

Docket Nos. 50-269, 50-270, 50-287
50-369, 50-370
50-413, 50-414

LICENSE: Duke Power Company

FACILITY: Oconee, Units 1, 2 and 3
McGuire, Units 1 and 2
Catawba, Units 1 and 2

SUBJECT: SUMMARY OF MARCH 5, 1992, DPC/NRC INTERFACE MEETING

On March 5, 1992, the NRC staff (including the Project Engineer, Project Managers, Project Director, Region II personnel, and resident inspectors from Oconee, McGuire, and Catawba plants) met with representatives of Duke Power Company (DPC) at the Wachovia Center, Charlotte, North Carolina, to discuss issues of interest to both NRC and DPC organizations. Meeting attendees are listed in Enclosure 1. The agenda for the meeting is provided as Enclosure 2.

DPC provided two very informative presentations addressing Duke Reorganization (Enclosure 3), and Duke Steam Generator Project (Enclosure 4). The NRC staff addressed the following topics: NRC Process for Senior Management Meetings, Technical Specification Line Item Improvements, Comments on NUREG-1022, Revision 1, Status of NRC Evaluation of SQUG/GIP, Status of Pilot NRC Administered Requalification Examinations, and Lessons Learned from Yankee Rowe Issues. Breakout sessions between DPC and the NRC staff to address site-specific issues took place in the afternoon.

/s/

Frank Rinaldi, Project Engineer
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
As stated

cc w/enclosures:
See next page

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Memorandum
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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555

March 30, 1992

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A handwritten signature in cursive script, appearing to read "Frank Rinaldi".

Frank Rinaldi, Project Engineer
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
As stated

cc w/enclosures:
See next page

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Catawba Nuclear Station
McGuire Nuclear Station
Oconee Nuclear Station

cc:

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Duke Power Company

- 2 -

Catawba Nuclear Station
McGuire Nuclear Station
Oconee Nuclear Station

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Meeting Attendees

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Dennis Murdock
Ken Caraway
Sam Heuertz
Mark Smith
Larry Reed
Hal B. Tucker
Todd Cooper
R. L. Gill
D. L. Rehn
T. P. Harrall
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T. McMeekin
G. D. Gilbert
T. F. Wyke
R. Futrell
Luellen B. Jones
G. Wayne Hallman
D. V. Ethington
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W. H. Taylor
R. O. Sharpe
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W. M. Funderburke
L. J. Kunka
K. P. Mullen
A. D. Jones
Joe M. Davis
Mark Patrick

Nuclear Regulatory Commission

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D. Matthews
Paul Harmon
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P. Kim Van Doorn
John Zeiler
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G. A. Belisle
L. Wiens
T. Reed

DUKE/NRC

INTERFACE MEETING

MARCH 5, 1992

Wachovia Center WC-2669

Charlotte, North Carolina

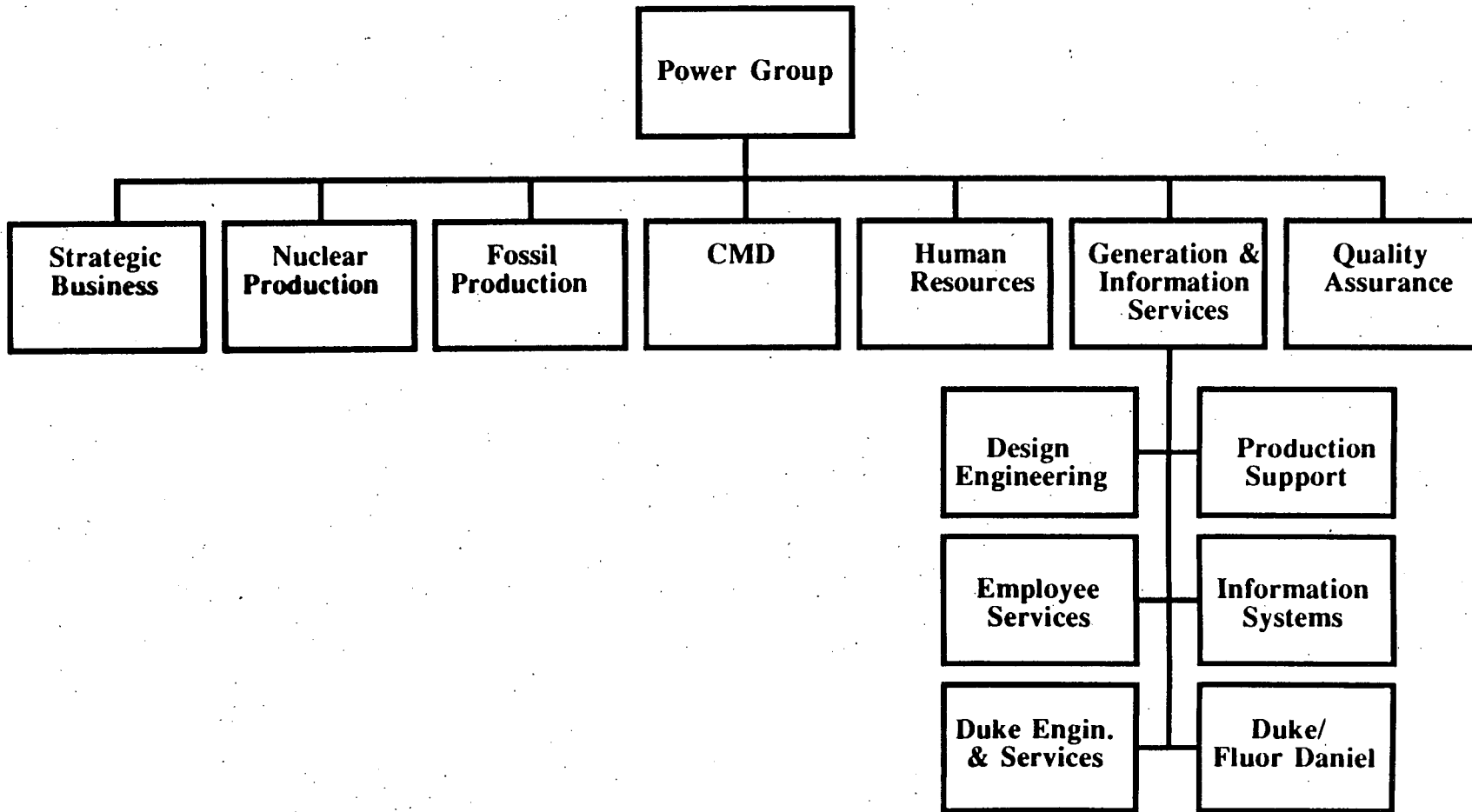
Agenda

8:00	Coffee	
8:30	Duke Reorganization	Dave Rehn
9:30	Steam Generator Project	Wayne Hallman
10:30	Break	
10:45	NRC Presentation	
12:00	Lunch	

Site specific breakout sessions will occur after lunch.

Power Group Restructuring

**POWER GROUP ORGANIZATION
TODAY**



WHY CHANGE -- IS IT BROKE?

- **NO!**
- **Track Record Speaks For Itself**
- **Current Organization Is Managed Effectively**
 - Room for Incremental Improvement
 - Configuration Is Not Aligned With Strategic Plan
 - Re-engineering Required To Achieve Excellence Goals
- **Realignment Of Functions Directed At**
 - Releasing Barriers To Excellence
 - Alignment With Strategic Plan
 - Strategic Use of Human Resources
- **Our Goal Is A Performance Step Change**

SIGNALS FOR CHANGE?

- **Strategic Plan Focus**
 - **Nuclear Excellence**
 - **Shift To Demand Side**
(**>400 MW/Year**)
 - **Financial Management**
 - **Environmental Leadership**

- **Power Group BRT Improvement Areas**
 - **Nuclear Refueling Outage Management**
 - **Nuclear Modification**
 - **Materials Management**
 - **Strategic & Business Planning**
 - **Cost Centers**

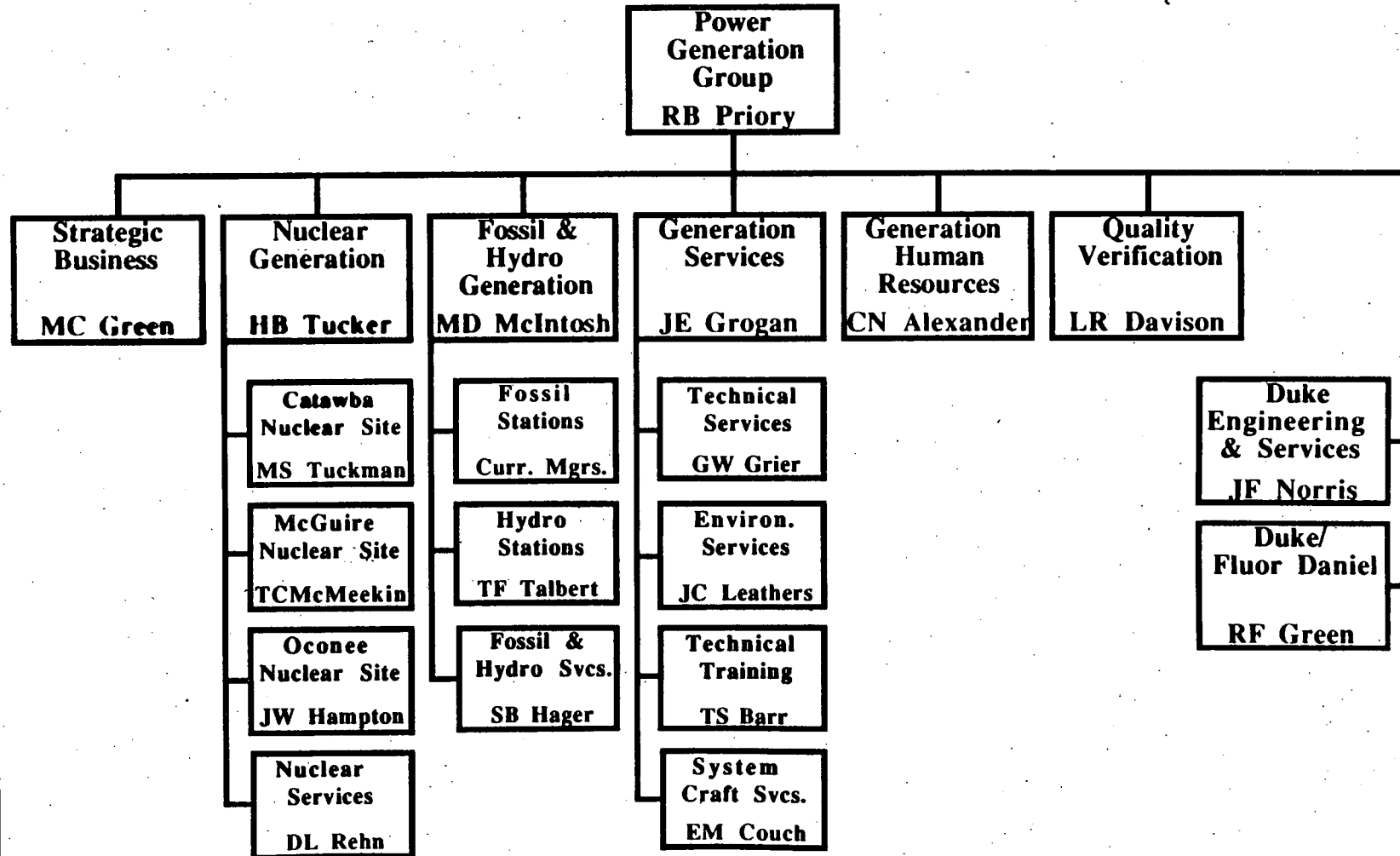
SUMMARY OF CHANGES

- **Key Objectives**

- **Separate Nuclear Site Management From Station Management**
- **Complete Transition From Design/Build To Operations**
- **Consolidate On-site Nuclear Support Services**
- **Relocate Hydro Generation To Power Generation Group**
- **Relocate Information Systems To Corporate Group**
- **Add Business Unit Management Groups**
- **Consolidate Environmental Resources**
- **Relocate Nuclear, Fossil & Hydro Support Services To The Generating Departments**

Power Group Restructuring

POWER GENERATION GROUP



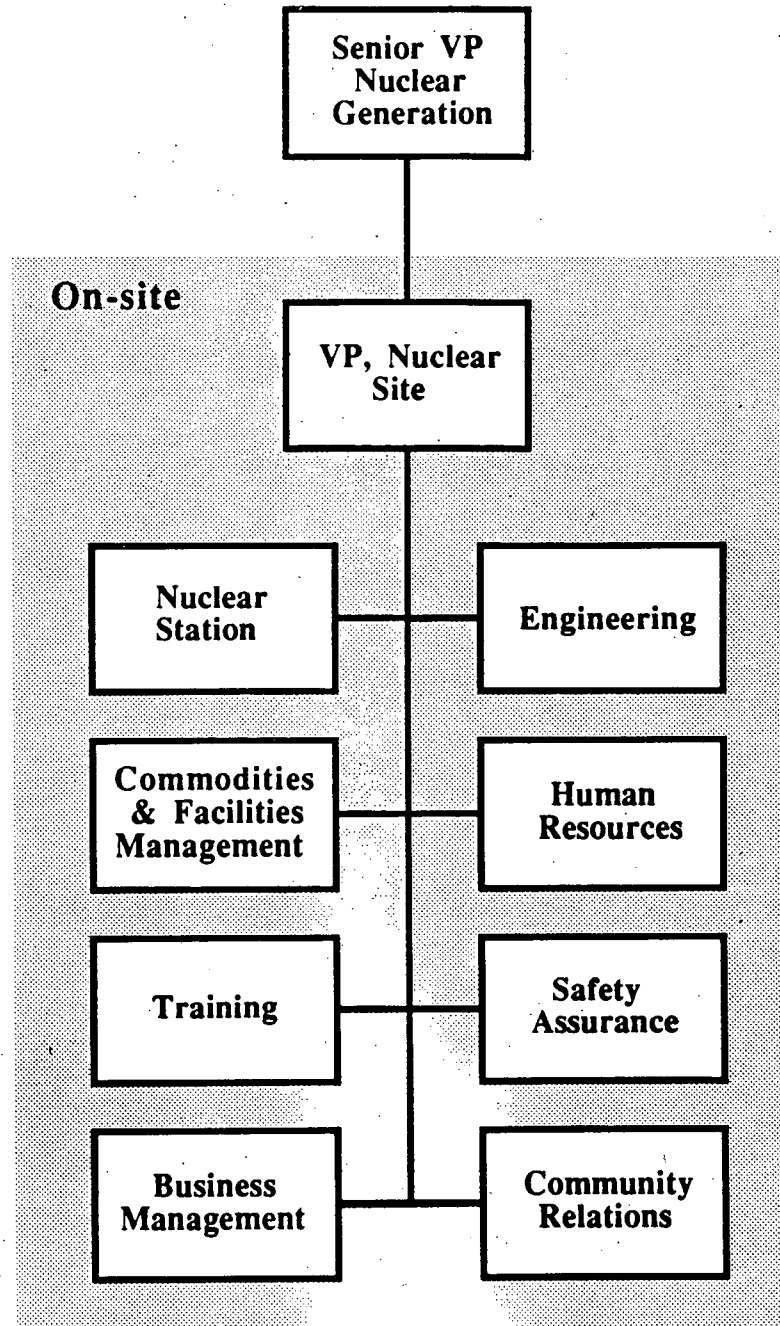
SUMMARY OF CHANGES, Cont'd.

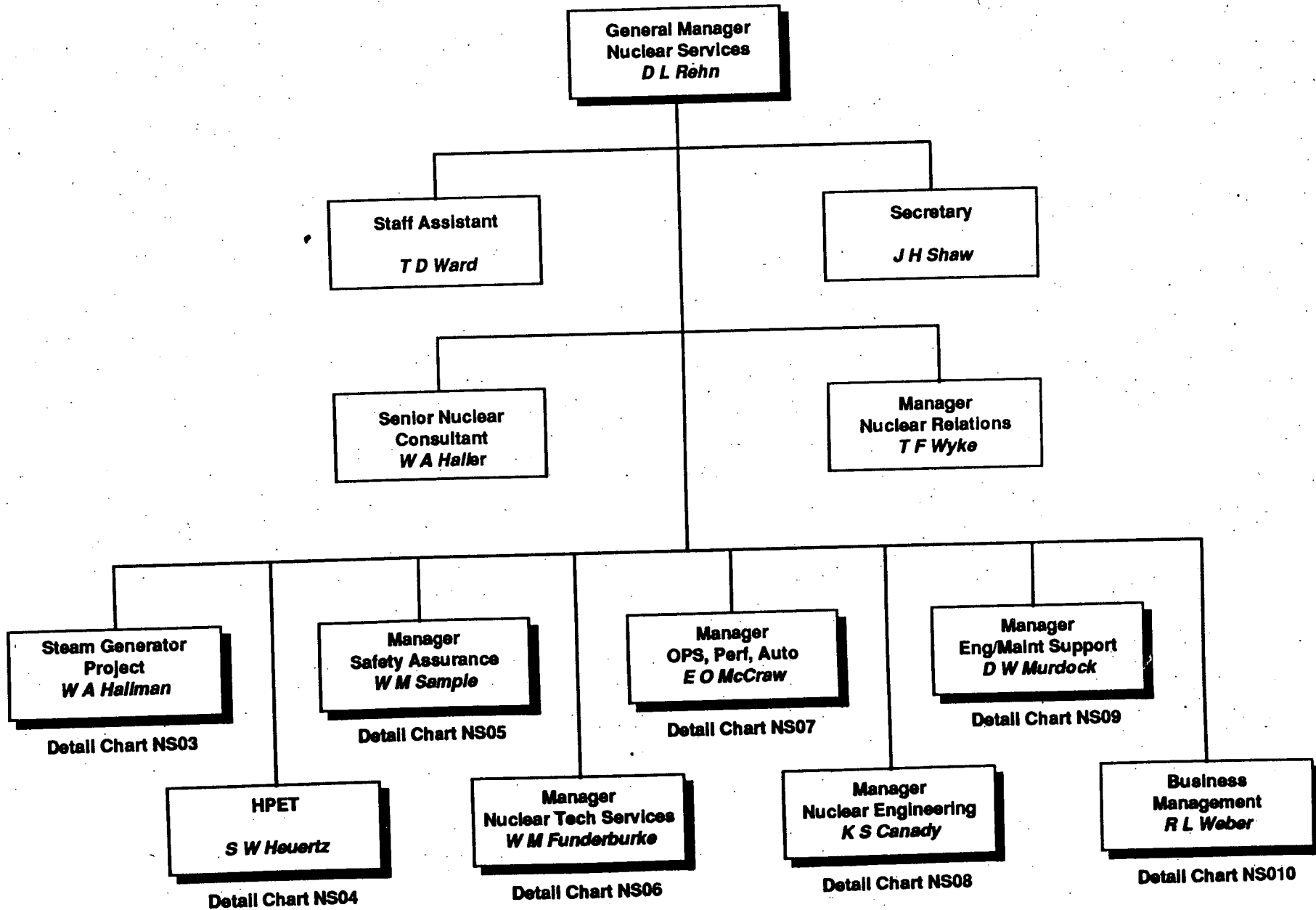
- **Nuclear Sites**

- **Each Site Headed By A Vice President**
- **Redefinition Of Station Manager Role**
- **Consolidated Commodities & Facilities Management**
- **Created Business Management Groups**
- **Integrated Design Engineering, CMD, QA, Corp. Comm., Transmission & Training Functions Into Site Organization**
- **Consolidated Multi-station Nuclear Support Service Into One Organization**

Power Group Restructuring

POWER GENERATION GROUP
NUCLEAR SITE ORGANIZATION





SUMMARY OF CHANGES, Cont'd.

• **Fossil and Hydro**

- **Merged Fossil And Hydro Operations**
- **Consolidated Support Services In One Organization**
- **Created Business Management Group**

• **Generation Services**

- **Consolidated Environmental Resources**
- **Created Technical Training Organization To Serve Power Generation Group**
- **Consolidated Technical Services For The Power Generation Group**
- **Created A System Craft Services Organization**

SUMMARY OF CHANGES, Cont'd.

- **Quality Verification**
 - **Created A Quality Verification Organization For The Power Generation Group**
 - **Reassigned The Nuclear Safety Review Board From The Nuclear Department To The Group Level**

- **Generation Strategic Business, Human Resources, DE&S, Corp. Comm., and Duke/Fluor Daniel**
 - **No Significant Restructuring**

Power Group Restructuring

PRO's & CON's

- **Pro's**

- **Clearly Aligns With Strategic Plan**
- **Intense Focus On Nuclear Excellence**
- **Strengthens Cost Center Financial Management**
- **Minimizes Duplication Of Function**
- **Strengthens Environmental Stewardship**
- **Significantly Reduces Organizational Interfaces Required To Complete A Plant Task**

PRO's & CON's, Cont'd.

- **Con's**
 - **Disruptive To Implement**
 - **Interruption Of Total Quality Management Activities**
 - **Risk Of More Rather Than Less Site Autonomy**
 - **Short-term Cost To Implement**
 - **Requires Aggressive Change**

Power Group Restructuring

SCHEDULE

- **Board Of Directors Approval** **9/24/91**
- **Internal Announcements** **9/25/91**
 - **Restructuring**
 - **First Two Levels Of Management**
- **Complete Remaining Restructuring And Personnel Assignments** **October**
- **Effective Date For Power Generation Group** **11/1/91**
- **Announce Relocation Schedules** **11/1/91**

THE FINAL PRODUCT

- **Improved Safety And Quality Margins**
 - Fewer Interfaces To Complete A Task
 - PGG Clearly Focused On Plant Operation
 - Safety And Quality Accountability Squarely In The Hands Of Site Management

- **Lower Generation Costs**
 - Improved Nuclear Refueling Outage Performance
 - Less Duplication
 - Improved Financial Management
 - Improved Commodities Management
 - Improved Plant Modification Control
 - Improved Work Planning

DUKE POWER COMPANY

STEAM GENERATOR REPLACEMENT PROJECT

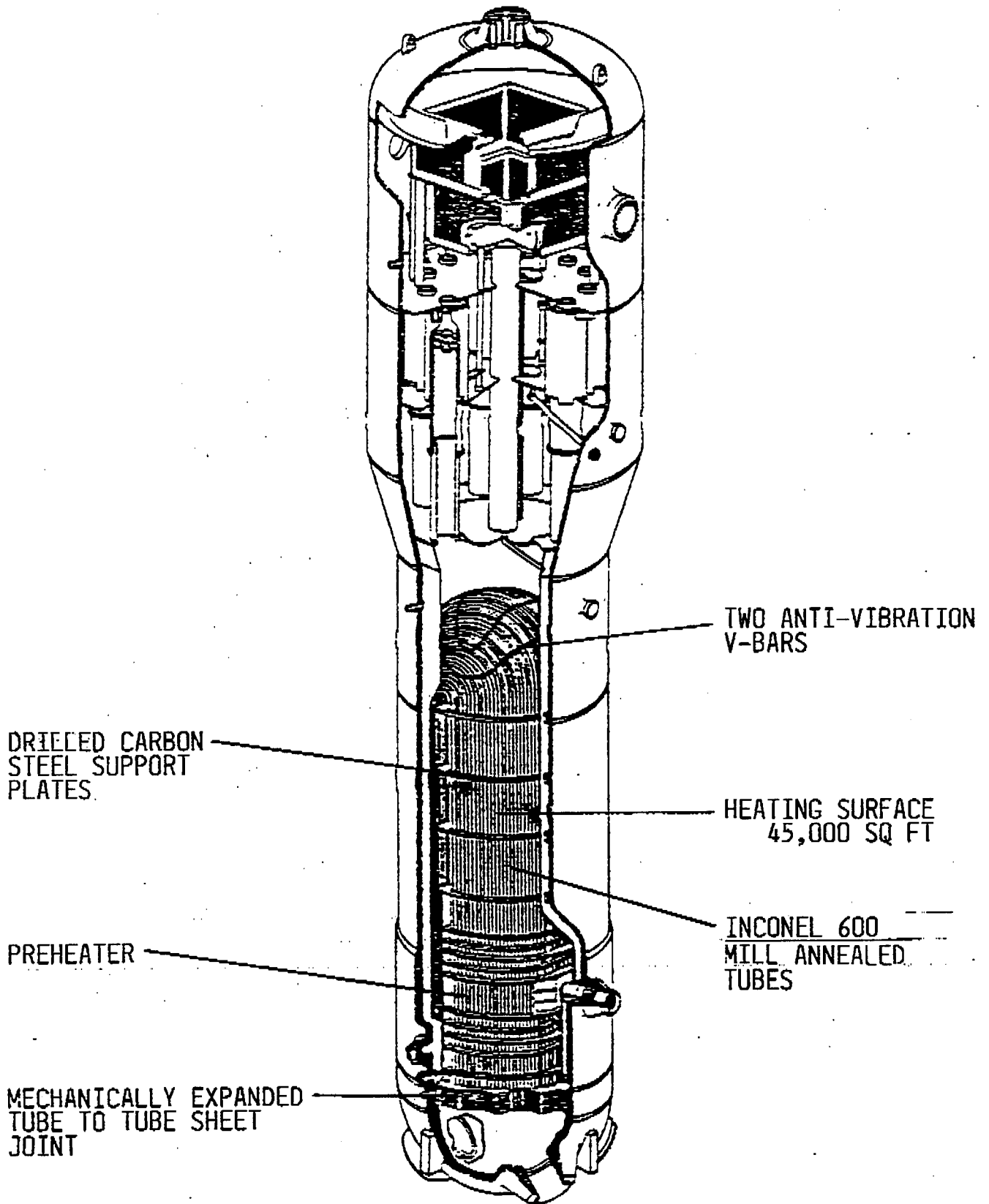
NRC INTERFACE MEETING

MARCH 5, 1992

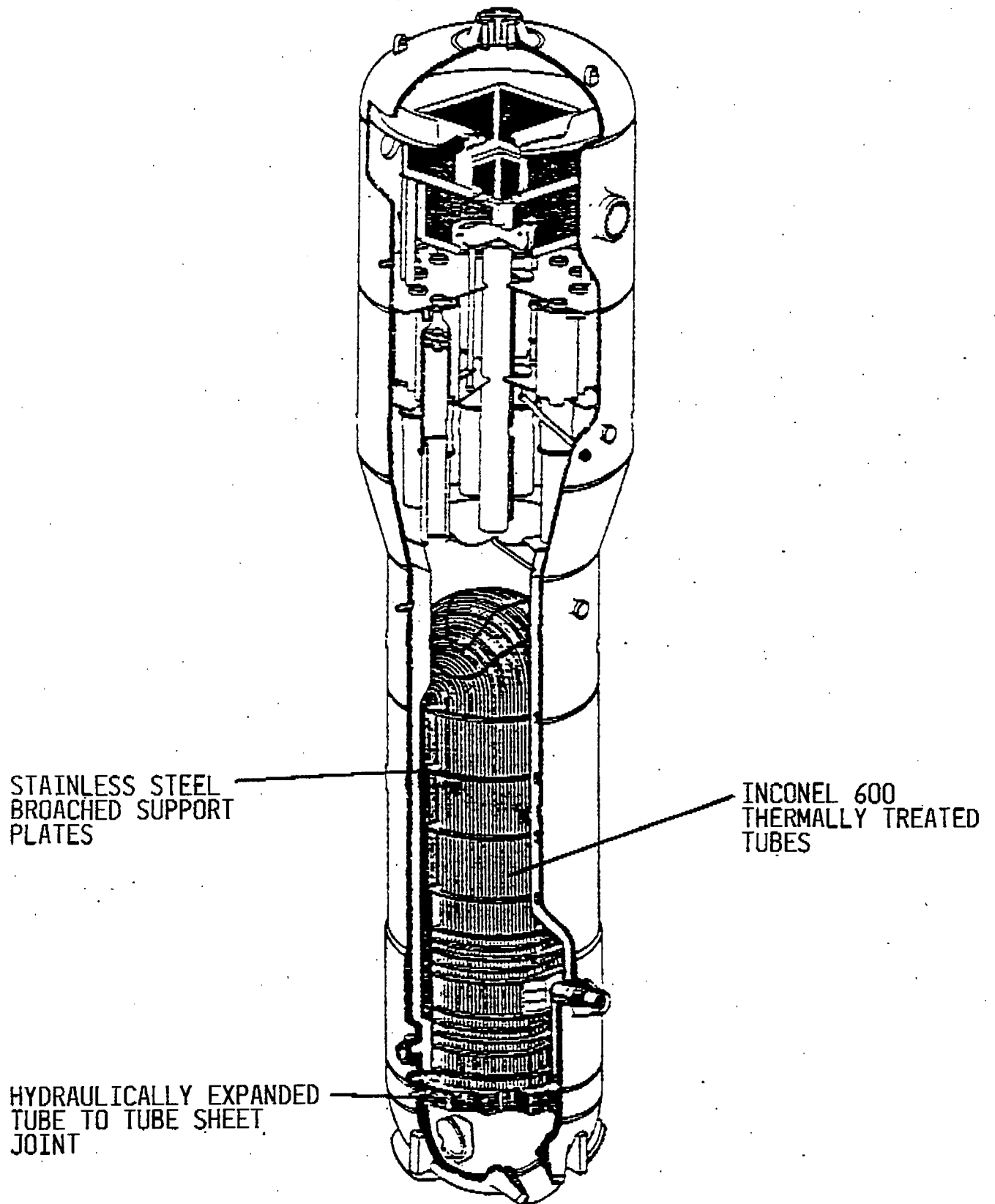
MCGUIRE AND CATAWBA NUCLEAR STATIONS

	MCGUIRE	CATAWBA
UNITS	2	2
COMMERCIAL SERVICE	UNIT 1 - 12/1/81 UNIT 2 - 3/1/84	UNIT 1 - 6/29/85 UNIT 2 - 8/19/86
NSSS	WESTINGHOUSE	WESTINGHOUSE
LOOPS	4	4
RATED CAPACITY	1129 MW (MDC) EACH	1129 MW (MDC) EACH

WESTINGHOUSE MODEL D2 AND D3
STEAM GENERATORS
McGUIRE 1, McGUIRE 2, AND CATAWBA 1



WESTINGHOUSE MODEL D5
STEAM GENERATORS
CATAWBA 2



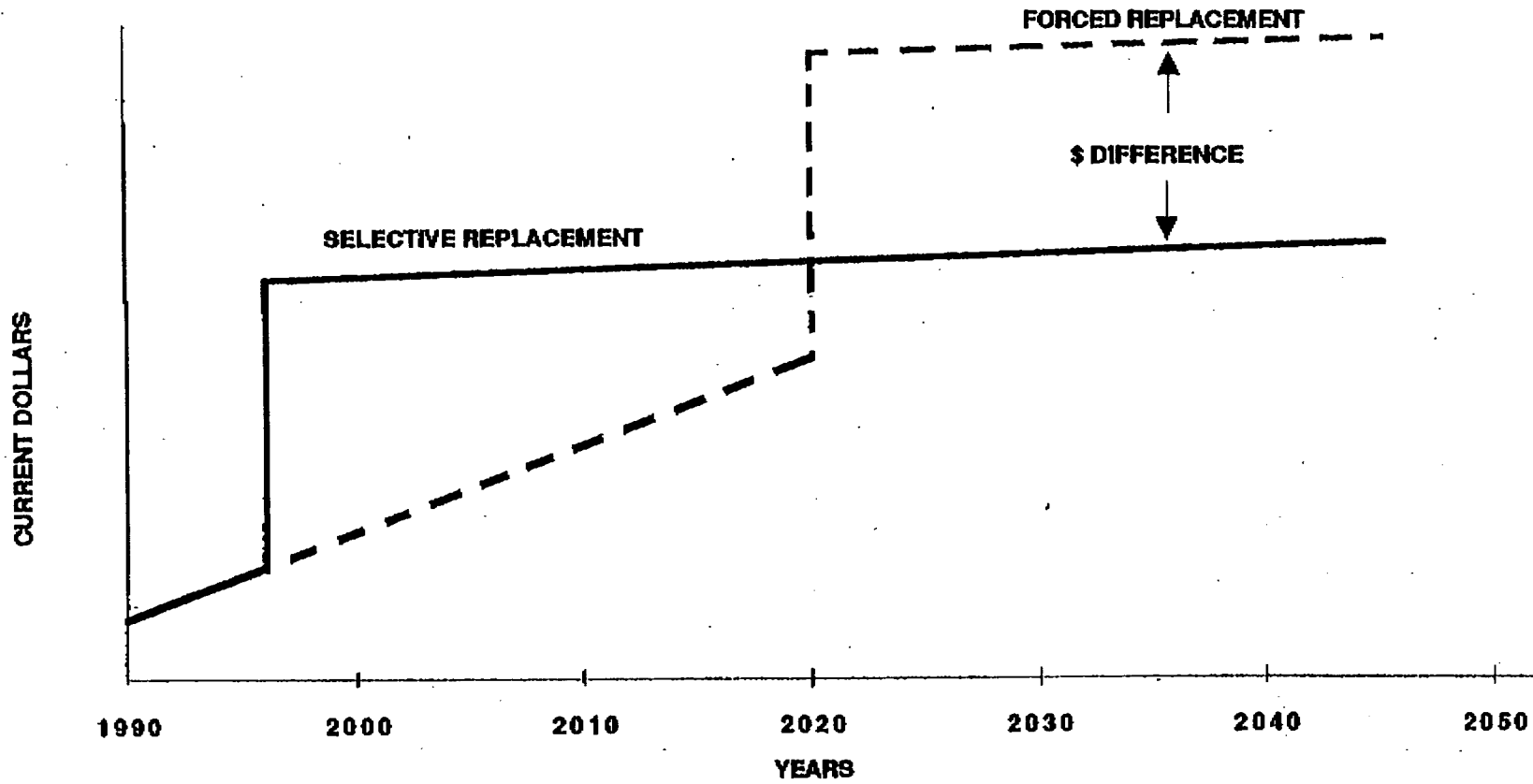
STEAM GENERATOR TUBE REPAIRS
MCGUIRE AND CATAWBA
MARCH 5, 1992

	<u>MNS-1</u>	<u>MNS-2</u>	<u>CNS-1</u>	<u>CNS-2</u>
TOTAL TUBES	18,696	18,696	18,696	18,696
TOTAL PLUGGED	1209	1039	261	80
TOTAL SLEEVED	397	635	0	0
EQUIVALENT % TUBES REMOVED FROM SERVICE	6.6	5.7	1.4	0.4

REPLACEMENT EVALUATION

- VARIOUS REPLACEMENT METHODOLOGY STUDIES
- REPLACEMENT COST STUDY IN 1990 - D C COOK COMPARISON
- REPLACEMENT EVALUATION TASK FORCE IN 1990 – FINANCIAL/TECHNICAL MODEL
- MODEL HAS OVER 50 INPUTS INCLUDING:
 - OPTIMISTIC, PESSIMISTIC AND EXPECTED DEGRADATION RATES (OLD AND NEW SGs)
 - TUBES PLUGGED AND SLEEVED
 - MAINTENANCE COSTS
 - LOST ~~///~~ GENERATION/REPLACEMENT POWER
 - FUEL COSTS
 - RADIATION EXPOSURE

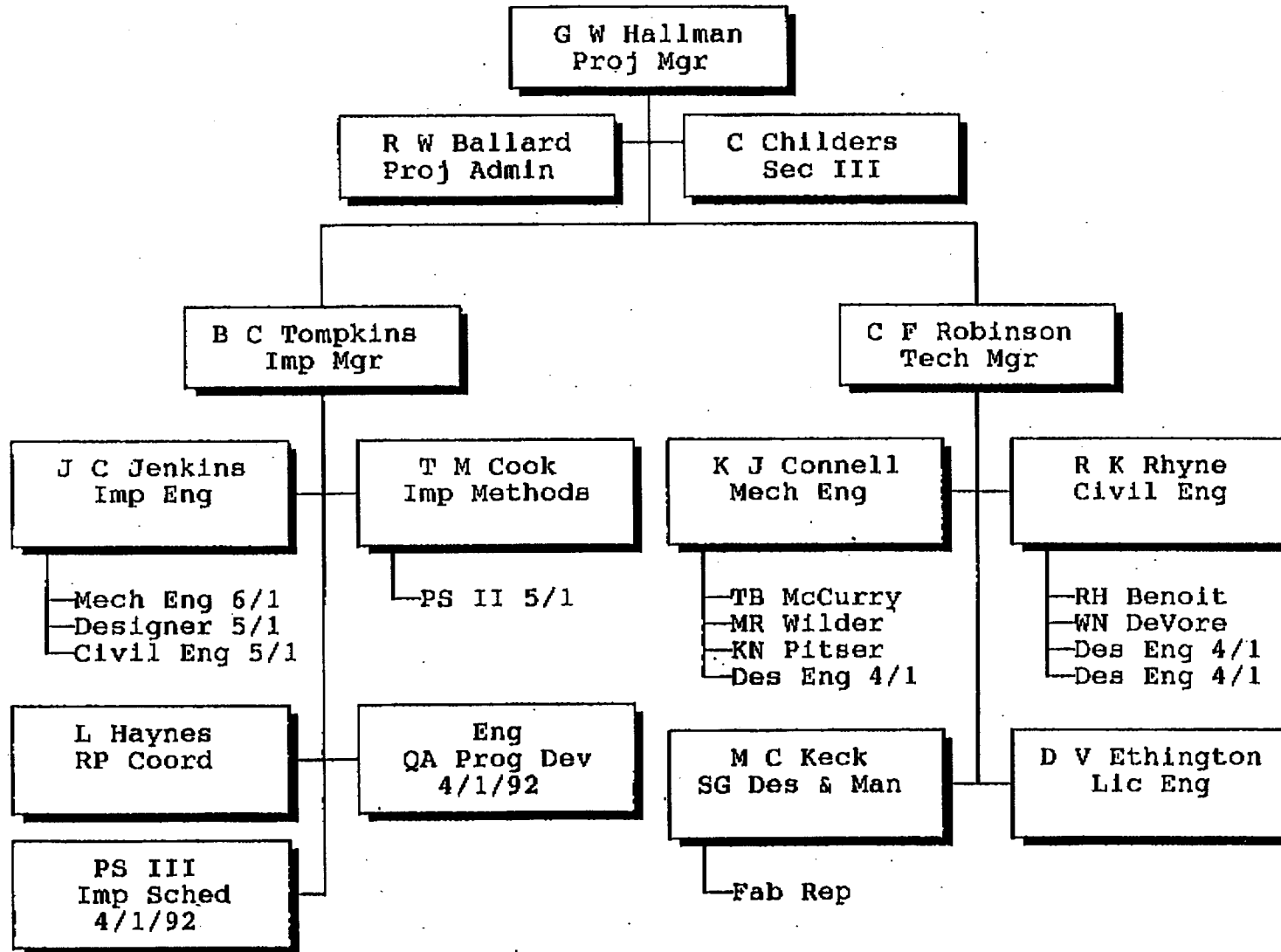
TYPICAL MODEL ANALYSIS MCGUIRE UNIT 1



REPLACEMENT PROJECT

- PROJECT MANAGER SELECTED - FEBRUARY, 1991
- FUNCTIONAL MANAGERS AND FOUR ENGINEERS IN PLACE AT THE END OF 1991
- PROJECT STAFFING PHILOSOPHY
 - PERMANENT CORE TEAM
 - LEAD PERSONS IN EACH FUNCTIONAL AREA
 - LEAD PERSONS TECHNICALLY INVOLVED AT THE WORKING LEVEL (NOT JUST COORDINATORS)
 - MATRIX ENGINEERING/TECHNCIAL SUPPORT FROM WITHIN DUKE
 - CONTRACT ENGINEERING/TECHNICAL SUPPORT AS REQUIRED

Steam Generator Project
 Projected Staffing Needs
 for 1992



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NEW STEAM GENERATORS

DESIGN GOALS

- SIXTY YEAR DESIGN LIFE
- IMPROVED THERMAL PERFORMANCE
- INTERCHANGEABILITY
- PROVEN TECHNOLOGY
- MINIMIZE IMPACT TO EXISTING PLANT
- MINIMIZE LIFE CYCLE COSTS

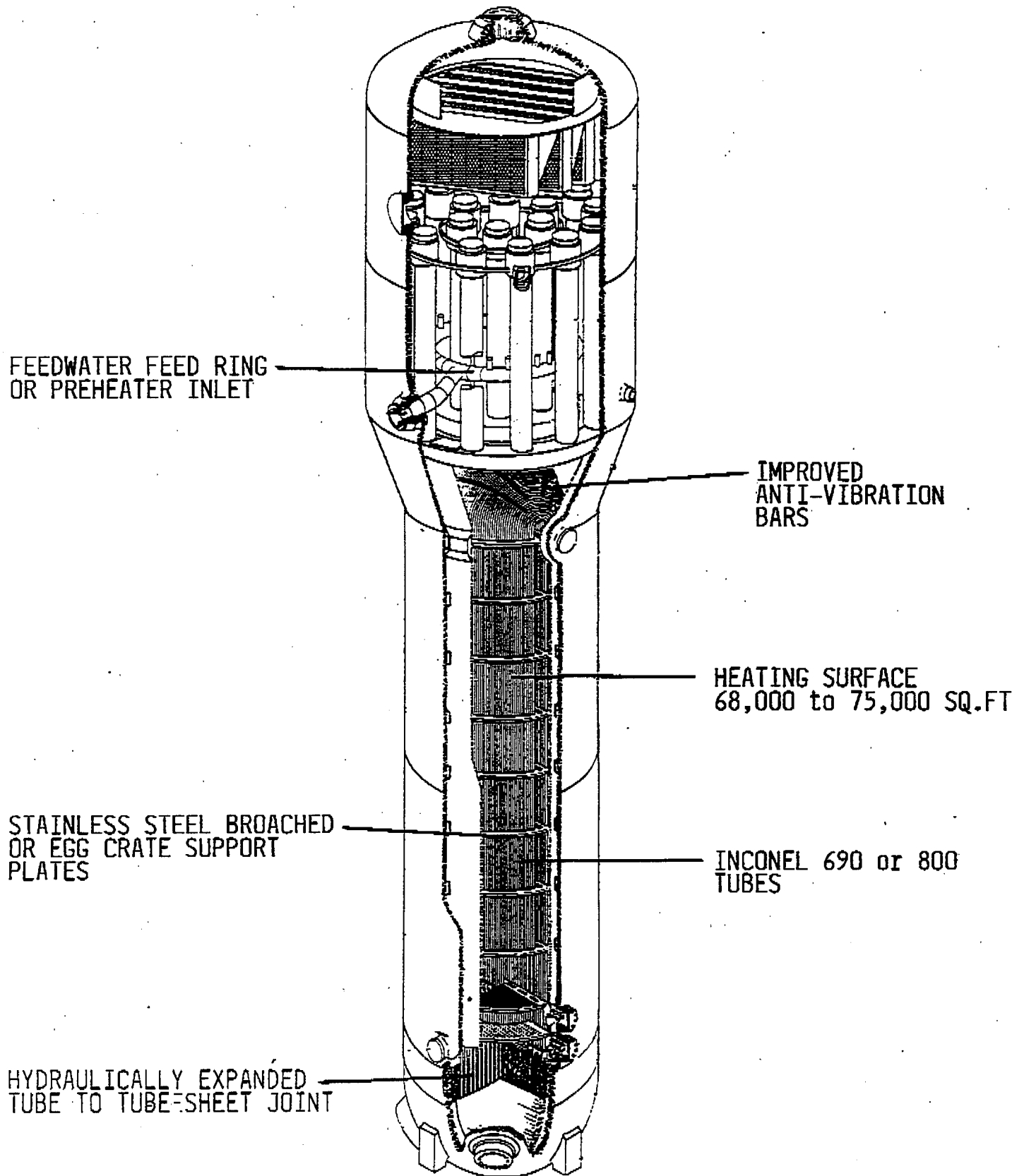
NEW STEAM GENERATORS PROSPECTIVE SUPPLIERS

- WESTINGHOUSE

- SIEMENS/KWU
ABB/CE

- BWI
FRAMATOME

NEW STEAM GENERATORS



REMOVAL AND REPLACEMENT

- REMOVAL AND REPLACEMENT STRATEGY

- ONE PIECE REMOVAL AND REPLACEMENT
- REMOVE AND REPLACE THROUGH EXISTING OPENINGS
- TWO CUT METHOD ON REACTOR COOLANT PIPING
- OPTICAL AND PHOTOGRAMETRIC FITUP TECHNOLOGY
- SMALL GAP WELDING ON REACTOR COOLANT PIPING
- SPECIAL LIFTING CRANE MOUNTED ON POLAR CRANE
- ALARA

- DISPOSAL STRATEGY

- INTERIM STORAGE BUILDING ON SITE
OR
- SHIP TO OFF SITE DISPOSAL

DESIGN CHANGE ANALYSIS AND LICENSING

- DESIGN CHANGE ANALYSIS WILL INCLUDE:

- TRANSIENTS
- CLASS 1 AND 2 COMPONENTS
- SAFETY
- SYSTEMS
- CLASS 1 PIPING
- COMPONENT SUPPORTS
- PIPING SUPPORTS
- LEAK BEFORE BREAK
- FLOODING

- LICENSING

- APPEARS THAT A LICENSE AMENDMENT IS REQUIRED
- TARGET IS TO HAVE LICENSE AMENDMENT APPROVAL SIX MONTHS IN ADVANCE OF THE FIRST REPLACEMENT
- BEGIN TO ESTABLISH APPROPRIATE INTERFACES WITH NRC IN THE NEAR FUTURE

MILESTONE SCHEDULE

ACTIVITY	SCHEDULE
RECEIVE STEAM GENERATOR BIDS	MARCH 13, 1992
PLACE STEAM GENERATOR ORDER	JULY 1, 1992
SELECT REPLACEMENT SEQUENCE	OCTOBER 1, 1992
SELECT INSTALLATION CONTRACTOR	FEBRUARY 1, 1994
LICENSE AMENDMENT APPROVED	DECEMBER, 1995
RECEIVE FIRST SET OF STEAM GENERATORS	JANUARY, 1996
INSTALLATION OF FIRST SET OF STEAM GENERATORS	1996
INSTALLATION OF REMAINING STEAM GENERATORS	1998 AND 2000
ALTERNATE COMPRESSED SCHEDULE (CONTINGENCY)	1995, 1996 AND 1997