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U-006-305 .55

RE: K-65 SILO SAMPLING PLAN U. S. DEPARTMENT OF ENERGY FEED MATERIALS PRODUCTION CENTER, FERNALD, OHIO

10/14/88

USEPA DOE-FN
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COMMENTS

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:
5HR-12

OCT 14 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. James A. Reafsnyder
United States Department of Energy
Environmental Protection Division
P.O. Box E
Oak Ridge, Tennessee 37830

Re: K-65 Silo Sampling Plan
U.S. Department of Energy
Feed Materials Production Center
Fernald, Ohio
OH6 890 008 976

Dear Mr. Reafsnyder:

The United States Environmental Protection Agency (U.S. EPA) would like to acknowledge the receipt of the sampling and implementation plan for the K-65 and metal oxide residue silo project on September 9, 1988. The silos (above-ground storage tanks) have been used to store waste raffinate slurries (K-65 residues in silos #1 and #2) and waste calcined raffinate powder (metal oxides in silo #3). The known primary hazardous substances of concern in silos #1 and #2 are radium and uranium and thorium, radium and uranium in silo #3. Some information is also available on inorganic constituents, but none on organic constituents. The goal of the sampling effort is to gather all information necessary to characterize the waste for removal, disposal, container compatibility, etc.

U.S. EPA has the following comments on the proposal:

(1) There are four tanks in the waste pit area, but the plan only addresses three of the them. silo #4 is assumed to be empty. This effort should involve the verification that no waste or other materials have been placed in silo #4. Any liquid or solid discovered in silo #4 should also be sampled.

(2) Section 1-1.0. The plan states that the purpose of the sampling and analysis is to characterize the waste for the purpose of remediation. The remedial investigation and selected remediation will address the impacts of the storage of waste in the tanks, not necessarily its removal from the tanks. The purpose of the sampling is to characterize the waste and a engineering plan for

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removal of the waste from the tank should be developed based on the sample analysis. Any contamination resulting from the storage of the waste in the tanks will then be addressed by the Remedial Investigation (RI) by sampling of surrounding soils and groundwater. The waste sample results will indicate what parameters should be included in the investigation of underlying and surrounding soils and water.

(3) Section 1-2.0. Are the results from the recent tank probing effort included in the total radium and uranium estimates?

(4) Will the radon treatment system be used for silo #3?

(5) Section 1-2.0, page 7. Clarify that the interim efforts to structurally stabilize the domed tops of the tanks have only occurred on silos #1 and #2.

(6) Is data presented in Table 2-1 for silos #1 and #2 available for silo #3?

(7) Sections 1-3.1 and 1-3.2, pages 6 and 7. Characterization of the waste with respect to regulatory requirements is necessary, but physical characteristics and information on all constituents is also necessary.

(8) Section 1-3.2, page 5. The statement that "the available data may not be fully representative" of the tank contents is a strong consideration in evaluating the number of samples that are required to be collected. The vertical homogeneity can not be substantiated by the 1950's waste samples. A conservative approach must be taken in evaluating the number of samples required.

(9) Section 1-3.3, page 10. Define what is meant by "significant levels" of HSL organics, PCBs, and pesticides? What is the source of these constituents?

(10) Some of the procedures in the Detailed Operational Procedures (DOP) and the Sampling and Analysis Plan (SAP) contradicted or were not always consistent with portions of the Quality Assurance Project Plan (QAPP). For example, several tables in the QAPP presented information on tests and test procedures that are not proposed in the DOP or SAP (i.e., water samples). It appears that boilerplate language was used for portions of the QAPP.

(11) Any portion of the core samples that exhibits pronounced layering should be analyzed for organics, total metals, EP toxicity metals, and radionuclides. Layers that exhibit the expected homogeneity should be analyzed for total metals, EP toxicity metals, and radionuclides.

(12) Full-face respirators should be worm instead of the proposed half- face respirators. Full-face provides much greater protection that a half-face.

(13) The sampling plan should clarify that CLP laboratory procedures, not a CLP laboratory, are going to be used.

(14) Total metal analysis should include the remaining target substance list metals: antimony, beryllium, copper, nickel, and thallium.

(15) Sample analysis should include the toxicity characteristic leaching procedures (TCLP).

(16) Due to the presence of radionuclides in the samples, U.S. DOE is proposing to exceed sample holding times for organic and mercury analysis. The proposed amount of holding time (sample collection to analysis) should be specified.

(17) Provide specific details of how the bottom of the tank will be protected from the Vibra Core during sampling. How will the bottom of the tank be located.

(18) What king of testing of rinseate will be done to verify the cleaning of sampling equipment? Are field blanks going to be collected?

(19) How and were will remaining core be archived?

(20) Will there be any air monitoring for organic constituents?

(21) Will any air samples be collected from void air space?

(22) How will sample locations within the tank be documented and marked?

These comments can be discussed at the October 28, 1988, groundwater meeting, if necessary. If this timeframe is not adequate, we can set up a teleconference sometime before October 28.

Please contact me at (312 or FTS) 886-4436, if you have any questions regarding this matter.

Sincerely,

Catherine A. McCord

Catherine McCord
Project Manager
RCRA Enforcement Branch

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