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**DISAPPROVAL OF REMOVAL ACTION 17 -
IMPROVED STORAGE OF SOIL AND DEBRIS**

07-23-92

**USEPA/DOE-FN
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LETTER**



R-028-707.1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

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JUL 23 1992

REPLY TO THE ATTENTION OF:

Mr. Jack R. Craig
United States Department of Energy
Feed Materials Production Center
P.O. Box 398705
Cincinnati, Ohio 45239-8705

HRE-8J

RE: Disapproval of Removal Action 17-
Improved Storage of Soil and Debris

Dear Mr. Craig:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the United States Department of Energy's (U.S. DOE) Removal Action 17 Improved Storage of Soil and Debris Work Plan. This Work Plan outlines short-term storage in contiguous areas of contamination (AOC) and construction of four improved storage facilities. Long-term management of these activities may take over ten (10) years.

On May 26, 1992, a meeting was held between U.S. DOE, U.S. EPA, and the Ohio Environmental Protection Agency in Dayton, Ohio to discuss comments and responses to this Removal Action Work Plan. As a result of this meeting U.S. EPA has revised its comments.

U.S. EPA hereby disapproves the Work Plan pending incorporation of the enclosed comments. U.S. EPA will be forwarding a letter addressing the issue of a waiver of the Applicable or Relevant and Appropriate Requirements regarding this Removal Action.

Please contact me at (312/FTS) 886-0992 if you have any questions.

Sincerely,

James A. Saric
Remedial Project Manager

Enclosure

cc: Graham Mitchell, OEPA-SWDO
Pat Whitfield, U.S. DOE-HDQ
Dennis Carr, WMCO

AUG 12 1992

TECHNICAL REVIEW COMMENTS**IMPROVED STORAGE OF SOIL AND DEBRIS, REMOVAL ACTION NUMBER 17
WORK PLAN****GENERAL COMMENTS**

1. The time required to complete the proposed removal action may be 10 years. The U.S. Environmental Protection Agency (EPA) notes that this exceeds the time period limitation for completing a removal action (RA), which is generally 12 months. Also, the planning phase for implementation of Phase 2 of the RA is likely to exceed 6 months, which requires the preparation of an engineering evaluation and cost assessment (EE/CA) or equivalent [National Oil and Hazardous Substances Pollution Contingency Plan (NCP) 40 CFR 300.420]. Considering the scope of this RA, the Department of Energy (DOE) should consider using an EE/CA or equivalent to meet NCP requirements.
2. The soil and debris management plan flow diagrams are comprehensive and well presented. However, the criteria are unclear for making a decision to obtain additional data in accordance with the sampling and analysis plan. For instance, Section 7.0 provides specific procedures for analysis, but it is not clear whether sampling will be conducted in all cases or only when radiological or photoionization unit readings are elevated. Also, the decision criteria, discussed in Section 3.0 should be integrated into Section 7.0 for consistency.
3. The current schedule does not include any mechanism for reporting to EPA or EPA approval during planned removals or waste generation. It may not be realistic to generate individual sampling plans, but some mechanism for EPA notification and approval should be defined. This mechanism should include a status report that indicates what major removals are planned, where material has been removed, provides the results of any analyses, identifies the disposition of removed material, and provides an inventory of the material.

SPECIFIC COMMENTS

4. Section 1.3, page 1-5, paragraph 2: Fifty parts per million (ppm) is the level for required incineration of polychlorinated biphenyl (PCB) contaminated waste under the toxic substances control act (TSCA); other TSCA cleanup levels may be applicable. For instance 40 CFR 761 requires cleanup to 25 ppm for fresh spills in

access restricted areas and 10 ppm in unrestricted areas. Also, the cleanup level for a Superfund site is lower; current policy requires cleanup to levels of 1 ppm to 10 ppm depending on the site remedy. The 50-ppm level is the level at which incineration is the only acceptable remedial option.

5. Section 3.1.2, page 3-5, paragraph 1: The material to be placed in a controlled stockpile if the activity concentration is greater than 100 pci/g should be further analyzed for RCRA-regulated contaminants. If contaminant determination (see Section 3.3) indicates that the material is nonhazardous, then it can be sent to the controlled stockpile (see Table 3-1).
6. Section 3.3, page 3-9, paragraph 3: The statement, "Physical samples and/or field measurements will be used to characterize materials when sufficient information is not available from the other data sources," is vague. The text should clearly indicate what information is adequate and when additional analyses will be needed.
7. Section 3.3, page 3-9, paragraph 4: The text, starting with "At a minimum," is unclear. If this text means that analyses will be conducted on all material, then this should be clearly stated.
8. Section 3.4, page 3-10, paragraph 4: The text should clearly state that hazardous constituents will also require transfer to an improved storage facility.
9. Section 3.4.6, page 3-16, paragraph 1: PCB-contaminated soil is a hazardous substance subject to CERCLA cleanup policy. DOE should include Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cleanup policy standards for PCBs.
10. Section 3.4.7, page 3-16, paragraph 3: It is not clear whether the hazardous waste piles referenced in Attachment 3 will be removed prior to grading in this area. Also, Phase 1, as described in Section 1.0, includes construction of a structure, but this activity is not addressed in this paragraph. The text should be revised to address these issues.
11. Section 6.2, page 6-2, paragraph 6: The 50-ppm level is a TSCA standard that requires incineration. 40 CFR 761 Subpart G requires cleanup of "fresh spills" on soils to 25 ppm in restricted areas and 10 ppm in unrestricted areas. CERCLA

policy standards should be used as the cleanup thresholds for PCBs. EPA also notes that risk-based cleanups generally fall in the range of 2 to 25 ppm.

12. Section 7.1, page 7-1, paragraph 2: The statement, "This sampling and analysis plan describes the procedures that will be undertaken to obtain analytical data of sufficient quality and quantity to characterize the soil and debris generated at the FEMP." is vague. The role of the sampling and analysis plan in contaminant determination should be discussed in detail.
13. Section 7.2.1, page 7-2, paragraph 2: PCB analysis should be included in the assessment of hazardous constituents.
14. Section 7.3.1, page 7-3, paragraph 3: The discussion of sampling techniques is vague: it does not include the rationale for deciding when sampling is required, nor does it include a mechanism for EPA review and approval. A specific sampling approach should be developed with an appropriate reporting format, or full sampling and analysis plans should be developed for specific projects, and these plans should be submitted for review and approval. Also, the sampling plan does not include any provisions for field screening as a means of waste assessment. This is significant because most initial waste determination will be made using hand held field instruments.
15. Section 7.3.1, page 7-4, paragraph 3: The work plan discusses the approach of using the volume of material as a means of determining the number of samples to be collected. Instead, the work plan should provide a specific approach that describes how many samples will be required under different conditions and how changing volume will affect the number of samples. For instance, statistical evaluation could be applied to existing data to determine whether the results are representative or a minimum number of samples could be collected and analyzed with additional data requirements based on representativeness or volume.
16. Section 7.5.1, page 7-5, paragraph 5: PCB analysis should be included in this section and in Table 7-2.
17. Section 7.5.2, page 7-6: Debris sampling is discussed in Section 7.3.2, not in Section 7.4 as stated in the text.

COMMENTS ON THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
"IMPROVED STORAGE OF SOIL AND DEBRIS, REMOVAL ACTION 17 WORK PLAN"
APRIL 1992

General Comments:

It should be clearly stated in Section 1.1, Goals and Objectives, that the field-correlated total uranium concentration of 100 pCi/g is not to be used as a final clean-up standard but only as a guideline for determining the soil storage disposition. This point should be reiterated throughout the work plan to clarify the purpose of the 100 pCi/g action level.

Specific Comments:

Page 2-1, Sect. 2.2, Para. 2, Sent. 3: The work plan is not absolutely clear as to how soil containing hazardous waste or PCBs at concentrations that exceed the regulatory standards will be containerized and stored if the total uranium activity concentration exceeds 100 pCi/g.

Page 3-5, Sect. 3.1.2, Para. 1: Since this work plan establishes a 100 pCi/g activity concentration for total uranium in soil to determine storage requirements, the procedure for correlating hand-held radiological detection instrumentation to the 100 pCi/g activity concentration for total uranium should then be included in the work plan.

Page 3-6, Sect. 3.2: The descriptions of the proposed improved storage facilities should be more specific as to the contaminant types (asbestos, VOCs, radioactive, etc.) of the materials to be accepted for storage. For example, the existing Scrap Metal (B69) Pad is the storage facility for low-level radiologically contaminated scrap metal, but the description of the Scrap Metal Pad in this work plan does not make that point clear. The facility descriptions should also include information on the approximate storage capacity, not size, of each facility and justifications for the added storage capacity should be made.

Page 3-6, Sect. 3.2: For the definition of the "Decontamination Facility Pad," the term "materials" is ambiguous and should be more descriptive in stating material types if more than just recoverable metal is to be stored there. It is also unclear as to whether this storage area is for short-term storage of items scheduled for decontamination, or for long-term storage. Further, radiologically contaminated metal that is recoverable should be stored at the Scrap Metal (B29) Pad where such a metal inventory already exists.

Page 3-8, Sect. 3.2.1, Para. 2: The method by which the mixed waste is segregated should be described. It is not clear as to what is to be segregated, whether it is the soil and debris, or the hazardous and radioactive components of the mixed waste.

Page 3-8, Sect. 3.2.1, Para. 6: The work plan should state how mixed waste (waste containing both radioactive and hazardous components) is going to be segregated and stored since off-site disposal of mixed waste seems unlikely.

Page 3-10, Sect. 3.4.1, Para. 1, Sent. 3: It is stated that a containment structure will be built, known as the CSF (Central Storage Facility), for "soils which contain a waste material other than radioactive constituents." This contradicts the definition of the Central Storage Facility on page 3-6 which mentions the segregation of waste based on the type of contamination, with radioactive contamination being one of the types.

Page 3-10, Sect. 3.4.1, Para. 1, Sent. 3: Mixed waste is waste containing both radioactive and hazardous components, so it can't be stored in the CSF which is "for soils which contain a waste material other than radioactive constituents (i.e., hazardous waste, mixed waste, petroleum contaminants, or PCBs)."

Page 3-15, Sect. 3.4.3: According to the description of the Central Storage Facility (CSF) on page 3-10, radioactively contaminated soil at a concentration that exceeds 100 pCi/g for total uranium cannot be stored at the CSF.

Page 3-15, Sect. 3.4.4: According to the description of the Central Storage Facility (CSF) on page 3-10, soils which contain a waste material other than radioactive constituents cannot be stored at the CSF, therefore mixed waste (waste containing radioactive and hazardous components) cannot be stored at the CSF.

Page 3-15, Sect. 3.4.5: According to the description of the Central Storage Facility (CSF) on page 3-10, soil from a USF project that is radioactively contaminated cannot be stored at the (CSF).

Page 3-25, Sect. 3.6.3.3: According to the description of the Central Storage Facility (CSF) on page 3-10, asbestos-contaminated debris that is also radiologically contaminated cannot be stored at the CSF.

Page 3-25, Sect. 3.6.3.5: According to the description of the Central Storage Facility (CSF) on page 3-10, mixed waste (waste containing radioactive and hazardous components) debris cannot be stored at the CSF.

Page 3-25, Sect. 3.6.3.6: According to the description of the Central Storage Facility (CSF) on page 3-10, petroleum-contaminated debris that is also radiologically contaminated cannot be stored at the CSF.

Page 4-6, Sect. 4.2: With regard to internal services present at the Improved Storage Facilities, forced ventilation equipment should be present at all facilities as a means to reduce occupational radon levels that may be present.

Page 4-7, Sect. 4.2: With regard to design considerations applied to the structures, provisions should be made for monitoring occupational radon exposure within the structures.

Page 7-2, Sect. 7.2.2: Analysis of radiologically contaminated soil samples should include gamma spectral analysis to identify the radionuclides that are present.