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**SUMMARY ON WASTE PIT CHARACTERIZATION
ACTIVITIES - FEED MATERIALS PRODUCTION
CENTER (FMPC)**

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LETTER**



Department of Energy

Oak Ridge Operations
P. O. Box E
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January 12, 1988
DOE 357-88

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Action

Ms. Catherine McCord
US-EPA
Environmental Review Branch
Planning & Management Division
Region V SHE-12
230 S. Dearborn Street
Chicago, Illinois 60604

**SUMMARY ON WASTE PIT CHARACTERIZATION ACTIVITIES - FEED MATERIALS
PRODUCTION CENTER (FMPC)**

Dear Ms. McCord:

During the November 3, 1987 Technical Information Exchange Meeting, questions arose regarding the Characterization Investigation Study (CIS), and whether the CIS characterized the waste pits adequately for the site-wide Remedial Investigation and Feasibility Study (RI/FS). DOE maintains the position that the CIS satisfies the determination of the nature and extent of contaminants in the waste pit area for the RI/FS process, and considers this phase of site characterization complete.

Two major activities took place during the various phases of the CIS in order to characterize the source term in the waste pit area. The first involved geophysical surveys designed to 1) provide information on waste concentrations and shallow stratigraphy and, 2) optimize soil borings and groundwater monitoring well placement. The geophysical surveys located ferrous metal and confirmed the existence of nonferrous materials including possibly graphite, nonferrous metal, fly ash, bricks and construction debris, and liquid waste. The geophysical surveys confirmed the heterogeneity of the contents of the waste pits.

The second major activity of the CIS was actual soil and pit sampling. Three to 12 vertical borings were made in each facility within the waste storage area, and split spoon samples were taken at 20- to 24- inch increments from the surface to near the bottoms of the pits. A total of 790 samples were obtained in this manner. Selected samples were analyzed for radioisotopes, HSL parameters, and RCRA characteristics. Pit numbers 1, 3, 5, 6, the burn pit, lime sludge ponds, and the fly ash areas were somewhat homogeneous with depth and from borehole to borehole,

and showed some stratigraphic layering. Pit numbers 2 and 4, and the sanitary landfill were more heterogeneous with depth and from borehole to borehole, than the other pits.

Data regarding contents of the waste pits existed prior to sampling and surveying for the CIS. These data are comprised of accountability records, miscellaneous records and photographs, and information from personnel interviews. Accountability records for total uranium, total thorium, and U-235 in each waste pit are on file. Estimates of the elemental constituents for each waste pit are also on file. Photographic documentation shows materials in waste pits 1, 2, 3, and the burn pit, while the materials are being placed into the pits, and before pit closure. Interviews with site personnel who worked around and placed material into the pits enhance the body of existing data. Surveying and sampling data for the CIS served to confirm existing data.

It is DOE's position that the sample data collected under the CIS, coupled with historic and observational data on the contents of the waste pits, provide sufficient information to determine source terms for use in the first phase of the site-wide RI/FS. Further sampling would not yield significant new data to warrant the risk of obtaining new samples, nor would it substantially change the existing body of information.

Pending USEPA-V approval, DOE plans to proceed with the pathway, receptor, and risk assessment portions of the RI/FS. If the results from the pathway, receptor, and risk assessment portions of the RI/FS indicate that additional information is required in order to better define source terms, the need for further sampling of the waste pits will be evaluated.

The current CIS database (Vols. I, II, III) will undergo a detailed review to confirm existing data. The results will be incorporated into the Task 1. "Description of Current Situation".

If you have any questions, please contact Margaret Wilson of our Environmental Protection Division on FTS 626-8528.

Sincerely,


James A. Reafender
Site Manager

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3348

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