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

December 17, 1996

MEMORANDUM TO: William H. Bateman, Director
Project Directorate IV-2
Division of Reactor Projects III/IV

FROM: Kristine M. Thomas, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV

SUBJECT: FORTHCOMING MEETING WITH UNION ELECTRIC COMPANY REGARDING CALLAWAY PLANT, UNIT 1

DATE & TIME: January 15, 1997
1:00 p.m. - 4:00 p.m.

LOCATION: U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, Maryland
Room O-6B11

PURPOSE: To discuss the nondestructive examination qualification efforts to date in support of the staff's review of the amendment request that would allow the use of the Framatome electrosleeving technology for sleeving steam generator tubes at the Callaway Plant. A meeting agenda is attached.

PARTICIPANTS*:	NRC	UNION ELECTRIC
	T. Sullivan	T. Herrmann
	G. Hornseth	E. Kahl
	P. Rush	
	C. Beardslee	
	K. Thomas	

Docket No. 50-483

Attachment: Agenda

cc w/att: See next page

CONTACT: Kristine M. Thomas
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*Meetings between NRC technical staff and applicants or licensees are open for interested members of the public, petitioners, intervenors, or other parties to attend as observers pursuant to "Commission Policy Statement on Staff Meetings Open to the Public" 59 Federal Register 48340, 9/20/94. A portion of the meeting may involve proprietary information. Consequently, those portions will not be open to the public. Anyone wishing to attend this meeting should contact Kristine M. Thomas by January 13, 1997, at (301) 415-1362.

Attachment

**MEETING WITH UNION ELECTRIC COMPANY
TO DISCUSS TECHNICAL SPECIFICATION AMENDMENT REQUEST
TO ALLOW SLEEVING OF STEAM GENERATORS AT THE CALLAWAY PLANT
USING THE FRAMATOME ELECTROSLEEVING TECHNOLOGY
MEETING AGENDA**

1. Status of Review

The staff recognizes that a metallurgical argument has been presented stating that parent tube indications would not be expected to propagate into the nickel sleeve. However, metallurgy alone cannot be used to assure future integrity of steam generator tubes. Nondestructive examination (NDE) must also be utilized to determine post-installation quality and continued sleeve integrity. Therefore, to allow the staff to move forward with its review of the Framatome electrosleeving technology, NDE qualification must be completed and complete answers must be provided to the questions contained in the request for additional information (RAI) dated July 25, 1996.

2. List of Incomplete Responses in September 24, 1996 Response to July 25, 1996 RAI That Need To Be Addressed

- RAI Question 1 stated: Framatome presented only limited information on the inspection of Electrosleeves for the detection of laboratory-induced stress corrosion cracking (SCC) in the parent tube. Discuss the detection threshold for SCC tube flaws (axial and circumferential) in the electrosleeved tubes using the actual field data analysis procedures for degradation located at the expansion transitions and dented tube support plate intersections. Also include a discussion of the potential masking of outside-diameter parent tube defects caused by asymmetric variations in the sleeve thickness at the exit and entrance regions.

  The response to Question 1 indicated that eddy current testing (ECT) qualification was not complete. No schedule for completion was provided.

- RAI Question 2 stated: Since the electrosleeving process enables detection of parent tube flaws beneath the sleeve, define and provide the basis for a plugging criteria for tubes with a measurable change (from the initial inspections) in NDE signal response for indications located below the electrosleeve. If these criteria rely on the ability to depth size indications, provide a detailed description of the qualification process to assess these depths. Include a description of the flaws (i.e., SCC versus EDM notches, orientation, depths, number of samples, etc.) used to qualify the method. Also discuss the potential influence on flaw depth measurement due to variations in sleeve wall thickness.

The response to Question 2 did not include the tube plugging criteria.

- RAI Question 3 stated: Eddy current inspection methods may be more sensitive than ultrasonic techniques for the detection of pits and nodules introduced in the fabrication process. Discuss the need to use diverse inspection methods for accepting electrosleeves following the installation process.

  - The response to Question 3 indicated that ultrasonic testing (UT) qualification utilizing tubes with stress corrosion cracking indications and electrosleeving was not complete. No schedule for completion was provided.

  - The response to Question 3 did not discuss the ability of NDE to detect pits, nodules and other possible plating defects. What acceptance criteria will be used if these types of sleeve defects are detected?

  - The response to Question 3 implied that a final decision had not yet been made on which NDE methods will be used for both initial sleeve acceptance and future inservice inspection. Has this decision been made?

3. Other Questions That Need To Be Addressed

   - Questions remain with respect to the effect UT beam redirection has on the ability to detect indications, determine defect location and sizes, and determine sleeve wall thickness.

   - What direction is the NDE qualification/plugging criteria taking? Is depth sizing being utilized, is determination of whether indications are in the parent tube or sleeve region being used, or is some other plugging criteria being used?

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