



DUKE COGEMA  
STONE & WEBSTER

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

15 January 2003  
DCS-NRC-000125

Subject: Docket Number 070-03098  
Duke Cogema Stone and Webster  
Mixed Oxide Fuel Fabrication Facility  
Corrections to *Mixed Oxide Fuel Fabrication Facility Environmental Report Revisions 1&2*, Tables 5-13a and 5-13b

Reference: P.S. Hastings (DCS) letter to U.S. Nuclear Regulatory Commission Document Control Desk, *Update to Mixed Oxide Fuel Fabrication Facility Environmental Report Revisions 1&2*, 10 December 2002

On 10 December 2002, Duke Cogema Stone and Webster (DCS) provided an update of the *Mixed Oxide Fuel Fabrication Facility Environmental Report Revisions 1&2*, Section 5.5 and Appendix F. On 7 January 2003, DCS was contacted by the NRC Staff with questions on the updated sections. As a result of that conversation we are submitting the attached correction to Tables 5-13a and 5-13b submitted as part of the 10 December 2002 transmittal. In addition, we are submitting a correction to Table 5-20.

If you have any questions, please contact me at 704-373-7820 or Mary Birch at 704-382-1401.

Sincerely,

Peter S. Hastings, P.E.  
Manager, Licensing and Safety Analysis

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Enclosure: Corrected Tables 5-13a, 5-13b and 5-20

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*Mitigated*  
Table 5-13a. Summary of Bounding MFFF Events *Consequences*

Bounding Accident <sup>a</sup>	Meteorology <sup>b</sup>	Maximum Impact to Site Worker (mrem)	Maximum Impact to Site Worker (probability of cancer deaths)	Maximum Impact to Public at SRS Boundary (mrem)	Maximum Impact at SRS Boundary (probability of cancer deaths)	Impact on Population within 80 km (person-rem)	Impact on Population within 80 km (LCFs)
Internal Fire	bounding - 95% percentile	<100	<del>&lt;4E-5</del> < 2 E-5	<0.5	<del>&lt;3E-7</del> < 1E-7	<del>&lt;3E-2</del> < 6E+3	<del>&lt;2E-5</del> < 4E-4
Load Handling	bounding - 95% percentile	<150	<6E-5	<1.0	<5E-7	<del>&lt;3E-2</del> < 3E+2	<del>&lt;2E-5</del> < 2E-3
Hypothetical Explosion Event	bounding - 95% percentile	<del>&lt;500</del> < 750	<3E-4	<del>&lt;3.0</del> < 5.0	<2E-6	<del>&lt;9E-2</del> < 2E+1	<del>&lt;5E-5</del> < 7E-3
Hypothetical Criticality Event	bounding - 95% percentile	<2200	<9E-4	<12	<6E-6	<6	<3E-3

<sup>a</sup> The bounding loss of confinement event is bounded by the load-handling event.

<sup>b</sup> Values calculated for 50<sup>th</sup> percentile indicate that median meteorology is at least three times lower than the bounding values.



Table 5-13b. Summary of Bounding Low Consequence Events

Bounding Accident	Meteorology <sup>a</sup>	Maximum Impact to Site Worker (mrem)	Maximum Impact to Site Worker (probability of cancer deaths)	Maximum Impact to Person at Site Boundary (mrem)	Maximum Impact at Site Boundary (probability of cancer deaths)	Impact on Population within 80 km (person-rem)	Impact on Population within 80 km (LCFs)
Loss of Confinement	bounding - 95% percentile	<del>&lt;500</del>	<del>&lt;4E-7</del> <3E-4	<del>&lt;1E-2</del> <4	<del>&lt;5E-9</del> <2E-6	<del>&lt;8E+1</del> <1E+1	<del>&lt;4E-7</del> <5E-3
Internal Fire	bounding - 95% percentile	<500	<del>&lt;2E+1</del> <3E-4	<4	<2E-6	<del>&lt;5E+3</del> <1E+1	<del>&lt;3E-6</del> <5E-3
Load Handling	bounding - 95% percentile	<del>&lt;500</del>	<del>&lt;4E-7</del> <3E-4	<del>&lt;1E-2</del> <4	<del>&lt;5E-9</del> <2E-6	<del>&lt;8E+1</del> <1E+1	<del>&lt;4E-7</del> <5E-3
Hypothetical Explosion Event	bounding - 95% percentile	N/A	N/A	N/A	N/A	N/A	N/A
Hypothetical Criticality Event	bounding - 95% percentile	N/A	N/A	N/A	N/A	N/A	N/A

<sup>a</sup> Values calculated for 50<sup>th</sup> percentile indicate that median meteorology is at least three times lower than the bounding values

**Table 5-20. Irreversible and Irretrievable Commitments of Construction Resources for the MOX Fuel Fabrication Facility**

Resource	Commitment	Comments
Land	106 acres	Land will be returned to industrial use after completion of the MFFF mission
Electricity (MWh)	<del>16</del> 16,000	
Fuel (gal)	330,000	
Water (gal)	33,000,000	Water will be treated and returned to the environment
Concrete (yd <sup>3</sup> )	156,000	
Steel (tons)	38,000	

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