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MEMORANDUM TO: Stuart A. Richards, Director

Project Directorate IV & Decommissioning Division of Licensing Project Management Office of Nuclear Reactor Regulation

FROM:

Robert M. Pulsifer, Project Manager, Section 2

Project Directorate I

/RA/

Division of Licensing Project Management Office of Nuclear Reactor Regulation

SUBJECT:

SUMMARY OF MEETING WITH GENERAL ELECTRIC NUCLEAR

ENERGY REGARDING THERMAL POWER OPTIMIZATION

On March 14, 2000, members of the staff met with Mr. Klapproth of General Electric (GE) to discuss the status of GE's thermal power optimization program for power uprate application to Boiling Water Reactors (BWRs). A list of attendees is provided as Attachment 1.

No members from the public were in attendance; therefore, the proprietary discussion immediately began. However, a copy of the non-proprietary handouts provided by GE for their presentation is included as Attachment 2.

GE provided a brief overview of their stretch power uprate and extended power uprate processes that they are using for BWRs, presently based on a topical report submitted by Caldon, Inc. for an ultrasonic flow meter. GE stated that their approach in support of an increased reactor thermal power level is consistent with an approved feedwater flow measurement technology. Mr. Klapproth discussed the status of this effort and the staff expressed some concern about the review and indicated that the priority for the review of new topical reports presently has been reduced. The scheduling of a review will be addressed when the topical report has been received by the staff.

Project No. 691

Attachments: 1. Attendance List

2. Non-proprietary Handout

cc w/att: See next page

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CC:

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

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

Mr. Glen A. Watford, Manager Nuclear Fuel Engineering GE Nuclear Energy P.O. Box 780 Wilmington, NC 28402

MEETING BETWEEN GENERAL ELECTRIC AND NRC MARCH 14, 2000

GE NUCLEAR ENERGY

J. Klapproth

NRC

- R. Pulsifer
- J. Donoghue R. Caruso
- S. Dembek



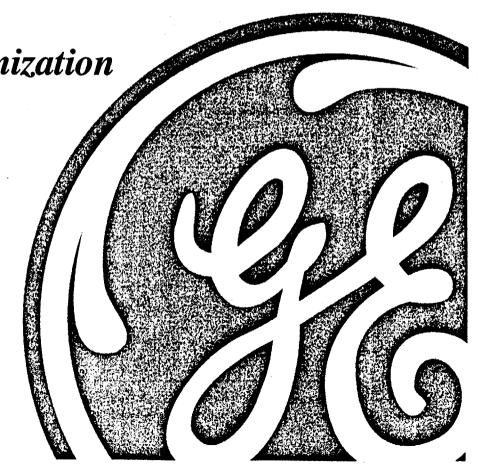
GE Nuclear Energy

GE's Thermal Power Optimization Program-Update

Open Session

Jim Klapproth, GE

March 14, 2000





Background...

- NRC proposed a rulemaking which would change a requirement in 10 CFR part 50 appendix K
 - Allows utilities option to apply reduced adder to the nominal licensed power level
 - Based on reduced feedwater flow measurement instrument error
- Change based on topical report submitted to NRC by Caldon, Inc. (Caldon)
 - Ultrasonic flow meter (leading edge flow meter LEFM)
 - Demonstrated more accurate feedwater flow measurement
- NRC issued SER approving Caldon's LEFM technology



Background...

- BWR operating license (OL) is supported by a number of analyses and evaluations based on 2% feedwater flow uncertainty
 - Apply reduced feedwater flow uncertainty to those analyses
 Utility may justify increasing the reactor thermal power level consistent with approved feedwater flow measurement and still remain within boundaries of these specific analyses
- Significant number of other safety analyses and evaluations that also support OL are performed at either nominal reactor thermal power level without an adder for feedwater flow uncertainty, or through statistical application of this uncertainty
 - These analyses and evaluations must be either re-performed or disposed for application of an increased reactor thermal power level



Background...

- Utilities have approached GE to request this type of support for their BWRs
- GE recognizes need to adapt and simplify NRC-approved power uprate processes for this application
- GE has called this meeting to discuss GE's streamlined approach to Thermal Power Optimization and provide status update



Agenda for the Closed (Proprietary) Session...

- Overview of GE's NRC-Approved Stretch Power Uprate (SPU) and Extended Power Uprate (EPU) processes for application to Boiling Water Reactors (BWRs)
- Review of GE's approach to support increase in reactor thermal power level (Thermal Power Optimization, or "TPO") consistent with approved feedwater flow measurement
- Status/Schedule
- NRC Feedback