

August 8, 2007

Mr. Dealis W. Gwyn, Licensing Manager
Shaw AREVA MOX Services
P.O. Box 7097
Aiken, SC 29804-7097

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING THE REVIEW OF
THE CIVIL/STRUCTURAL DESIGN FOR THE MIXED OXIDE FUEL FABRICATION FACILITY
LICENSE APPLICATION REQUEST

Dear Mr. Gwyn:

We have reviewed the information in your application dated September 27, 2006, which requests a license to possess and use special nuclear material, and source and by-product material in the Mixed Oxide Fuel Fabrication Facility (MFFF). The MFFF, which is to be located on the Department of Energy's Savannah River Site in Aiken, South Carolina, will process and fabricate mixed oxide fuel for use in commercial nuclear power plants as part of the plutonium disposition program.

Enclosed is a list of additional information that the Nuclear Regulatory Commission (NRC) staff need to complete its review of the civil/structural design of the MFFF. Please provide a summary document describing how our questions were addressed and any other changes to other licensing documents that may have been necessary to incorporate the responses (e.g., license application change pages). Please provide the response and change pages within 45 days of the date of this letter.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room and the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

D. Gwyn

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Please contact me at (301) 492-3229 if you have questions about the additional information we have requested.

Sincerely,

/RA/

David Tiktinsky, Senior Project Manager
MOX Branch
Special Projects and Technical
Support Directorate
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Enclosure:
Request for Additional Information

Docket No.: 70-3098

cc:	G. Smith, NNSA	A.J. Eggenberger, DNFSB	R. Virgilio, FSME
	J. Olencz, DOE	L. Zeller, BREDL	D. McIntyre, OPA
	H. Porter, SC Dept. Of HEC	G. Carroll, GANE	D. Silverman, Esq., DCS
	D. Curran, Esq., GANE	M. Shannon, RII	W. Gloersen, RII
	D. Seymour, RII		

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DATE	8/ 3 /07		8/ 6 /07		8/ 8 /07			

OFFICIAL RECORD COPY

Request for Additional Information
License Application (LA) Dated September 27, 2006,
Docket: 70-3098

GI-1

Please describe the potential effects of the soil layer thicknesses used in the soil/structure interaction analysis for the Mixed Oxide Fuel Fabrication Building that do not meet the maximum thickness commonly accepted in engineering practice (Lysmer and Kuhlemeyer, 1969) and recommended in the SASSI User's and Theoretical Manuals (Lysmer, et al., 1999a,b) on the seismic response of the building system.

This information is needed to determine compliance with 10 CFR 70.61 for evaluating the likelihood of seismically induced accident sequences and their potential consequences and the 70.64(a)(2) baseline design criterion.

REFERENCES:

Lysmer, J. and R.L. Kuhlemeyer. "Finite Dynamic Model for Infinite Media." *Journal of Engineering Mechanics Division*. American Society of Civil Engineering. Vol. 95, No. EM4. pp. 859-877. 1969.

Lysmer, J., F. Ostandan, and C.C. Chin. "SASSI 2000— A System for Analysis of Soil-Structure Interaction, User's Manual." Revision 1. Berkeley, California: University of California. 1999a.

"SASSI 2000—A System for Analysis of Soil-Structure Interaction, Theoretical Manual." Revision 1. Berkeley, California : University of California. 1999b

GI-2

During the Nuclear Regulatory Commission staff's onsite review performed June 19-June 21, 2007, Shaw AREVA MOX Services stated that a cutoff frequency of 25 Hertz (Hz) was used in the soil-structure interaction analysis for the Mixed Oxide Fuel Fabrication Building for determining the seismic response of the building system.

Please demonstrate that the analysis includes all frequencies that make significant contributions to the seismic response of the building system and the rationale for using 25 Hz as the cutoff.

This information is needed to determine compliance with 10 CFR 70.61 for evaluating the likelihood of seismically induced accident sequences and their potential consequences and the 70.64(a)(2) baseline design criterion.

Enclosure