



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

June 1, 1994

Docket Nos. 50-369, 50-370,  
and 50-413

LICENSEE: Duke Power Company

FACILITY: McGuire Nuclear Station, Units 1 and 2 and Catawba Unit 1

SUBJECT: SUMMARY OF MEETING ON APRIL 6, 1994, WITH DUKE POWER COMPANY  
REGARDING STEAM GENERATION REPLACEMENT

On April 6, 1994, the NRC staff meet with representatives of Duke Power Company (DPC) at NRC headquarters in Rockville, Maryland. The purpose of the meeting was to hear a presentation by DPC on the McGuire, Units 1 and 2, and Catawba, Unit 1, steam generator (SG) replacement project. In particular, DPC presented their licensing approach to the SG replacement.

Meeting attendees are listed as Enclosure 1. A copy of the DPC handout is provided as Enclosure 2.

Duke Power noted that the present schedule for the SG replacement is November 1995 for McGuire, Unit 1; July 1996 for Catawba, Unit 1; and September 1997 for McGuire, Unit 2.

Duke Power noted that their licensing approach to the SG replacement is to first submit Topical Reports for staff review and approval. Then DPC will submit the plant-specific proposed technical specification (TS) changes referencing the approved Topical Report for technical support of the TS changes. By having the staff review and approve the Topical Reports before the proposed TS changes are submitted alleviates having to submit duplicate technical justification packages for each plant-specific TS change.

The Topical Reports, listed below, will be submitted sometime in June or July 1994.

1. DPC-NE-3000 (DPC Thermal Hydraulic Analysis)
2. DPC-NE-3001 (Mulhe - Dimensional Reactor Transients and Safety Analysis)
3. DPC-NE-3002 (FSAR Chapter 15 System Transient Methodology)
4. DPC-NE-3004 (New Topical for mass and energy release and containment response)

000078

9406090184 940601  
PDR ADOCK 05000369  
P PDR

NRC FILE CENTER COPY

DF01

June 1, 1994

- 5. Replacement Steam Generator Design Topical (this is a Babcock and Wilcox International Topical that provides information on design, design basis, analysis, codes and standards, fabrication and testing)

The first three topicals will involve minor changes; numbers 4. and 5. will be new topicals. Staff approval will be needed by June of 1995.

The submittal of proposed TS changes for all three Units is targeted for September 30, 1994.

/s/  
 Victor Nerses, Project Manager  
 Project Directorate II-3  
 Division of Reactor Projects - I/II

Enclosures:

- 1. Attendees
- 2. Steam Generator Replacement Project

cc w/enclosures:  
See next page

**DISTRIBUTION:**

Enclosure 1 & 2  
 Docket File  
 NRC & Local PDRs  
 PD23 Reading File  
 V. Nerses  
 J. Johnson, RII

Enclosure 1

W. Russell/F. Miraglia	C. Hinson
ADPR/NRR	S. Klementowicz
S. Varga	D. Gauch
G. Lainas	R. Fonner
V. Nerses	G. Wunder
R. Martin	A. Johnson
L. Berry	M. Sykes
OGC	G. Harris, RII
D. Matthews	G. Hornseth
E. Jordan	M. Cutchin, OGC
ACRS (10)	F. Orr
L. Plisco, EDO	K. Desai

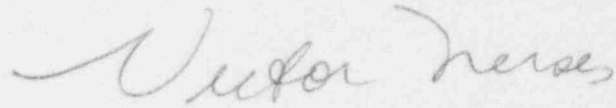
OFF	LA:PD23:DRPE	PM:PD23:DRPE	D:PD23:DRPE	
NAME	LBerry	VNerses:dt	DMatthews	
DATE	6/1/94	6/1/94	6/1/94	

June 1, 1994

5. Replacement Steam Generator Design Topical (this is a Babcock and Wilcox International Topical that provides information on design, design basis, analysis, codes and standards, fabrication and testing)

The first three topicals will involve minor changes; numbers 4. and 5. will be new topicals. Staff approval will be needed by June of 1995.

The submittal of proposed TS changes for all three Units is targeted for September 30, 1994.



Victor Nerses, Project Manager  
Project Directorate II-3  
Division of Reactor Projects - I/II

Enclosures:

1. Attendees
2. Steam Generator Replacement Project

cc w/enclosures:  
See next page

Duke Power Company

McGuire Nuclear Station  
Catawba Nuclear Station

cc:

A. V. Carr, Esquire  
Duke Power Company  
422 South Church Street  
Charlotte, North Carolina 28242-0001

County Manager of Mecklenberg County  
720 East Fourth Street  
Charlotte, North Carolina 28202

Mr. R. O. Sharpe  
Compliance  
Duke Power Company  
McGuire Nuclear Site  
12700 Hagers Ferry Road  
Huntersville, NC 28078-8985

J. Michael McGarry, III, Esquire  
Winston and Strawn  
1400 L Street, NW.  
Washington, DC 20005

Senior Resident Inspector  
c/o U. S. Nuclear Regulatory  
Commission  
12700 Hagers Ferry Road  
Huntersville, North Carolina 28078

Mr. T. Richard Puryear  
Nuclear Technical Services Manager  
Westinghouse Electric Corporation  
Carolinas District  
2709 Water Ridge Parkway, Suite 430  
Charlotte, North Carolina 28217

Dr. John M. Barry  
Mecklenberg County  
Department of Environmental  
Protection  
700 N. Tryon Street  
Charlotte, North Carolina 28202

Mr. Dayne H. Brown, Director  
Department of Environmental,  
Health and Natural Resources  
Division of Radiation Protection  
P. O. Box 27687  
Raleigh, North Carolina 27611-7687

Mr. M. Sinkule, Section Chief  
Project Branch #3  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, NW. Suite 2900  
Atlanta, Georgia 30323

Ms. Karen E. Long  
Assistant Attorney General  
North Carolina Department of  
Justice  
P. O. Box 629  
Raleigh, North Carolina 27602

Mr. G. A. Copp  
Licensing - EC050  
Duke Power Company  
526 South Church Street  
Charlotte, North Carolina 28242-0001

Regional Administrator, Region II  
U.S. Nuclear Regulatory Commission  
101 Marietta Street, NW. Suite 2900  
Atlanta, Georgia 30323

Elaine Wathen, Lead REP Planner  
Division of Emergency Management  
116 West Jones Street  
Raleigh, North Carolina 27603-1335

Duke Power Company

McGuire Nuclear Station  
Catawba Nuclear Station

cc:

Mr. Z. L. Taylor  
Regulatory Compliance Manager  
Duke Power Company  
4800 Concord Road  
York, South Carolina 29745

North Carolina Municipal Power  
Agency Number 1  
1427 Meadowwood Boulevard  
P. O. Box 29513  
Raleigh, North Carolina 27626-0513

County Manager of York County  
York County Courthouse  
York, South Carolina 29745

Richard P. Wilson, Esquire  
Assistant Attorney General  
South Carolina Attorney General's  
Office  
P. O. Box 11549  
Columbia, South Carolina 29211

Piedmont Municipal Power Agency  
121 Village Drive  
Greer, South Carolina 29651

Saluda River Electric  
P. O. Box 929  
Laurens, South Carolina 29360

Max Batavia, Chief  
Bureau of Radiological Health  
South Carolina Department of  
Health and Environmental Control  
2600 Bull Street  
Columbia, South Carolina 29201

North Carolina Electric Membership  
Corporation  
P. O. Box 27306  
Raleigh, North Carolina 27611

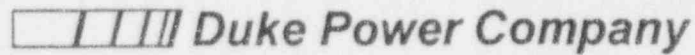
Senior Resident Inspector  
Route 2, Box 179 N  
York, South Carolina 29745

Mr. David L. Rehn  
Vice President, Catawba Site  
Duke Power Company  
4800 Concord Road  
York, South Carolina 29745

Mr. T. C. McMeekin  
Vice President, McGuire Site  
Duke Power Company  
12700 Hagers Ferry Road  
Huntersville, North Carolina 28078

LIST OF ATTENDEES  
MEETING BETWEEN NRC AND DPC  
APRIL 6, 1994  
REGARDING STEAM GENERATOR REPLACEMENT

<u>NAME</u>	<u>ORGANIZATION</u>
V. Nerses	NRC/NRR/ Project Manger
D. Matthews	NRC/NRR
M. Cutchin	NRC/OGC
G. Lainas	NRC/NRR
B. Martin	NRC/NRR/PDII-3
D. Ethington	Duke/SGRP/Licensing Supervisor
M. Hazeltine	Duke/SGRP/Licensing
S. Copp	Duke/Region Affairs
M. McGarry	Duke/Winston and Strawn/Legal
A. Carr	Duke/Legal
M. R. Robinson	DPC/McGuire/SGRP
G. W. Hallman	DPC/SGRP
F. Orr	SRXB/NRR
Kulin Desai	SRXB/NRR
Z. L. Taylor	DPC/Catawba/Regulatory Compliance MGR
Charles S. Hinson	NRC/NRR/PRPB
Stephen Klementowicz	NRC/NRR/PRPB
Lynn Connor	STS, Inc.
April Rice	South Carolina Electric & Gas
Antory Pfeffor	Serch Licensing/Bechtel
Dorothy Gauch	NRC/OGC
Robert L. Fonner	NRC/OGC
Anne Cottingham	Duke/Winston & Strawn
Robert Sharpe	Duke/McGuire/Regulatory Compliance
John. M. Washam	Duke/McGuire/Regulatory Compliance
Dave Weaver	WI/Electric Power Company/Licensing
George Wunder	NRR/PDII-1
Al Johnson	NRC/NRR/Project Manager-Ginna NRR
Marvin Sykes	NRC/OSP
Garry Harris	NRC/Resident Inspector McGuire
Geoff Hornseth	NRR/EMCB



McGuire Nuclear Station  
Catawba Nuclear Station

Steam Generator Replacement Project

Meeting with NRC

April 6, 1994

*Steam Generator Replacement Project*

---

---



Replacement Scope Includes McGuire  
Units 1 and 2 and Catawba Unit 1

Replacement Schedule

MNS 1 - November 95  
CNS 1 - July 96  
MNS 2 - September 97

*Steam Generator Replacement Project*

---

---

 DUKE POWER COMPANY

Replacement SG Tubing Bundle Design

- 11/16" Tubes in a Triangular Pitch Array
- 6633 Tubes per SG
- Tube Bundle is over 8 feet Higher than Current SGs
- 79,800 sf Heat Transfer Surface Area (48,000 sf in current SGs)
- Effective Increase of ~20% After Accounting for Lower Conductivity and Preheater Efficiency

*Steam Generator Replacement Project*

---



---

 DUKE POWER COMPANY

OPERATING PARAMETER CHANGE

- Maintain Original Main Steam Pressure

	M.S Current	M.S New	CNS Current	CNS New
Main Strm Press	975	1020 (S/L)	990	1020 (S/U)
Fdw Flow	15	same	15.2	same
Fdw Temp	437	same	441	same
RCS Flow	.....Tech Spec.....	.....Tech Spec.....	.....Tech Spec.....	.....Tech Spec.....
RCS T <sub>set</sub>	618	614	620	614

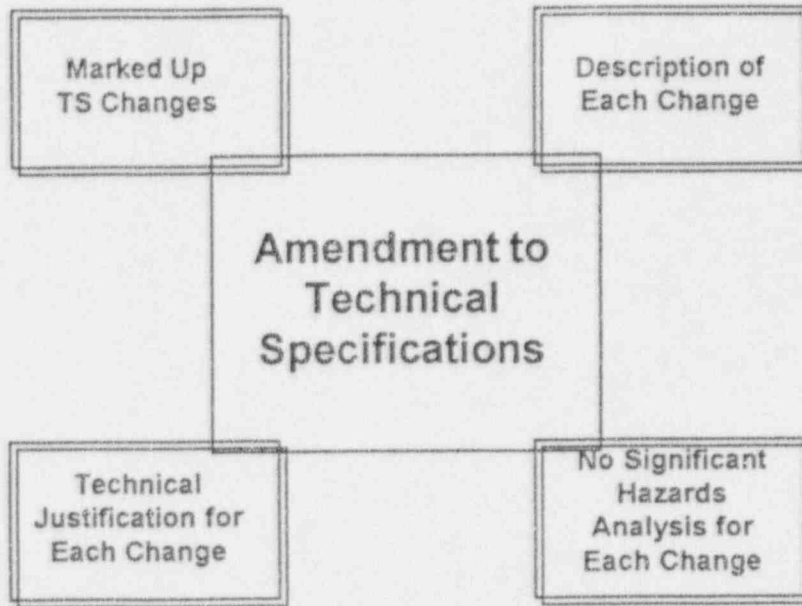
*Steam Generator Replacement Project*

---



---





 **DUKE POWER COMPANY**

## Technical Justification

- Descriptive Information
- Reference Appropriate Approved Methodology
- Describe Analysis and Results

*Steam Generator Replacement Project*

---

---

 **DUKE POWER COMPANY**

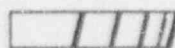
Topical Reports

- DPC-NE-3000 - DPC Thermal Hydraulic Analysis Methodology
- DPC-NE-3001 - Multi-Dimensional Reactor Transients and Safety Analysis
- DPC-NE-3002 - FSAR Chapter 15 System Transient Methodology
- New Topical will be submitted for mass and energy release and Containment Response
- LOCA Topicals previously submitted by BWNT
- RSG Design Topical

*Steam Generator Replacement Project*

---

---

 **DUKE POWER COMPANY**

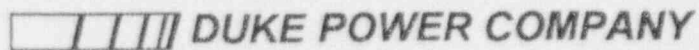
**RSG Design Topical**

- Design Description
- Design Basis
- Analysis
- Codes and Standards
- Fabrication
- Testing

*Steam Generator Replacement Project*

---

---



## License Amendment

- License Amendment Submitted For Each Station
- Submittal Will Include Required TS Changes.
- Submittal Of License Amendment For All 3 Units Targeted For September 30, 1994
- Approval Requested For September 30, 1995

*Steam Generator Replacement Project*



## Work Breakdown Structure

- 41 Work Packages
- 19 Plant Mods or Documentation Changes
- 22 Construction Work Packages

*Steam Generator Replacement Project*

**50.59  
Replacement  
Activities**

RCS CUTTING  
AND WELDING

RETIRED SG  
STORAGE FACILITY

PIPING SYSTEM MODS

SG RIGGING  
AND HANDLING

TEMPORARY FACILITIES

RCS  
LOOP  
ANALYSIS

