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WASTE PIT 5 LINER REPAIR

10-02-91



Department of Energy
Fernald Environmental Management Project
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OCT 02 1991

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DOE-021-92

Mr. Graham E. Mitchell, DOE Coordinator
Ohio Environmental Protection Agency
40 South Main Street
Dayton, Ohio 45402

Dear Mr. Mitchell:

WASTE PIT 5 LINER REPAIR

- Reference:
1. Letter, G. E. Mitchell, OEPA to J. R. Craig, FEMP, "Comments on Waste Pit Liner Repair," dated August 14, 1991.
 2. Letter, J. A. Saric, U.S. EPA to J. R. Craig, FEMP, "Conditional Approval of the Waste Pit 5 Liner Repair Work Plan."

Based on discussions held on September 27, 1991, with you and members of your staff, verbal approval was provided on September 30, 1991, to initiate the actions identified in the Waste Pit 5 Liner Repair Work Plan for the repair of the Waste Pit 5 liner.

This approval was based on your review of the draft responses prepared to address comments generated on the work plan for this action (reference 1). These responses are provided as an enclosure, along with the responses to the comments received from the U.S. EPA at the time they granted conditional approval to initiate this action (reference 2).

A modified work plan has been prepared and is also enclosed.

As was discussed in the telecon on September 27, 1991, a discussion of this repair activity will be included in the Removal Action Work Plan being developed for the control of exposed material in pit 5, Removal #18 of the September 20, 1991 Consent Agreement.

If you have any questions concerning these responses or the modified work plan, please call Oba Vincent at (513) 738-6937.

Sincerely,

Jack R. Craig
Fernald Remedial Action
Project Manager

FO:Vincent

Enclosures: As stated

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cc w/encl.:

J. J. Fiore, EM-42, GTN
K. A. Hayes, EM-424, GTN
L. August, GeoTrans
K. Davidson, OEPA-Columbus
T. Schneider, OEPA-Dayton
J. A. Saric, USEPA-V, 5HR-12
M. Butler, USEPA-V, 5CS-TUB-3
J. Benetti, USEPA-V, 5AR-26
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J. D. Wood, ASI
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cc w/o encl.:

W. E. Muno, USEPA-V, 5HR-13
D. A. Ullrich, USEPA-V, 5H-12
D. R. Schregardus, OEPA-Columbus

EPA Files

Response

This paragraph has been deleted from the work plan.

Resolution

Same as response.

Specific Comment 3

Table II, no page number: the table shows uranium as the only radionuclide hazard monitored. The table should also include thorium and radium as hazards monitored. Footnote 1 at the bottom of the table is not specified in the table.

Response

Agree. Table II has been modified to include monitoring for all long-lived alpha emitters. Also footnote 1 has been reassigned.

Resolution

See Table II.

RESPONSE TO OHIO EPA COMMENTS

General Comment 1

The activities suggested under this work plan should be designated as a removal action. The objective of the proposed work is to minimize the release of contaminants to the environment, thus designating it as a removal action. Only activities such as utility upkeep, etc., should be considered as ongoing maintenance activities. A revised work plan, incorporating agency comments, should be submitted addressing the work as a removal action.

Response

During the operating life of Waste Pit 5, repair of the pit liner has historically been achieved through FEMP maintenance. The character of the activities proposed at Waste Pit 5 as part of this work plan is identical to past maintenance activities performed at Waste Pit 5. DOE feels that this activity should not be identified as a removal action under CERCLA at this time.

In reviewing the eight factors to be considered in determining what constitutes a removal action as listed in 40 CFR 300.415 (b)(2), only one factor applies to this activity, specifically, 40 CFR 300.415 (b)(2)(iii) "hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release" may relate to this project. However, during the course of maintaining storage facilities at FEMP, maintenance actions commonly address situations where a threat of release of hazardous substances, pollutants, or contaminants may exist. While the threat of release does exist at Waste Pit 5, the magnitude of this threat does not justify the elevation of this activity from a maintenance repair level considering that this specific repair activity cannot address any liner deterioration which might also exist at deeper levels in waste pit 5.

However, this repair activity will be discussed and assessed in the removal action work plan for the control of exposed material in pit 5. With the preparation of this document, the continuing, future repair activities may be included as part of this removal action.

Resolution

No modification to the work plan is required.

General Comment 2

Since Waste Pit 5 is one of the newly designated RCRA regulated land based units, how will RCRA regulations be addressed concerning the disposition of the water drawn from the pit prior to work. OU1 managers should be in contact with the RCRA compliance group at FMPC to address this issue.

Response

Overflow water from Waste Pit 5 currently flows to the clearwell. Additionally, the clearwell currently receives a majority of the stormwater runoff from the waste pit area as a whole. The continued operation of the clearwell as a water collection basin for the waste pit area is inescapable because the clearwell continues to receive water from waste pit 5 and other hazardous waste management units. The introduction of the waste pit 5 cover water into the clearwell is reasonable and does not represent an increased environmental threat.

The cover water from waste pit 5 must be removed in order to accomplish the subject repairs. The clearwell represents the only logical destination for this water.

The clearwell has also been designated a RCRA regulated land based unit and is subject to the closure process. Closure plan for this unit provides a justification for continued operation of the clearwell based on its role in collection and storage of waste water on the FEMP site. Justification for continued operation of the clearwell hinges on two significant issues. These are: the waste water treatment system and the stormwater runoff control removal action (RA No. 2). To remove the clearwell from operation would require modifications in these systems that may not be feasible given the current state of technology. The additional staging would require massive pumps and the construction of additional sump capacity. The area needed for the additional sump is not available given the current location of the waste pits and the waste silos. Completion of RA No. 2 is required per the consent agreement, by July, 1992. Removing the clearwell from operation would delay completion of the project indefinitely. On September 27, 1991, a telecon was held with OEPA and FEMP RCRA compliance staff to discuss this issue. Approval to conduct this repair activity per the work plan was granted on September 30, 1991.

Resolution

No modification to the work plan is required. See Section IV, Procedures, paragraph 4.4, page 4.

General Comment 3

Will any of the activities of this removal action affect/be coordinated with the activities of the recently proposed removal action to place a floating cover on pit 5? DOE should evaluate and discuss how these two removal actions might be integrated.

Response

It is the intention of DOE to coordinate all activities at waste pit 5. In order to allow for adequate space allocation, worker health and safety, task efficiency and integration with RCRA, it will be appropriate for all necessary activities at waste pit 5 to be planned, engineered, managed, and executed an integrated sequence of actions geared to address all currently defined issues for Pit 5.

Current Removal Actions associated with waste pit 5 include the waste pit 5 experimental treatment facility. Further plans for Removal Actions will include the mitigation of emissions from waste pit 5, a floating cover is just one option that will be evaluated, and a Removal Action to address the berm stability of waste pit 5 if required.

Resolution

Refer to waste pit 5 Closure Plan/Response Summary which was submitted to OEPA and U.S. EPA on September 26, 1991.

Specific Comment 1

IV. Liner Repair Work Implementation, Section 4.6, page 3, last paragraph: The work plan should discuss the depth (within the pit) to which cracks in the seam will be chased/excavated. More detail should be given as to how clearing/excavation into the pit contents will be conducted.

Response

Contents of waste pit 5 will be moved away from areas to receive repairs to the maximum extent practicable using hand tools. It should be noted that no waste pit 5 residues will be removed from the pit. The contents of waste pit 5 are not anticipated to be physically self-supporting. It is likely that only small quantities of the residues will be able to be moved away from repair areas. The fluid nature of the waste pit 5 contents is expected to persist due to the need to maintain the material in a moist condition in order to prevent wind erosion.

Resolution

See Section IV, Procedures, paragraph 4.6, page 4.

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Specific Comment 2

IV. Liner Repair Work Implementation, Section 5.1, page 4: Please detail what the "test of repairs made" will encompass. If it is only an inspection by the project engineer, refer to it as such and not as a test.

Response

Tests of the repaired area of the liner will not be performed. Each repaired area will be visually inspected by the project engineer to assure quality workmanship.

Resolution

See Section IV, Procedures, paragraph 5.1, page 4.

Specific Comment 3

IV. Liner Repair Work Implementation, Section 5.4, page 4: Define PPE the first time it is used.

Response

Agree.

Resolution

See Section IV, Procedures, paragraph 5.7, page 5.

Specific Comment 4

V. Sampling and Analysis, page 5, 3rd bullet: Coordination with OU5 site-wide ecological assessment personnel should be made so that vegetation samples could be collected and analyzed in comparison with soil concentrations. This information might prove useful in the site ecological assessment.

Response

Vegetation samples from waste pit 5 will be provided to individuals conducting the ecological assessment.

Resolution

See Section V, Sampling and Analysis, last paragraph, page 7.

Specific Comment 5

V. Sampling and Analysis, page 5, 6th paragraph: The text should provide more detail as to the number and time of high volume air samples to be collected prior to the initiation of work. Samples should be collected prior to any activity, during drawdown, and during repair activities.

Response

Three baseline air samples will be obtained for a duration of eight hours prior to any repair activity at waste pit 5. Three air samples will be collected on a constant basis each day while work is proceeding. This includes

the time during which the cover water is drained from the pit and during actual repair activities. Air sampling device filters will be changed at the end of each day that air samples are collected. No air samples will be collected during non-work hours or on non-work days.

Resolution

See Section V, Sampling and Analysis, 6th paragraph, page 6.

Specific Comment 6

V. Sampling and Analysis, page 5, 6th paragraph: Attachment C does not contain sampling procedures, it contains MSDSs. The references should be to Attachment D.

Response

MSDS were mistakenly identified as Attachment C. MSDS will be incorporated into Attachment F.

Resolution

See Attachment F.

Specific Comment 7

Attachment D, Table II, location: Define the difference between "boundary" and "various", as they both reference Attachment B.

Response

The wording in Table II will be modified.

Resolution

See Table II.

Specific Comment 8

Attachment F, Liner Repair Instructions, 2nd paragraph: Please discuss the proper disposal to be employed for the rags containing solvent. Will these rags be assessed/treated as a mixed waste?

Response

Construction waste will be handled according to site procedure FEMP-720, "Control of Construction Waste" and SOP-20-C-601, "Packaging low-level radioactive waste (L-LRW) for off-site disposal." Any mixed waste generated by the pit 5 liner repairs (rags containing solvents, unused solvents and repair materials) will be drummed and stored on site as mixed waste. All efforts will be made to minimize the generation of such waste.

Resolution

See Section IV, Liner Repair Work Implementation, Procedures, item 5.9, page 5.

Specific Comment 9

Attachment F, Liner Repair Instructions, 1b: Provide more detail as to the methodology of the "dry knuckle test".

Response

The manufacturer's instructions explains the "dry knuckle test" as "if no adhesive comes off on your knuckle, the adhesive is dry."

Resolution

See Attachment E, key point 1b, page E-1.

Specific Comment 10

Attachment F, liner repair instructions, 1b: Define screed as discussed in "DO NOT SCREED". This information should be provided in the text.

Response

The manufacturer's sales representative describes "DO NOT SCREED" as do not stretch out or thin out as with a spatula or other spreading instrument.

Resolution

See Attachment E, key point 1c, page E-1.