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**APPLICABILITY OF 40 CFR PART 191 TO THE FEED MATERIALS  
PRODUCTION CENTER (FMPC)**

07/10/87

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LETTER

USEPA



Department of Energy

Oak Ridge Operations  
Post Office Box E  
Oak Ridge, Tennessee 37831

Wesley JORDAN

Bill Newton

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July 10, 1987

Mr. Valdas V. Adamkus  
Regional Administrator  
U.S. Environmental Protection Agency  
Region V - 5ME-12  
230 S. Dearborn Street  
Chicago, Illinois 60604

Dear Mr. Adamkus:

**APPLICABILITY OF 40 CFR PART 191 TO THE FEED MATERIALS PRODUCTION CENTER (FMPC)**

This is in response to your June 8, 1987, letter to Joe La Grone regarding the applicability of 40 CFR Part 191, Environmental Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Waste, to the waste stored in the K-65 silos at the FMPC. The K-65 residues contain approximately 1652 grams of Ra-226 as estimated by past sampling operations. Based upon this radium content, the specific activity of the K-65 materials is estimated to be approximately 188 nanocuries per gram. The figure of 17,600 curies referenced in Table 3.4 of the Remedial Investigation/Feasibility Study (RI/FS) Task 1 Report-Description of the Current Situation is a typographical error. We sincerely regret that the error was not caught during our final review of the document.

With regard to thorium stored on site, we have determined that only those materials with greater than 90% purity would exhibit activities above 100 nanocuries per gram. The FMPC currently stores approximately 66,000 kilograms of material in 320 drums with specific activities greater than this level. This material is being stored in several facilities (one location is outside storage) at the FMPC pending management at another DOE site. Small quantities of thorium waste have also been reported as being placed in waste storage pits 2 and 4. These pits are currently being characterized as part of the RI/FS at FMPC. We are not aware of any other material currently handled or stored at the FMPC that exhibits activities greater than 100 nanocuries per gram.

40 CFR Part 191 establishes environmental standards for the management, storage and disposal of spent nuclear, high level and transuranic radioactive wastes. No materials are currently being processed or stored at the FMPC, including the K-65 residues and the thorium inventories, which contain in excess of 100 nanocuries per gram of an alpha emitting transuranic isotope (i.e., elements with an atomic number greater than 92). Therefore, we believe that the provisions



July 10, 1987

5885

of 40 CFR Part 191 are not directly applicable to operations at the FMPC. In addition, EPA Region II has agreed that K-65 residues stored at Niagara Falls are not covered by these regulations because the residues result from naturally occurring radioactive material.

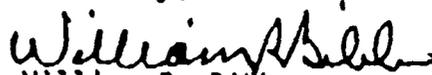
In response to the specific compliance concerns raised in your letter:

- (1) The K-65 residue are isolated from other wastes at FMPC and will remain that way.
- (2) It is our goal to meet the dose standards in Subpart A of 40 CFR 191. We are in the planning phase of interim control measures to further reduce exposures associated with the storage of the K-65 residues and the thorium bearing materials. These interim control measures have been identified in the original and revised deliverables submitted to your office in response to Item B of the CERCLA section of the Federal Facilities Compliance Agreement (FFCA). Updates on actions pursuant to this item of the FFCA have been provided to your office on a monthly basis in the Technical Information Exchange meetings being conducted at the FMPC. We will secure EPA concurrence prior to implementing any interim control measures at these facilities.
- (3) Disposal options for the K-65 residues are also being evaluated as part of the RI/FS and the recommended option will be submitted to you for approval prior to implementation.

As part of the process of evaluating the proposed interim control measures at the K-65 silos and the thorium storage structures, dispersion modeling and dose assessments will be completed to assess the impact associated with the actions. All modeling will be in accordance with AIRDOS-EPA. The dose assessment will estimate the annual dose equivalent to the maximally exposed individual resultant from the K-65 silos and thorium structures before, during and following the implementation of interim control measures. Upon completion of these modeling runs, the DOE will evaluate the need to implement further actions at these facilities so as to minimize off-site exposure to members of the general public and meet the objectives of the DOE As Low As Reasonably Achievable (ALARA) program. We will continue to inform your office of the results of these assessment activities as they become available.

We appreciate the assistance provided by EPA and trust that the information provided in this letter is adequate for your determination that the current DOE plans and procedures regarding the K-65 waste are acceptable.

Sincerely,

  
William R. Bihh  
Deputy Assistant Manager  
for Fernald