an event. We feel that the berm height should be sufficient to prevent inflow from a 10 year, 24 hour storm at a minimum.

2) The statement is made that the SWRB will bypass the AWWT and discharge directly to the GMR during flows that exceed the 10 year storm. I refer the author to the OU5 ROD sections 9.1.4 and 9.1.5 regarding discharges from the SWRB to the GMR and recommend the statement be deleted.

3) The final statement of the paragraph is that during the periods of storm water bypass referred

Mr. Johnny Reising
 July 21, 1997
 Page 11

to in #2 above, the outlet pumps from the retention basins will not operate. I refer again to the OU5 ROD which states that "The selected remedy includes the following key components for storm water and wastewater: Collection of contaminated storm water, using the existing FEMP retention basin, as necessary during the implementation of site-wide remedial actions to minimize discharges of contaminants to Paddy's Run and the resultant impacts to the regional aquifer." If an untreated discharge is inevitable it is preferable to have a discharge to the GMR rather than to Paddy's Run because of the greater potential for groundwater contamination through discharges to Paddy's Run. Therefore the outlet pumps from the retention basins should continue to operate to minimize the possibility of any overflows to Paddy's Run.

Response:

Action:

35) Commenting Organization: Ohio EPA Commentor: DSW
 Section #: 4.2.3 Pg #: 4-2 Line #: 1st ¶ Code: C
 Original Comment #:

Comment: The meaning of the clause "To account for the sediment removal capability of the retention basins" in the first sentence is unclear. Please explain.

Response:

Action:

36) Commenting Organization: Ohio EPA Commentor: DSW
 Section #: 5 Pg #: 5-1 Line #: 1st ¶ Code: C
 Original Comment #:

Comment: Please explain the reasons that would necessitate installation of silt fencing along perimeter down slope areas and drainage ditches. Silt fence must be installed on the contours if it is to work as a silt fence. If it to be used as a diversion device, that should be stated.

Response:

Action:

37) Commenting Organization: Ohio EPA Commentor: DSW
 Section #: 5 Pg #: 5-1 Line #: 2nd ¶ Code: C
 Original Comment #:

Comment: This paragraph states that runoff from all areas will be routed to the retention basins until the areas are certified below the FRLs. However, routing of runoff to the retention basins should continue until all up slope soils are stabilized.

Response:

Action:

38) Commenting Organization: Ohio EPA Commentor: DSW
 Section #: 5 Pg #: 5-1 Line #: 3rd ¶ Code: C

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