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**WASTE PIT AREA CONTAINMENT
IMPROVEMENTS REMOVAL ACTION WORK
PLAN**

11/04/92

DOE-FN/EPA

7

RESPONSES

[REDACTED]

PO-54, Waste Pit Area Containment Improvements Removal Action
Work Plan

DOE - FN
EPA

US EPA COMMENTS

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General Comments:

- 1a. Health physics concerns are not adequately addressed. Since information on the extent and type of radiological contamination is available from historical records and past studies of the waste pit area, such results should be included in the work plan. This information can then be used to anticipate possible health radiological hazards, both to workers and to the general public, which could arise from implementation of the work plan activities. It is important to assess these hazards early in the work plan process; the hazards are not only important in formulation of the Health and Safety Plan (which is not required as part of the work plan), but also because the design process must take into account the hazards so that construction activities implementation minimizes and contains the health and safety hazards.

Response: Historical data on the extent and type of radiological contamination in the waste pit area can be found in the original Removal Site Evaluation, dated May 1991. This data was used in the preparation of the work plan to assure that health and safety hazards will be minimized during implementation activities. This data will also be used in the preparation of the Health and Safety Plan.

Resolution: Historical data will not be added to the work plan.

- 1b. Fugitive emissions were identified as a possible result of construction activities only in Section 3.3.2 (Implementation of the Protection of Areas of Stressed Vegetation). However, it seems likely that regrading of the ditches and improvement of roads could also lead to considerable fugitive emissions. Details on the extent of such hazards, as well as efforts which will be taken to minimize emissions, should be addressed in all sections on implementation of the work plan.

Response: It is agreed that fugitive dust emissions will need to be controlled during ditch regrading activities.

Resolution: Information will be added to Section 3.1.2, page 3-6, paragraph 2 to state how fugitive dust emissions will be controlled during regrading activities.

2. Although it may not be necessary to provide design details of the removal action (RA) activities, the performance criteria which will be used to 1) design construction activities, and 2) evaluate the effectiveness of the RA, should be developed at this point and included in the work plan. Without having such information, it is difficult to determine whether the RA will adequately fulfill its objectives.

Response: The purpose of this Removal Action is to reduce the spread of contamination. This will reduce the exposure to individuals working in the immediate vicinity of the waste pit area and the level of effort required for decontamination of equipment entering and leaving the waste pit area. By regrading the ditches, this removal action will enhance Removal Action 2, Waste Pit Area Stormwater Control, operations to control stormwater runoff in the Waste Pit Area. The potential for fugitive dust emissions will be greatly minimized by improving the vegetation cover on the waste pits and the Burn Pit.

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The effectiveness of this removal action will mainly be evaluated by visual inspections. As part of the waste pit area inspection program, the drainage ditches will be inspected weekly for proper drainage, and the waste pits and Burn Pit will be inspected weekly for a good vegetative growth cover. The effectiveness of this removal action will also be evaluated by the results of the air monitoring stations located around the Waste Pit Area (see Section 7.1).

Resolution: Information will be added to Section 3.1.2, page 3-6, paragraph 2; Section 3.2.2, page 3-7, paragraph 5; and Section 3.3.1, page 3-11, paragraph 2 concerning the weekly inspections.

Specific Comments

1. **Section 2.1, pg. 2-1, paragraph 2:** Although it is stated in Section 3.1.1 (pg. 3-1) that the road between Waste Pits 5 and 3 will be improved, this information is not included here in the description of areas of concern. Please correct this discrepancy.

Response: Will comply.

Resolution: Section 2.1 will state that both the road between Waste Pits 3 and 5 and the road between Waste Pits 4 and 6 will need to be improved.

2. **Section 3.1.2, pg. 3-2, paragraph 1:** A figure should be included in the document showing the three construction zones that will be established during implementation activities to upgrade the drainage ditches.

Response: Will comply

Resolution: The three construction zones will be added to Figure 3-1.

3. **Section 3.1.2, pg. 3-6, paragraph 1:** It should be specified what steps will be taken to ensure that excavation is kept to a minimum during ditch improvement.

Response: Will comply.

Resolution: The means to ensure that excavation will be kept at a minimum has been included in Section 3.1.2, page 3-6, paragraph 1.

- 4a. **Section 3.1.2:** The control of fugitive emissions and surface water erosion should be addressed under implementation of the drainage ditch regrading, since both seem likely to result from construction activities to contain contaminated soils. If these issues are not considered to be of concern, then the reason for such a decision should be supported and justified.

Response: Will comply.

Resolution: Information will be added to Section 3.1.2, page 3-6, paragraph 2 to state how fugitive dust emissions and surface water erosion will be controlled during regrading activities.

- 4b. The description of soil containment implementation should also contain information on the criteria which will be used to determine the effectiveness of this part of the RA. Performance criteria for judging the RA effectiveness should be developed and described here, since these criteria directly affect the design and implementation of field activities. In addition, a schedule should be generated for evaluating continuing effectiveness of the regrading.

Response: See General Comment 2.

Resolution: See General Comment 2.

5. **Section 3.2.2, pg. 3-7, paragraph 4:** More specific details should be provided on what is meant by "as needed." Specific criteria should be developed for determining whether the mud has been adequately stabilized or the addition of more stabilizing material is needed.

Response: Will comply.

Resolution: Section 3.2.2 will be rewritten to clarify that the lime or cement will be added at a ratio of three to five percent by volume to stabilize the mud at the bottom of the ditch.

- 6a. **Section 3.2.2:** The control of fugitive emissions and surface water erosion should be addressed under implementation of the Pit 4 berm correction, since both seem likely to result from construction activities to stabilize the berm. If these issues are not considered to be of concern, then the reason for such a decision should be supported and justified.

Response: Will comply.

Resolution: Information will be added to Section 3.2.2, page 3-7, paragraph 4 to state how fugitive dust emissions and surface water erosion will be controlled during regrading activities.

- 6b. The description of berm stabilization implementation should also contain information on the criteria which will be used to determine the effectiveness of this part of the RA. Performance criteria for judging RA effectiveness should be developed and described here, since these criteria directly affect the design and implementation of field activities. In addition, a schedule should be generated for evaluating continuing effectiveness of the stabilization and regrading.

Response: See General Comment 2.

Resolution: See General Comment 2.

7. **Section 3.3.2, pg. 3-8, point number 4:** More detail should be provided on the methods which will be used to identify sources of fill soil and topsoil. For instance, it should be stated whether or not off-site sources for material will be considered, if laboratory tests will be used to confirm the soil characteristics, etc.

Response: A suitable topsoil will be used from an off-site source. The common fill material will also be from an off-site source unless an on-site source can be used.

Resolution: No changes necessary.

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8. **Section 3.3.2, pg. 3-10, paragraph 4:** More detail should be provided on what type of surface water control will be provided to minimize erosion. Even if interim erosion control measures are implemented during the RA, it seems likely that construction equipment and activities could cause greater than average amounts of erosion. It should be clarified what efforts will be made to trap and contain the runoff since it could contain large amounts of contaminated soil.

Response: Will comply.

Resolution: Additional information will be added to Section 3.3.2, page 3-10, paragraph 4.

9. **Section 3.3.2, pg. 3-11, paragraph 2:** Performance criteria for quality of the revegetation covering should be developed and included in the work plan since they directly affect the design and implementation of RA activities. The frequency of quality control tests should also be specified here.

Response: See General Comment 2.

Resolution: See General Comment 2.

10. **Section 4.1, pg. 4-1, paragraph 2:** In view of the imminent change in contractor at FEMP, which falls within the 44 week timeline for completion of this RA, please clarify whether WEMCO will continue to be responsible for implementation of this RA Work Plan even after a new contractor is on site at FEMP. In addition, clarify whether the subcontractors cited here will still be working at the site.

Response: The DOE is responsible for the oversight of all activities at the FEMP, and assures a smooth transition between contractors. This removal action will not be impacted by the change of contractor at the FEMP.

Resolution: No resolution is necessary.

11. **Section 7.1, pg. 7-1, paragraph 2:** It is stated that air monitoring will be used to establish the effectiveness of the RA. Results of air monitoring should also be used during RA implementation to ensure that control measures (for fugitive emissions, for example) are performing adequately.

Response: Air filter samples will be taken before, during, and after removal action activities. Because of the long turn around time on the air filter samples it would not be appropriate to use these samples to ensure that control measures are performing adequately. Personal air monitoring devices will be used for this purpose at the discretion of the FEMP IRS&T Department and/or the Health and Safety Plan.

Resolution: No changes necessary.

12. **Section 7.2, pg. 7-1, paragraph 3:** It should be specified what guidelines will be used to determine if roads are radiologically contaminated.

Response: The guidelines in the *WEMCO Radiological Controls Requirements Manual*, dated May 13, 1992, (RM-0009), will be used to determine if the roads are radiologically contaminated.

Resolution: The *WEMCO Radiological Controls Requirements Manual* (RM-0009), will be referenced in Section 7.2.

13. **Section 7.4, pg. 7-4, paragraph 2:** As noted above under General Comments (Comment #1), information on the extent and type of contamination should be included in the RA work plan to ensure that RA construction activities are designed to adequately address health concerns and are sufficient to meet the objectives of the RA.

Response: See response to general comment number one.

Resolution: See response to general comment number one.

14. **Section 7.4, pg. 7-5, Table 7-2:** Please justify why radionuclides are not included in the list of hazardous constituents for analysis of excess material.

Response: Radionuclides have been added to the list of parameters to analyze for.

Resolution: Table 7-2 has been added to show the radionuclides which will be tested for.

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General Technical Comments

1. The removal action (RA) work plan has an attached addended removal site evaluation (RSE) report. The RSE indicates that the primary contaminants associated with the site area are radionuclides. DOE may generate substantial contaminated soil and debris during this RA. However, the RA work plan requires only nonradionuclide analyses for determining the disposition of soil and debris. Also, nonradionuclide parameters in the work plan include some Resource Conservation and Recovery Act (RCRA) metals, volatile organic compounds (VOC), and non-RCRA polychlorinated biphenyls (PCB). PRC notes that the list of RCRA parameters does not include all parameters necessary to identify whether a waste is characteristic. PRC believes that DOE must address: 1) DOE should include radionuclides in the list of analyses because they are the contaminants of concern associated with this RA; 2) DOE should provide justification for its list of nonradionuclides analytes, which includes an incomplete list of RCRA parameters.

Response: 1) Will comply.

2) The DOE is not sampling excess soil for site characterization purposes, but for the management of the soil according to Removal Action 17 Work Plan, Improved Storage of Soil and Debris.

Resolution: 1) A list of radionuclides which will be analyzed for has been provided in Table 7-2.

2) No changes necessary.

2. DOE has provided a schedule for implementation of the RA in Section 4.0. However, the schedule does not indicate a submittal date for a final report and does not identify what the final report will include. The schedule should identify the delivery date of the final report and identify the components of the report. At a minimum the report should include the following: 1) an evaluation of the effectiveness of the RA in meeting RA work plan and RSE objectives, 2) a discussion of the findings of site radiation surveys and analytical data, 3) a discussion of the volume of contaminated soil and debris and its disposition, 4) any data gaps or additional required activities identified as a result of the RA activities, and 5) conclusions including anticipated future RA activities, if any.

Response: The DOE will provide a final report to the US EPA and Ohio EPA for informational purposes within 90 days of the receipt of all applicable data. This final report will contain an evaluation of the effectiveness of the removal action, a discussion of all applicable data, and a discussion of the volume of contaminated soil and debris generated.

Resolution: Section 4.2 will state that the final report will be submitted within 90 days of the receipt of all applicable analytical results.

Ohio EPA Comments

1. **Section 3.1.2, pg. 3-6, last paragraph:** DOE should avoid using materials which can not be washed or treated (e.g. asphalt). The use of such materials generates wastes which will not be treatable and takes an action which may not be consistent with the final remedy. The use of washable materials such as aggregates is preferred.

Response: This last paragraph defines a patented asphalt permitizing process for wood Uni-mats®. This process is not a thick layer of asphalt. The total thickness of this process is ½ to 1-inch. This condition occurs at the existing wood Uni-mats® only, over a limited area. This process provides a very durable surface, that will last until the final remediation of OU-1. During the final remediation of OU-1, these Uni-mats® will be remediated in the same manner as any other Uni-mats® encountered in the OU-1 area. Asphalt pavement is not used in the project.

Resolution: No resolution required.

2. **Section 3.3.2, pg. 3-8, 4th bullet:** DOE must include a description of the fill soil source as well as any criteria (e.g. contaminant concentration, etc.) used for determining adequateness of the fill material.

Response: A suitable topsoil will be used from an off-site source. The common fill material will also be from an off-site source unless an on-site source can be used.

Resolution: No changes required.

3. **Section 3.3.2, pg. 3-10, 3rd paragraph:** DOE should use water from a potable water supply for these activities.

Response: Will comply.

Resolution: This paragraph will be rewritten to specify the use of potable water.

4. **Section 4.2, pg. 4-2:** Unless the design effort has already started, DOE will not meet the required field work deadline of six months. The document fails to provide the date of issuance for the Action Memorandum but it must have been issued before the RSE thus requiring field work before December 1992. DOE must expedite its efforts to meet this deadline.

Response: The Action Memorandum for this removal action was issued August 27, 1992. To meet the NCP six month time criteria field activities must commence before March 1, 1993. In order to meet this time criteria, the DOE intends to initiate field activities of seeding the areas of stressed vegetation, as identified in Section 4.4, during the review cycle of the work plan. See letter from Jack R. Craig to Mr. James A. Saric and Mr. Graham E. Mitchell dated September 23, 1992 (DOE-2777-92).

Resolution: Section 4.2 will be rewritten to clarify the issuance date of the Action Memorandum and the intentions to implement seeding of the areas of stressed vegetation during the review cycle of the work plan.

0.2.2.8: **Section 7.2, pg. 7-1, last paragraph:** Is the radiological survey technique described here the same as that used in for the Sewage Treatment Plant Incinerator Soils Removal Action? If not, DOE should use the survey technique implemented in the Incinerator Soils RA survey.

Response: The radiological survey technique described in this removal action is not the same as that used in the Sewage Treatment Plant Incinerator Soils Removal Action. The radiological surveys are being used for different purposes in the two removal actions. The purpose of the radiological survey used in the Sewage Treatment Plant Incinerator Soils Removal Action was to perform a field survey to locate areas of soil with total Uranium concentrations above field action levels. These areas would be marked and excavated. In the Waste Pit Area Containment Improvements Removal Action, the purpose of the radiological surveys of the roads is to verify that the roads meet acceptable limits to allow access to them. Therefore, the WEMCO *Radiological Safety Radiological Contamination Surveys Procedure* (SP-P-35-023) will be used to perform the surveys.

Resolution: No changes required.

6. **Section 7.3, pg. 7-4, 1st paragraph:** DOE should consider the use of pre- and post-construction surface water sampling for evaluating the effectiveness of this removal action.

Response: See US EPA General Comment 2.

Resolution: See US EPA General Comment 2.

7. **Section 7.4, pg 7-4, 4th paragraph:** Radiological analyses, in addition to hazardous substance analyses, of the soil are necessary to determine the proper disposition of the soils. DOE should incorporate within the revised work plan radiological sampling of the excess material.

Response: DOE agrees that radiological analyses should be performed on the excess soil.

Resolution: Table 7-2 was added to include the radiological analyses which will be performed.

8. **Appendix C:** Include state ARAR: Ohio Solid Waste OAC 3745-27-02(UU); OAC 3745-27-05; ORC 3734.03; ORC 3734.01(I) since solid waste may be generated (contaminated soil); proposed runoff control rules, which will be ARARs when finalized, OAC 1511 and ORC 307.79.

Response: OAC 3745-27-01(UU) is the definition for "public water supply well." Prior to several recent revisions of this rule, this was the definition for "solid waste". The current citation for solid waste is 3745-27-01 (III). It is the FEMP's assumption that this is what Ohio EPA was referring to in this comment. This definition will not be included as an ARAR because all waste generated from this project will be stored according to Removal Action 17, Improved Storage of Soil and Debris, and is not being disposed so as to invoke the solid waste disposal rule.

OAC 3745-27-05, entitled Authorized, limited, and prohibited solid waste disposal methods, will not be included as an ARAR because disposal of solid waste will not occur. The stockpiling and disposition of soil does not constitute disposal by definition (see ORC 3734.01(F), where disposition constituting storage is not disposal). All soil will be stored per Removal Action 17 until remediation/disposal alternatives are selected and implemented.

ORC 3734.03, entitled Open dumping and burning, will not be included as an ARAR because disposal of solid waste will not occur under Removal Action 22.

ORC 3734.01(I) is the definition of "open dumping." This will not be included as an ARAR because disposal through open dumping will not occur at the FEMP. All excess soil from Removal Action 22 will be stored according to Removal Action 17 until remediation/disposal alternatives are selected and implemented.

Mr. Mitchell instructed WEMCO to delete proposed runoff control rules, OAC 1511 and ORC 307.79, from the comments in a phone conversation on October 16, 1992.

Resolution: No resolution necessary.