September 24, 1997

LICENSEE: Union Electric Company

FACILITY: Callaway Plant, Unit 1

SUBJECT: MEETING WITH UNION ELECTRIC COMPANY AND FRAMATOME TECHNOLOGIES REGARDING THE INSTALLATION OF FRAMATOME ELECTROSLEEVES IN THE CALLAWAY, UNIT 1 STEAM GENERATORS

On Wednesday, August 13, 1997, a meeting was held with Framatome Technologies, Inc. (FTI), Union Electric Company (UE), and the Nuclear Regulatory Commission (NRC) staff to discuss the electrosleeving process in support of a UE-proposed technical specification amendment that would allow electrosleeving of the steam generator tubes at the Callaway Plant. The meeting was held at the NRC offices in Rockville, Maryland. A notice of this meeting was issued by the staff on August 1, 1997. Attachment 1 is a list of meeting attendees. Attachment 2 is a non-proprietary version of the handout material that the NRC presented at the meeting.

The purpose of the meeting was to allow the NRC staff to present technical issues that will need to be satisfactorily resolved in order to complete action on the technical specification amendment request. The NRC staff requested that UE and FTI provide further information related to topics discussed at the meeting.

ORIGINAL SIGNED BY

Barry C. Westreich, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-483

Attachments: 1. List of Meeting Attendees
2. Meeting Handout material (Non-Proprietary)

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

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Division of Reactor Projects III/IV
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Docket No. 50-483

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cc w/atts: See next page

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MEETING WITH UNION ELECTRIC COMPANY

LIST OF MEETING ATTENDEES

August 13, 1997

Union Electric Company

Ed Kahl
Tim Herrmann

Framatome Technologies, Inc.

James E. Galford
John Helmey
Charles England
Joseph R. Wyatt

Baltimore Gas & Electric Company

E. S. Broczkowski
Getachen Tesfaye

Duquesne Light

Greg Kammerdener

NRC

Barry Westreich
Jack Strosnider
Geoff Hornseth
Donald S. Brinkman
Ted Sullivan
Cherryl Beardslee
H. F. Conrad

ELECTROSLEEVE - LICENSE AMENDMENT REVIEW

OUTSTANDING ISSUES

(CALLAWAY DOCKET REVIEW)

CHERYL BEARDSLEE
AUGUST 13, 1997
U.S. NUCLEAR REGULATORY COMMISSION

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ISSUE #1 - QUALIFICATION FOR DEPTH SIZING CRACKS

JUNE 9, 1997 SUBMITTAL

Union Electric approach- Structural requirements can be met, assuming a RMSE, and measurement uncertainties are acceptable based on RMSE value.

NRC CONCERNS

Flaws - Lab Grown Axial/Circumferential ODSCC Data Set

CONCLUSIONS:

- **Composition of the data set is inadequate**
- **Root Mean Square Error (RMSE), by itself, is not meaningful/sufficient for concluding that this NDE method is qualif**

ISSUE #2 - BASIS FOR FLAW SPECIFIC STRUCTURAL LIMITS

JUNE 9, 1997 SUBMITTAL

Utilizes different structural limits than those previously submitted to the NRC. The new structural limits are flaw specific and less conservative.

ISSUE

More detailed information must be submitted for the NRC staff to review and understand the basis for the revised limits.

ISSUE #3 - QUALIFICATION FOR DEPTH SIZING PITS

QUALIFICATION DATA SET - Consists of:

- **samples did not have Electrosleeves installed**

WHAT IS THE BASIS FOR THIS, CONSIDERING:

- **Potential NDE variability due to different thickness**
- **Potential NDE variability due to different materials**
- **Other potential NDE variabilities**

ISSUE #4 - IDENTIFICATION OF STRUCTURALLY SIGNIFICANT FLAWS IN PARENT TUBE

Within the Electrosleeved area, there are sections where the parent tube is the pressure boundary and the sleeve condition is inconsequential.

Actual flaw data is not available that proves that structurally significant flaws can be identified with reasonable confidence.

- EDM Notch Data Set - does not contain real flaws
- Field SCC samples - do not contain structurally significant flaws
- Lab grown SCC samples - do not contain a range of flaw depths

ISSUE #5 - APPLICABILITY OF EXPANSION/TRANSITION DATA SET TO OTHER REGIONS IN A STEAM GENERATOR TUBE

Data set used to qualify depth sizing of cracks contained cracks in the expansion transition region.

What is the applicability of this data set to other tube locations or tube conditions? (i.e., dented tube support plate intersections, OD deposits, etc.)

OVERALL CONCLUSIONS

- Significant NDE questions remain unanswered
- Answers to above issues are considered essential for the staff to conclude its review

ELECTROSLEEVE