

October 13, 1999

LICENSEE: FirstEnergy Nuclear Operating Company

FACILITY: Perry Nuclear Power Plant, Unit 1

SUBJECT: SUMMARY OF SEPTEMBER 30, 1999 MEETING ON PROPOSED FIVE PERCENT POWER UPRATE

On September 30, 1999, the NRC staff met with representatives of the FirstEnergy Nuclear Operating Company (FENOC) in Rockville, Maryland. The purpose of the meeting was to discuss the proposed five percent power uprate for the Perry Nuclear Power Plant, Unit 1, submitted by letter dated September 9, 1999. A list of the meeting participants is included as Enclosure 1. A copy of the licensee's meeting handout is included as Enclosure 2.

FENOC stated that the five percent power uprate is expected to be simpler than other similar power uprates because there is no reactor pressure increase involved. Additionally, FENOC has reviewed past power uprates for NRC staff requests for additional information (RAIs) and has included information in its submittal to address the past staff RAIs. FENOC plans to institute the power uprate midcycle (approximately June 2000) and requests NRC review to be completed by May 1, 2000. This date is based on expected customer electrical loading. A discussion was held regarding the number of RAIs to be issued by the staff. FENOC stated that they will entertain RAIs as they are developed and the staff does not have to hold questions from each technical branch until they can be issued as one RAI.

DOUGLAS PICKETT FOR:
Jon B. Hopkins, Senior Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Enclosures: As stated

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

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Douglas V. Palatka for

Jon B. Hopkins, Senior Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosures: As stated

cc w/encs: See next page

FirstEnergy Nuclear Operating Company

cc:

Mary E. O'Reilly
FirstEnergy Corporation
76 South Main St.
Akron, OH 44308

Resident Inspector's Office
U.S. Nuclear Regulatory Commission
P.O. Box 331
Perry, OH 44081-0331

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
801 Warrenville Road
Lisle, IL 60532-4531

Sue Hiatt
OCRE Interim Representative
8275 Munson
Mentor, OH 44060

Gregory A Dunn
Manager - Regulatory Affairs
FirstEnergy Nuclear Operating Company
Perry Nuclear Power Plant
P.O. Box 97, A210
Perry, OH 44081

John K. Wood
Vice President - Nuclear, Perry
FirstEnergy Nuclear Operating Company
P.O. Box 97, A200
Perry, OH 44081

Mayor, Village of Perry
P.O. Box 100
Perry, OH 44081-0100

William R. Kanda, Jr., Plant Manager
FirstEnergy Nuclear Operating Company
Perry Nuclear Power Plant
P.O. Box 97, SB306
Perry, OH 44081

Perry Nuclear Power Plant, Units 1 and 2

James R. Williams
Chief of Staff
Ohio Emergency Management Agency
2855 West Dublin Granville Road
Columbus, OH 43235-2206

Donna Owens, Director
Ohio Department of Commerce
Division of Industrial Compliance
Bureau of Operations & Maintenance
6606 Tussing Road
P.O. Box 4009
Reynoldsburg, OH 43068-9009

Mayor, Village of North Perry
North Perry Village Hall
4778 Lockwood Road
North Perry Village, OH 44081

Radiological Health Program
Ohio Department of Health
P.O. Box 118
Columbus, OH 43266-0118

Ohio Environmental Protection
Agency
DERR--Compliance Unit
ATTN: Mr. Zack A. Clayton
P.O. Box 1049
Columbus, OH 43266-0149

Chairman
Perry Township Board of Trustees
3750 Center Road, Box 65
Perry, OH 44081

State of Ohio
Public Utilities Commission
East Broad Street
Columbus, OH 43266-0573

MEETING ATTENDEES

FIRSTENERGY NUCLEAR OPERATING COMPANY

PROPOSED POWER UPRATE

SEPTEMBER 30, 1999

FIRSTENERGY NUCLEAR OPERATING COMPANY

Edward Root	Manager, Asset Improvement
Gary Rhoads	Perry Licensing Supervisor
Ben Spiesman	Perry Licensing Engineer
Tom Shega	Perry Design Engineer

NRC

Anthony Mendiola	Section Chief, Project Directorate III
Jon Hopkins	Senior Project Manager, Project Directorate III
Clare Goodman	Scientist, Operator Licensing & Human Performance
Jay Lee	Engineer, Probabilistic Safety Assessment Branch
Meena Khanna	Engineer, Materials and Chemical Engineering Branch
Joe Donoghue	Engineer, Reactor Systems Branch
Ralph Caruso	Section Chief, Reactor Systems Branch

MEMBER OF THE PUBLIC

Christine Cave	McGraw-Hill
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Perry Power Uprate

September 30, 1999

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What we want to discuss today...

- Perry Power Uprate
- Upcoming Activities
- Power to Flow Map Changes
- Methodology
- RAI Incorporation into Submittal
- SAR Process
- Questions

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ENCLOSURE 2

Perry Power Uprate...

- Upgrading the licensed thermal power for Perry by 5% to 3758 MWt
- Uprate does not require increase in Reactor Pressure - simplifies analysis and licensing process
- Mid-Cycle Power Uprate
- Perry, like most BWR plants, has an as-designed equipment and system capability to accommodate steam flow rates at least 5% above the original rating.
- Successful uprates with other BWR's
 - ~8 BWR's uprates during initial operating license phase
 - ~18 BWR's completed uprates after initial licensing phase
- Complete submittal to NRC - no supplemental submittals expected

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Key Milestones...

- Project Kickoff Meeting - 9/22/98
- RFO7 Modifications complete - 5/7/99
- NRC Submittal - 9/9/99
- NRC Management Meeting - 9/30/99
- Test procedure prepared - 3/1/00
- Simulator update complete - 3/9/00
- Operator crew training complete - 5/12/00
- All procedure changes ready to support NRC approval - 5/31/00
- Request for NRC approval to operate at 105% conditions - 5/1/00
- Possible RFO8 turbine modifications complete - 4/1/01

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Completed RFO7 Activities...

- Added a Steam Line Resonance Compensator circuit (concern over pressure wave propagation in Main Steam Lines - 3rd order harmonic) to the Steam Bypass & Pressure Regulation System.
- Implemented TIL 1123 to add hydraulic accumulators for the Turbine Control Valves (TCV)
- Recalibrated the TCV steam flow to valve position curves to permit smoother TCV operation. The TCV's will operate further open than they have in the past.
- Control Room Load and Load Set meters were rescaled to 1500 MWe.

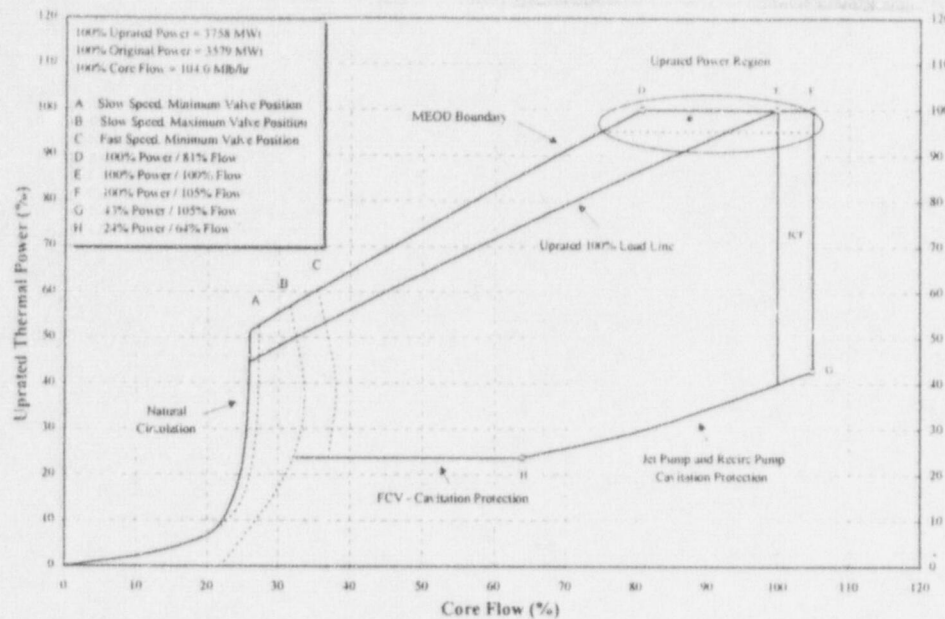
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Potential RFO8 Turbine Mods...

- Analysis indicates that High Pressure Turbine may not pass full uprated steam flow
- This could limit turbine operation to ~104%
- HP Turbine could be modified by minor grinding of first stage nozzles during RFO8 to increase flow passing capability

5-

105% Power To Flow Map...



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Power Uprate Methodology...

- Process followed the NRC approved generic format and content for BWR power uprate per the licensing topical reports documented in GE LTR-1 and LTR-2.
- Using GE LTR-1, every issue required to be addressed in a plant-specific power uprate licensing report is addressed in the Safety Analysis Report (SAR)
- For issues that were evaluated generically, the generic evaluations in either GE LTR-1 and/or LTR-2 are used as the primary references.
- SAR not intended to address all the details of the analyses and evaluations. It summarizes the results of all the significant operational and safety evaluations needed to justify a licensing amendment to allow for uprated power operation.

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RAI review and approval process...

- The Perry SAR has incorporated many previously issued Requests for Additional Information (RAI) that have come as a result of past power uprate license amendment requests. The RAI's for the following plants were categorized and incorporated, as appropriate, into the Perry SAR submittal:

Brown's Ferry 2 & 3

Brunswick 1 & 2

Hatch

Fermi 2

Fitzpatrick

Nine Mile 2

Peach Bottom 2 & 3

Susquehanna

WNP 2

Limerick

Engineering report preparation and approval process...

- There are 67 engineering task reports that go into additional detail and provide the basis for the SAR
- FirstEnergy provided GE with current design basis, calculations, plant procedures, USAR, TS/Amendments
- Evaluations performed per the requirements of the LTR
- Verified draft report (including SAR section) provided for review
- FirstEnergy comments provided to GE
- Informal discussion between GE preparer and lead Perry reviewer to confirm acceptable resolution of comments
- Final report provided to FE with formal comment response provided after acceptable resolution

SAR review and approval process...

- Same review & approval process utilized for SAR
- Formal comment resolution meeting in San Jose with 5 Perry participants.
- Formal approval by Plant Operations Review Committee (PORC) and Corporate Nuclear Review Board (CNRB)

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Conclusion...

*SAR demonstrates that Perry can
safely operate at the requested
power level.*

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