

PDR

AUG 20 1974

58-263

Victor Stello, Jr., Assistant Director for Reactor Safety, L

TAR REQUEST NO. ORB-2-115 "WRITTEN RESPONSE TO MONTICELLO INTERROGATORIES

Enclosed is a copy of the response to the subject request which was transmitted to Mr. J. Shea by S. B. Kim on August 15, 1974. Both Mr. Shea and Mr. Kim will be working with the OGC to obtain a final answer to the interrogatory, at which time it will again be available for Reactor Safety review. Mr. Kim suggested to J. Shea and Mr. Shea agreed that the interrogatory No. 13 may be best prepared by the operating reactors branch since it concerns specific plant experience.

L. S. Rubenstein
Core Performance Branch
Directorate of Licensing

cc: D. F. Ross
S. B. Kim
J. Shea

Central File ✓
CPB Reading
L Reading (M. Groff)
~~AEC PDR~~

OFFICE	CPB:L	CPBL	CPB:L			
SURNAME	SBKim:dsm	LSRubenstein	DRoss			
DATE	8/19/74	8/19/74	8/19/74			

Form AEC-318 (Rev. 9-53) AECM 0240

GPO C43 18 81485-1 520-284

9212070353 740820
PDR ADOCK 05000263
P PDR



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

AUG 20 1974

Victor Stello, Jr., Assistant Director for Reactor Safety, L

TAR REQUEST NO. ORB-2-115 "WRITTEN RESPONSE TO MONTICELLO INTERROGATORIES

Enclosed is a copy of the response to the subject request which was transmitted to Mr. J. Shea by S. B. Kim on August 15, 1974. Both Mr. Shea and Mr. Kim will be working with the OGC to obtain a final answer to the interrogatory, at which time it will again be available for Reactor Safety review. Mr. Kim suggested to J. Shea and Mr. Shea agreed that the interrogatory No. 13 may be best prepared by the operating reactors branch since it concerns specific plant experience.

A handwritten signature in cursive script, likely belonging to L. S. Rubenstein, is written above the typed name.

L. S. Rubenstein
Core Performance Branch
Directorate of Licensing

cc: D. F. Ross
S. B. Kim
J. Shea

EVALUATION OF OPERATING EXPERIENCES
PROPOSED TESTING AND CRITERIA

In response to AEC request, the General Electric Co. (GE) agreed to a surveillance program on 8x8 fuel bundle behavior as described in the letter from J. Hinds of GE to V. Stello of AEC dated February 4, 1974. They include measurements of some key geometric dimensions as well as routine sipping, visual inspections and non destructive tests. About ten fuel rods are pre-characterized before irradiation. This fuel bundle has been inservice since last spring refueling operation. At the time of next refueling outage a complete inspection will be performed on these removable rods under the storage pool. They will look for the unusual features such as fretting, hydriding blisters, and dimensional changes. The program is flexible such that any abnormal rods can be further examined in detail. Northern State Power Company has agreed to participate with GE in the above surveillance program. GE will also obtain operating power history such that a realistic evaluation can be made. The data and evaluation of the 8x8 lead bundle will be submitted to the staff of AEC for a review.

At the time of inspection three criteria~~s~~ will be used as a measure of satisfactory fuel assembly performance and continuing service of the 8x8 fuel. They are 1.0% cladding strain measured in terms of diameter change, 0.030 inches of the rod deflection between two spacer grids and fretting wear of 10% of thickness.

15. Quality Assurance

New 628 fuel assemblies undergo rigorous Quality Assurance process beginning with GE plant, AEC Regulatory Operation regional office and utility.

In GE plant, QA concerns material acceptability process conformance and product conformance, as well as shipping test performance. Close to 190 key quality manufacturing activities are monitored and evaluated. Further details may be found in the affidavit of Mr. J. E. Bergman of GE dated March 29, 1974 at the time of the Pilgrim hearing.

In addition, as an independent action, we, Technical Review, requested Regulatory Operation headquarters for GE audit on fuel and cladding characteristics. RO inspectors spent several days at GE, Wilmington, North Carolina plant site. The following are the items inspected.

- Fill Gas Composition and Pressure
- Fuel Stack Length
- Plenum Volume
- Fuel Rod Enrichment Verification
- Fuel Rod Moisture
- Pellet Diameter
- Surface Finish
- Pellet Moisture
- Sorbed Gas Content
- Pellet Enrichment
- Pellet Density
- Cladding Wall Thickness
- Cladding O.D.
- Cladding I.D.

Ovality

Eccentricity

I.E. Surface Finish

Surface Cleanliness

Surface Defects

Tubing Strength & Chemistry Characteristics

Young's Modulus

Coefficient of Thermal Expansion

Regional Office of Regulatory Operation of the AEC performed two audits on GE fuel manufacturing process. As a result of first audit eight corrective actions were taken. The second, recent audit has been completed and is being evaluated at this time. They also reviewed the QA program on receiving 8x8 fuel assemblies and were present at the time of refueling.