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**TRENCHING IN THE OU #2 SOLID WASTE
LANDFILL AND SOUTH FIELD AREA 2**

10-22-92

**USEPA/DOE-FN
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LETTER**



UNITED STATES ENVIRONMENTAL
REGION 5
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REPLY TO THE ATTENTION OF:

OCT 22 1992

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

HRE-8J

RE: Trenching in the OU #2 Solid
Waste Landfill and South Field
Area 2

Dear Mr. Craig:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the Results of Characterization Trenching in the Operable Unit (OU) #2 Solid Waste Landfill and South Field Area 2. The purpose of the trenching was to visually characterize the contents of the Landfill, and obtain leachate samples. The contamination discovered may have revealed a potential data gap in the OU #2 Remedial Investigation (RI).

Therefore, U.S. EPA has enclosed comments on the results of the Landfill trenching. The United States Department of Energy should investigate the attached comments and their potential impacts on the OU #2 RI.

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

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bcc w/o attachments:

William Muno->Norm Niedergang->Kevin Pierard, WMD
Brian Barwick, ORC
Cheryl Allen, OPA

bcc w/attachments:

Larry Jensen, ARD
Tom Hahne, PRC

RESULTS OF CHARACTERIZATION TRENCHING IN THE
OPERABLE UNIT 2 SOLID WASTE LANDFILL AND SOUTH FIELD AREA 2

TECHNICAL REVIEW COMMENTS

General Comments

- 1) Three trenches were excavated within the solid waste landfill (SWL). Trenching activities in two of the three trenches had to be discontinued when medical waste in Trench 2 and volatile organic compounds (VOC) and possible yellowcake in Trench 3 were encountered. The purpose of ground-water sampling was to sample leachate from contaminated portions of the SWL; in Trenches 2 and 3, leachate from the areas of greatest contamination was not sampled, because trenching activities were discontinued. Although cessation of trenching activities was an appropriate health and safety precaution, it also creates possible data gaps. The document should note that the samples are not necessarily representative of possible hotspots and should clearly identify the level of uncertainty. The U.S. Department of Energy (DOE) should identify future activities to alleviate data gaps, particularly considering the possible risks posed by materials identified in the SWL. Finally, the relevance of these findings to those of the Operable Unit (OU) 2 remedial investigation (RI) should be discussed.
- 2) Geologic fence diagrams and cross sections are presented for the SWL trenching activities. The fence diagrams do not accurately reflect the termination of trenches at a 6-foot depth in Trench 2 and at a 3-foot depth in Trench 3. The fence diagrams should be modified appropriately.
- 3) The location of trenches in both the SWL and South Field Area 2 are not adequately identified. The location of trenches with respect to ^{gs} landfill boundaries or with historically identified features (such those identified in the 1954 aerial photograph) should be clearly identified on maps. Also, the sampling locations should be identified.

- 4) It is not clear whether or not soil samples from the SWL were submitted for analysis. DOE should indicate if suspect material (for example yellowcake and paint-contaminated soils in Trench 3 and medical waste in Trench 2) was sampled when encountered. Also, other information should be provided for identifying the likely constituents of the medical waste, yellowcake, magnesium fluoride, and paint waste identified during the excavation. For instance, labels (such as those on paint cans) identifying the contents or physical characteristics of the waste that could be used to further identify the wastes should be included.
- 5) The report consists of three attachments and a cover letter. None of the attachments have numbered pages. The document should be more formally organized and pages should be numbered.
- 6) The report does not include any analytical results. The report does however, clearly state that this information will be provided, when available. DOE should provide some schedule for submitting analytical data.

Specific Comments

Comment No. 1 -- Attachment No. 2, Section 2.1. Medicine vials and possibly magnesium fluoride were identified in Trench 1. DOE should clearly indicate what the potential source of this material is and identify, if possible, the possible contents. DOE should also discuss the significance of this finding.

Comment No. 2 -- Attachment No. 2, Figure 2.1. The figure is not drawn to scale; however, the figure implies that trenches were all excavated to the same depth. DOE should provide a vertical scale and identify precisely the limits of the excavations (for example 3 feet below ground surface (bgs) in Trench 3, and 6 feet bgs in Trench 2). Also, the trenches should be identified on a map clearly showing their positions within the SWL.

Comment No. 3 -- Attachment No. 2, Figure 2.2. The figure should include the locations where ground-water samples were collected.

Comment No. 4 -- Attachment No. 2, Section 2.2.1. The report indicates that medical waste was found in Trench 2. DOE should identify specifically what types of medical waste were identified and include any information that could be used to infer the possible hazardous constituents of this waste.

Comment No. 5 -- Attachment No. 2, Figure 2.4. The figure implies that the trench was excavated along its entire length to a depth of 12 feet. However, the text clearly states that excavation in the central and northern sections extended to a depth of 6 feet. The figure should be corrected. Also, ground-water sampling locations should be included.

Comment No. 6 -- Attachment No. 2, Figure 2.6. The figure implies that the trench was excavated along its entire length to a depth of 12 feet. However, the text clearly states that excavation in the central and northern sections extended to a depth of 3 feet. The figure should be corrected. Also, ground-water sampling locations should be included.

Comment No. 7 -- Attachment No. 2, Section 3.3. DOE does not indicate that the horizontal and vertical extent of contamination is unknown because of the limits of the excavation. This section should clearly identify data gaps caused by limiting the investigation.

Comment No. 8 -- Attachment No. 3, Section 1.4. DOE states that no ground-water sampling was conducted because of the slumping of trench walls. The significance of this data gap should be discussed. DOE should consider additional activities to collect ground-water samples if the data gap will result in unacceptable levels of uncertainty.