



State of Ohio Environmental Protection Agency

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George V. Voinovich  
Governor

August 30, 2000

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

RE: AREA 3A/4A IRDP RTC

Dear Mr. Reising:

This letter provides as an attachment Ohio Environmental Protection Agency comments on the Responses to Comments on the Area 3A/4A IRDP Package.

Our most significant outstanding concern is that the excavations are excessively complicated. We do not believe they are constructable as drawn. After short cuts are taken for expedience and as new contamination is discovered we believe that the actual volume of material excavated will be significantly larger than these Plans predict. This would be consistent with our experience in the South Field and in the Sewage Treatment Plant excavations.

We are available to discuss these comments at a meeting . This may be more expeditious than to begin another comment and response cycle.

If you have any questions, please contact Tom Ontko or me.

Sincerely,

*For Tom Ontko*

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

cc: Jim Saric, U.S. EPA  
Terry Hagen, FDF  
Mark Shupe, HSI GeoTrans  
Francie Hodge, Tetra Tech EM Inc.

Ruth Vandergrift, ODH

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**Ohio Environmental Protection Agency Comments  
on the RTC Package for  
Area 3A/4A IRDP**

- 1) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #:    Pg #:                      Line #:                      Code:  
Original Comment #: 1  
Comment:
1. We still find it difficult to believe that the excavations will be built as designed. We cite the following additional examples of excavations that appear overly complex:
    - A Drawing 00021. Look north of the Plant 9 footprint about 140 feet north of the "table" in our original comment. Notice the four excavations roughly 11 feet square and 1 foot deep that are separated from each other by 10 feet. It is our experience in the STP and other projects that the three excavations would be performed continually; that is one excavation 70 feet long and 10 feet wide would be dug to a 1 foot depth. The increased volume to the OSDF would be less than 12 cubic yards.
    - B On Drawing G-00072 north of control point 21 is a long narrow berm between two deeper excavations.
    - C Also on Drawing G-00072 are 7 one foot deep excavations roughly 5 feet square. These are oriented in an east-west line and span a distance of 140 feet.

Based on past experience at the FEMP, we believe that the design under-estimates the total volume of soil to be excavated. We predict that making these drawings so complicated will result in a larger volume of soil excavated than predicted. The STP and the South Field Projects both resulted in a significantly greater excavation volume than originally planned.
  2. It is not our experience that "the survey to verify excavation volume is not a high priority." To the contrary, our observations have been that when excavation volumes are pay items, they are the highest priority.
  3. Section 02100-Surveying was not included in our Package. This should be provided.
  4. We also take issue with the priority to minimize the volume of uncontaminated soils placed in the OSDF. In any given area, soils excavation will of necessity follow debris generation. Since there is already an excess of debris, we do not see when the soil will catch up.
- 2) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #:                      Pg.#:                      Line #:                      Code: C  
Original Comment #: 6  
Comment: The work plan for treating the PCE/TCE/DCE contaminated soil must be submitted to the Agencies for review and approval. Be advised that Hamilton County will need to be contacted for the proper air permits along with whatever stack or

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performance testing requirements are necessary.

- 3) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #:                      Pg #:                      Line #:                      Code: c  
 Original Comment #: 13

Comment: The response and action are satisfactory except for two minor issues:

- 1) Our danger signs were intended to illustrate examples and were not intended to be comprehensive yet our comment is to be added verbatim to the text. Geologists from the ARWWT Project should be consulted for a more thorough listing of indications that the GMA materials are being approached or penetrated.
- 2) Provide qualifications for the engineering personnel who will identify if the GMA is breached. They should have prior experience in soils classification.

- 4) Commenting Organization: Ohio EPA                      Commentor:  
 Section #:                      Pg #:                      Line #:                      Code:  
 Original Comment #: 17

Comment: We have two concerns about returning overburden and pipe bedding material to the trench: contamination and the use of pipe bedding as select impacted material in the OSDF.

Firstly, pipe trenches may serve as a conduit for migration of contaminants. This is possible even for non-process pipes. For example, a trench for a communications cable may preferentially allow migration of surface spills. In this scenario, we suspect that efforts made during production years to clean up spills would have terminated well before the work proceeded very closely to the pipe. The text also acknowledges a lack of sampling data in the trenches. Furthermore, surface scans would be ineffective in detecting contamination that migrated within the bedding material. The process of excavating the trench and spreading the pipe bedding material into a 6-foot wide flat surface could serve to mix and dilute contamination. The possibility that above-FRL soils will be overlooked is particularly high in the case of the non-process piping in which pipe bedding material will only be scanned at 50-foot intervals.

Secondly, our understanding of the OSDF construction sequence is that there will nearly always be either a cap or a liner being built. We do not expect that there will be a time in the future that select material will not be in short supply. We expect that the glacial tills comprising most of the cut and filled locations in the former Production Area will not meet the specification for select material without sorting or screening. Pipe bedding should already meet the select criterion.

To summarize, our position is that pipe bedding should be administratively dispositioned in the OSDF as select impacted material providing it meets the WAC.



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tank is empty. The response does not mention the visual determination criteria. The Specification should be re-written to include the visual criteria. The re-write should also make it clear that sludges, residues, hold-up and the like do not comply with the WAC. These materials should be drummed for placement in the Special Materials Handling Area.

- 8) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #:                      Pg.#:                      Line #:                      Code: C  
 Original Comment #: 52  
 Comment: With SP4 already gone, the document should not reference "loading and hauling material from SP4". According to the comment response, the new stockpile is to be named A3A-008. To prevent any possible confusion as to what material is located at that spot, the text should reference the new pile name.
- 9) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #:                      Pg #:                      Line #:                      Code: c  
 Original Comment #: 54  
 Comment: We agree that hydraulic conductivity is not an appropriate specification for the clay plug because of the turn-around time to perform the test. We take issue with the allowance that clay be compacted at +/- 3% optimum moisture content. Experience with the OSDF clay liner has shown that clay with a moisture content 0 to 3% wetter than optimum will more consistently give a satisfactory Proctor density.
- 10) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #:                      Pg #:                      Line #:                      Code: c  
 Original Comment #: 55  
 Comment: The issue of sequencing certification samples and installation of the clay plug should be re-visited in light of the response to Ohio EPAs original comment # 8. Activities scheduled for the bottom of excavations (plugging, sampling, real-time scans) are all at the mercy of rainfall. We learned at the STP during 1999 that rain delays can be very time consuming when excavations fill with water. We need to develop a strategy that includes performing all operations without delays in the excavations that require plugging.  
 We suggest a strategy that includes an expedited certification review. A certification approach should be developed around the designed excavation. This approach would have real-time and physical sampling components and would contain all of the elements in a Certification Design Letter. The CDL would be reviewed prior to design grade being reached. It may be expeditious to negotiate a "cook book" approach which standardizes the number of samples needed based on the area to be plugged. Real-

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time and physical sampling should commence as soon as design grade is reached. Construction of the plug should not be contingent on physical sampling but should commence when the real-time scans are satisfactory. The plugging will be at risk and the area will need to be re-excavated should the area fail certification.

The following are new comments on Figures 3-4 and 3-5, Trenching Beyond the Design Surface

- 11) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: Figure 3-4 Pg #: Line #: bullet 4 Code: c  
 Original Comment #:  
 Comment: Based on our observations during the STP Project, the process piping will be mangled to the extent that visual inspection will be precluded. Pipes whose interiors can not be viewed should not be deemed compliant with the WAC. What percentage of process piping is expected to not meet WAC? Again, our experience at the STP Project was that a large fraction of process piping was not dispositioned in the OSDF.
- 12) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: Figure 3-4, bullet 5 and 6; Figure 3-5, bullet 6 Code: c  
 Original Comment #:  
 Comment: Physical samples should be taken from the excavator bucket before the bucket is emptied on the ground and possible contamination is mixed and diluted.
- 13) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: Figure 3-5, bullet 2 Pg #: Line #: Code:  
 Original Comment #:  
 Comment: The caption does not indicate the frequency at which pipe bedding material will be monitored for WAC. This should be indicated as one sample per specified length of trench.
- 14) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: Pg #: Line #: Code:  
 Original Comment #:  
 Comment: In the strategy for process piping as outlined in Figure 3-4, the overburden is never tested for FRL before it is returned to the trench. A strategy should be devised to scan the overburden before it is returned to the trench. Similarly, in Figure 3-5, the overburden for non-process piping is referred to in Step 1 as "precertified" but we can not find reference to how this is performed in either the Figure or in Section 3.4.4.