

July 11, 2003

Mr. Jens G. M. Andersen, Manager
Fuel Engineering Services
Global Nuclear Fuel
Castle Hayne Road,
Wilmington, North Carolina 28401

SUBJECT: GLOBAL NUCLEAR FUEL (GNF) TOPICAL REPORTS NEDC-32851,
REVISION 2, "GEXL14 CORRELATION FOR GE14 FUEL" AND NEDC-32464P,
REVISION 2, "GEXL10 CORRELATION FOR GE12 FUEL WITH
INCONEL SPACER" (TAC NO. MB3094)

Dear Mr. Andersen:

By letter dated May 31, 2003, you provided a history of the subject topical reports. In particular, you noted that as a result of the February 11, 2002, meeting between the NRC and GNF, you believe that the NRC will no longer need to review these topical reports. In this meeting you stated that GNF agreed to increase the bias and uncertainty used in the GEXL correlations for 10x10 fuel in order to increase the confidence level in the correlations in the absence of data for top peaked power shape for 10x10 fuel. The re-evaluation of the safety limits using these increased uncertainties were completed by April 12, 2002. In addition, GNF has agreed to conduct additional testing to obtain critical power data for GE14 top peaked axial power shape. Once these additional data are obtained, GNF will re-evaluate the GEXL14 correlation consistent with the requirements of GESTAR. GNF has stated that this re-evaluation will not be submitted for NRC review as the GESTAR process will assure that the correlation is acceptable.

The staff does not agree with this position. GESTAR II, Amendment 22, Section 1.2.7, "Critical Power Correlation," states that the coefficients for the critical power correlation of a new fuel design will be determined generically based on full-scale prototypical test assemblies, with sufficient data to cover the operational range of the fuel. Since General Electric developed the GEXL14 correlation (and the associated coefficients), with an incomplete data base, any added data to the data base would necessitate a re-correlation of the complete data base. The NRC staff expects GNF to submit the revised version of the GEXL14 correlation for staff review, including the supporting evaluation and the statistical analyses. We have closed TAC No. MB3094 and upon the submittal of the additional information, the staff will open a new TAC to document its review.

If you have questions regarding this letter, please contact me at (301) 415-1445.

Sincerely,

/RA/

Alan B. Wang, Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Project No. 712

cc: See next page

Global Nuclear Fuel

Project No. 712

cc:

Mr. Charles M. Vaughan, Manager
Facility Licensing
Global Nuclear Fuel
P.O. Box 780
Wilmington, NC 28402

Mr. George B. Stramback
Regulatory Services Project Manager
GE Nuclear Energy
175 Curtner Avenue
San Jose, CA 95125

Mr. James F. Klapproth, Manager
Engineering & Technology
GE Nuclear Energy
175 Curtner Avenue
San Jose, CA 95125

Mr. Glen A. Watford, Manager
Technical Services
GE Nuclear Energy
175 Curtner Avenue
San Jose, CA 95125

July 11, 2003

Mr. Jens G. M. Andersen, Manager
Fuel Engineering Services
Global Nuclear Fuel
Castle Hayne Road,
Wilmington, North Carolina 28401

SUBJECT: GLOBAL NUCLEAR FUEL (GNF) TOPICAL REPORTS NEDC-32851,
REVISION 2, "GEXL14 CORRELATION FOR GE14 FUEL" AND NEDC-32464P,
REVISION 2, "GEXL10 CORRELATION FOR GE12 FUEL WITH
INCONEL SPACER" (TAC NO. MB3094)

Dear Mr. Andersen:

By letter dated May 31, 2003, you provided a history of the subject topical reports. In particular, you noted that as a result of the February 11, 2002, meeting between the NRC and GNF, you believe that the NRC will no longer need to review these topical reports. In this meeting you stated that GNF agreed to increase the bias and uncertainty used in the GEXL correlations for 10x10 fuel in order to increase the confidence level in the correlations in the absence of data for top peaked power shape for 10x10 fuel. The re-evaluation of the safety limits using these increased uncertainties were completed by April 12, 2002. In addition, GNF has agreed to conduct additional testing to obtain critical power data for GE14 top peaked axial power shape. Once these additional data are obtained, GNF will re-evaluate the GEXL14 correlation consistent with the requirements of GESTAR. GNF has stated that this re-evaluation will not be submitted for NRC review as the GESTAR process will assure that the correlation is acceptable.

The staff does not agree with this position. GESTAR II, Amendment 22, Section 1.2.7, "Critical Power Correlation," states that the coefficients for the critical power correlation of a new fuel design will be determined generically based on full-scale prototypical test assemblies, with sufficient data to cover the operational range of the fuel. Since General Electric developed the GEXL14 correlation (and the associated coefficients), with an incomplete data base, any added data to the data base would necessitate a re-correlation of the complete data base. The NRC staff expects GNF to submit the revised version of the GEXL14 correlation for staff review, including the supporting evaluation and the statistical analyses. We have closed TAC No. MB3094 and upon the submittal of the additional information, the staff will open a new TAC to document its review.

If you have questions regarding this letter, please contact me at (301) 415-1445.

Sincerely,

/RA/

Alan B. Wang, Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Project No. 712

DISTRIBUTION:

cc: See next page

PUBLIC	PDIV-2 Reading
RidsNrrDlpmLpdiv (HBerkow)	RidsNrrPMAWang
RidsRgn4MailCenter (Ahowell)	RidsOgcMailCenter
FAkstulewicz (NRR/DSSA/SRXB)	RidsNrrLAEPeyton
AAttard (NRR/DSSA/SRXB)	RidsAcrsAcnwMailCenter

ADAMS Accession No.: ML 031960667

NRR-106

***See previous concurrence**

OFFICE	PDIV-2/PM	PDIV-2/LA	SRXB/SC	PDIV-2/SC
NAME	AWang	EPeyton	FAkstulewicz*	SDembek
DATE	7/11/03	7/11/03	7/10/03	7/11/03

DOCUMENT NAME: C:\ORPCheckout\FileNET\ML031960667.wpd

OFFICIAL RECORD

COPY