



Department of Energy

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MAY 16 2003

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V, SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0380-03

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

**TRANSMITTAL OF RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY
COMMENTS ON THE DRAFT INTEGRATED REMEDIAL DESIGN PACKAGE FOR AREA 2,
PHASE II**

- References:
1. Letter, J. Saric to J. Reising, "A2, P2 Implementation Plan," dated August 29, 2002
 2. Letter, T. Schneider to J. Reising, "Implementation Plan for Area 2, Phase II," dated September 13, 2002

Enclosed for your approval are responses to the Ohio Environmental Protection Agency (OEPA) comments on the draft Integrated Remedial Design Package (IRDP) for Area 2, Phase II. The draft IRDP was approved by the United States Environmental Protection Agency (USEPA) as noted in reference (1). Upon approval, these comment responses will be incorporated into the revised IRDP.

If you have any questions or need further information, please contact Robert Janke at (513) 648-3124.

Sincerely,

Johnny W. Reising
Fernald Remedial Action
Project Manager

FCP:R.J. Janke

Mr. James A. Saric
Mr. Tom Schneider

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DOE-0380-03

Enclosure: As Stated

cc w/enclosure:

R. Janke, OH/FCP
A. Murphy, OH/FCP
D. Pfister, OH/FCP
T. Schneider, OEPA-Dayton (three copies of enclosure)
M. Cullerton, Tetra Tech
AR Coordinator, Fluor Fernald, Inc./MS78

cc w/o enclosure:

R. Greenberg, EM-31/CLOV
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G. Jablonowski, USEPA-V, SR-6J
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M. Shupe, HSI GeoTrans
R. Vandegrift, ODH
D. Carr, Fluor Fernald, Inc./MS1
J. Chiou, Fluor Fernald, Inc./MS64
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K. Harbin, Fluor Fernald, Inc./MS60
U. Kumthekar, Fluor Fernald, Inc./MS64
F. Miller, Fluor Fernald, Inc./MS64
C. Neumann, Fluor Fernald, Inc./MS64
A. Snider, Fluor Fernald, Inc./MS64
T. Poff, Fluor Fernald, Inc./MS65-2
D. Russell, Fluor Fernald, Inc./MS64
ECDC, Fluor Fernald, Inc./MS52-7

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**RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY
COMMENTS ON THE DRAFT INTEGRATED REMEDIAL
DESIGN PACKAGE FOR AREA 2, PHASE II
(20450-IRDP, 20450-PL-0001, REVISION A)**

FERNALD CLOSURE PROJECT

IMPLEMENTATION PLAN

Commenting Organization: Ohio EPA
Section #: General Comment Pg. #: Line #: Commentator: OFFO
Original Comment #: 1 Code: C

Comment: The document needs to be revised to incorporate details regarding the ongoing characterization and excavation occurring within Subarea 4 to the west of Subarea 1, hereafter referred to the "Parking Lot." Additionally, a discussion of how the characterization activities failed to find the disposal materials in this area is warranted.

Response: Agree. All ongoing activities will be fully described.

A Geophysical Survey was performed from January 2000 to March 2000 using Electromagnetic Terrain Conductivity Profiling and Ground-Penetrating Radar (GPR), an Electromagnetic Terrain Conductivity Survey was performed from August 2000 to September 2000 using the Electromagnetic Terrain Conductivity Profiling (20400-RP-0003), and borings were also established in the Project Specific Plan (PSP) for Predesign Sampling in the Area 2, Phase II (A2PII) - Parts Two and Three (20450-PSP-0001) to investigate anticipated fill material based on historical topographical differences.

Action: The document will be revised to include a discussion of the use of the GPR, the results of that investigation, and the borings aimed at the investigation of the possible fill areas.

Commenting Organization: Ohio EPA
Section #: General Comment Pg. #: Line #: Commentator: OFFO
Original Comment #: 2 Code: C

Comment: Ohio EPA commented during our review of the A2PII PSP for Predesign Sampling (Original Comment #11, DOE file 10/26/1999) that GPR and magnetometer should be utilized for locating past disposal areas. DOE's response concurred with our recommendation. However, the document does not discuss any such surveys and it would seem that such a survey would have located the buried pipes and possibly the concrete in the Parking Lot area. It would seem prudent for DOE to revisit the issue of GPR/magnetometer surveys in the areas west of the haul road to locate any additional disposal areas.

Response: GPR was used to characterize and to explore potential buried objects and fill areas in the shallow subsurface in the area west of the haul road in A2PII. Several Transects for this survey were located in the immediate vicinity of the Parking Lot Area. The depth of the exploration in most of the areas was estimated to be 4 to 6 feet. The GPR did not detect any buried items in the investigation areas.

Action: This document will include a discussion of the use of the GPR and the results of that investigation.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: General Comment Pg. #: _____

Line #: _____

Code: C

Original Comment #: 3

Comment: The document is quite confusing particularly with regard to what is located within or outside of Subarea 3. A better map than that provided in Figure 1-2 is essential to understanding the scope of work included in this document. Additionally, it seems prudent that Subarea 3 should be removed from the document and submitted separately at a later date following appropriate characterization.

Response: Agree.

Action: Text pertaining to specific remediation activities assumed to be performed in Subarea 3, detailed in Section 3 (Remedial Action Approach), will be removed from Section 3 of the document and resubmitted as an addendum to this Integrated Remedial Design Package (IRDP) once predesign data has been analyzed and incorporated. In addition, Figure 1-2 will be upgraded and enlarged to a full size drawing to clarify the limits of the Subareas and to provide a better map of the A2PII subareas.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: General Comment Pg. #: _____

Line #: _____

Code: C

Original Comment #: 4

Comment: Adding to the confusion of the document is the use of specifications from multiple dates and projects. Ohio EPA understands the benefits of one sitewide set of specifications and would welcome such an approach, however the approach used in this document is unacceptable. The submittal received by Ohio EPA included four separate sets of specifications packages from two separate projects and four different dates (Doc 20300-TS-0001:July 2002; Doc 20800-TS-0002:April 2002; Tech Specs for 3A/4A:November 2001; Partial OSDF Phase IV Specs:August 2001). A number of which included the same spec with contradictory text and requirements that are not appropriate for this action. Until such time as an appropriate sitewide specifications package can be developed, this document must incorporate specifications specific to this project. As submitted, the specification packages made the document unreviewable.

Response: The inclusion of the multiple specification packages was due to the schedule of construction for each of the subareas and the ongoing effort to create sitewide soil specifications. The Technical Specifications for Soil and Disposal Facility Project (SDFP) Excavation for Remediation (20300-TS-0001, Revision 1), will govern future construction activities not completed. The excavation specification and the latest revision of the On-Site Disposal Facility (OSDF) specification are intended to supplement each other in order to eliminate redundancy and inconsistency in requirements for the combined SDFP. As a result, OSDF specifications have been revised as necessary to include requirements for excavation projects (i.e., surveying requirements). Note that there will be many requirements in these specifications that do not apply to A2PII due to the reduced scope as compared to Area 3B/4B/5/MDC and OSDF scopes of work. Design drawings for A2PII, as well as future excavation projects, will communicate project-specific application of technical specification requirements.

Action: The latest revision of applicable OSDF Technical Specifications (20100-TS-0002) and Technical Specifications for SDFP Excavation for Remediation (20300-TS-0001, Revision 1), will be the only two documents referenced and included with the revised submittal of this document.

Commenting Organization: Ohio EPA
 Section #: General Comment Pg. #:
 Original Comment #: 5

Line #:

Commentator: OFFO
 Code: C

Comment: Within A2PII a significant amount of debris is scattered around such as HDPE pipe, rebar, fitting, etc. The document does not address any of these materials. These materials need to be removed and properly disposed of as part of the Implementation Plan. Please include details on removal of all such debris and the prevention of additional debris placement in the area.

Response: Agree. It was incorrectly assumed that the majority of the debris was to be removed and reused by other projects. The rebar, HDPE pipe, and fittings were removed during excavation of the Former Laydown Area, formerly referred to as the "Parking Lot" and placed across the road. The pile of rebar and HDPE pipe will be relocated to the newly created Silos Laydown Area located south of the Advanced Wastewater Treatment Facility.

Action: Due to excavation of the Former Laydown Area being performed without a formal design, descriptions of activities performed will be added to the document and included in Subarea 1 discussions. In addition, piles of debris/soil/etc located south and east of Subarea 3, Trailer Complex, will be addressed in the addendum to this IRDP and future predesign PSPs. For future prevention of additional debris placement, see response and action to Comment No. 18.

Commenting Organization: Ohio EPA
 Section #: 1.1 Pg. #: 1-2
 Original Comment #: 6

Line #: 16-19

Commentator: OFFO
 Code: C

Comment: Ohio EPA is unfamiliar with the Stream Corridor Implementation Plan. What is the date for submittal of this document and in what document is the schedule provided?

Response: An IRDP for Streams Corridors will be submitted to the agencies for review in early 2004. The schedule has not been included in any document.

Action: None.

Commenting Organization: Ohio EPA
 Section #: 1.1 Pg. #: 1-2
 Original Comment #: 7

Line #: 21-24

Commentator: OFFO
 Code: C

Comment: There is some confusion regarding MTL-HRD-011. This section says it is not addressed while latter sections state it is a part of Subarea 3. Please clarify how this pile is being address and if the certification report addressed the soil below the pile. Additionally, how does DOE intend to manage the pile? Will it remain a pile or be blended into the area following certification?

Response: Soil Pile MTL-HRD-011 and its footprint were certified in November 1999 with the Certification Report for Area 2, Phase III Part One. There are no plans at this time to remove the pile, although it may be used for restoration purposes at a later date.

Action: Sections 1.1 and 2.1.1 will be revised to reflect that the pile and footprint of the pile were certified in 1999.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 1.2

Pg. #: 1-3

Line #: 16-24

Code: C

Original Comment #: 8

Comment: a) Why is the footprint for MTL-HRD-12 delayed into Subarea 3?

b) Does this area include the piles located just upgradient of the Storm Sewer Outfall Ditch (SSOD) and east of the former salt storage shed?

c) Does this area include the area immediately adjacent to the former Active Flyash Pile (AFP)? In particular the bank area where contamination was found during Area 2, Phase I (A2PI) site prep? And the ditch that runs between the trailers and AFP?

Response: a) The footprint of HRD-012 was included in Subarea 3 due to the lack of characterization data for the soils beneath the former stockpile.

b) This area includes the footprints of the former piles located just upgradient of the SSOD and east of the former salt storage shed. These piles have been consolidated into Stockpile 8.

c) No, this area will be covered in the Stream Corridors Area.

Action: a) None.

b) None.

c) None.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 1.2

Pg. #: 1-3

Line #: 29-30

Code: C

Original Comment #: 9

Comment: This sentence needs to be reworded to make clear that the Non-Impacted Material Stockpile 2 is only a footprint and **not** an existing stockpile.

Response: Agree. The sentence will be reworded to make clear that the Non-Impacted Material Stockpile 2 is only the footprint of what was intended to be a stockpile at one time. This stockpile was never created.

Action: The sentence will be rewritten, as follows:

“The remaining area includes the area previously reserved for Non-Impacted Stockpile 2 that was never used to stockpile material.”

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 1.4.1

Pg. #: 1-5

Line #: 13-21

Code: C

Original Comment #: 10

Comment: a) As stated in a previous comment, Ohio EPA believes that the predesign investigations must be completed before submittal of the IRDP. What investigations are ongoing as referenced here?

b) This section claims that Subarea 3 will be completed at a later date. This is not implied in the Introduction.

- c) This section says that there is "limited existing predesign investigation data" for Subarea 4. Is there a basis for this statement? If this is the case, shouldn't additional data be collected? The finding of disposal activities in the Parking Lot area suggests that relying upon "historical knowledge" is not sufficient and that additional characterization is warranted.

- Response:
- a) The only ongoing predesign investigation in A2PII is real-time scanning under the PSP for Predesign Sampling in the A2PII - Parts Two and Three. Additional predesign investigations for Subarea 3 will be addressed in a future PSP.
- b) Section 1.2 only defines the various A2PII Subareas. See Comment No. 3 for additional response.
- c) The basis of the statement "limited existing predesign investigation data" for Subarea 4 is that a number of borings were taken in this area to investigate possible fill areas. Also there were a few transects from the Grumman Exploration (magnetometer and GPR) that were located in the areas where there were any indication of suspect fill.

However, real-time scanning is not complete and is the only remaining characterization activity in Subarea 4. At the time of the first issuance of this plan only the area east of the haul road had not been covered. Now much more of the area has been covered and real-time scanning of A2PII is 75 percent complete. Real-time scanning of Subarea 4 will be complete prior to re-issuance of this IRDP.

- Action:
- a) The beginning of Section 1.4.1 will be rewritten as follows:

"A2PII predesign investigation activities began in September 1999 with the PSP for Predesign Sampling in the A2PII - Parts Two and Three (20450-PSP-0001), which includes both real-time scanning and physical sampling, where real-time scanning is the only ongoing activity. The Geophysical Survey Technical Report (20400-RP-0003) included magnetometer surveys and was completed in June 2000. Sampling activities have been completed for Subarea 1..."

- b) See action for Comment No. 3.
- c) Updated/current real-time figures will be provided.

Commenting Organization: Ohio EPA
 Section #: 1.4.2 Pg. #: 1-5 Line #: 31-33 Commentator: OFFO
 Original Comment #: 11 Code: C

Comment: A design drawing for the work proposed in Subarea 2 is essential. Design drawings are the most relied upon documentation during field work. Development of an appropriate design drawing with detailed notes will ensure that everyone is in agreement as to what actions are necessary in the area. Revise the document to include a detailed drawing for this remediation.

Response: Agree.

Action: A design drawing will be developed for Subarea 2, Radium Hot Spot.

Commenting Organization: Ohio EPA Commentator: OFFO
Section #: 1.4.2 Pg. #: 1-6 Line #: 4-9 Code: C

Original Comment #: 12

Comment: As stated in a previous comment, the submittal of four separate technical specifications package results in a document that is too confusing to interpret and would result in poor field implementation. Revision of the document to include project specific specifications is necessary.

Response: See response to Comment No. 4.

Action: See action to Comment No. 4.

Commenting Organization: Ohio EPA Commentator: OFFO
Section #: 1.4.2 Pg. #: 1-6 Line #: 15-16 Code: C

Original Comment #: 13

Comment: Considering recent activities, which have occurred in A2PII, this Implementation Plan needs to incorporate them and the corresponding data.

Response: Agree.

Action: Section 2 will be revised to incorporate the recent activities in the Parking Lot and all corresponding data.

Commenting Organization: Ohio EPA Commentator: OFFO
Section #: 1.4.6 Pg. #: 1-7 Line #: 15-16 Code: C

Original Comment #: 14

Comment: The document should include detail on post-remediation grading and topography as well as interim restoration activities. Subarea 1 has gone nearly a year without any final grading or seeding. It is unacceptable to leave these areas unstabilized until such time as final restoration plans are developed. At a minimum, interim restoration grading and seeding details must be included.

Response: In general, the A2PII subareas will be stabilized and seeded after remediation is complete. The goal of the planned grading and seeding activities will be to ensure that slopes are stable and drainage patterns are appropriate for the subarea. At a minimum, excavations deeper than 3 feet, if not during remediation, then during final grading, will be graded so that a buffer of at least 5:1 slopes are provided around the perimeter of the excavation for personnel safety. This may include borrowing from the surrounding area and backfilling following certification sampling. Seeding will be carried out per the applicable seeding specification. Restoration plans for the subareas have not been developed at this time; therefore, stabilization of the subareas to minimize erosion will be the primary goal after remediation. Also, with regard to Subarea 1, the potential relocation of the Pilot Plant Drainage Ditch may require additional grading and disturbance that could encroach into the area. Final restoration plans will be developed once a decision on the remediation approach for the Pilot Plant Drainage Ditch has been developed.

Action: The plan for interim grading and stabilization of the subareas after remediation will be included in the revised document or within the addendum to this IRDP. The restoration plans for final grading and seeding of the subareas will be provided in the appropriate Natural Resource Restoration Design Plan.

Commenting Organization: Ohio EPA
 Section #: 1.5.3.1 Pg. #: 1-8 Line #: 28-32 Commentator: DSW
 Code: C
 Original Comment #: 15
 Comment: Update to reflect recent capture of Indiana Bat on site and continued monitoring (also update Table A-2, Page A-2).

Response: Agree.

Action: The plan will be revised to reflect the 1999 capture of one Indiana Bat.

Commenting Organization: Ohio EPA
 Section #: 1.5.3.2 Pg. #: 1-9 Line #: Commentator: OFFO
 Code: C
 Original Comment #: 16
 Comment: The appropriate acreage is 11.5 for required mitigation due to the additional destruction caused in the Trap Range. This needs to be revised in all submittals, somehow it keeps getting repeated.

Response: The amount of impacted wetlands on the Fernald Site is currently at 11.5 acres. The amount of acreage required to compensate for these impacts is 17.25 acres.

Action: Proper mitigation acreages will be included in the revised document and other future submittals as stated above.

Commenting Organization: Ohio EPA
 Section #: 1.6 Pg. #: 1-11 Line #: 36-38 Commentator: OFFO
 Code: C
 Original Comment #: 17
 Comment: Not sure what a "primary COC for excavation" is, but uranium is certainly a primary COC for all areas at Fernald as defined in the Sitewide Excavation Plan (SEP).

Response: Agree.

Action: The sentence "Uranium in not a primary COC for excavation in A2PII" will be deleted.

Commenting Organization: Ohio EPA
 Section #: 1.6 Pg. #: 1-12 Line #: 21-27 Commentator: OFFO
 Code: C
 Original Comment #: 18
 Comment: Obviously based upon the recent events in the Parking Lot area, additional effort needs to be placed on ensuring unwanted activities do not occur in areas following characterization/certification.

Response: Areas that have been certified or are in the process of being certified are inspected at least bi-weekly to ensure that unwanted activities are not being carried out. Areas with ongoing projects are inspected more frequently. Briefings are also held with project personnel as needed to ensure that the procedures to protect Certified Areas and areas undergoing characterization are clearly understood. All inspections and corrective actions are documented on inspection forms.

Action: Continue ongoing inspections, briefings and corrective actions in Certified Areas and areas undergoing characterization.

Commenting Organization: Ohio EPA Commentator: OFFO
 Section #: Figure 1-1 Pg. #: Line #: Code: C
 Original Comment #: 19
 Comment: This map needs to be all inclusive of the areas in A2PII, i.e., A2PII Part Three.

Response: Agree.

Action: Figure 1-1 will be revised as noted above.

Commenting Organization: Ohio EPA Commentator: OFFO
 Section #: Figure 1-2 Pg. #: Line #: Code: C
 Original Comment #: 20
 Comment: A large area lies outside of the Subarea 3 Trailer Complex Area, to its east and west of the SSOD, north of the AFP. Piles of debris/soil/etc. are located in this area but are not discussed in the IRDP. Additionally there is flyash and some uranium contamination in the area adjacent to the AFP that are unaddressed. Revise the document to address these areas.

Response: See response to Comment Nos. 5 and 8.

Action: See action for Comment Nos. 5 and 8.

Commenting Organization: Ohio EPA Commentator: OFFO
 Section #: 2.1.1 Pg. #: 2-1 Line #: Code: C
 Original Comment #: 21
 Comment: There is confusion between Figure 1-2 and 2-1 regarding Subarea 3. As discussed in previous comments the scope of Subarea 3 needs clarification.

Response: Agree. Also see action to Comment No. 19

Action: Figures 1-2, 2-1, and 2-2 will be revised to coincide.

Commenting Organization: Ohio EPA Commentator: OFFO
 Section #: 2.1.4 Pg. #: Line #: Code: C
 Original Comment #: 22
 Comment: Due to recent activities in A2PII, this sentence may need to be corrected.

Response: Agree. As is written, this sentence discounts the potential of finding any materials that exceed the OSDF waste acceptance criteria (WAC). The recent activities in A2PII did identify a pipe that was not permitted to be placed in the OSDF.

Action: This sentence will be revised to read as follows:

“This comparison confirmed that there are no known areas within the A2PII boundary that exceed the OSDF WAC, however through excavation control the possibility of finding above-WAC material still exists.”

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 2.2.3.2.2

Pg. #: 2-8

Line #:

Code: C

Original Comment #: 23

Comment: Based upon Ohio EPA's observations in this area there appears to be concrete and other material disposed here. A survey by GPS and magnetometer seems warranted to help direct the excavation and to ensure material is not left behind.

Response: There was a GPR transect in close proximity to the area to search for possible fill. No fill was identified. However, all areas undergo a post excavation walk down to search for any obvious signs of debris that was not removed during excavation. Also, see response to Comment No. 2.

Action: Document will be updated to discuss all GPR activities and the respective findings.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 2.2.3.3

Pg. #: 2-8

Line #: 15-22

Code: C

Original Comment #: 24

Comment: a) This section states that additional samples will be collected. As part of a predesign investigation, real-time is usually included as well as physical samples. The sampling should have been done prior to this IRDP via a separate PSP. In addition, the data should be included in this IRDP document, if Subarea 3 is suppose to be part of A2PII.

b) It is not acceptable to Ohio EPA to variance the sampling for Subarea 3 onto the existing A2PII PSPs. Especially when Subarea 3 was not included in the existing predesign PSPs in the first place (refer to responses to comments on the PSP for Predesign Sampling in the A2PII - Parts Two and Three).

Response: a) Agree.

b) Agree.

Action: a) See Action to Comment No. 3.

b) An additional PSP for predesign of these areas will be submitted and samples will be taken throughout these areas to further define the extent of excavation necessary to remove the infrastructure as well as impacted soil within the area. This will be performed prior to the finalization of the designs for infrastructure removal. All data will be incorporated into an addendum to this IRDP, which will be submitted at a later date.

Section 2.2.3.3 will be revised to read:

"The Infrastructure includes the Trailer complex, the Wash Facility, a portion of the Impacted Material Haul Road (IMHR) and nearby footprint of a former debris pile (MTL-HRD-012), and the Subcontractor Area. An additional PSP for predesign of these areas will be submitted and samples will be taken throughout these areas to further define the extent of excavation necessary to remove the infrastructure as well as impacted soil within the area. This will be performed prior to the finalization of the designs for infrastructure removal. All data will be incorporated into an addendum to this IRDP, which will be submitted at a later date."

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 2.2.3.4.1

Pg. #: 2-9

Line #: 14-18

Code: C

Original Comment #: 25

Comment: Boring 11371 should have been bounded during the predesign investigation. A PSP is the process to be used to document this information or a variance of the PSP when it is determined a sampling point needs further confirmation. It is unclear as to why the PSP states that the boring is bounded, when in actuality this has not been done. Please explain.

Response: Boring 11371 (sample 200058) was specifically addressed in Section 1.2 of the approved PSP for Predesign Sampling in the A2PI Non-Waste Units and A2PII - Part One which reads: "Samples 121033 and 200058 have beryllium and arsenic results, respectively, slightly above-final remediation level (FRL). The beryllium result for sample 121033 was 1.7 parts per million (ppm), while the FRL for beryllium is 1.5 ppm. The arsenic result for sample 200058 was 12.3 ppm, while the FRL for arsenic is 12.0 ppm. Since the results are very close to the FRL limits and this area will undergo extensive sampling for certification, these sample points will not be bounded in this PSP. However, additional sample points have been placed in these areas to help determine the extent of impacted material." The PSP does not claim bounding and it states that the boring showed concentrations only slightly above the FRL. This was attributed to an isolated anomaly and not indicative of widespread contamination, which would be proven through the certification activities. Also, this elevated arsenic result is at the same depth interval that was proven through the Supplemental Background Study to have natural arsenic above the on-site FRL.

Action: None.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 2.2.3.4.1

Pg. #: 2-9

Line #: 25-30

Code: C

Original Comment #: 26

Comment: Due to the proximity to the South Field Disposal Area and the prior flyash removal nearby, Ohio EPA believes it is warranted to conduct further evaluation and bounding of this contamination.

Response: This comment refers to boring SS-36 (sample 121033), which was specifically addressed in Section 1.2 of the approved PSP for Predesign Sampling in the A2PI Non-Waste Units and A2PII - Part One. See response to Comment No. 25.

Action: None.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 2.2.3.4.1

Pg. #: 2-10

Line #: 1-12

Code: C

Original Comment #: 27

Comment: There appears to be a significant difference between the two sets of data. One showing above FRL Ra-226 and the other showing below FRL. Why would HPGe samples show such variation? The text should include an addition discussion and basis for the differences in the findings.

Response: Gamma-photon spectra collected with the HPGe instruments estimate Ra-226 activity based on the activities of the Rn-222 daughters Pb-214 and Bi-214. Rn-222 is a heavy gas and its distribution in near-surface soil and the atmosphere above the soil is controlled by environmental factors. The diurnal variation in Rn-222 activity is monitored with an independent HPGe instrument (referred to as a radon monitor) whenever HPGe

measurements for precertification are made. The radon monitor data are used to correct the Ra-226 measurements for the variable effects of radon.

The two data sets in question were collected years apart, and it is important to note that only the Ra-226 data (uncorrected and corrected) are in poor agreement. Results for all other isotopes (e.g., K-40, Cs-137, U-238 and Th-232) at 100-cm and 31-cm agree within 20 percent, indicating that the instruments were performing properly and the measurement site has not been disturbed. The 100-cm data were collected in November and December of 1999 and February and March of 2000, while all of the 31-cm shots were collected in June of 2002. It has been demonstrated that Ra-226 data collected at the same location and on the same day from heights of 100-cm and 31-cm agree within approximately 10 percent (see attached Table 3-1 from "Influence of Radon Emanation on the *In Situ* Gamma Spectrometric Determination of the Concentration of Ra-226 in Soil at Fernald" (20310-RP-0009). This suggests that the discrepancy between the two data sets in question may be due to the significantly different environmental conditions prevailing at the times the two data sets were collected.

Given the potential difficulty with reproducing Ra-226 measurements from season to season under widely differing environmental conditions, it is suggested that if no cause for a discrepancy greater than 35 percent can be identified, the greatest Ra-226 value be used. This conservative approach makes use of the currently approved acceptance criterion for duplicate measurements when the two measurements are not taken consecutively.

Action: The information stated in the response will be incorporated into Section 2.2.3.4.1 to provide clarification.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 2.2.3.4.1

Pg. #: 2-10

Line #: 14-19

Code: C

Original Comment #: 28

Comment: a) How was the 3-foot scrape confirmed in capturing the extent of above-FRL soil contamination in A2PI north of the east/west portion of the IMHR? The text states that "no further action is necessary" but doesn't provide any clarification. Please explain.

b) Is the reference to A1PI here a typo?

Response: a) Both borings were advanced to a depth of 3.5-foot with samples taken from the 0 to 0.5-foot, 1 to 1.5-foot, 2 to 2.5-foot, and 3 to 3.5-foot intervals. All of the results for radium-226 and total uranium were below the FRL. One additional boring SF-HR3, which was located south of the other borings and in A2PI, was also sampled in the same manner. Results from this boring indicated a result of 1.7 pCi/g at the 0 to 0.5-foot interval and was below the FRL at all other intervals taken. Due to the results of boring SF-HR3 and the fact that it was in A2PI, which was being excavated, all of these boring locations were scraped 3 feet. Real-time scanning was performed following this scrape to confirm that all of the above-FRL material had been removed. This was done as part of the precertification activities in A2PI since this area was scraped during the A2PI Haul Road removal.

b) Yes.

Action: a) The information stated in the response will be incorporated in Section 2.2.3.4.1 to provide clarification.

b) Both A1PI references in this section will be corrected to A2PII.

Commenting Organization: Ohio EPA
 Section #: 2.2.3.4.1 Pg. #: 2-10 Line #: 21-24 Commentator: OFFO
 Code: C
 Original Comment #: 29

Comment: If the area east of the IMHR has not been scanned in a predesign investigation and DOE claims that "process and historical knowledge indicates" that the area has not been impacted this is unacceptable to Ohio EPA. It seems prudent to at least conduct a real time survey in this area due to the obvious issues with process knowledge in these areas.

Response: Agree.

Action: The sentence will be reworded to make clear that real-time surveying is being conducted in this area and the figures will be updated to reflect this.

Commenting Organization: Ohio EPA
 Section #: 2.3 Pg. #: 2-10 Line #: 27 Commentator: OFFO
 Code: C
 Original Comment #: 30

Comment: Section 2.1.1 includes no discussion of COCs as referenced in this section. No discussion of the COCs could be found other than in Section 2.3. Please clarify.

Response: Agree. This was a typographical error.

Action: Section 2.3 will be corrected to read Section 2.1.3. (Also the typographical error in Section 2.1.3 will be corrected to reference Section 2.3 instead of 2.4.)

There were no comments listed as Nos. 31 and 32.

Commenting Organization: Ohio EPA
 Section #: 2.3 Pg. #: 2-11 Line #: Commentator: OFFO
 Code: C
 Original Comment #: 33

Comment: These bullets do not appear to determine primary COCs consistent with the SEP, which lays out primary and secondary COCs for remediation areas. Reductions to that list require specific justification and discussion.

Response: The primary constituents of concern (COCs) are identical to those listed in the SEP and are all being retained. The secondary COC list has been reduced based on the bullets listed in Section 2.3. Additional justification will be provided for the reduction of the secondary area-specific constituents of concern (ASCOC) list.

Action: Section 2.3 will be revised to include justification for the reduction of the secondary ASCOCs.

Commenting Organization: Ohio EPA
 Section #: Table 2-6 Pg. #: 2-20 Line #: Commentator: OFFO
 Code: C
 Original Comment #: 34

Comment: The document does not provide sufficient justification for the reduction in the list of ASCOCs. Disposal areas such as Subarea 2 and the Parking Lot area suggest that no COC's should be reduced from the list as unknown disposal operations occurred in these areas.

Response: Agree. See response to Comment No. 33.

Action: See response to Comment No. 33.

Commenting Organization: Ohio EPA
 Section #: Figure 2-13 Pg. #: Line #: Commentator: OFFO
 Original Comment #: 35 Code: C
 Comment: The copy of this map is illegible.

Response: Agree.

Action: A revised figure will be added.

Commenting Organization: Ohio EPA
 Section #: Pg. #: Line #: Commentator: OFFO
 Original Comment #: 36 Code: C
 Comment: It is unclear why the footprint of MTL-HRD-012 is included within Area 3 rather than completing it in a more timely manner under Area 4. Please clarify.

Response: See response to Comment No. 8a.

Action: MTL-HRD-012 will be included within the addendum to this IRDP.

Commenting Organization: Ohio EPA
 Section #: 3.0 Pg. #: 3-2 Line #: 1-38 Commentator: OFFO
 Original Comment #: 37 Code: C
 Comment: Please include a set of full size drawings with the revised version of this document.

Response: Will comply.

Action: One set of full size drawings will be included with the revised IRDP to Ohio EPA.

Commenting Organization: Ohio EPA
 Section #: 3.0 Pg. #: 3-2 Line #: 14-19 Commentator: OFFO
 Original Comment #: 38 Code: C
 Comment: A construction drawing(s) is needed to ensure proper implementation of this removal.

Response: Agree.

Action: A design drawing will be developed for Subarea 2, Radium Hot Spot.

Commenting Organization: Ohio EPA
 Section #: 3.0 Pg. #: 3-2 Line #: 28-33 Commentator: OFFO
 Original Comment #: 39 Code: C
 Comment: As stated previously the Tech Specs submitted with this document are very confusing and need to be specific to this project.

Response: See response to Comment No. 4.

Action: See action to Comment No. 4.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 3-1.1.3

Pg. #: 3-3

Line #: 30

Code: C

Original Comment #: 40

Comment: This section is first to mention the idea of "associated utilities" relating to Basin 5 in Subarea 3. If the utilities are to be a part of this subarea, it needs to be mentioned in the "Remediation Area Background and Description" or another "appropriate-beginning" section of this document.

Response: Agree. The infrastructure specific utilities associated with Subarea 3 are defined in Section 3.

Action: The second sentence in Section 1.2.3 will be reworded, as follows:

"In addition, the infrastructure includes the water line that services both the Trailer Complex and the Equipment Wash Facility, a portion of the transfer line, and Basin 5 and associated utilities that are to be removed under the addendum to this Implementation Plan."

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 3.1.3

Pg. #: 3-5

Line #: 1-4

Code: E

Original Comment #: 41

Comment: a) This section should mention that surface water and runoff controls for A2P11 are also explained in Section 4.0 of this document.

b) In Lines 15 and 16, there seems to be a typo. Should the Subarea that's referenced be "1" instead of "2?"

Response: a) Agree.

b) Yes.

Action: a) A sentence will be added to cross reference to Section 4.3 for additional surface water discussion.

b) The reference will be corrected.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 3.1.3

Pg. #: 3-5

Line #:

Code: C

Original Comment #: 42

Comment: This section should include a discussion on slope stabilization and revegetation following excavation.

Response: Agree. See response to Comment No. 14.

Action: The plan for grading and stabilization of the area after remediation will be included in the revised document.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 3.1.3.1

Pg. #: 3-5

Line #:

Code: C

Original Comment #: 43

Comment: Include requirements for revegetation.

Response: Agree. See response to Comment No. 14.

Action: The plan for grading and seeding of the area after remediation will be included in the revised document.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 3.1.3.2

Pg. #: 3-5

Line #:

Code: C

Original Comment #: 44

Comment: a) Simple regrading will not be sufficient in this steep slope. The plan should include specific seeding and matting requirements for immediate installation following completion of the excavation.

b) During prior field discussions, the concept of digging contamination out at the bottom of the slope and using the excavation as part of the storm water controls was mentioned. A design drawing of the excavation depths and boundaries will help assess whether such a structure is appropriate.

Response: a) Agree.

b) Silt fence will be installed at the bottom of the slope between the excavation and Paddys Run. The excavation will proceed from the top of the slope to the bottom of the slope to prevent recontamination of previously remediated areas.

Action: a) Permanent seed mix for dry areas will be used to stabilize the excavated slope. Matting will not be used due to installation difficulties associated with personnel access on the extremely steep slope and the number of trees and saplings remaining on the slope after excavation.

b) A design drawing will be developed for Subarea 2, Radium Hot Spot.

Commenting Organization: Ohio EPA

Commentator: OFFO

Section #: 3.1.3.3

Pg. #: 3-6

Line #: 5-6

Code: C

Original Comment #: 45

Comment: Sentence 5/6 may or may not be correct considering what's been uncovered in A2P11.

Response: Agree.

Action: Subarea 3 will be removed from Section 3 of the document and resubmitted as an addendum once predesign data has been analyzed and incorporated.

Commenting Organization: Ohio EPA

Commentator: DSW

Section #: 3.1.3.3

Pg. #: 3-6

Line #: 10-11

Code: C

Original Comment #: 46

Comment: Please include a sentence stating that the hose will be routed around the certified area between Subarea 3 and the SWRB.

Response: Agree.

Action: The sentence will be incorporated in the addendum to this IRDP once predesign data has been analyzed and incorporated.

Commenting Organization: Ohio EPA
 Section #: 3.3.3.2 Pg. #: 3-13 Line #: Commentator: OFFO
 Original Comment #: 47 Code: C

Comment: The excavation approach described in this section can minimize the disturbance to trees and vegetation, as long as the excavator can utilize the "arm" of the equipment without tearing down the vegetation. In addition, the bucket of the excavator should have a flat blade, which will help minimize disturbance. If the excavator can stay stationary, this will also keep the ground underneath the equipment in tact. However, if the excavator has to move in and out of the area, this will cause rutting and disturb the area underneath the equipment as well.

Response: Agree. All attempts will be made to minimize disturbance during remediation.

Action: A note will be added to the design drawing to include the requirement for a flat blade on the bucket of the excavator. The Implementation Plan text will also be revised to include this requirement.

Commenting Organization: Ohio EPA
 Section #: 3.1.3.3 Pg. #: 3-6 Line #: 25-31 Commentator: DSW
 Original Comment #: 48 Code: C

Comment: Why is part of the drainage going to the SWRB and part going directly to the SSOD? It would appear as though all should be going to the SWRB for treatment, or all should be directed away from the SWRB if treatment is not required. Water not treated in the SWRB and directed to the SSOD should not contain excessive suspended solids. A sediment trap should be constructed to treat water from the excavated area prior to discharge to the SSOD if silt fence will not be sufficient to treat runoff.

Response: The paragraph was written based on assumption of no contamination and to control runoff as it is currently being treated.

Action: Subarea 3 will be removed from Section 3 of the document and resubmitted as an addendum once predesign data has been analyzed and incorporated.

Commenting Organization: Ohio EPA
 Section #: 3,1,5,2 Pg. #: 3-7 Line #: 16-17 Commentator: DSW
 Original Comment #: 49 Code: C

Comment: What, if any, soil disturbance, and sediment and erosion controls will be installed for laydown areas?

Response: There should be no soil disturbance if a suitable area exists. However, if not, sediment and erosion controls will be installed in accordance with ODNR Rainwater and Land Development, latest edition, as applicable.

Action: None at this time.

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 Commenting Organization: Ohio EPA
 Section #: 3.1.6 Pg. #: 3-6 Line #: Commentator: OFFO
 Code: C
 Original Comment #: 50
 Comment: The section should include reference to the use of real-time scanning during excavations as well.

Response: Agree.

Action: The following sentence will be added to the section:

“Additionally, real-time scans will be performed in uranium, thorium, and radium contaminated areas during excavation activities after each 3-ft +/- 1-ft lift.”

Commenting Organization: Ohio EPA
 Section #: 3.2 Pg. #: 3-6 Line #: 5-6 Commentator: OFFO
 Code: C
 Original Comment #: 51
 Comment: Under which subarea is the gravel road between the Silos Area and the Haul Road being removed? This area will need to be addressed as well.

Response: This gravel road will be included within Subarea 3. Although, as previously stated, Subarea 3 will be removed from Section 3 of the document and resubmitted as an addendum once predesign data has been analyzed and incorporated.

Action: Subarea 3 will be removed from Section 3 of the document and resubmitted as an addendum once predesign data has been analyzed and incorporated.

Commenting Organization: Ohio EPA
 Section #: 3.3.3 Pg. #: 3-12 Line #: 20-32 Commentator: DSW
 Code: C
 Original Comment #: 52
 Comment: How will these criteria apply to the naturally very steep “Slope of Dread” in the Radium Hot Spot area?

Response: The criteria do not apply. The criteria are for slopes created during excavation (i.e., digging a hole on a flat plane). In the case of the Radium Hot Spot, the remediation is anticipated to be limited to a “skim” or “scrape” parallel to the existing slope with the exception of a few discrete deeper locations. However, due to removal of vegetation, the slope will undoubtedly require stabilization following remediation.

Action: None.

Commenting Organization: Ohio EPA
 Section #: 3.3.3.2 Pg. #: 3-14 Line #: 18-21 Commentator: OFFO
 Code: C
 Original Comment #: 53
 Comment: Though Ohio EPA concurs with intent to excavate under dry conditions, it is unclear if the proposal is just to dig the bottom under dry conditions or the entirety of the project? More clarification on schedule for this project is needed.

Response: The revised plan is for ingress/egress to Subarea 2 will only be from the IMHR, not through Paddys Run, therefore, the excavation no longer requires dry conditions. The DOE intends to remediate Subarea 2, Radium Hot Spot upon obtaining approval to proceed from the regulatory agencies.

Action: Clarification will be provided.

Commenting Organization: Ohio EPA
 Section #: 3.3.4 Pg. #: 3-15 Line #: 5-10 Commentator: OFFO
 Code: C
 Original Comment #: 54

Comment: Again the approach to Subarea 3 is confusing. It is unclear how DOE intends to certify the surface soils prior to utility removal, particularly in light of the delay before initiating any remediation in the area.

Response: Agree. Subarea 3 has two distinct remedial approaches. The first is the typical excavation due to contamination/surface impacted material and the second is utility removal in non-impacted areas. The second approach, utility removal, is detailed in Section 3.3.4 and is directed only towards areas where no contamination or surface impacted material is present.

For areas where remediation is necessary due to contamination or surface impacted material, the utility lines will be removed during the active remediation. This is the case for the trailer area north of the former AFP and for the area occupied by the electrical subcontractor. Certification will only take place after all impacted materials have been removed, including the utilities in these areas.

Action: Section 3.3.4 will be revised to provide additional clarification as described above.

Commenting Organization: Ohio EPA
 Section #: 3.6 Pg. #: 3-18 Line #: Commentator: DSW/OFFO
 Code: C
 Original Comment #: 55

Comment: a) We do not encourage "grade to drain" in all circumstances. In many, if not most, instances the ponding of water and a relatively rough grade with irregular topography is desirable on site. This more accurately reflects the natural topography of the site, allows microhabitat for many indigenous flora and fauna, and in particular allows breeding areas for declining amphibian populations.

b) This section should include requirements for revegetation as part of the interim restoration grading. It is not acceptable to leave these areas unvegetated until final restoration is initiated.

Response: a) As discussed in the response to Comment No. 14, grading will be carried out to ensure the area is stable and that drainage is appropriate for the area. If an excavated area can be left to pond water as a wetland or vernal pool with minimal additional grading, that approach will be taken. There may be areas that are left to drain as a result of remediation work and then later converted to wetland or vernal pool as part of final restoration. Grading conducted after remediation will be approached with a focus on minimizing future regrading requirements.

b) Revegetation will be carried out as required in the applicable seeding specification. Areas will not be left unvegetated following remediation.

Action: a) Post-remediation grading will be designed and implemented as discussed above with an emphasis on proper drainage (or retention) and stability of the area.

b) Requirements in the applicable seeding specification will be followed for revegetation.

Commenting Organization: Ohio EPA
 Section #: 4.1 Pg. #: 4-1 Line #: 31-32 Commentator: OFFO
 Original Comment #: 56 Code: C
 Comment: Ohio EPA believes there are wetlands in the area and the efforts must be made to limit impacts to them. This is particularly important in the Parking Lot area.

Response: Agree.

Action: Work activities will be planned to avoid impacts to wetlands in the area.

Commenting Organization: Ohio EPA
 Section #: 4.2.2 Pg. #: 4-4 Line #: 21-26 Commentator: OFFO
 Original Comment #: 57 Code: C
 Comment: Are the dust control methods/bullets listed in a sequential order? If so, the two methods which need to be listed at the top would include "applying a water mist" and "a cover to the load bed."

Response: The dust control methods/bullets are not presented in sequential order. Generally, the application of a water mist is the first action taken to control dust. If the dust issue is related to hauling material in trucks, the covering of a load bed would be the second action taken. The specific implementation of dust control methods will depend on the situation encountered in the field.

Action: Implement dust controls methods as outlined above. No change required to text.

Commenting Organization: Ohio EPA
 Section #: 4.2.3 Pg. #: 4-7 Line #: Commentator: OFFO
 Original Comment #: 58 Code: C
 Comment: When past soil remediation activities have warranted monitoring stations, such as radon, the stations were set-up to monitor the area. This should also apply to A2PII.

Response: The excavation activities in A2PII do not warrant the use of project specific radon monitoring. The site radon monitoring system is utilized to monitor radon levels unless there is a specific need related to the project. If a field condition is encountered that warrants the installation of project specific radon monitors, they will be installed as necessary.

Action: Project specific radon monitors will be utilized if needed during excavation.

Commenting Organization: Ohio EPA
 Section #: 4.3 Pg. #: 4-8 Line #: 27 Commentator: DSW
 Original Comment #: 59 Code: E
 Comment: "and/or situation" should read "and/or siltation."

Response: Agree.

Action: Text will be revised as noted in the comment.

Commenting Organization: Ohio EPA Commentator: DSW
 Section #: 4.3 Pg. #: 4-8 Line #: 35-36 Code: C

Original Comment #: 60

Comment: There is no Section 3.5.1 referred to here, and (apparently) no specific surface water monitoring tasks applicable to the A2PII Project. Please elaborate.

Response: The reference to Section 3.5.1 is incorrect. The appropriate reference should be to Section 3.3 for specific monitoring requirements during excavation.

Action: Text will be revised as noted above.

Commenting Organization: Ohio EPA Commentator: OFFO
 Section #: Design Package Pg. #: Line #: Code: C

Original Comment #: 61

Comment: In reviewing the Design Criteria Package (DCP), a lot of the technical specifications and language from Area 3A/4A DCP may or may not be appropriate. The language in the text and the specifications should be emended for A2PII, then applied.

Response: Agree. However, in addition to A2PII, the DCP also applies to Areas 3A, 4A, 3B, 4B, 5, and 6. The technical specifications and DCP are written to cover multiple projects in order to generate sitewide documents, with design drawings communicating project-specific application of technical specification and DCP requirements. Therefore, some language in these documents will not apply to all projects. The text will remain the same with the exception of incorporation of response to Comment No. 62.

Action: See action to Comment No. 62.

Commenting Organization: Ohio EPA Commentator: OFFO
 Section #: 5.1/DCP Pg. #: 8 Line #: First Paragraph Code: C

Original Comment #: 62

Comment: Is using a 3D model for A2PII's conceptual design applicable? In addition, is the maximum limit listed for a slope 1.5:1V with 15-foot benches every 13 vertical feet appropriate for A2PII?

Response: No. A2PII's conceptual design will be based on characterization results of physical sampling and real-time monitoring. Secondly, although the slope requirement is not likely to apply to A2PII, the criterion remains appropriate for the document.

Action: The sentence, now in Section 5.2, will be revised to read as follows:

"Design documents for Areas 3A, 3B, 4A, and 4B will be developed based on a 3-D computer model of the extent of contamination. Design documents for remaining areas will be based on characterization results of physical sampling and real-time monitoring."

Commenting Organization: Ohio EPA Commentator: DSW
 Section #: 6.1.4.10 Pg. #: 6-12 Line #: 31 Code: C

Original Comment #: 63

Comment: See earlier comment regarding Section 3.5.1.

Response: See response to Comment No. 60.

Action: Text will be revised as noted in response to Comment No. 60.

Commenting Organization: Ohio EPA Commentator: DSW
 Section #: Appendix D Drawings Pg. #: Dwg. 99X-5500-G-00734 Line #: NA Code: C
 Original Comment #: 64
 Comment: Please add a note regarding the removal of ST-6 in/10 in HDPE 6 in carrier 10 in containment line along the east side of the certified area, that the certified area is not to be disturbed during removal of the pipe.

Response: Agree.

Action: The drawing will be marked as stated. The entire drawing will be replaced upon submittal of the addendum to this IRDP.

Commenting Organization: Ohio EPA Commentator: DSW
 Section #: Appendix D Drawings Pg. #: Dwg. 99X-5500-G-00734 Line #: NA Code: C
 Original Comment #: 65
 Comment: This drawing shows the new receiving area as part of the trailer complex area to be excavated. This area is still having new concrete laid down in preparation for it being the new receiving area. What is the schedule for its excavation?

Response: The new receiving building is scheduled as follows:

- Turnover from D&D to SDFP is planned for March 1, 2005
- Excavation of the slab and associated soil is planned for August 2005.

Action: None.

Commenting Organization: Ohio EPA Commentator: DSW
 Section #: Appendix D Drawings Pg. #: Dwg. 99X-5500-G-00738 Line #: NA Code: C
 Original Comment #: 66
 Comment: The "Erosion Control Blanket Lined Ditch Detail" specifies "100% coconut fiber or jute mesh stitch bonded between heavy duty UV stabilized nets. See Specification Section 02275." We do not approve of the use of UV stabilized nets. Although Specification 02275 was not included in the package, I do not believe this is in the specification, and if it is, it needs to be changed.

Response: Agree. UV stabilized net is not included in Specification 02275.

Action: Will remove UV stabilization nets from detail. The entire drawing will be replaced upon submittal of the addendum to this IRDP.

Commenting Organization: Ohio EPA Commentator: DSW
 Section #: Drawings Pg. #: Dwg. 99X-5500-G-00738 Line #: NA Code: E
 Original Comment #: 67
 Comment: The detail for the silt fence for "Temporary Diversion Detail" refers to note 1 and there is no note 1.

Response: Agree.

Action: The entire drawing will be replaced upon submittal of the addendum to this IRDP.

Table 3-1
Data Available for the Comparison of Laboratory and
***In Situ* HPGe Measurements of Ra-226^a**

Data Collection Area ^b	Date	Time ^c	Soil Moisture ^d (%)	Two-Method Average, 31 cm (pCi/g)	HPGe, 31 cm (pCi/g)	Two-Method Average, 100 cm (pCi/g)	HPGe, 100 cm (pCi/g)
PBC-01	10-23-96	1456-1607	24.1	0.74	0.74	0.75	0.70
PBC-02	10-25-96	1506-1624	21.9	0.65	0.70	0.65	0.70
PBC-03	10-25-96	1722-1840	21.2	10.5	4.6	11.5	4.5
PBC-04	10-24-96	1322-1446	27.3	0.96	0.86	1.0	0.86
PBC-05	10-24-96	1542-1656	21.8	1.0	0.81	0.99	0.77
PBC-06	10-24-96	0924-1318	26.7	1.1	0.86	1.1	0.86
PBC-07	10-25-96	1112-1224	28.4	1.1	0.86	1.1	1.1
PBC-08	10-23-96	1030-1159	29.9	0.79	0.71	0.75	0.62
PBC-09	10-23-96	1224-1338	29.3	0.78	0.82	0.81	0.78
PBC-10	10-24-96	1715-1934	20.8	2.8	2.1	2.9	1.7
PBC-12	4-29-97	PM	22.8	-	-	5.7	2.2
PBC-13	4-29-97	PM	19.7	-	-	1.3	0.95
PBC-14	4-29-97	PM	15.1	-	-	1.1	0.77
PBC-15	5-1-97	PM	23.0	-	-	1.5	0.82
PBC-16	5-1-97	PM	12.1	-	-	15	5.3
PBC-17	5-1-97	PM	21.2	-	-	9.7	3.9

^a Source of results: Concentrations and moisture levels are from DOE (1999). Dates and times for PBC-01 through -10 are from Gamma Spectrometry Field Worksheets. Chris Sutton (Fluor Fernald) provided dates for PBC-12 through -17 (12-13-99).

All HPGe results are averages of two 15-minute measurements, except for PBC-06 (6 measurements) and PBC-12 to -15 (three measurements). Laboratory results are weighted averages for 6 to 15 locations. All concentrations are given on a wet-weight basis.

^b Locations of areas are given in Figures 3.1 and 3.2 of DOE (1999).

^c All measurements were made after noon, except for those at PBC-06, -07, and -08. For locations PBC-12 through -17, only results obtained from measurements made after noon were used.

For areas PBC-01 through -10, the 100-cm measurements generally were made first. However, for areas PBC-04 and -10, the 31-cm measurements were made first. For area PBC-08, the two 31-cm measurements were made between the two 100-cm measurements.

^d Moisture levels provided are those associated with the HPGe measurements.