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TRANSMITTAL OF RESPONSES TO USEPA AND OEPA COMMENTS ON THE PROJECT SPECIFIC PLAN FOR THE GREAT MIAMI RIVERBANK CHARACTERIZATION OF MAY 1993

08/16/93

DOE-FN/EPA
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RESPONSES
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Department of Energy
Fernald Environmental Management Project
P.O. Box 398705
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AUG 16 1993

DOE-2722-93

Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - 5HRE-8J
77 W. Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Graham E. Mitchell, Project Manager
Ohio Environmental Protection Agency
40 South Main Street
Dayton, Ohio 45402-2086

Dear Mr. Saric and Mr. Mitchell:

TRANSMITTAL OF RESPONSES TO THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AND THE OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE PROJECT SPECIFIC PLAN FOR THE GREAT MIAMI RIVERBANK CHARACTERIZATION, MAY 1993

Reference: 1) Letter, G. E. Mitchell to J. R. Craig, "Comments on the Operable Unit 5 PSP", dated June 21, 1993

2) Letter, J. A. Saric to J. R. Craig, "Approval of OU 5 Great Miami Riverbank Characterization Work Plan - FEMP", dated July 15, 1993

Enclosed for your review are the subject responses. The work plan will be revised upon final resolution of these comments.

If you or your staff have any questions, please contact Pete Yerace or Kathleen Nickel at (513) 648-3161 or 648-3166, respectively.

Sincerely,

Jack R. Craig
Fernald Remedial Action
Project Manager

FN:Nickel

Enclosure: As Stated

Recycled and Recyclable

001

cc w/ enc:

K. H. Chaney, EM-424, TREV
J. J. Fiore, EM-42/TREV
D. R. Kozlowski, EM-424 TREV
G. Jablonowski, USEPA-V, AT-18J
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J. Kwasniewski, OEPA-Columbus
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J. Michaels, PRC
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K. L. Alkema, FERMCO/65-2
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cc w/o enc:

R. L. Glenn, Parsons
J. W. Thiesing, FERMCO

RESPONSES TO U.S. EPA COMMENTS ON THE PROJECT SPECIFIC PLAN FOR THE GREAT MIAMI RIVERBANK

Commenting Organization: U.S. EPA
Commentor:
Section #: 3.2.2 Pg. #: 12 Line #: Code:
Original Comment # 1

Comment: The Work Plan states that all soil samples will be collected using a split spoon sampler and conventional auger rig. Because of the likelihood of encountering impenetrable materials, DOE should consider and discuss contingency drilling methods or sample locations that can be used to define the vertical extent of contamination if the primary sampling location proves impenetrable.

Response: DOE recognizes the limitations of a split spoon sampler; however, any other drilling method that would penetrate concrete slabs would require drilling fluid to cool the bit. Since the drilling is into rubble on the riverbank, it would be virtually impossible to contain the drilling fluids in the boring. DOE does not want to use a drilling method that would transport potentially contaminated material into the river.

As was shown in the original work effort, even though refusal was met, enough material was recovered to detect the presence of contamination. In areas where refusal is encountered, the vertical extent will not be determined by the sampling program. However, the sampling grid is wide enough that the boring program should be able to define the lateral extent of the location of slabs within the riverbank fill. The depth extent of fill will not be below the level of the river bottom so the volume of potentially contaminated material can be estimated even though contamination levels are not available.

It is understood that further action will be required in order to remove contamination from the site. The outfall line construction activity only removed the contaminated material between the sheet pilings that formed the cofferdam. Radiologically contaminated material is known to be present on the north side of the cofferdam near Location No. 4 in the original sampling program. The data from this PSP will be used to develop a plan for removing the remaining contamination. The data will also be used to help estimate the volume of material that will require excavation so realistic cost estimates and schedules can be formulated.

During excavation of contaminated materials, radiological screening will be used to determine the extent of excavation that is needed to remove all contamination. Confirmatory sampling will be conducted to ensure that the contamination has been removed.

Action: Expand the introduction to state that remediation will be required for the site and that this PSP will refine the understanding of the extent of the area requiring remediation.

Commenting Organization: U.S. EPA
Section #: Table 3-3 Pg. #: 13 Commentor: Line #: Code:
Original Comment # 2

Comment: The text states that all soil borings will be drilled to an approximate depth of 13 feet, to groundwater, or to an impenetrable material, whichever is encountered first. However, Table 3-3 indicates estimated sampling intervals at boring depths in ranges of 0 to 2, 2 to 4, 4 to 6, 10 to 12, and 12 to 13 feet. It is unclear whether boring depths will be as described in the text or in Table 3-3. DOE must clearly state the intended boring depths and related sampling intervals.

Response: At each of 18 boring locations, DOE intends to split-spoon sample to a maximum depth of 13 feet, which is the depth of the invert of the outfall line, or until groundwater or impenetrable materials are encountered. Samples are intended to be collected in 18-inch increments of soil as the split spoon is advanced. The number of samples per location will be dependent on the depth actually sampled before one of the three ending conditions is met. Table 3-3 presents the sample locations, coordinates, and predictions of the depths expected to be reached assuming that not all borings reach 13 feet. These predictions are presented in ranges (e.g. 2-4 feet). Table 3-3 was used to estimate a likely distribution of depths for planning purposes. In retrospect, the inclusion of this planning information was not beneficial to the presentation of the PSP. For planning purposes, a maximum of nine samples per location is assumed for each of the 18 locations resulting in a maximum of 162 samples.

Action: Revise the text to clearly state the maximum number of samples and delete Table 3-3 from the PSP.

Commenting Organization: U.S. EPA
Section #: 3.6 Pg. #: 14 Commentor: Line #: Code:
Original Comment # 3

Comment: As written, the proposed analytical program is unclear. The text should clearly state the specific analytes for which each discreet sample (18-inch aliquot) will be analyzed.

Response: The described method proposes that one sample from each borehole will be submitted for two types of analyses: ASL B at the FERMCO laboratory; and ASL C at an off-site laboratory. Soil samples will be sent to the FERMCO laboratory for total uranium and total thorium, but not isotopic analysis. The bulleted text describing this is incorrect. Isotopic analyses will be done at an off-site laboratory. The TAL for the off-site laboratory analysis is correct . The FERMCO laboratory is used for quick turnaround so field responses can be formulated without having to wait for the full isotopic analysis to be completed.

Action: Correct the text to show that only total uranium and total thorium are being analyzed at the FERMCO laboratory.

Commenting Organization: U.S. EPA
Section #: 4.1 Pg. #: 16 Commentor: Line #: Code:
Original Comment # 4

Comment: This section indicates that groundwater samples will be collected; however, groundwater sampling is not discussed anywhere else in the PSP. The reference in this section to groundwater sampling must be deleted.

Response: The statement in Section 4.1 referring to groundwater sampling is erroneous. The first word of the third sentence in this section should be "Soil." The scope of the sampling effort is presented in Section 3.2. The sampling is designed to characterize the extent of radiological contamination caused by fill activities in soils of the riverbank. Only soil samples are planned.

Action: The first word of the third sentence in Section 4.1 will be changed from "groundwater" to "soil."

Commenting Organization: U.S. EPA
Section #: 6.1 Pg. #: 20 Commentor: Line #: Code:
Original Comment # 5

Comment: The method used to determine the number of equipment rinsate samples is unclear. The number of equipment rinsate samples is usually one rinsate sample for every 20 samples collected, and equipment is decontaminated between each sample. The text states that equipment rinsates will be collected at rate of 1 per 20 pieces of a type of equipment cleaned by a specific decontamination method. As written, equipment may not be decontaminated between each soil sample, and equipment rinsate samples may not be collected as frequently as necessary. The text must be modified to clarify this statement.

Response: The procedure for equipment rinsate blanks is that a rinsate sample will be collected for every 20 instruments that have been decontaminated. The intent is that each sample instrument will be decontaminated before it is used to collect the sample and, after 20 individual instrument decontaminations have been performed, a new rinsate blank sample will be collected to verify competence of the decontamination process.

Action: Clarify the text to show that the sampling equipment is decontaminated between each use, and that rinsate samples are collected at a frequency of 1 in 20 samples collected.

RESPONSES TO OHIO EPA COMMENTS ON THE PROJECT SPECIFIC PLAN FOR THE GREAT MIAMI RIVERBANK

Commenting Organization: Ohio EPA
Commentor:
Section #:
Pg. #:
Line #:
Code:
Original General Comment # 1

Comment: The use of a split spoon sampler to collect soil samples in an area of buried concrete rubble raises some significant concerns. First, the sampling will obviously not define the vertical extent of contamination since if rubble is encountered, it will refuse the split spoon. An excellent example of this is the sampling location No. 4 from the previous work. This was the most contaminated sample, yet the vertical extent of contamination could not be determined. Second, if the concrete rubble is contaminated and a sample of the material is not collected (i.e., the split spoon is refused), then the area goes uncharacterized. DOE will need to conduct additional investigations in this area in order to determine the nature and extent of contamination.

Response: DOE recognizes the limitations of a split spoon sampler; however, any other drilling method that would penetrate concrete slabs would require drilling fluid to cool the bit. Since the drilling is into rubble on the riverbank, it would be virtually impossible to contain the drilling fluids in the boring. DOE does not want to use a drilling method that would transport potentially contaminated material into the river.

As was shown in the original work effort, even though refusal was met, enough material was recovered to detect the presence of contamination. In areas where refusal is encountered, the vertical extent will not be determined by the sampling program. However, the sampling grid is wide enough that the boring program should be able to define the lateral extent of the location of slabs within the riverbank fill. The depth extent of fill will not be below the level of the river bottom so the volume of potentially contaminated material can be estimated even though contamination levels are not available.

It is understood that further action will be required in order to remove contamination from the site. The outfall line construction activity only removed the contaminated material between the sheet pilings that formed the cofferdam. Radiologically contaminated material is known to be present on the north side of the cofferdam near location No. 4 in the original sampling program. The data from this PSP will be used to develop a plan for removing the remaining contamination. The data will also be used to help estimate the volume of material that will require excavation so realistic cost estimates and schedules can be formulated.

During excavation of contaminated materials radiological screening will be used to determine the extent of excavation that is needed to remove all contamination. Confirmatory sampling will be conducted to ensure that the contamination has been removed.

Action: Expand the introduction to state that remediation will be required for the site and that this PSP will refine the understanding of the extent of the area requiring remediation.

Commenting Organization: Ohio EPA
Section #: Figure 3-3
Original Specific Comment # 1

Commentor:
Pg. #: 11 Line #: Code:

4685

Comment: The work plan fails to discuss any post excavation sampling following the previous work. DOE should place additional sampling locations adjacent to previous excavation (e.g., location nos. 4 and 6). These samples will tie the new grid into the old locations and provide confirmation of excavation activities.

Response: Post-excavation sampling indicated that contaminated concrete slabs are exposed at the edge of the excavation immediately north of the sheet piling cofferdam. The plan covers the areas on both sides of the previous excavation with both radiation walk-over survey and borings. Figure 3-3 is being revised to depict the actual location of the grid of borehole locations. Revised survey data provides a better presentation of the actual conditions to show that the work in this PSP is continuous with the efforts in the previous investigation.

Action: Revise Figures 3-2 and 3-3 using surveyed data that show the actual configuration of the riverbank and the location of the outfall line. Show the area where radiation is known to be present based on post-excavation radiation measurements.

Commenting Organization: Ohio EPA
Section #: 3-3
Original Specific Comment # 2

Commentor:
Pg. #: 12 Line #: Code:

Comment: DOE should clarify that the object of this section is to investigate areas outside the present sampling grid.

Response: The text will be clarified.

Action: Add the following text to the beginning of Section 3-3: "An air photograph review will be conducted in order to identify other locations where it is possible that contaminated material may have been used to stabilize the riverbank between Ross and New Baltimore."

Commenting Organization: Ohio EPA
Section #: 3-6
Original Specific Comment # 3

Commentor:
Pg. #: 14 Line #: Code:

Comment: Does this section suggest each borehole will have one sample submitted for both sets of analyses? This would seem a bit redundant. DOE should consider sending a biased set of samples to an off-site lab for ASL C characterization as a confirmation of the ASL B samples.

Response: The described method does propose that one sample from each borehole will be submitted for both analyses. The TAL is correct for the off-site laboratory analysis; however, bulleted text is incorrect. Soil samples will be sent to the FERMCO laboratory for total uranium and total thorium but not isotopic analysis. Isotopic analyses will be done at an

off-site laboratory for confirmation. The FERMCO laboratory is used for quick turnaround so field responses can be formulated without having to wait for the full isotopic analysis to be completed.

Action: Revise the text to show that only total uranium and total thorium are being analyzed at the FERMCO laboratory.

Commenting Organization: Ohio EPA
Section #: 4-1
Original Specific Comment # 4

Commentor:
Pg. #: 16 Line #: Code:

Comment: The work plan proposes no groundwater sampling, yet it is discussed here. Please review and revise.

Response: The statement in Section 4.1 referring to groundwater is erroneous. The first word in the third sentence should be "soil" not "groundwater."

Action: The text in Section 4.1 will be corrected. Remove the word "groundwater" and replace with "soil."