



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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REPLY TO THE ATTENTION OF:

AUG 01 2000

SRF-5J

Mr. Johnny W. Reising
United States Department of Energy
Feed Materials Production Center
P.O. Box 398705
Cincinnati, Ohio 45239-8705

RE: IEMP 1st Quarter
2000 Report

Dear Mr. Reising:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the United States Department of Energy's (U.S. DOE) integrated environmental monitoring report for the first quarter of 2000. This document is designed to meet the site-wide environmental monitoring reporting requirements, pursuant to the Integrated Environmental Monitoring Plan (IEMP).

Although the report adequately presents the monitoring data and meets the requirements of the IEMP, U.S. EPA has concerns over the increased dose equivalents for the 16 fence line monitoring stations for the 1st quarter of 2000, when compared to 1999. These concerns are further elaborated below:

1. As noted in the integrated environmental monitoring status report (IEMSR), first quarter 2000 dose equivalents for the 16 fence line monitoring stations increased significantly compared to those for the first quarter of 1999. The IEMSR also notes that the highest fence line dose equivalent (0.37 millirem [mrem] at AMS-3) "represents a significant increase over the first quarter 1999 dose of 0.018 mrem." Additional concerns not noted in the IEMSR are as follows:

2. The 0.37-mrem maximum dose was accumulated over 3 months and is higher than the maximum 1999 annual dose of 0.29 mrem accumulated over 12 months.

3. First quarter 2000 doses at 6 of the 16 fence line monitoring stations exceeded the 1999 annual doses. These 6 stations were located at the northeast corner of FEMP (AMS-23), along the eastern boundary (AMS-3, AMS-9C, and AMS-29), and at the southwest corner (AMS-5 and AMS-25). Therefore, elevated doses are occurring around much of the FEMP boundary.

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4. As noted in the IEMSR, first quarter results reflect "the shutdown of earthmoving remediation projects during the winter months" and are typically lower than results for the remaining three quarters of the year. In the absence of any efforts by the Waste Pits Remedial Action Project (WPRAP) to control fugitive emissions, doses for the remaining three quarters of 2000 would be expected to be higher than those measured during the first quarter.

5. The maximum first quarter 2000 dose (0.37 mrem) exceeded the maximum first quarter 1999 dose (0.018 mrem) by a factor of about 20. If this factor were to persist throughout the rest of 2000, the projected maximum fenceline dose for 2000 would be 20 times the 1999 maximum dose (20×0.29 mrem), or 5.8 mrem. This projected dose is below the 10-mrem NESHAP standard but is still of concern.

6. The IEMSR notes that thorium isotopes are contributing an increasingly large portion of the dose measured at fenceline monitoring stations. Monitoring results for 1990 through 1998 indicate that uranium isotopes contributed an average of 62 percent of the dose. However, during the first quarter of 2000, thorium isotopes accounted for an average of 65 percent of the dose while uranium isotopes accounted for less than 20 percent.

7. The maximum uranium isotope contribution at any fenceline monitoring station was only 34 percent of the dose, and uranium isotope contributions were less than 10 percent of the dose at two stations.

8. Thorium isotope contributions ranged from 34 to 82 percent of the dose and were higher than 65 percent at 11 of the 16 monitoring stations.

9. First quarter 2000 results strongly suggest that the biweekly uranium isotope measurements conducted as part of the air particulate monitoring program are no longer the best short-term indicators of radiation exposure at the FEMP fenceline. Furthermore, focusing on uranium isotopes when other isotopes contribute most of the fenceline dose may create a false picture of the effectiveness of FEMP's fugitive emission control practices.

The IEMSR briefly addresses both the increases in dose equivalent and thorium contribution issues and what U.S. DOE is doing to address them. However, U.S. EPA requests to be updated once monitoring results are obtained by U.S. DOE, and to be made aware of any changes in sampling protocol that may occur, as well as continued trends based on the results of the fenceline monitoring.

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Please contact me at (312) 886-0992 if you have any questions regarding this matter.

Sincerely,



James A. Saric
Remedial Project Manager
Federal Facilities Section
SFD Remedial Response Branch #2

cc: Tom Schneider, OEPA-SWDO
Bill Murphie, U.S. DOE-HDQ
John Bradburne, Fluor Fernald
Terry Hagen, Fluor Fernald
Tim Poff, Fluor Fernald

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