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SUBMITTAL OF THE REVISED REMEDIAL ACTION WORK PLAN FOR AREA 1, PHASE SOIL REMEDIATION - (THIS DOCUMENT CONTAINS THE COMMENT RESPONSES AND THE TRANSMITTAL LETTER - ACTUAL WORK PLAN IS LOCATED IN 5-301.4)

12/09/96

DOE-0265-97
DOE-FEMP EPAS
25
RESPONSES



Department of Energy

Ohio Field Office
Fernald Area Office
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155



DEC 9 1996
DOE-0265-97

Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - 5HSF-5J
77 W. Jackson Boulevard
Chicago, Illinois 60604-3590

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

Dear Mr. Saric and Mr. Schneider:

SUBMITTAL OF THE REVISED REMEDIAL ACTION WORK PLAN FOR AREA 1, PHASE SOIL REMEDIATION

The purpose of this letter is to transmit, for your review and approval, the revised Remedial Action Work Plan (RAWP) for Area 1, Phase I. As you know, the Area 1, Phase I Work Plan addresses remediation and construction activities in the northeastern portion of the Department of Energy, Fernald Environmental Management Project (DOE-FEMP).

Numerous comments were received from the Ohio Environmental Protection Agency (OEPA) and U.S. Environmental Protection Agency (U.S. EPA) in response to the Draft Submittal of the Area 1, Phase I Work Plan dated July 17, 1986. Due to the number and complexity of the comments received from the OEPA and U.S. EPA, the DOE-FEMP submitted a Response to Comment (RTC) document on October 9, 1996, in an effort to resolve any major issues prior to the resubmittal of the Area 1, Phase I RAWP. Upon your review of the RTC document, additional questions and concerns were raised about the Area 1, Phase I certification and remediation efforts. As a result, enclosed are responses to the comments received on the RTC document. Furthermore, the enclosed responses, as well as the responses provided in the RTC document, have been incorporated into the enclosed revised work plan. The DOE-FEMP responses have also been highlighted in the text, where applicable with shading.

If you should have any questions about this submittal, please call Robert Janke at (513) 648-3124.

Sincerely,



Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:R.J. Janke

Enclosure: As Stated

cc w/enc:

S. Fauver, EM-42/CLOV
L. Griffin, EM-42/CLOV
K. Miller, DOE-EML
G. Jablonowski, USEPA-V, 5HRE-8J
R. Beaumier, TPSS/DERR, OEPA-Columbus
M. Rochotte, OEPA-Columbus
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(now renamed Fluor Daniel Fernald)
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December 4, 1996

Fernald Environmental Management Project
Letter No. C:SWP:96-0005

Mr. Johnny Reising
Remedial Action Project Manager
Department of Energy
Fernald Area Office
P. O. Box 538705
Cincinnati, Ohio 45253-8705

Dear Mr. Reising:

CONTRACT DE-AC24-92OR21972, SUBMITTAL OF THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP) REVISED REMEDIAL ACTION WORK PLAN FOR THE SOIL RESTORATION PROJECT - AREA 1, PHASE 1, REVISION E.

Enclosed is the revised Remedial Action Work Plan for the Soil Restoration Project - Area 1, Phase 1. This revised document is due to the Regulatory Agencies on December 4, 1996. The Area 1, Phase 1 Work Plan addresses remediation and construction activities to take place during fiscal year 1996 and fiscal year 1997 in the northeastern portion of the Fernald Environmental Management Project Site.

Numerous comments were received from the OEPA and USEPA in response to the Draft Submittal of the Area 1, Phase 1 Work Plan dated, July 17, 1996. The DOE-FEMP responses to these comments have been incorporated into the text. The text has been modified to reflect the OEPA responses and the USEPA responses to the DOE response package (both dated November 1, 1996, and received by DOE-FEMP on November 4, 1996). Information from subsequent discussion has also been included in the text. As a result, the text has undergone an extensive rewrite.

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Mr. Johnny Reising
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The DOE responses to the November 1, 1996 OEPA and USEPA comment responses are enclosed with this submittal. The DOE responses have also been highlighted in the text, where applicable, with shading.

If you have any questions about this submittal, please call Arlen Hunt at 513:648-3312.

Sincerely,

Michael J. Kuntz
for
Chuck Little
Executive Vice President

CCL:JW:mb
Enclosures

- c: WITH ENCLOSURES:
T. Hagen, MS65-2, Fluor Daniel Fernald (FDF)
A. Hunt, MS52-5, FDF
R. Janke, MS45, DOE-FEMP
G. Jones, MS52-5, FDF
K. Nelson, MS52-5, FDF
P. Riley, MS52-5, FDF
J. White, MS52-5, FDF
File Record Storage Copy 102.1
EDC 20701
- c: WITHOUT ENCLOSURES:
M. Davis, ANL
R. Johnson, ANL
C. Little, MS2, FDF
K. Miller, EML
K. Picel, ANL
R. Warner, MS45, DOE-FEMP
L. Parsons, MS45, DOE Contract Specialist

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**DOE RESPONSE DOCUMENT FOR THE US EPA TECHNICAL REVIEW
COMMENTS ON THE "DRAFT OPERABLE UNIT 5, AREA 1, PHASE I REMEDIAL
ACTION WORK PLAN RESPONSE TO COMMENTS DOCUMENT"**

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Note: the US EPA comments dated November 1, 1996, are restated below with the DOE responses provided. The comment responses below frequently send the reader to the Remedial Action Work Plan for the Soil Remediation Project Area 1, Phase I Rev. E. If the response is not addressed in the Work Plan, a discussion is provided below.

Comment 1

Commenting Organization: US EPA Commentor: Saric
Section #: NA Pg #: NA Line #: NA
Original General Comment #: 1

Comment:

The text states that the Area 1 Phase I Remedial Action Work Plan (RAWP) will address certification of most of the removal areas. The text further states that the prior omission of certification was based on funding issues, which is resolved. EPA notes that funding should not be cited as a reason for omitting critical elements of a work plan. As an example, if permanent structures will be built or irreversible actions are taken without certifying compliance with the cleanup goals identified in the record of decision (ROD), then these actions may not be compliant with the ROD. To the extent possible, the work plan should be developed in a manner that funding issues do not cause critical gaps in implementing components or work or that would result in potential non-compliance with the ROD.

Response:

Agreed.

Action:

All references to funding issues have been eliminated.

US EPA Comment Responses

December 4, 1996

Page 3

- 1- the need for faster real-time data compilation and evaluation
- 2- the need for the insitu radiological techniques to be able to detect radiological hot spots.

Due to the low level of contamination in Area 1, Phase I and, as a result, excavation efforts being driven by road construction and OnSite Disposal Facility (OSDF) needs, potential vulnerabilities from these initial uses of the insitu radiological characterization techniques are minimal.

C) The efforts in Area 1, Phase I have been on an aggressive schedule considering the type and number of outstanding issues that have arisen concerning certification, hot spot criteria, and the use of insitu radiological characterization techniques. Through our numerous meetings and discussions, the FEMP hopes that the major issues, at least those associated with and impacting Area 1, Phase I, have been satisfactorily resolved. As discussed in recent meetings, certain areas of the Phase I certification process will need the assistance of both the US EPA and the Ohio EPA to meet with FEMP representatives to discuss certification results in order to obtain preliminary, verbal concurrence with initiating construction activities in Area 1, Phase I.

The Sitewide Excavation Plan (SEP) is scheduled to be submitted in March 1997. The SEP will be the document to resolve any outstanding issues on a site wide basis pertaining to such issues as certification, hot spot criteria, and ALARA goal implementation approach. The Comparability Study, also to be provided in March 1997, will look to establishing the policy for using the insitu radiological characterization techniques to support certification across the site. The March submittal schedule of these documents should provide sufficient time to resolve any outstanding issues prior to the submittal of the next Integrated Remedial Action Work Plan, scheduled for November 1997.

Action:

A) An Addendum to the Area 1, Phase I Project Specific Plan (PSP) will be written detailing the specifics for the certification approach to be used for the existing North Access Road. This will be provided to the regulators.

B) Work closely with the EPAs to understand and evaluate the insitu radiological data as well as ensure close coordination and communication with the dissemination and discussion of Area 1, Phase I certification data. Submit the Comparability Study and SEP as scheduled.

C) Same as action for Part B. Work closely with the EPAs to understand and evaluate the insitu radiological data as well as ensure close coordination and communication with the dissemination and discussion of Area 1, Phase I certification data. Submit the Comparability Study and SEP as scheduled.

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Comment 3

Commenting Organization: US EPA Commentor: Saric
Section #: NA Pg #: NA Line #: NA
Specific Comment #:1 (Original Specific OEPA Comment #: 14)

Comment:

The text states that drain tiles in the northwestern portion of the site will not be excavated. US EPA concurs with the comments made by OEPA during the October 22, 1996 meeting. Based on a subsequent meeting on October 29, 1996, EPA understands that the adjacent property owner has requested that the tiles remain in place. The revised work plan should include plans to ensure that leaving the drain tile system will not result in potential offsite impacts or unacceptable risk. This should be viewed in light of the possible increased deposition of dust in this area during soil excavation.

Response:

Agreed; as discussed in Appendix G, Drain Tiles, all drainage tiles that have a reasonable possibility of impacting the OSDF will be removed from the east field. All drain tiles known or discovered during Area 1 Phase I activities will be removed except for those in the northeast drainage swale, which will not impact the OSDF due to their distance from OSDF and the area's topography.

Additionally, the neighboring property owner has expressed concern about drainage changes in the eastern side of the FEMP. The proposed plan minimizes those changes. The property owner wants the tiles in the northeast swale to remain in place, since the water coming onto his property through the tiles is beneficial to him. The tiles in question (CPT 1-6) have had their contents (sediment) sampled and the contamination concentrations are below their respective FRLs. Therefore, there is no potential for contamination of the immediate area or the neighbor's property.

Action:

Clay tiles CPT 7-11 have been removed. Tiles CPT 1-6 will remain in place.

Comment 4

Commenting Organization: US EPA Commentor: Saric
Section #: NA Pg #: NA Line #: NA
Specific Comment #:2 (Original Specific OEPA Comment #: 16)

Comment:

The text states that actions will be taken to comply with the fugitive dust emission limits/ceilings as designated in the OU2 and OU5 RODs. US EPA concurs with OEPA's concern over visible dust emissions. It seems reasonable that emissions should be aggressively monitored in accordance with as low as reasonably achievable (ALARA) objectives. If the OU2 and OU5

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ROD references are not adequately protective of human health, then it may be appropriate to consider more stringent criteria. The text should be revised to consider the issue of dust emission and monitoring.

Response:

A conference call on Oct. 29, 1996 and a meeting at Fernald on Nov. 25, 1996 between DOE-FN, OEPA and US EPA discussed the issues of BAT for fugitive dust emission abatement and fugitive dust emission monitoring. DOE-FN still contends that 13 minute particulate emission for unpaved roadways or parking areas and storage piles in a one hour time period with administrative control of 6 minutes of visible dust emissions for each 60 minute period meet the required Ohio Administrative Code. In the most recent discussions, DOE agreed to develop a sitewide policy and BAT determination in the near future for fugitive dust emissions for the agencies review.

Action:

Until a sitewide policy is developed, a 13 minute per 60 minute period for dust emission will be observed for the unpaved roadways, parking areas and the soil storage areas with an administrative level of 6 minutes so that the OAC is not exceeded. The following controls will be implemented to minimize fugitive dust emissions: covers and physical barriers, moisture adjustments, water spray, vehicle speed restrictions, crusting agents, operational controls, wind screens, temporary shutdown during high winds, seeding, and dust alerts. These issues are covered in Sections 4.1.5.3 Fugitive Dust Emissions Monitoring and 4.1.5.4 Fugitive Dust Emissions Abatement of the Area 1, Phase I RAWP.

Comment 5

Commenting Organization: US EPA Commentor: Saric
 Section #: NA Pg #: NA Line #: NA
 Specific Comment #:3 (Original Specific OEPA Comment #: 30)

Comment:

The text states that field instrumentation will be used to ensure that residual soil contamination exceeding the final remediation levels (FRLs) will not be left in place. The text states, however, that a 3-times rule may be used as a "not to exceed hot spot criteria," because the average contamination may be acceptable. US EPA concurs with OEPA that leaving hot spot areas in place with contamination at 3-times the FRL does not appear to meet the intent of the ROD. While the average contaminant values would attain FRLs, contamination would be left in place that clearly exceeds FRLs. DOE should provide further justification for leaving such hot spots in place, considering the fact that instruments may have clearly delineated an area requiring remediation. It appears that leaving such known contamination hot spots in place would not meet the remediation goals stated in the ROD.

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Response:

In previous meetings with OEPA and US EPA, there were discussions regarding how FRLs were defined and by what means FRL attainment could be demonstrated in the certification process. An agreement was reached that defined a soil FRL as an average of the soil COC concentration for any single certification unit to a specified confidence limit. By agreement, an FRL was not to be viewed as a "not to exceed level." The language in the OU5 ROD was not specific in this regard, and resolution of this issue only took place in these discussions.

Use of an average soil concentration to represent the FRL is logical when viewed from the perspective of exposure experienced by a receptor. The Undeveloped Park User Receptor is a roving model. Calculated risk is best modeled by an average concentration over a fairly large area and it is not adversely impacted by localized fluctuations. In order to prevent an unlimited allowance of FRL exceedance at any one data point, a "hot spot" criteria was discussed. A hot spot is defined for the purposes of this Remedial Action Work Plan (RAWP) as the maximum allowable limit for a COC in a specified area that can remain in residuals when the FRL (average) for a certification unit (CU) is met. It is not in the best interests of successful certification to allow a large exceedance to remain as this will drive up the average, especially given the limited number of data points comprising a CU. The 3xFRL criteria is a compromise based on DOE Order 5400.5 that limits the area and magnitude of any single data point while averting excavation remobilization for localized fluctuations that are not of concern to human health or the environment.

Action:

None

DOE RESPONSE DOCUMENT FOR THE OHIO EPA TECHNICAL REVIEW
 COMMENTS ON THE "DRAFT OPERABLE UNIT 5, AREA 1, PHASE I REMEDIAL
 ACTION WORK PLAN RESPONSE TO COMMENTS DOCUMENT"

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Note: The OEPA comments dated November 1, 1996, are restated below with the DOE responses provided. The comment responses below frequently send the reader to the Remedial Action Work Plan for the Soil Remediation Project Area 1, Phase I Rev. E. If the response is not addressed in the Work Plan, a discussion is provided below.

General Comments

Comment 1

Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: General Comment Pg #: Line #: Code: M
 Original Comment #:

Comment:

Ohio EPA does not agree with DOE's proposal to conduct construction or grading activities prior to the completion of the final certification package. The Remedial Action Work Plan (RAWP) should reflect that all areas will receive final certification prior to construction initiation. Ohio EPA will entertain an exception to this only for the North Access Road construction and removal of the existing North Access Road. For these locations DOE may submit a request for special consideration or approval to initiate construction based on certification data receipt and analysis. This comment is applicable to all responses addressing initiation of construction prior to certification.

Response:

See discussion in Section 7.6.1.1 Certification of the Existing North Access Road

Action:

An addendum to the Area 1 Phase I Project Specific Plan (PSP) will be written detailing the specifics on the certification approach to be used for the existing North Access Road. This will be provided to the regulators.

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Comment 2

Commenting Organization: Ohio EPA Commentor: OFFO
Section #: General Comment Pg #: Line #: Code: M
Original Comment #:

Comment:

Ohio EPA does not concur with DOE's proposed approach for dealing with BTVs in any area other than Area 1 Phase I. Ohio EPA believes simply collecting data and postponing a decision will lead to increased costs or limitations on land use and resource value. In addition, the fact that the site may not be remediated to a level protective to ecological receptors will need to be considered in the on-going NRDA negotiations. DOE should initiate additional studies or analysis of the BTVs and expected future land uses to determine what contaminants need to be remediated. Such an analysis should be completed and agreed to prior to submittal of the next work plan for soil remediation. This comment applies to all responses addressing attainment of BTVs.

Response:

By agreement with the Regulatory Agencies, during implementation of Area 1 Phase I, data will be collected during certification regarding the status of the Area 1, Phase I BTV constituents that failed the Ecological Risk Assessment. This approach was agreed to during this Remedial Action Work Plan because Area 1, Phase I is being used primarily as a base for construction of the relocated North Access Road and the On-Site Disposal Facility (OSDF), and the area has minimal post-remedial habitat concerns. The approach to be used to address relevant BTV constituents in future Remedial Action Work Plans will be addressed in the Sitewide Excavation Plan (SEP), which is scheduled to be sent for regulatory review in March 1997.

Briefly, this sitewide approach to addressing BTV constituents will involve making an area-specific assessment of all 17 BTVs that failed the sitewide Ecological Risk Screening process for relevance to the habitat or habitats that are planned for post-remedial land use in any specific remediation area. If one or more of the demonstrated source terms for BTV constituents are considered a threat to a proposed habitat, based on the latest information available in the literature, then remediate to the BTV level or levels to the extent practicable. The goal of this approach is to address those BTV constituents that are potential habitat threats but not to commit to remediation for BTVs that are of no site specific relevance.

Action:

None; BTVs are not a concern in Area 1, Phase I.

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Comment 3

Commenting Organization: Ohio EPA

Commentor: OFFO

Section #: Pg #: Line #: Code: M

Original Comment #:

Comment:

The RAWP should be revised to delete all references to areas not being certified under this work plan as well as any Area Specific Contaminants of Concern (ASCOCs) resulting from those areas. In addition, the document must include additional contaminant and certification unit designations for all areas being added to the work plan. Therefore, Area D should be eliminated and details added for SB and PS.

Response:

Agreed; it is agreed that all references to areas not being certified as well as any ASCOCs specific to those areas should be removed from the RAWP, to the extent possible. Some discussion of subareas adjacent to Area 1, Phase I scope subareas is needed to address the potential impact of existing contamination and construction activities in these subareas on the Area 1, Phase I scope.

Action:

CU designations for subarea D north and D south have been removed from the Certification Maps in Section 7 (Figures 7-1 through 7-4). CU designations for PS and SB have been added to the Certification Maps in Section 7 (Figures 7-1 and 7-3). This will be further described in addendums to the Certification Project Specific Plans for these subareas.

Also, the ASCOCs represented on Table 7-1 have been modified to reflect the removal of COCs specific to subarea D from the Area 1, Phase I scope.

Comment 4

Commenting Organization: Ohio EPA

Commentor: OFFO

Section #: Pg #: Line #: Code: M

Original Comment #:

Comment:

The RAWP fails to discuss how DOE is complying with its commitment to implement an ALARA approach to soil excavation for soils exceeding 50 ppm total uranium as defined on page 9-5 in the OU5 ROD. Specifically, DOE must define why it is not economically practical to excavate soils determined by the RTRAK or HPGe to exceed 50 ppm or even the 80 ppm FRL. The commitment in the ROD clearly suggests the removal, when economically practical, of soils exceeding 50 ppm based upon field instruments. Ohio EPA believes it is necessary for DOE to make a determination of how they are complying with the ALARA commitment.

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Response:

Agreed; a strategy needs to be developed for complying with the ALARA commitment. Clearly, achieving ALARA in Area 1, Phase I was not an issue here because of the low level of contamination present (many Remedial Investigation and Area 1, Phase I quick-turn laboratory samples had less than 10 ppm total uranium), but it may be an issue in remediation areas with an average level of 50 ppm total uranium or greater.

To reach the ALARA goal for total uranium of 50 ppm, field instrumentation must have the capability to resolve contamination in soils to this level. The limitations of the RTRAK field instrument have been revealed during Area 1, Phase I activities. The signal overlap of thorium over the uranium peak and the statistical variability for the detector package is being worked out by using longer acquisition times and slowing down the speed of the detector platform. The attempt is to cover the same area, but with a higher confidence and lower variability (less statistical error) in the analysis. Attempts are being made to develop software to better define the uranium and thorium peaks. This should allow the RTRAK system to have better confidence at lower contamination levels.

Action:

Develop the ALARA approach and incorporate the strategy into the SEP for EPA review and approval. This strategy will be used in later RAWPs. Continue to develop RTRAK capabilities.

Comment 5

Specific Comments

Commenting Organization: Ohio EPA Commentor: OFFO

Section #: Pg #: E-4 Line #: A1 Code: C

Original Comment #:

Comment:

Ohio EPA does not concur with DOE's suggestion that excavation will not be necessary for the OSDF sediment basin. Ohio EPA review of data in the area suggests excavation will be necessary for compliance with the Th-232 FRL. The revised RAWP must include data from the areas of the Pump Station and the Sediment Basin to support the "no excavation needed" activity description.

Response:

Agreed; data would be needed if no excavation were proposed. However, the OSDF Sediment Basin is now proposed to be excavated. It is currently under a cover of approximately 18 inches of gravel and is being used as an equipment storage pad. Precertification with real-time instruments is not possible until this gravel is removed. When this removal takes place, DOE-FEMP recommends a 6 inch layer of soil be removed simultaneously. This will minimize the

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Ohio EPA Comment Responses

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uncertainty of COCs residing in the soil immediately underlying the gravel pad. Precertification will then take place and further excavation will occur, if needed, prior to certification sampling. Excavation will be performed by the OSDF project and is not in the scope of this RAWP. Certification will be performed to support the OSDF effort concurrent with the scope of this RAWP.

Action:

The details for the characterization, removal and disposal of the gravel, and overexcavation of the underlying soil will be added to the certification Project Specific Plan prior to initiation of work.

Perform precertification and certification in support of the OSDF project excavation.

Comment 6

Commenting Organization: Ohio EPA Commentor: OFFO

Section #: Pg #: E-5 Line #: A1 Code: C

Original Comment #:

Comment:

In order to support DOE's position that no action will be necessary to isolate this area, contaminant data from Area 1 should be included in the figures of this document. Sample data may be available from the STP removal action or other sampling activities in that area.

Response:

It is assumed the commentor is enquiring about the northern area of subarea A1. Drainage from the northern portion of A1 flows to the northwest into A south over a very low slope. The area, being nearly flat in topography, would require extensive trenching, and possibly underground piping of the water to a potentially distant location to the north, to achieve drainage. This extensive trenching is not considered necessary since existing data and real time RTRAK and HPGe readings along the eastern boundary of the FEMP property line adjacent to the western portion of A1, show levels of total uranium only slightly above background but below the FRL.

Action:

DOE-FEMP will continue to perform the good management practices identified in Section 2.1.3.

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Comment 7

Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: E-7 Line #: Code: C
Original Comment #:

Comment:

DOE must ensure that the date of 1/30/98 for submittal of the Certification package for Areas A2, A3, C, and D1 will allow for sufficient time for review and approval prior to any need to initiate construction in any of these areas.

Response:

The schedule for certification of subareas A2, A3, C and D1 is provided on Table 3-3. The schedule for certification reporting is provided on Table 3-5. Currently, no excavation for remediation purposes is planned for any of these areas; they are only being certified (subarea C is identified as a potential borrow area for OSDF construction). See Figures 2-4 and 2-5 and discussion in Section 2.3.4 Certification Subareas.

Action:

Certification will be performed, data returned and a certification report submitted with adequate regulatory review time prior to making any construction plans in these subareas.

Comment 8

Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: 2 Line #: Code: C
Original Comment #:

Comment:

Revise action to state text within the RAWP will be revised to reflect sampling for WAC attainment.

Response:

The subject of sampling for WAC attainment has been addressed in Section 7.1 Waste Acceptance Criteria Sampling and Analysis.

Action:

Sampling to identify soil which may be above the OSDF WAC will occur as planned in Section 7.1

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Comment 9

Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: 3 Line #: Code: C
Original Comment #: 4

Comment:

The response states that the OSDF is scheduled to accept waste in the fall of 1997. It was Ohio EPA's understanding the first waste placement schedule had been extended to spring 1998 and was agreed upon by DOE, US EPA and Ohio EPA. Please clarify if the response represents a change in the agreement.

Response:

Agreed; however, contaminated soil on viable OU2 waste materials must be placed in the newly constructed OSDF liner in the Fall of 1997 prior to beginning winter, in order to achieve the waste placement milestone in the Spring of 1998.

Action:

The first waste placement schedule has been extended to Spring 1998. The text in Section 2.1.3 Good Management Practices bullet number two has been corrected.

Comment 10

Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: 4 Line #: Code: C
Original Comment #: 5

Comment:

Data from Area 1(A) should be included in the RAWP figures to support the position that this area does not present a recontamination threat. As stated previously, data from the STP removal action should be available.

Response:

See response to Comment 6.

Action:

See action for Comment 6.

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Comment 11

Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: 5 Line #: Code: C
Original Comment #: 7

Comment:

The response should be revised to reflect the removal of Area D from the scope of the Area 1, Phase I RAWP.

Response:

Agreed; subareas D north and D south have been removed from the scope of this RAWP. They are considered in this RAWP only because of their proximity to subareas within the scope of this RAWP. No excavation or certification will occur under the scope of this RAWP.

Action:

Subarea D (D north and D south) have been removed from the scope of this RAWP. Subarea D will be remediated under Remediation Area 6, a later RAWP. Maps showing D north and D south are provided in this RAWP only to explain their impact on Area 1, Phase I scope subareas; for example, subarea B northwest runoff will flow into the same catch basin as subareas D north and D south. Therefore, to discuss runoff controls for subarea B northwest, it is necessary to show the runoff pattern for the entire drainage area (Attachment A maps), including D north and D south, since the sediment basin is in the western portion of D south. Sediment originating from this sediment basin could have a potential impact on the Sloans crayfish in Paddys Run. See Section 4.1.5.7 Threatened and Endangered Species. See text Section 2.3.2 Scope for further discussion on how subareas D north and D south are being handled in this RAWP.

Comment 12

Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: 9 Line #: Code: C
Original Comment #: 16

Comment:

The response should be revised to reflect the agreement reached between the Ohio EPA, DOE and USEPA during our 10/29/96 conference call. The RAWP should reference the proposed fugitive dust control document.

Response:

A conference call on Oct. 29, 1996 and a meeting at Fernald on Nov. 25, 1996 between DOE-FEMP, OEPA and US EPA discussed the issues of BAT for fugitive dust emission abatement and fugitive dust emission monitoring. DOE-FEMP still contends that the 13 minute

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particulate emission for unpaved roadways, parking areas, and storage piles in a one hour time period with the administrative control of 6 minutes of visible dust emissions for each 60 minute period meet the required Ohio Administrative Code. In the most recent discussions, DOE agreed to develop a sitewide policy and BAT determination in the near future for fugitive dust emissions for the agencies to review.

Action:

Until a sitewide policy has been developed, a 13 minute per 60 minute period for dust emission will be observed for the unpaved roadways, parking areas and the soil storage areas with an administrative level of 6 minutes so that the OAC is not exceeded. The following controls will be implemented to minimize fugitive dust emissions: covers and physical barriers, moisture adjustments, water spray, vehicle speed restrictions, crusting agents, operational controls, wind screens, temporary shutdown during high winds, seeding, and dust alerts. These issues are covered in Sections 4.1.5.3 Fugitive Dust Emissions Monitoring and 4.1.5.4 Fugitive Dust Emissions Abatement of the Area 1, Phase I RAWP.

Comment 13

Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: 7 Line #: Code: C
Original Comment #: 11

Comment:

The response and the RAWP should be revised to discuss how precertification will be conducted in forested areas. The methodology for such precertification must be included in the revised RAWP.

Response:

Agreed; the subject of precertification in the wooded area is discussed in Section 7.2.1 Precertification of the North Pine Woods.

Action:

Precertification is currently in progress in subarea B northwest woods, using the HPGe. Physical samples are planned for collection as soon as HPGe work is completed.

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Comment 14

Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Pg #: 8 Line #: Code: C
 Original Comment #: 14

Comment:

Ohio EPA does not concur with the proposed language modification. Ohio EPA believes all field tiles on the eastern portion of the facility should be removed to protect the OSDF. Additional clarification regarding the neighboring property owners desires should be provided. Is the desire to maintain flow or prevent increased flow? If sufficient justification can be provided for not removing the northeast swale tiles, the revised language should read "all drain tiles known or discovered during Area 1 Phase I activities, with the exception of the northeast drainage swale, will be removed."

Response:

Agreed. As discussed in Appendix G, Drain Tiles, all drainage tiles that have a reasonable possibility of impacting the OSDF will be removed from the east field. All drain tiles known or discovered during Area 1, Phase I activities will be removed except for those in the northeast drainage swale, which will not impact the OSDF due to their distance from OSDF and the area's topography.

Additionally, the neighboring property owner has expressed concern about drainage changes in the eastern side of the FEMP. The property owner wants the tiles in the northeast swale to remain in place, since the water coming into his property through the tiles is beneficial to him. The tiles in question (CPT 1-6) have had their contents (sediment) sampled and the contaminant concentrations in the contents are below the FRL. Therefore, there is no potential for contaminating the immediate area or the neighbor's property.

Action:

Clay tiles CPT 7-11 have been removed. Tiles CPT 1-6 will remain in place. The RAWP text has been changed to include this information.

Comment 15

Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Pg #: 13 Line #: Code: C
 Original Comment #: 20

Comment:

- A) What measures are used to ensure a maximum speed of 15 mph is maintained?
- B) All future remedial action work plans must include a dust suppression plan for review and approval.

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Response:

A) See discussion Section 4.1.5.3

Action:

A) Monitor field activities for compliance.

B) A dust suppression plan will be submitted with future RAWPs.

Comment 16

Commenting Organization: Ohio EPA

Commentor: OFFO

Section #: Pg #: 17 Line #: Code: C

Original Comment #: 30

Comment:

A) Given the low levels of contamination observed in Area 1, Phase I, identification of hot spots has not been an issue. Available data including the existing RI/FS data, HPGe and WAC attainment samples, have not indicated a case in which the FRL for uranium has been exceeded. In other areas with higher levels of contamination, hot spots are expected to become a concern. General issues related to criteria to be used for interpreting results from the RTRAK and HPGe systems, as well as the use of area-based hot-spot criteria, will be addressed in the Sitewide Excavation Plan (SEP). Results from the comparability study will be available to support approaches proposed in the SEP.

B) The general approach used to address radiological hot spots is to screen for gamma-emitting radionuclides using the NaI detector system and to confirm the presence of such hot spots using HPGe detectors. HPGe detectors are used to evaluate gamma-emitting radionuclides (e.g., isotopes of uranium, thorium, and radium). In addition to confirming hot spots in conjunction with the NaI system, HPGe detectors also are used during precertification to determine levels of uranium and other gamma-emitting radionuclides in areas not accessible by the NaI detector system. HPGe detectors do not provide 100% coverage, and would provide only information related to radiological hot spots in such areas.

It is anticipated that excavation required to achieve FRLs for the primary (gamma discernible radiological) COCs will result in the removal of most soil that has elevated levels of non-radiological contaminants. The primary COCs are the source of the great majority of risks related to contaminants in FEMP soils and comprise most of the soil contamination footprint. Areas with elevated levels of non-radiological contaminants that originated from airborne releases are expected to be generally within the footprint of areas contaminated by airborne releases of primary contaminants and, consequently, are expected to be excavated. Complete spatial coverage for hot spots will not be provided for non-radiological contaminants, because of a lack of any capability to readily provide the kind of spatial coverage for non-radiological contaminants that is available for gamma-discernible radionuclides. The discrete samples

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collected during certification will provide the ability to detect significant non-radiological hot spots that were not removed by excavation.

If discrete samples indicate levels of non-radiological contaminants well above FRLs, then further evaluation of the area surrounding the sample location will be necessary. If historical knowledge indicates that spills or other direct releases may have resulted in the contamination of soil by non-radiological contaminants, areas of such spills will be evaluated for the presence of contamination and remediated as needed. Non-radiological hot spots do not appear to be a concern for Area 1, Phase I.

Action:

A) Issues related to use of the RTRAK and HPGe systems and area-based hot-spot criteria will be discussed in the SEP.

B) Discussion of issues related to the use of the HPGe system for evaluating hot spots and non-radiological hot spots, will be provided in the SEP.

Comment 17

Commenting Organization: Ohio EPA
Original Comment #: 38

Commentor: GeoTrans, Inc.

Comment:

In order that the worth and accuracy of all RTRAK and HPGe reading can be verified during independent review, ambient environmental data should be rigorously referenced to the data obtained from these devices (to the extent possible). The procedures and frequency for this referencing should be specified in the RAWP. The practice of not referencing RTRAK and HPGe readings to ambient environmental data can only be justified by demonstrating good comparability between these detectors and laboratory data for the range of the environmental conditions anticipated during deployment.

Response:

The comparability study is in progress at this time. Soil moisture and soil density data are being collected with every measurement. The influence of soil type, soil temperature, soil density and soil percent moisture, and environmental conditions such as rain, snow, temperature and vegetation will be discussed in the comparability study report and, to the extent necessary, certification reports. Data are being collected in accordance with the Data Quality Objective (DQO) for the Comparability Study in Appendix C.

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Action:

Discussion on the observed influence of ambient environmental conditions will be made in the comparability study and certification reports. Quantitative assessments of all potential environmental variables is not possible given the limited data set that is being collected.

Comment 18

Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: 25 Line #: Code: C
Original Comment #: 44

Comment:

Ohio EPA agrees with the basis for selecting ASCOCs but the process for actual location/orientation of a CU is still unclear. It would seem more appropriate to locate them along drainages, surface features or known release areas. These issues may not be as important for Area 1, Phase I but should be considered in all future remediation plans.

Response:

The CU design for Area 1, Phase I was based on the demonstrated presence of ASCOCs in soil and on the potential for contamination from known release points. In particular, if the presence of ASCOCs were demonstrated in the former production area near the boundaries of Area 1, Phase I, then a "ring" of CU-1s were set up along the fence line (this is also the boundary of Area 1, Phase I) to determine if the contamination extends beyond the production area boundary. Therefore, both the known presence and potential for presence of ASCOCs in soil were taken into account during the determination of CU locations. CU orientation was designed for ease of implementation in the field. The existence of many odd-shaped CUs would make implementation difficult and would cause delays in the remediation. See Section 7.6, Assignment of Certification Units in Area 1, Phase I, for further discussion.

Action:

Based on knowledge gained from the implementation of the Area 1, Phase I remedial design, the CU designs for subsequent RAWPs will need to incorporate additional information which will include some or all of the following, as required:

- construction needs
- topography/drainage areas
- non-contiguous areas (such as areas partitioned by roads)
- other suspected release points (e.g. the incinerator/waste water treatment facility)

This strategy will be more fully developed in the Sitewide Excavation Plan (SEP).

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Comment 19

Commenting Organization: Ohio EPA Commentor: GeoTrans, Inc.
Original Comment #: 47
Section #: 7 Pg #: 7-7 Line #: 32 Code: C

Comment:

The text should be revised to discuss how the number of additional samples will be determined to certify cleanup of a CU that had failed at a previous certification attempt.

Response:

There are four different conditions that could cause a CU to fail certification and each has a different action:

1. The CU average is below the FRL but the CU fails due to high variability. In this case the archived samples will be analyzed, added to the certification data set, and the certification analysis will be performed. If the CU still fails the certification analysis then proceed to 2, 3 or 4, as appropriate.
2. The CU fails because of widespread contamination. In this case the entire CU is excavated and recertified as CU-1s. If the original CU is a CU-I, then it would be re-certified as such. If the CU was a CU-II then it would be subdivided into CU-Is, excavated, and re-certified.
3. The CU fails due to a small localized contamination area. In this case real-time quickturn methods will be used to isolate the contaminated area. The area would be excavated and resampled to assure that the excavation was successful. If successful, the CU would achieve certification. If unsuccessful, the process would be repeated until certification is successful.
4. The CU fails due to improper CU delineation. In other words, if the designated CU is not homogeneous, it is to be re-designated as two or more separate CUs for either re-certification, or remediation and re-certification if found to be above the FRL.

In all cases when a CU is redesignated as smaller CUs, each of these new CUs will follow the standard sampling requirements of the smaller CU.

Action:

This information has been stated in the Area 1, Phase I RAWP in Section 7.9 Certification Failure.

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Comment 20

Commenting Organization: Ohio EPA

Commentor: OFFO

Section #: Pg #: 32 Line #: Code: C

Original Comment #: 54

Comment:

Ohio EPA believes procedures outlined in the dust suppression plan must be included as a portion of the RAWP for review and approval.

Response:

Same response as Comment 12 above.

Action:

A Dust Suppression Plan has been provided.