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June 16, 2000

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

**RE: DRAFT COMMENTS ON AREA 3A/4A IRDP PACKAGE**

Dear Mr. Reising:

This letter provides Ohio Environmental Protection Agency comments on the draft Integrated Remedial Design Package for Area 3A/4A.

Our review of the Package was performed knowing that the predesign soil sampling data was still ongoing. Data shortfalls include; WAC sampling around Plant 6; VOC WAC attainment sampling around the incinerator pad; maintenance building above-WAC bounding.

One of our major comments is that the excavations as designed appear to be very difficult to implement in the field. There are instances where two adjacent areas are excavated to within one foot of the other. Our observations of grading have been that it is more expensive and time consuming to survey and verify that the torturous design has been achieved. It would be advantageous in these cases to merely grade both areas to the deeper grade. All excavations should be reviewed by Fluor Fernald Construction for field implementability.

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  
Mark Shupe, HSI GeoTrans

Ruth Vandergrift, ODH  
Francie Hodge, Tetra Tech EM Inc.

**Ohio Environmental Protection Agency Comments  
on the  
Draft Implementation Plan for Area 3A/4A**

**General Comments**

- 1.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #:   Pg #:                      Line #:                      Code: C  
 Comment: Have the excavation drawings been reviewed for construct ability? We have noticed many cases where excavations have tortuous outlines that at first looks very expensive to build and does not appear to have a strong logical need to be so complicated. For example, refer to Drawing 00021 in the Plant 9a footprint. The drawing shows a 4 feet high 'island' roughly 5 feet by 10 feet in size. This 'island' is located between two deeper excavations that require plugging to protect the GMA. In general, we strongly support the concept of minimizing excavations which penetrate the tills which protect the GMA. But in this case, we believe it would be quicker (and therefore more protective) to excavate the island with the surrounding materials ('island' volume 200 cubic feet, i.e., barely half a truckload) than it would be to survey and verify that the excavation followed the design.
- ~~2.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #:   Pg #:                      Line #:                      Code: C  
 Comment: We are having difficulty determining the drivers for the various excavations. Color-coded cross-sections which distinguish soils to be excavated for FRL exceedences, WAC flunkers, slope stability, utility excavation, etc. would help us understand some of the more convoluted excavations. Cross-sections should contain analytical information obtained from borings so that it is easy to confirm that all soils above the FRL have been captured and that excavations are bounded by analytical results which are below FRL.~~
- 3.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #:   Pg #:                      Line #:                      Code: C  
 Comment: During previous discussions we agreed that the issue of whether all deep foundation pilings would be removed or allowed to remain in place would be handled on a case-by-case basis. The only deep piling to remain after remediation in this Package is in the Boiler Plant. A discussion should be added detailing the reason the piling is remaining and specifically why it is more protective of the GMA to allow it to remain than it is to remove it.

- 4.) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: Pg #: Line #: Code: C  
 Comment: A new table should be added that summarizes the excavations that are expected to require plugging to protect the GMA. The table should include a specific name for the excavation (i.e., 'Deep Excavation in NE side of Plant XX footprint'), the volume of gray clay estimated to be required to effectuate the plug, and the size of the area which drains into the excavation.
- 5.) Commenting Organization: Ohio EPA Commentor: ODH  
 Section #: Pg #: Line #: Code: C  
 Comment: We will provide detailed comments on the Drawings when results from all the sampling are incorporated into the next revision of this Package.
- 6.) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: Pg #: Line #: Code: C  
 Comment: Has any cost/benefit analysis been performed for treating the soils contaminated with TCE, PCE and DCE? Also, details are necessary on the method of treatment to be used.

#### Specific Comments on the Implementation Plan

- 7.) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 1.1 Pg #: 1-5 Line #: 12-13 Code: C  
 Comment: This section does not include the approval by the Agencies for DCN's. Please add.
- 8.) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 1.5 Pg #: 1-12 Line #: Code: C  
 Comment: The Lessons Learned section needs to include a bullet which states that certification of the excavated areas will take place in an expedited manner to prevent ponding of water in the excavations. This expedited approach should involve submitting the CDL for review prior to completion of final excavation, and approval after precertification.
- 9.) Commenting Organization: OEPA Commentor: OFFO  
 Section #: 2.3.3 Pg #: 2-12 Line #: 24, 26 & 27 Code: C  
 Original Comment #  
 Comment: This section states that some "predesign boring locations" fall outside 3A/4A boundaries into Area 6. However, in the review of Figures 2-13 and 2-14 it is difficult to know exactly which borings are outside 3A/4A boundaries. Please designate which locations are on the outside of 3A/4A and Area 6 on the figures.

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- 10.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 2.6.3 Pg #: 2-25 Line #: 9                      Code: C  
Comment: This section describes the fitted safe slopes which correspond to the excavation depths which are illustrated on Figures 2-21 through 2-25. The figures, sections, etc. are satisfactory and the concepts are clear. However, the colors in the figures indicate modeled concentrations. Figures should be added to the Plan that reflect measured concentrations as obtained from borings. The same cross sections can be used. The use of color-coding to indicate measured concentrations (similar to Figure 2-16) in lieu of numerical values is acceptable if the numeric version proves to be too cumbersome.  
The intent of this comment is to be able to quickly visually verify that all excavations are bounded by analytical data below the FRL and that all soils greater than the FRL have been captured.
- 11.) Commenting Organization: OEPA                      Commentor: OFFO  
Section #: 3.2.3 Pg #: 3-4 Line #: 7-13                      Code: C  
Original Comment #  
Comment: If any other line is hit during excavation, i.e., process line, then the material released from that line should be dug out as well. In addition, every effort should be taken to plug or stop the line from releasing its contents into the trench.
- 12.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 3.6                      Pg #: 3-21 Line #: 11                      Code: C  
Comment: The text states that in excavations where there is less than 5 feet of gray clay remaining over the GMA, the contractor has 15 working days to initiate work to bring the gray clay to a minimum of 5 feet thick. This should be changed so that the placement should be completed in five working days. A requirement to pump rainwater from the excavation should be added.
- 13.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 3.6                      Pg #: 3-21 Line #:                      Code: C  
Comment: This section makes serious and satisfactory commitments to protect the GMA in instances where excavations are planned to extend through the glacial tills that overlay the aquifer. Because the actual elevation of the GMA is inferred from a limited number of borings, it is possible that excavations may penetrate the gray clay or expose permeable lenses that are not shown on the drawings.  
A contingency plan should be developed which:
- identifies 'danger' signs that the aquifer may be penetrated (appearance of unconsolidated material, 'pumping' under vehicle tires, rainfall that drains through

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the bottom of excavations instead of ponding, etc.)

- identifies actions which must take place in order to plug the breach. These actions may include scanning the bottom of the excavation, identifying a source of gray clay to use for plug material, planning contingency drainage measures to prevent rainwater infiltration and the like.

- 14.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 3.7    Pg #: 3-21    Line #: 29    Code: C  
Comment: The text states that some interim grading of design slopes may be required to facilitate access by the real-time monitoring crew. It goes on to say that most interim grading will be performed after the precertification measurements are completed. First, we do not see the necessity of interim grading for access by the real-time crew. In the STP Project, slopes required for safe operations of trucks and excavating equipment were readily and safely used by the real time crew. Also, as stated in Section 2.5.13 of the SEP, rough or interim grading is to be performed after certification. Secondly, our confusion here may be related to semantics, but we are not clear what the terminology 'interim grading' refers to. We are clear on the concept of earthmoving to achieve remediation or to remove below-grade utilities. We are also comfortable with our understanding of the term 'final grading' to mean that grading which occurs subsequently to certification in order to bring the topography to final slopes, allow for long-term drainage and achieve NRRP objectives. The concept of 'interim grading' has us puzzled.  
Define the term 'interim grading' and explain why this intermediate grading activity is necessary.
- 15.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: Figure 3-4    Pg #:                      Line #:                      Code: C  
Comment: This figure describes the steps and decision points to be made to excavate process pipes (and other underground utilities) in areas beyond the design surface. According to the text in Section 3.4.4, line 21 "There are very few data points on the contamination existing in bedding material and soil below the utility lines, due to penetration permit requirements that forbid subsurface investigation of bedding material." It is not stated whether the lack of data extends to trench overburden soil. Unless data exists to show that the overburden removed in step 1 is below FRL, this material should be sampled (or scanned with the HPGe) before it is returned to the trench.

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- 16.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: Figure 3-4 Pg #: Line #: number 6 Code: C  
Comment: This step describes how at 50-foot intervals, a bucket of pipe bottom material is removed from the trench bottom and scanned (and sampled) prior to being returned to the excavation. Based on the area of view of the HPGe detector (see Table 4.1-1 of the User's Guidelines, Measurement Strategies and Operational Factors for Deployment of *In-Situ* Gamma Spectroscopy at the Fernald Site) the HPGe should be placed no higher than 15 cm above the surface. Since the field of view at that height is roughly one meter, the soil will need to be spread in a circle with a two-meter diameter and the detector should be placed in the center of the circle.
- 17.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 3.4.4 Pg #: 3-17 Line #: 26 Code: C  
Comment: Has a cost/benefit analysis been performed on the disposition of overburden and pipe bedding material from process piping below the design grade. Considering that the OSDF project is soil-poor and that the pipe-bedding will meet the criteria of select impacted material, it may be cheaper just to administratively decide to place all pipe bedding material as select impacted material (WAC compliance would, of course, still need to be established.)
- 18.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 3.5.1 Pg #: 3-19 Line #: 11 Code: C  
Comment: The text states "Perched groundwater that resides in excavation zones that contain organic contamination (i.e. Plant 6, Incinerator Pad, RCRA Soil Area 5) will be collected in tanks and transferred to the BSL..." where it will be treated for VOCs. There is no succinct discussion in this plan that discusses why no other areas will be evaluated for VOC contamination. Provide a discussion which summarizes RI/FS data, process knowledge, knowledge of the perched groundwater regime, etc that justifies why no additional efforts are initiated to discover new areas of VOC contamination. It is our understanding that portable GC/MS instrumentation has been recently deployed at Fernald which could quickly and cheaply screen perched water for VOCs.
- 19.) Commenting Organization: Ohio EPA Commentor: DSW  
Section #: 4.3 Pg #: 4-7 Line #: 19 Code: C  
Comment: The sediment trap referred to here is the Tank Farm Settling Basin and should be specified as such.

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- 20.) Commenting Organization: Ohio EPA                      Commentor: DSW  
Section #: 4.3            Pg #: 4-7            Line #: 32            Code: C  
Comment: The sentence "Industrial activity inspections may also be conducted in the Area 3A/4A remediation area, if required under the SWPP." must be changed to "Industrial activity inspections **will** also be conducted in the Area 3A/4A remediation area, **as** required under the SWPP."
- 21.) Commenting Organization: Ohio EPA                      Commentor: DSW  
Section #: 4.3            Pg #: 4-8            Line #: 21-22            Code: C  
Comment: This sentence is difficult to understand. It appears to refer to project specific monitoring for areas outside the production area ("the former storm water runoff-controlled Production Area drainage basin"). It would read more clearly if "the former storm water runoff-controlled Production Area drainage basin" was more simply stated as "Production Area drainage basin."
- 22.) Commenting Organization: Ohio EPA                      Commentor: DSW  
Section #: 4.3            Pg #: 4-8            Line #: 28-30            Code: C  
Comment: This project does require project specific storm water monitoring, specifically, the storm water must be monitored for VOCs to determine where it will be pumped to from the 3A/4A area.
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- 23.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 4.4            Pg #: 4-9            Line #: 17            Code: C  
Comment: The text states that the GMA under Plant 6 has already been identified as an area that will need aquifer restoration. More recent data has indicated that the aquifer contamination is much smaller than previously thought. Decisive actions to protect the GMA in this location will almost certainly save money compared to the costs to remediate under Plant 6.

**Specific Comments on Appendix A**

- 24.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: Appendix A, Section 4.0                      Pg #: 5            Line #: na            Code: C  
Comment: The citation listed under ODNR, "Ohio's Standards for Stormwater Management..." is the subtitle of the document. The correct title is "Rainwater and Land Development " followed by your citation as a subtitle. Section 5.4 on page 13 of this appendix (the first paragraph after the four bullets) should also be changed.

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### Specific Comments on Appendix B

- 25.) Commenting Organization: Ohio EPA      Commentor: DSW  
Section #: Appendix B, 3.1      Pg #: 3-1      Line #:      Code: C  
Comment: It is unclear from this section whether water containing VOCs will be pumped to the Tank Farm Settling Basin prior to being put into portable tanks (Appendix B, 3.1 and 5.5; Specification 02275, 3.1D) or pumped into portable tanks prior to being pumped to the Tank Farm Settling Basin (Appendix B, 1.3; drawing 99X-1900-G-00010, keyed note 4)
- 26.) Commenting Organization: Ohio EPA      Commentor: DSW  
Section #: Appendix B      Pg #: General      Line #:      Code: C  
Comment: There needs to be more information on sampling for VOCs. Is this done prior to any water being sent over to the Tank Farm Settling Basin, if any VOC is present will the water be routed to the BSL through portable tanks, how long between sampling and pumping is allowed, etc?
- 27.) Commenting Organization: Ohio EPA      Commentor: DSW  
Section #: Appendix B, 3.2      Pg #: 3-2      Line #:      Code: C  
Comment: Need more detail here and on drawing 99X-1900-G-00008 on how water will be contained/handled in the soil treatment area?
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- 28.) Commenting Organization: Ohio EPA      Commentor: DSW  
Section #: Appendix B, 3.3 and 3.5      Pg #: 3-3 and 3-5      Line #: 21-22      Code: C  
Comment: Water should not be pumped directly to Paddys Run. Water should be routed through one of the sediment basins handling water from certified areas, such as the sediment basin in Area 2 Phase III or Area 1 Phase I.
- 29.) Commenting Organization: Ohio EPA      Commentor: DSW  
Section #: Appendix B      Pg #: 3-6      Line #: figure 3-1      Code: C  
Comment: Provide more detail about the WMF, how are VOC and non-VOC waters going to be kept separate, how is the water handled here, etc?
- 30.) Commenting Organization: Ohio EPA      Commentor: DSW  
Section #: Appendix B, 4.2      Pg #: 4-2      Line #:      Code: C  
Comment: Specification 02930 is not provided in the Technical Specifications package.

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- 31.) Commenting Organization: Ohio EPA Commentor: DSW  
Section #: Appendix B, 6.2 Pg #: 6-2 Line #: Code: C  
Comment: Is silt fence necessary in addition to the diversion ditch? It appears as though the diversion ditch alone will accomplish the desired result.
- 32.) Commenting Organization: Ohio EPA Commentor: DSW  
Section #: Appendix B Pg #: Appendix A Line #: Velocity calculations Code: C  
Comment: Note that design velocities in erodible ditches greater than 3 fps should have rock check dams to reduce velocities. Rock check dams should be installed according to ODNR guidance.
- 33.) Commenting Organization: Ohio EPA Commentor: DSW  
Section #: Appendix B Pg #: Appendix A Line #: Code: C  
Comment: The calculations for pump size in this section use a 3 day dewatering period and Specification 02275 3.8 B require pumps to be sized so that no water from a 10 year, 24 hour or lesser storm event overflow into the GMA.

#### Specific Comments on Appendix E

- 34.) Section #: Appendix E Pg #: E-1 Line #: 15 Code: C  
Comment: The text should discuss the possibility that the elimination of the more than 800 samples did not restrict the model's capacity to predict un-sampled contamination at depths just below the 0.5 foot cutoff. For example, consider a location with contamination extending to three feet below land surface but that was only sampled above 0.5 feet. The model would be unable to predict the presence of this contamination unless nearby sampling intersecting the contamination is available. Was the removal of the data points conditioned on the sampling results below the cutoff depth?
- 35.) Commenting Organization: Ohio EPA Commentor: HSI GeoTrans, Inc.  
Section #: Appendix E Pg #: E-2 Line #: 9 Code: C  
Comment: The SAGE2001 program user must select an appropriate maximum lag distance for sample variogram construction (a value of 300 feet was used for the excavation design). It is important that this parameter be carefully chosen because the program will not use any sample variogram points at lag distances larger than the specified maximum. Similarly, if the specified maximum is too long, useless points could be included in the modeling process. The inclusion of these points may adversely affect model accuracy. The selected maximum lag distance should be justified as appropriate through an assessment of variogram model sensitivity to potential alternative choices for this parameter.



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from the least squares regression analysis performed to fit the model variograms to the variogram plot. The error SSE should be provided for the selected model and for any competing models considered. In addition, the error SSE should be reported for alternative values considered for the maximum lag distance and for the minimum data pairs threshold value.

- 41.) Commenting Organization: Ohio EPA                      Commentor: HSI GeoTrans, Inc.  
Section #: Appendix E    Pg.#: E-3    Line #: 25                      Code: C  
Comment: The results of this geostatistical analysis are a key input to the determination of excavation volumes and depths. The critical nature of this analysis, therefore, requires that meaningful and quantitative model validation be performed, and that the results of the validation be presented in the text discussion. Validation should be used to demonstrate that a reasonable model has been identified and used. The model put forth in Appendix E assumes an exponential form and a nugget effect of 0.27. Is this model superior to one that does not include a nugget effect? Validation statistics calculation (i.e., standardized residuals, orthonormal residuals, etc.) procedures are available to answer such questions by providing a way to quantitatively compare one model to another. It should be noted that the above validation statistics differ from the total sum of squared differences (error SSE) reported by SAGE2001. Assuming that validation statistics were used in model development for this analysis, they should be reported in the text rather than merely providing a statement that the analysis satisfied an internal review.

#### General Comments on The Technical Specifications

- 42.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #:    Pg #:                      Line #:                      Code: C  
Comment: The following Parts and Sections are referenced throughout the Technical Specifications but are not included in the document: Part 6, Part 8, Section 02200, Section 02100, Section 02230, and Section 02930. Please provide these sections.
- 43.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #:                      Pg #:                      Line #:                      Code: C  
Comment: Please delete all references to the borrow area, as that is not part of the work under this scope.

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### Specific Comments on the Technical Specifications

- 44.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02205 Pg #: 6 of 19 Line #: 3.1 Code: C  
Comment: Activity C should immediately follow activity A. Surface water management and control measures need to be in place before the activities mentioned in activity B begin. Please correct.
- 45.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02205 Pg #: 7 of 19 Line #: K 2, 3 Code: C  
Comment: What justification is there for the steep slopes (1.5H:1V) indicated in this section? Are these slopes constructable and safe to work on and around?
- 46.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02205 Pg #: 7 of 19 Line #: N 1 Code: C  
Comment: What methods will be used to verify that the truck is no longer considered RCRA hazardous?
- 47.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02205 Pg #: 11 of 19 Line #: 3.4 Code: C  
Comment: All RCRA hazardous debris must be sampled for TCLP and pass before placement in the OSDF. Also, how is the RCRA debris transported to the OSDF?
- 48.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02205 Pg #: 12 of 19 Line #: 3.5 Code: C  
Comment: The definition of empty (less than 1 inch of liquid or less than 0.3% by weight of the total container contents) appears to have been borrowed from the RCRA definition of 'empty' container. However, RCRA defines container as something which is normally used to transport materials. The underground storage tanks relevant to this Plan are not containers but are defined as tanks and the RCRA regulations have a different definition for empty tanks. To be clean closed under RCRA, a tank would be drained, cleaned and clean-closed only after a rinseate sample was found to be free of hazardous constituents. WAC-compliance for tanks should follow the same criteria as used for process-related metals.
- 9.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02205 Pg #: 12 of 19 Line #: 3.5 F Code: C  
Comment: If soils around the UST are saturated, then the soils must be treated or sampled.

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- 50.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02205 Pg #: 13 of 19 and 16 of 19 Line #: 3.7 C, 3.13 B Code: C  
Comment: Real-time monitoring between lifts of below-WAC are to be performed, as has been in the case in all remedial excavations. Please correct.
- 51.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02205 Pg #: 14 of 19 Line #: 3.11 E Code: c  
Comment: All haul equipment fitted with automatic covers should have the covers in place at all times (ie - inside and outside of radiological controlled areas), except when loading or unloading.
- 52.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02205 Pg #: 15 of 19 Line #: 3.2 M Code: C  
Comment: OEPA is under the impression that SP4 will be hauled away before the end of the current construction season. Will SP4 still be there during the 3A/4A remediation? If so, please provide details as to what soil will be added to the stockpile, and how it will be verified prior to placement that the soils are below-WAC, as SP4 has already passed WAC Attainment Sampling.
- 53.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02205 Pg #: 18 of 19 Line #: 3.15 E 4 Code: C  
Comment: A new requirement for removing surface water from excavations should be added to make it a priority to remove surface water from all excavations which penetrate within 5 feet of the GMA.
- 4.) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.  
Section #: 02206 Pg #: 4 of 6 Line #: 3.2C Code: C  
Comment: Hydraulic conductivity requirements should be specified for GMA plug material.
- 5.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: Specification 02206 Pg #: 4 of 6 Line #: 3.2 C1 A, B Code: C  
Comment: This specification details activities that are required when work activities encroach on the 5-foot protective cover of the GMA but do not extend to within 2-feet of the GMA. Specification 3.2C1A allows the Construction Manager 5 working days to collect physical samples. This is an unreasonably long duration. The text on page 3-20 lists only ten excavations that are expected to penetrate within 5 feet of the GMA. It doesn't seem unrealistic to expect the CM to perform this sampling much more quickly. Lacking convincing justification for a longer time, we think 24 hours to obtain this sample is more than adequate. Section 3.2C1B allows ten working days for the contractor to backfill with the GMA plug. This, too, seems unreasonably long considering the expenses that are being incurred to remediate

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the aquifer. Two working days to initiate plugging and five days to complete plugging seems reasonable.

- 56.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: Specification 02206 Pg #: 4 of 6 Line #: 3.2 C1 A Code: C  
Comment: The text explains that the CM will collect samples in the area to be backfilled that are within 5 feet of the GMA but not within 2 feet of the GMA. Describe the measures to be taken to ensure that the act of sampling does not provide a route for contaminants to enter the GMA. Sample depth, plugging the sample hole, examination of the soil core for coarse-grained materials, etc. should be included in the measures.
- 57.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02206 Pg #: 4 of 6 Line #: 3.2 D 2 Code: C  
Comment: The text states "...as necessary to achieve a total compacted thickness of 2-feet." We are unclear if the 2-feet referred to here is the requirement that 2 feet of clay be placed within 24 hours of encroaching on the GMA or if this is a typographical error and it refers to the 5-foot plug thickness. Confirm that this is not a typo.
- 58.) Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.  
Section #: 02206 Pg #: 5 of 6 Line #: 3.2 D 4 Code: C  
Comment: The specification should indicate that the sodium bentonite grout will be mixed prior to installation and will be pressure emplaced using a tremie pipe. In addition, the grout should be emplaced by first installing the tremie pipe to the bottom of the pile and by removing the tremie pipe as the pile is filled with grout. The grouting should be performed in one continuous operation. In addition, the specification should indicate how the grout will be emplaced so that all void space is eliminated in the event that an obstruction, preventing installation of the tremie pipe to the bottom of the pile, is encountered.
- 59.) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: 02275 Pg #: 2 of 8 Line #: 1.4 C Code: C  
Comment: Provide a copy of the Contractor's Surface Water Management Plan for Ohio EPA review and approval. We can commit to an expedited review cycle to minimize delays.
- 0.) Commenting Organization: Ohio EPA Commentor: DSW  
Section #: Specification 02275 Pg #: 3 Line #: 1.4 C 5 and 6 Code: C  
Comment: How will plugged pipes' handle incoming water. Will they be rerouted to by pass excavations? This needs to be addressed.

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- 61.) Commenting Organization: Ohio EPA                      Commentor: DSW  
Section #: Specification 02275    Pg #: 4                      Line #: 2.1 D                      Code: C  
Comment: Site requirements are for coir/jute fiber matting. Confer with the site Natural Resources group. Any plastic netting used (not recommended) must be specified as non-UV stabilized.
- 62.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 02205                      Pg #: 4 - 5                      Line #:                      Code: C  
Comment: The erosion control blanket requirement should be revised to specify the coir based, biodegradable material defined in previous construction specifications for other on-site projects. Additionally, Ohio EPA recommends use of this erosion control fabric on any slope that will be steeper than 4:1 to facilitate seeding success.
- 63.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 02205                      Pg #: 5 of 8                      Line #: 3.2                      Code: C  
Comment: The section should specifically refer to the ODNR guidance for installation methods and requirements. Additional detail should be provided in this section to ensure proper silt fence usage and installation.
- 64.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 02275    Pg #: 7 of 8                      Line #: 3.8 C                      Code: C  
Comment: For excavations extending to within 5 feet of the GMA, this specification requires that less than one foot of standing water be maintained at all times by pumping to the Tank Farm Settling Basin. No design storm event is specified. We strongly agree that aggressive storm water controls are necessary to protect the aquifer. We are not confident that it is possible to implement the one foot maximum standing water regardless of the size of the storm. It may be necessary to pump from the excavation to an adjacent area rather than the Tank Farm Settling Basin. A prioritized list of actions to be taken if a greater-than-design basis series of storms occurs should be a part of the SWMP.
- 35.) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: 02275    Pg #: 6 of 8                      Line #: 3.8                      Code: C  
Comment: Protection of the Great Miami Aquifer is one of the highest priorities of the Ohio Environmental Protection Agency not only at the Fernald site but throughout southwest Ohio. Verifying compliance with this specification will be a major component of our oversight activities.

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- 66.) Commenting Organization: Ohio EPA Commentor: DSW  
 Section #: 02275 Pg #: 7 Line #: 3.10 A Code: C  
 Comment: The sentence ("Forty-five calendar days will be the maximum time...") which begins both Section 3.10A and Section 3.10B should be deleted in both sections. Seven days is the maximum time before stabilizing can take place. We have found that including the first sentence can lead construction personnel to believe they can leave those areas unstabilized for 44 days.

**Specific Comments on the Drawings**

- 67.) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: drawing G-00100 Pg #: Cross section 1 Line #: Code: c  
 Comment: This section shows a clay plug in the GMA but the bench does not extend around the entire perimeter of the excavation. The excavation should be redesigned so that surface water does not drain into the excavation.
- 68.) Commenting Organization: Ohio EPA Commentor: OFFO  
 Drawing #: G000030 Sheet #: 27 Section #: cross section 5 Code: c  
 Comment: The drawing shows the GMA plug is greater than 5 feet thick.