

4677

**DISAPPROVAL - FIRE TRAINING FACILITY  
RAWP/CPID**

**08/04/93**

**OEPA/DOE-FN**

**8**

**COMMENTS**

**OU3**



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George V. Voinovich  
Governor

August 4, 1993

RE: DISAPPROVAL -  
FTF RAWP/CPID

Mr. Jack R. Craig  
Project Manager  
P.O. Box 398705  
Cincinnati, Ohio 45239-8705

Dear Mr. Craig:

Attached are Ohio EPA comments on the Fire Training Facility Removal Action Work Plan and Closure Plan Information Document. These comments incorporate both RCRA and Remedial Response reviews. Ohio EPA staff will be available to discuss the inadequacies of this document and its revision.

If you have any questions, please contact Tom Schneider or me.

Sincerely,

*Graham E. Mitchell*

Graham E. Mitchell  
Environmental Manager

GEM/TAS/klj

- cc: Jenifer Kwasniewski, DERR
- Tom Schneider, DERR
- Mike Proffitt, DDAGW
- Jim Saric, USEPA
- Dennis Carr, FERMCO
- Lisa August, GeoTrans
- Jean Michaels, PRC
- Robert Owen, ODH

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PARTIAL  
ACTION RESPONSE  
to 5-1969  
(6533)

OHIO EPA COMMENTS  
ON  
CONTAMINATION AT THE FIRE TRAINING FACILITY RAWP/CPID

**General Comments**

1. The document describes using a PID for screening soils as contaminated or not. The plan fails to recognize the fact that, since listed wastes were disposed of at the site, any detection via laboratory analytical methods of one of the listed wastes constitutes a hazardous waste. Thus the assumption should be that a much larger volume of hazardous and/or mixed wastes will be generated. Additionally, the plan should be revised to incorporate this fact into the removal action.
2. The post excavation sampling provided in the work plan is insufficient to verify any cleanup. Collection of a single sample does not meet the requirements of any guidance. Thus DOE will fail to characterize the extent of contamination present and will not verify the attainment of any cleanup level. DOE should conduct additional verification sampling to determine the amount of hazardous waste and substances left in place as well as the radiological contamination left.
3. DOE should consider the use of an on-site analytical service to conduct timely analysis of organic contaminants. Such a system would allow for better definition of the waste units during the removal action. The analysis could be conducted at a lower DQO and used during excavation or removal activities.
4. Although the document makes reference to the specific requirements of a RCRA closure, the information presented within the plan is not at a level of detail consistent with that required for an approvable closure plan.
5. A list of all potential contaminants has not been provided within the RAWP/CPID. Although it is indicated that F003 and F005 solvents were disposed of at the site, there is no indication of which specific solvents were handled. DOE-FEMP must establish a list of all hazardous wastes which were ever handled at the Fire Training Facility and then monitor for all of these as potential contaminants.
6. The assumption is made throughout the plan that contamination will be detected using field monitoring equipment. This procedure does not constitute an adequate demonstration of clean closure by RCRA standards. Additional analytical testing will be required to define the rate and extent of contamination throughout the Fire Training Facility.

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7. The closure plan fails to include an adequate sampling and analysis plan which will enable DOE-FEMP to define the rate and extent of contamination throughout the Fire Training Facility. The sampling and analysis plan should include the following information:
  - \* Parameters to be analyzed.
  - \* Number of samples and locations.
  - \* Background samples.
  - \* Sample type.
  - \* Sampling methods and equipment.
  - \* Analytical methods.
  - \* Evidence of a QA/QC plan for lab analysis.
  - \* A statement of clean levels for soil and rinseate.
  - \* QA/QC procedure for field methods.
8. DOE-FEMP fails to identify what the status of the HWMU will be following closure (ie. will this be an attempt at clean closure of the Fire Training Facility?).
9. The plan states that a period of time greater than 180 days will be required to complete closure of the unit but fails to provide an adequate justification for the additional time requested.

#### Specific Comments

1. Section 2.2.3.1, pg. 2-17, 1st Paragraph: Additional detail should be provided as to why the "results of this survey were inconclusive". Were no data obtained or just bad data?
2. Section 2.2.3.2, pg. 2-20, 2nd paragraph: The statement that, "soil gas survey suggest that horizontal migration of VOCs in the perched groundwater has not occurred to a great extent" is unfounded. It would appear from reviewing the soil gas data in Figure 2-5 and the groundwater data in Appendix A that no correlation can be drawn between soil gas data and groundwater contamination. Soil gas data at location 26 shows elevated VOC levels, yet groundwater data in the area shows no detections. Whereas, piezometer 1509 shows significant groundwater contamination and no soil gas detections were found in the area.
3. Section 2.2.4, pg. 2-21, 1st paragraph:
  - a) The MCL for uranium is 20 ug/l not "30 ug/l."
  - b) The paragraph should discuss the fact that more than just uranium, thorium and daughters were sampled in the perched water. Attachment 1 shows the full Rad suite was analyzed.
  - c) The paragraph should provide information on radionuclides

- other than uranium detected in the perched groundwater.
4. Section 2.2.4, pg. 2-21, 2nd paragraph: The paragraph does not state whether wells 1887 and 1890 were sampled following installation. The text should describe any sampling conducted including the analytical suite.
  5. Section 3.1.2, pg. 3-4, bullets: This section fails to incorporate the available data concerning the FTF into its evaluation of soil disposition. Removal Action 17 addresses contaminants other than uranium. This work plan must account for the following facts: 1) radium and thorium are present at concentrations requiring containerization, 2) any detection of a listed hazardous waste in the soils makes the soil hazardous waste thus requiring containerization, 3) soils are known to contain petroleum contaminants thus requiring containerization, 4) soils are contaminated with PCBs above the action limit set in RA 17 thus requiring containerization. Based upon the data provided in Attachment 1, DOE must reevaluate the criteria for soil excavation and containerization. DOE should develop a more defined strategy for waste management during the RA at the FTF based upon available data and potentially collect additional data prior to excavation to support decision making.
  6. Section 3.1.2, pg. 3-5, 1st bullet: It is unclear the meaning of the "( $>$  total uranium 100 pCi/g)" statement in this bullet. Mixed waste is not defined by the 100 pCi/g limit. DOE should review the definition of a mixed waste as it pertains to this removal action.
  7. Section 3.2.2.3, pg. 3-12, 3rd paragraph: This section fails to address the characterization of contaminants in the surface water and sludges. Prior to any treatment of the waste waters or sludges characterization data is required to determine if the treatment proposed is sufficient and effective. DOE may not use the Plant 8 VOC treatment system prior to complete characterization of the waste water. Water and sludge should be sampled prior to removal from the respective units and sample collection should be in such a way (e.g., proper QA/QC) as to allow the data to be sufficient for use in other parts of the RI/FS.
  8. Section 3.2.2.4, pg. 3-13: DOE should consider incorporation of the metal generated as a part of this removal action into the Scrap Metal Pile Removal Action.
  9. Section 3.2.2.5, pg. 3-16, 1st paragraph: Why has DOE chosen to use the NaI detector over the shielded SPA-3 used during

- the STP Incinerator Soils Removal Action? The technique used during that removal action yielded very useful information. It would seem that DOE would want to continue to use that technology.
10. Section 3.2.2.5, pg. 3-16, 2nd paragraph: Since listed wastes have been disposed of at the FTF, the use of a PID or FID is not acceptable for screening soils as hazardous waste. As stated previously, soil containing any concentration of a listed waste is a hazardous waste. DOE should consider the use of a field GC or such for the characterization of soils prior to excavation. The use of a more quantitative instrument will better enable DOE to properly manage the hazardous waste as it is excavated.
  11. Section 3.2.2.5, pg. 3-16, 4th paragraph: Soil is considered a LLW even if it is less than 100 pCi/g of uranium (Please review the definition of a LLW). The paragraph should probably state that soils with uranium concentrations >100 pCi/g will be containerized as LLW. Additionally, as discussed in RA #17, soils containing specified levels of radium or thorium should also be containerized.
  12. Section 3.2.2.5, pg. 3-16: The section fails to address the excavation and disposition of soils containing PCBs and/or petroleum contamination as discussed in RA #17.
  13. Section 3.2.2.5, pg. 3-16 & 17, last & first paragraph: Excavation should continue until all guidelines (e.g., radium, thorium, PCBs, petroleum contamination, hazardous wastes) have been met.
  14. Section 3.2.2.5, pg. 3-17, 3rd paragraph: One sample from beneath the magnesium burn area excavation will not be sufficient to verify cleanup. DOE should define the objective of this sampling. If cleanup verification is the actual goal, then appropriate guidance documents should be reviewed for determining the required number and types of samples.
  15. Section 3.2.2.5, pg. 3-20, 3rd paragraph: DOE has failed to provide a justification for the use of test pits instead of the standard boring. DOE should provide the reasoning behind this decision.
  16. Table 3-3, pg 3-30: DOE has failed to justify the sampling scheme proposed herein. a) Why is the perched ground water not being sampled for inorganics or PCB? Inorganics have been detected in the perched ground water exceeding MCLs. PCBs have been detected in soils exceeding the FEMP action level.

- b) Why are TCLP metals being collected from ground water? It would seem that no advantage is gained by sampling for TCLP instead of HSL inorganics. DOE should sample for HSL inorganics.
17. Table 3-6, pg. 3-39: a) Decon should be conducted on all equipment prior to it leaving the RA area. The equipment will be used to excavate listed hazardous wastes and thus must be properly decontaminated to prevent the spread of hazardous waste to other areas of the FEMP.  
b) The table and text fail to provide a definition or reference for the definition of the various levels of decon.
18. Section 3.3.3.1, pg. 3-40, thorium bullet: Why is Th-228 not analyzed? Th-228 was detected during previous sampling events (see Attachment 1). DOE should include Th-228.
19. Section 3.3.3.1, pg. 3-41, Non-Rad An.: Sampling during the FTF RA should include analyses for dioxins. Dioxins have been detected during the sampling of fire training facilities at the DOE Mound Plant.
20. Section 3.3.3.1, pg. 3-41, Soil test pits: Table 3-6 suggests that only VOCs and Semi VOCs will be analyzed for in the test pits. This section suggest metals will be also sampled. The work plan should be revised as appropriate.
21. Section 3.3.3.1, pg. 3-41, 4th paragraph: The text should discuss which contaminants have been eliminated from the HSL Extended List. See previous comment concerning HSL inorganics versus TCLP metals.
22. Table 3-7, pg. 3-42: a) Why are sludges only sampled for radionuclides? It is most likely these materials will be hazardous wastes and must be sampled appropriately.  
b) Tables 3-7 and 3-8 should be reviewed to ensure consistency with Table 3-3. Table 3-3 includes no Herbicide/Pesticide sampling.
23. Section 3.4.5.3, pg. 3-52: a) As stated previously, the document is lacking in its consideration of the additional criteria within RA 17 for containerization of soils. DOE must review the criteria for radium, thorium, PCBs, and petroleum contamination and revise the document to address these contaminant waste streams.  
b) The assumptions that DOE used for estimating volumes of waste are not well presented. It would seem from review of the data within this document that any radiologically contaminated soil requiring excavation will most likely be a

mixed waste due to the presence of a listed waste. DOE should review the waste estimations with the fact in mind, that any detection of a listed waste within the soil results in the soil being a mixed waste.

- 24. Section 3.4.5.4, pg. 3-53, 4th paragraph: It is the reviewers understanding that in order to free release an object/material all surfaces had to be scanable. As a result of this requirement, porous media such as concrete could not be free-released. DOE should provide more detail on the criteria for free-release of such materials and how they will be met during this removal action.
- 25. Table 3-10, pg. 3-56: The table fails to include any ARAR or TBC relevant to the free-release of materials. Page 3-26 of RA #17 WP lists the following as ARARs for release of materials: 40 CFR 268.45, 40 CFR 192, NRC Reg. Guide 1.86, and DOE Order 5400.5. These should be included in the table and addressed within the work plan.
- 26. Section 4.1.1, pg. 4-1: a) How does DOE propose to compare TCLP metals from soils with total metals from soils for a decision on clean? The background soil study used HSL (total) metals analyses to develop the UTLs yet TCLP metals is proposed herein. The data from these two sets will not be comparable.  
b) DOE may not simply address the 100 pCi/g action limit and ignore the other action limits set within RA #17. DOE must address the action limits for radium, thorium, PCBs and petroleum contaminants.

- 27. Table 4-1, pg. 4-3: The organics section of this table requires significant revision:

Chloroform	MCL=0.1 mg/l	
1,2 DCA	DAL=0.07 mg/l	
1,2 DCE	MCL=0.07 mg/l	
PCE	MCL=0.005 mg/l	DAL=0.075 mg/l
Pentachloroph.	MCL=0.001 mg/l	DAL=0.015 mg/l
Toluene	MCL=1.0 mg/l	

Additionally, why isn't TCE include since it has been detected and is a listed waste? Other constituents such as Semi Vols and PCBs should be considered also, especially if they are listed wastes.

- 28. Table 5-1, pg. 5-2: DOE has not provided sufficient information to justify the "Schedule Hold Interval" proposed in the schedule. Ohio EPA can see no reason for not initiating the removal action upon approval of the work plan. The Schedule Hold Interval is unacceptable.

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- 29. Attachment 1, Section 2.1, pg. 2: The section referenced Figure 1 but no such figure exists within the attachment. The figure should be included.
- 30. Attachment 1, Table B.1: It is unacceptable to have data outstanding for three years. Samples for Tc-99 and Sr-90 were collected 5/3/90 and as of printing this work plan were not available. DOE should track, acquire, and incorporate this data prior to submission of the revision.