

September 1, 1995

Mr. Ross P. Barkhurst
Vice President Operations
Entergy Operations, Inc.
P.O. Box B
Killona, LA 70066

Dear Mr. Barkhurst:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI) REGARDING THE TECHNICAL SPECIFICATIONS CHANGE REQUEST TO USE COMBUSTION ENGINEERING WELDED TUBE SLEEVES AT WATERFORD STEAM ELECTRIC STATION, UNIT 3 (TAC NO. M88397)

By letter dated December 6, 1993, as supplemented by letters dated May 12, 1995, and August 9, 1995, Entergy Operations, Inc. submitted a Technical Specifications change request to allow the installation of tube sleeves as an alternative to plugging defective steam generator tubes at Waterford 3. The request proposed the use of Combustion Engineering Leak Tight Sleaving design at Waterford 3. After reviewing the information provided in your August 9, 1995 letter, we have determined that additional information is required to complete our review. We request that you provide the additional information requested in the enclosure as soon as practical to meet your schedule needs.

This requirement affects fewer than ten respondents, and therefore, is not subject to Office of Management and Budget review under Public Law 96-511. If you need any additional information, please contact me.

Sincerely,
Timothy Polich/for

Chandu P. Patel, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure: RAI

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Vice President Operations
Entergy Operations, Inc.
P.O. Box B
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Sincerely,

Chandu P. Patel, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

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Mr. Ross P. Barkhurst
Entergy Operations, Inc.

Waterford 3

cc:

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Winston & Strawn
Attn: N. S. Reynolds
1400 L Street, N.W.
Washington, DC 20005-3502

Request for Additional Information

Steam Generator Tube Slewing Technical Specifications at Waterford 3

1. Please provide details of the sleeve installation sequence with respect to whether or not the upper weld is completed and heat treated prior to the lower joint being welded or rolled. Also, if a sleeve has two welded joints, what is the timing and sequence between welding and PWHT of the two welds?
2. What assurances exist that the tubes at Waterford are not locked in the ECS? Experience at other installations has demonstrated that TSP designs generally thought to be immune to creating a locked tube situation, have proven otherwise. Describe tests to be performed or other measures to be taken to avoid possible detrimental effects of having locked tubes during PWHT.
3. Please provide additional discussion and details of far field residual stress measurements from welded sleeve mock-ups of tube bundles with locked supports. Provide information of the effect of multiple sleeves in a single locked tube with respect to residual far-field stresses after PWHT.
4. Discuss the temperature profile induced by the PWHT and what measures, if any, have been instituted to minimize its effect on a locked tube.
5. Please provide additional information regarding the observed bowing that occurs in constrained tubes after slewing. Has CE quantified the effect and analyzed the implications of bowing? Additionally, has bulging of a locked tube at the PWHT zone been observed, quantified and analyzed?
6. It is not clear from the submittal whether or not the licensee is committing to the latest ET probe technology, such as CECCO or Plus-Point. Please clarify.

Enclosure