

June 1, 2005

Richard L. Sweigart, Vice President
Regulatory Affairs Manager
Duke Cogema Stone & Webster
P.O. Box 31847, M/S FC21A
Charlotte, NC 28231-1847

SUBJECT: CORRECTION TO THE FINAL SAFETY EVALUATION REPORT ON THE
CONSTRUCTION AUTHORIZATION REQUEST FOR THE MIXED OXIDE
FUEL FABRICATION FACILITY AT THE SAVANNAH RIVER SITE, SOUTH
CAROLINA

Dear Mr. Sweigart:

The purpose of this letter is to provide Duke Cogema Stone & Webster with a corrected Table 9.1-7, "Comparison of the Radiotoxicity of Reactor-Grade Plutonium and Weapons-Grade Plutonium; TEDE Per Gram of Plutonium Inhaled," on page 9-16 of NUREG-1821, "Final Safety Evaluation Report on the Construction Authorization Request for the Mixed Oxide Fuel Fabrication Facility (MFFF) at the Savannah River Site, South Carolina."

It was brought to our attention that the incorrect dose conversion factors were used in the evaluation of this table. Due to this correction, the statement on page 9-15 of the FSER, "In addition, MELOX processes reactor-grade plutonium, which delivers about 10 times more dose from inhalation than the weapons-grade plutonium proposed for use in the MFFF," is incorrect. The correct statement is, "In addition, MELOX processes reactor-grade plutonium, which delivers about 5.6 times more dose from inhalation than the weapons-grade plutonium proposed for use in the MFFF." This does not change the conclusion that the collective dose observed at the MELOX facility is a reasonable upper bound of doses expected at the MFFF.

Attached is the corrected Table 9.1-7, using the correct dose conversion factors.

If you have any questions, please contact me at (301) 415-8076.

Sincerely,

/RA/

William Troskoski, Project Manager
Mixed Oxide Facility Licensing Section
Special Projects Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

Docket: 70-3098

cc: J. Johnson, DOE
H. Porter, SC Dept. of HEC
J. Conway, DNFSB

L. Zeller, BREDL D. Silverman, Esq. DCS
G. Carroll, GANE
D. Curran, Esq., GANE

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Table 9.1-7 Comparison of the Radiotoxicity of Reactor-Grade Plutonium and Weapons-Grade Plutonium; TEDE Per Gram of Plutonium Inhaled

Pu Isotope	DCF (rem/ μ Ci)	Specific Activity of Pu isotope (μ Ci/g)	Reactor-Grade Isotopic Mass Fraction	Reactor-Grade Dose Fraction (rem/g Pu)	Weapons-Grade Isotopic Mass Fraction	Weapons-Grade Dose Fraction (rem/g Pu)
^{238}Pu	3.9×10^2	1.71×10^7	0.0149	1.0×10^8	0.000395	2.6×10^6
^{239}Pu	4.3×10^2	6.13×10^4	0.595	1.6×10^7	0.92	2.4×10^7
^{240}Pu	4.3×10^2	2.28×10^5	0.240	2.3×10^7	0.0614	6.0×10^6
^{241}Pu	8.3	1.03×10^8	0.103	8.8×10^7	0.01	8.5×10^6
^{242}Pu	4.1×10^2	3.93×10^3	0.04	6.5×10^4	0.001	1.6×10^3
TOTAL				2.3×10^8		4.1×10^7