

November 21, 1996

LICENSEE: Duke Power Company

FACILITIES: Oconee Nuclear Station, Units 1, 2, and 3  
McGuire Nuclear Station, Units 1 & 2  
Catawba Nuclear Station, Units 1 & 2

SUBJECT: SUMMARY OF MEETING WITH DUKE POWER COMPANY ON LICENSING  
ISSUES AND SAFETY INITIATIVES

On October 16, 1996, the NRC staff (NRR Projects, Region II and resident inspectors) met with representatives of Duke Power Company (DPC) at the McGuire Nuclear Station to discuss ongoing current licensing issues and safety initiatives at the three DPC nuclear stations. Meeting attendees are listed in Enclosure 1. The meeting agenda is included in Enclosure 2 and meeting handouts are provided in Enclosure 3.

Original signed by:

Victor Nerses, Senior Project Manager  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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

cc w/encl: See next page

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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A handwritten signature in cursive script, reading "Victor Nerses", is positioned above the typed name and title.

Victor Nerses, Senior Project Manager  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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

cc w/encl: See next page

ATTENDEE LIST

OCTOBER 16, 1996, DUKE POWER COMPANY & NRC

INTERFACE MEETING

NAME

ORGANIZATION

V. Nerses	NRC/NRR/PD II-2/Project Mgr-McGuire
H. Berkow	NRC/NRR/PD II-2 Director
D. LaBarge	NRC/NRR/PD II-2/Project Manager-Oconee
P. Tam	NRC/NRR/PD II-2/Project Manager-Catawba
S. Rudisail	NRC/RII/DRP
R. Freudenberger	NRC/SRI/Catawba
L. Wert	NRC/RII/Acting Branch Chief/DRP
Jim Snyder	MNS/Reg. Compliance Manager
Mano Nazar	MNS/Maintenance Superintendent
Jack Boyle	MNS/CE&N Engr. Mgr.
T. C. McMeekin	VP/MNS
M. S. Kitlan, Jr.	CNS/Reg. Compl. Manager
Bruce Anderson	Information Management
Jeff Forbes	CNS/Engr. Mgr.
Ernie Hite	NGO/Acting Engineering Support Mgr.
Dennis Murdock	ESS/Manager, Major Projects
Ed Burchfield	ONS/Reg. Comp. Mgr.
Scott Shaeffer	NRC/RII/McGuire SRI
Marvin Sykes	NRC-McGuire
Pete Herran	DPCo - McGuire Mgr. Eng.
John Thrasher	DPC-McGuire Maint. Engr. Mgr.
Keith Thomas	DPC-McGuire - Work Control Supt.
Skip Copp	DPC-Mgr. Muc. Reg. Affairs - GO
Mike Tuckman	DPC-Sr. VP
Bill Pitesa	DPC- McGuire - SRG Mgr.
Mac Gerrie	DPC-Station Mgr.

DUKE POWER - NRC  
10/16/96 INTERFACE MEETING

AGENDA

Time	Topic	Speaker
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0800	Opening Remarks/DPC	Mike Tuckman Ted McMeekin
	Opening Remarks/NRC	Herb Berkow
0810	SG Replacement Project	Wayne Hallman Robert Sharpe
0840	UFSAR Activities	Skip Copp John Thrasher
0920	Identification of UFSAR Compliance Changes in Proposed Amendments (Sensitivity in Identifying USQ)	Herb Berkow
0955	Plant Issues List (Clarifications)	Scott Shaeffer
1020	BREAK	
1035	Self-assessment Process	Mac Geddie
1105	EP/Implementing Procedures Handling Privacy Issues	Peter Tam
1115	ISTS Status	Skip Copp
1145	OEDB Database Demo	Bill Matthews
1215	Closing Remarks	
	Duke Power	Mike Tuckman Ted McMeekin
	NRC	Herb Berkow
1230	Lunch	



DPC

# STEAM GENERATOR REPLACEMENT



***Duke Power Company***

**McGuire Nuclear Station**

**Steam Generator Replacement Project**

**Duke Power/ NRC Interface Meeting**

**October 16, 1996**

***Steam Generator Replacement Project***

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# *Duke Power Company*

## Agenda

**Project Overview**

**Wayne Hallman**

**Catawba Outage Video**

**Robert Sharpe**

**Catawba Outage**

**Robert Sharpe**

**McGuire Status**

**Robert Sharpe**

*Steam Generator Replacement Project*

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# *Catawba Outage Successes*

- **June 12 - October 4 = 113.35 days Breaker to Breaker**
- **Outage Exposure (168 REM) Lowest Ever (per S/G) in U. S.**
- **S/G Fitup and Narrow Groove Welding**
- **Containment Purge Necessary for Heatup**
- **No LER's**

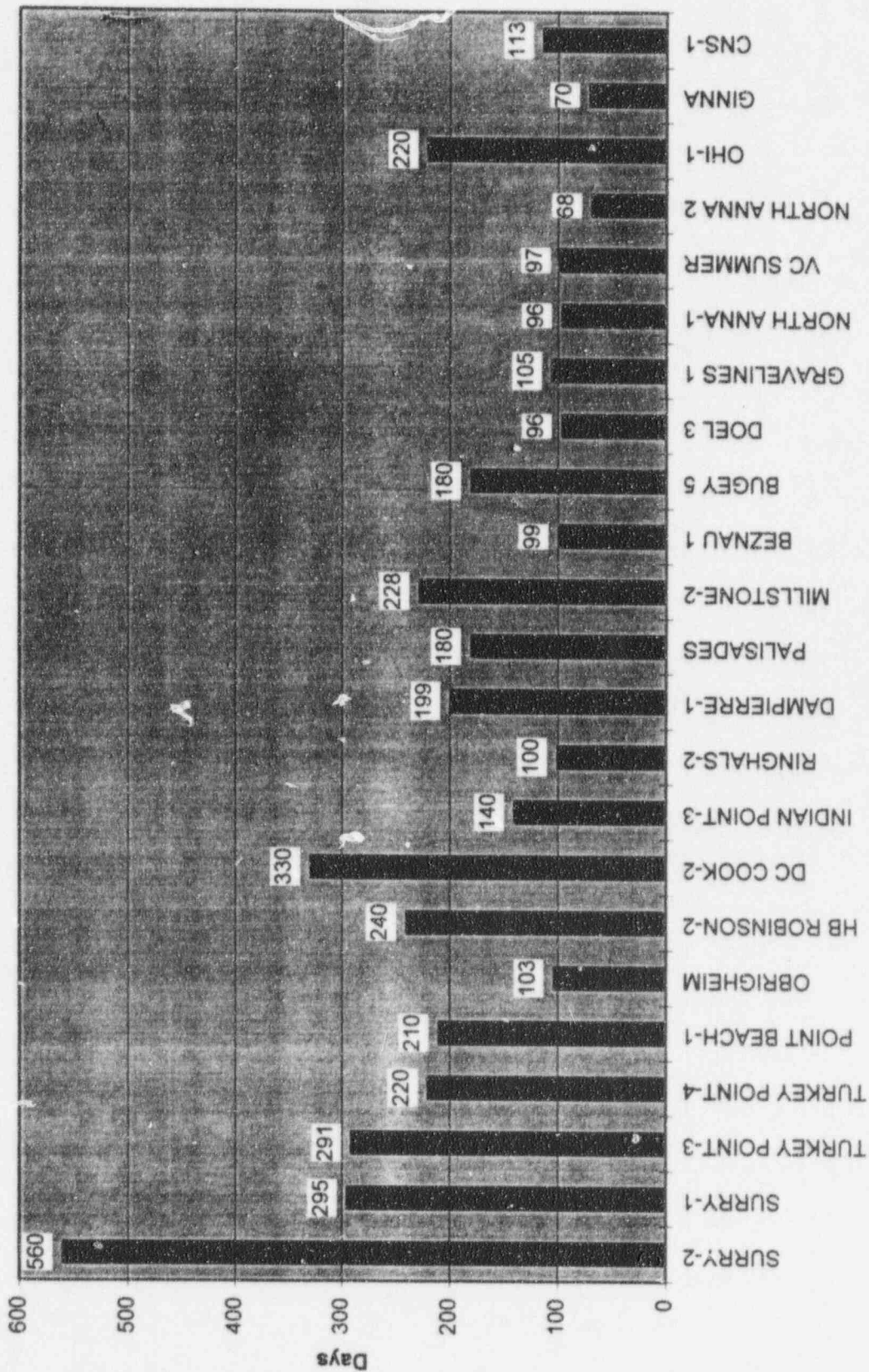
*Steam Generator Replacement Project*

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# SGRP OUTAGE DURATIONS



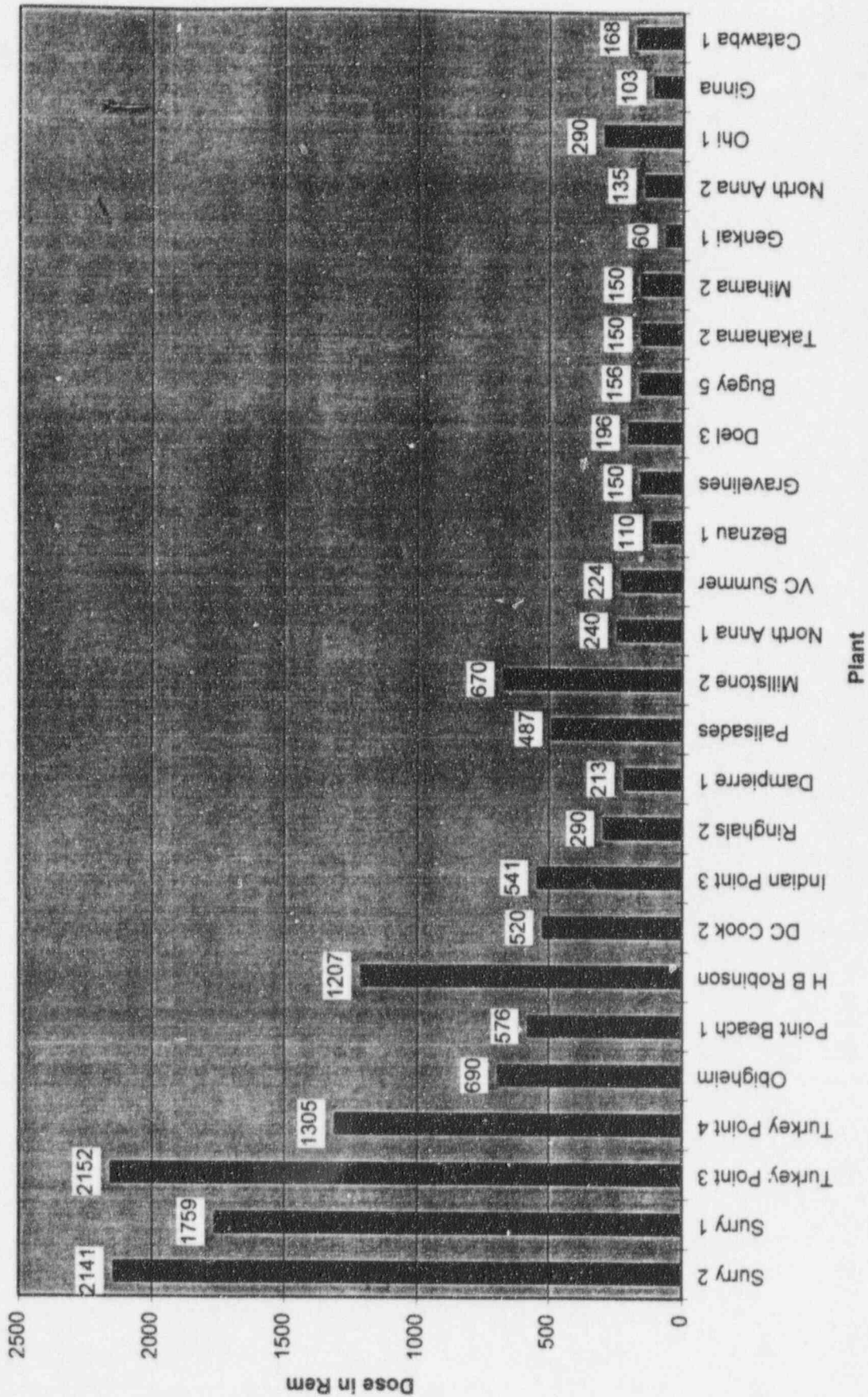
Plant

## Steam Generator Replacement Project



# SGRP OUTAGE DOSES

All Known Previous SGR Outages Exposure

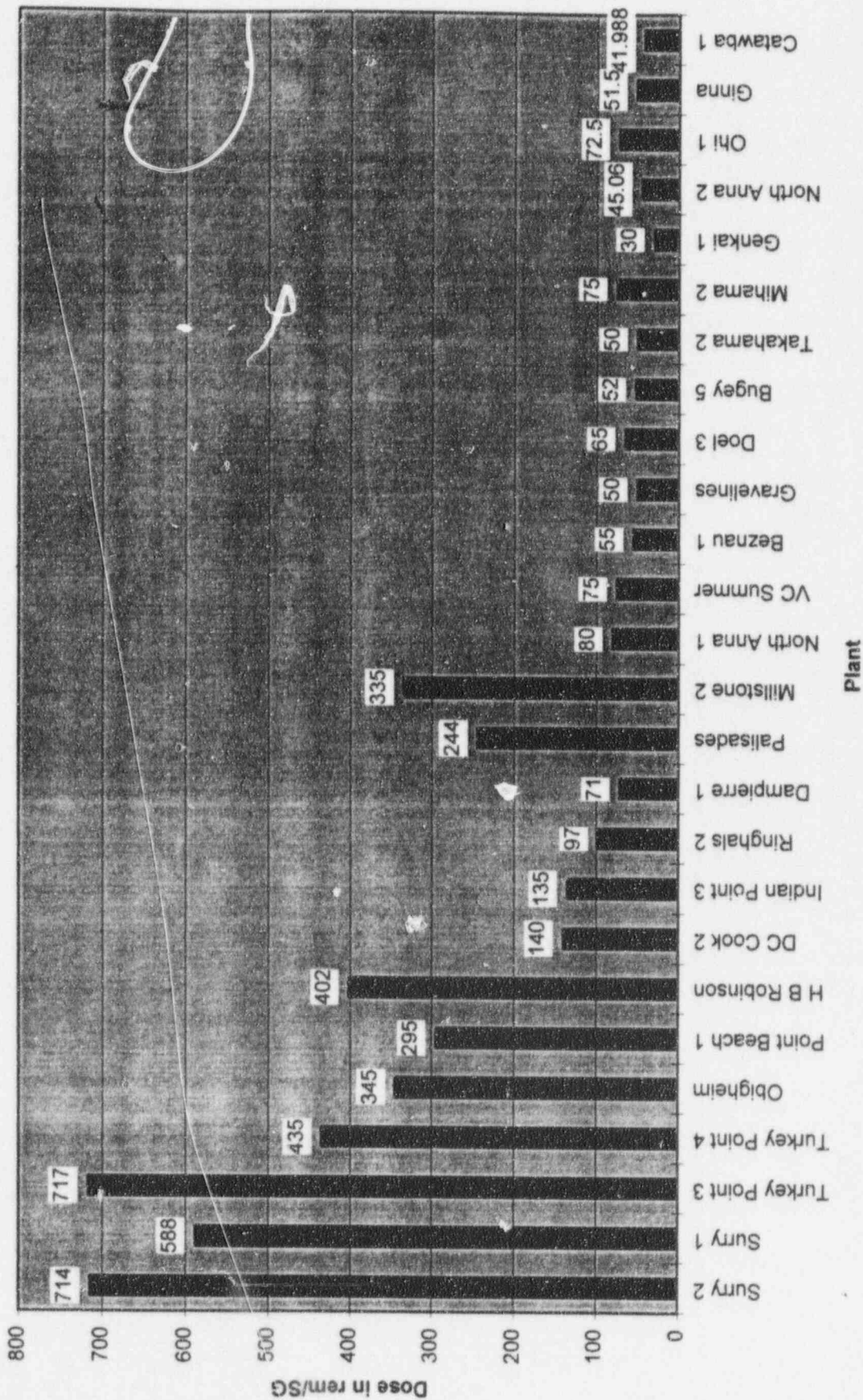


Steam Generator Replacement Project



# SGRP OUTAGE DOSES

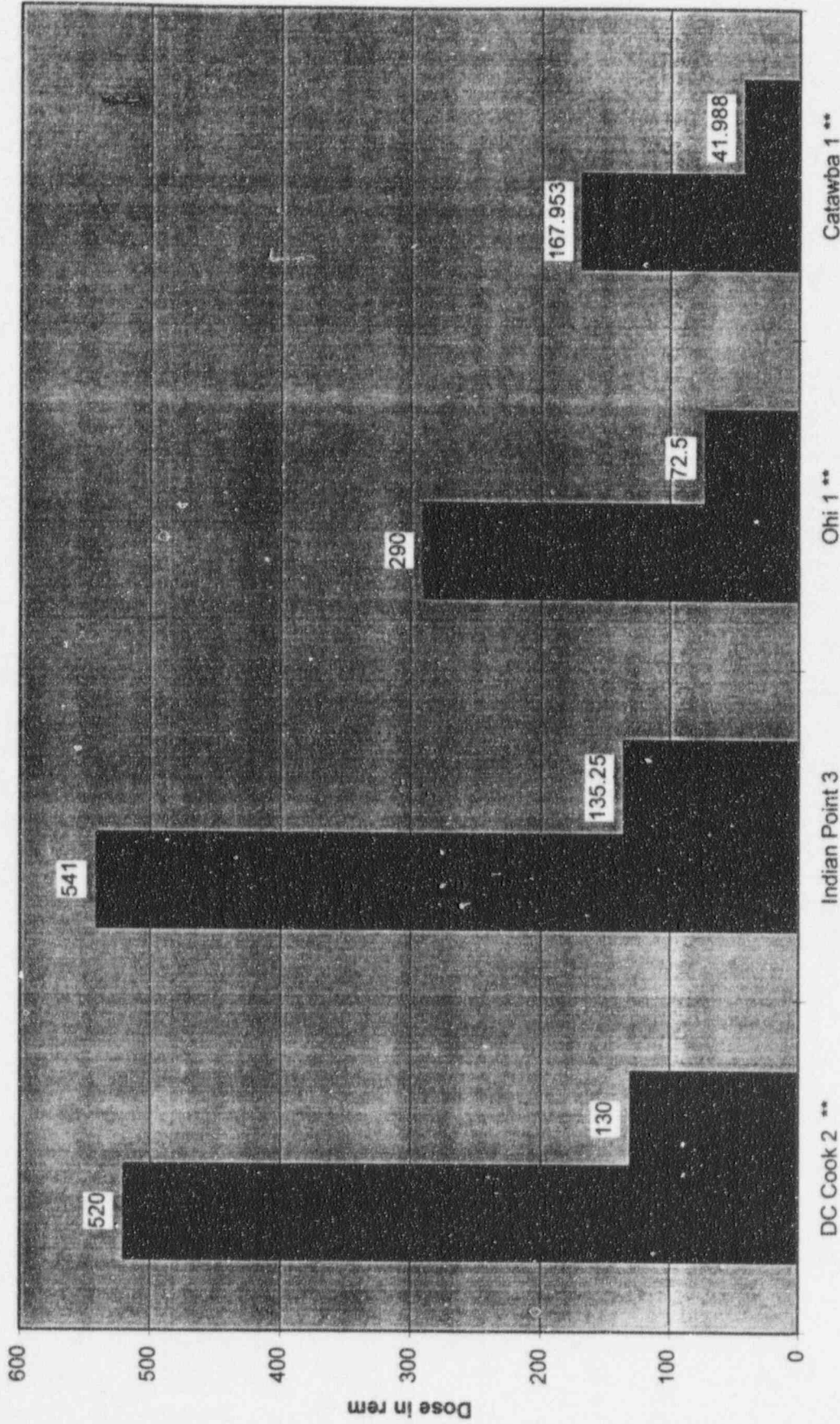
All Known SGRP Dose per SG



Steam Generator Replacement Project

# SGRP OUTAGE DOSES

Four Loop Plant SGRP Exposure



Plant (•• Indicates Ice Condenser Units)

## Steam Generator Replacement Project

# *Lessons Learned*

- **Welding Program ( 2 Cited Violations)**
- **>1000 Items Under Review as Lessons Learned**
- **7 Recordable Injuries, None Serious**
- **Housekeeping**
- **On-Site Manufacturing Activities**

*Steam Generator Replacement Project*

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# ***RSG OPERATING PERFORMANCE***

- **Responsive Level Control**
- **Less Shrink and Swell During Transients**
- **No Tuning Changes Required to Feedwater Control**
- **Operations and Engineering Very Pleased with RSG's**

***Steam Generator Replacement Project***

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# *Operating Parameters*

## Preliminary System Operating Parameters

	<u>MNS</u>	<u>CNS1</u>	<u>Old</u>
	(expected)	(actual)	(W S/Gs)
• T-Hot (F)	614	613	619
• T-Cold (F)	557	554	559
• RCS Flow (GPM)	400k	399k	386k
• SG Oper Lvl (%)	39 - 65	39 - 65	38 - 66.5
• Pzr Lvl (%)	25 - 55	25 - 55	25 - 60
• Fdw Temp (F)	440	440	435 - 440
• Steam Flow (Mlbm/hr)	3.79	3.79	3.79
• Steam Press (psia)	1020	997	930 - 990
• SG Moisture Carryover (expected) (%)	0.1	0.1	0.25

*Steam Generator Replacement Project*

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# *McGuire Status*

- **Five RSG's on Site; Last Three to Ship in December**
- **RSG Nozzle Preps Underway**
- **Unit 1 Outage to Start January 31, 1997**
- **Unit 2 Outage to Start September 16, 1997**
- **Engineering Work for Both Outages Nearing Completion**
- **Retired S/G Storage Facility Complete**
- **Crane Erection Has Begun**

*Steam Generator Replacement Project*

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# **UFSAR INITIATIVES**

- ◆ **Process Improvement**
- ◆ **Accuracy Review**

# PROCESS IMPROVEMENT

## ◆ UFSAR Working Group

- ◆ NGD UFSAR Working Group Formed
- ◆ Existing Guidance /Directives
- ◆ Interfacing Directives Reviewed
- ◆ Feedback From UFSAR Contributors

## ◆ Results

- ◆ Nuclear System Directive (NSD) Written for UFSAR Update Process
- ◆ Interfacing NSDs to be Revised
- ◆ Self-Assessments Planned

# UFSAR ACCURACY REVIEW

## ◆ COMPLETED:

- ◆ UFSAR "Read Through" by SG Replacement Staff (MNS/CNS)
- ◆ Chapter 15, Accident Analysis, Review to Support SGRP
- ◆ Accuracy Review for Current Updates (ONS/MNS)
- ◆ Radiation Protection Accuracy Review (CNS)

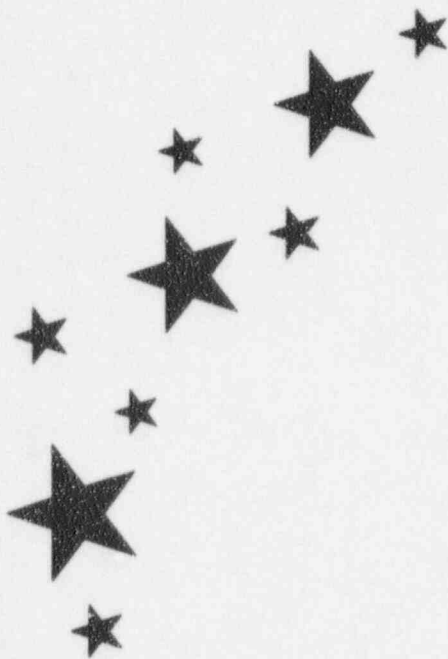
## ◆ PLANNED:

- ◆ NEI Initiative
- ◆ Engineering Pilot UFSAR Review of Systems (MNS/CNS/ONS)

# **ENGINEERING PILOT UFSAR REVIEW**

- ◆ **NEI 96-05 Guidelines**
- ◆ **Two (2) Catawba Safety Systems**
  - ◆ FW (Refueling Water) and VE (Annulus Ventilation)
- ◆ **Two (2) McGuire Safety Systems**
  - ◆ KC (Component Cooling) and NS (Containment Spray)
- ◆ **Two (2) Catawba Non-Safety Systems**
  - ◆ EHM (Hydrogen Mitigation) and EPA (SATA/SATB)
- ◆ **Two (2) McGuire Non-Safety Systems**
  - ◆ EHM (Hydrogen Mitigation) and RC (Condenser Cooling -Turbine Flood)
- ◆ **Pilot Results Expected First Quarter of 1997**

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# SELF-ASSESSMENT PROGRAM



# McGUIRE SELF ASSESSMENT PROGRAM

- ◆ We believe that a key to continuous improvement is a strong Self Assessment Program. Therefore, we are attacking self assessment on multiple levels.
- ◆ Levels of self assessment
  - ◆ Individual
  - ◆ Group
  - ◆ Site (Safety Review Group)
  - ◆ Business Excellence Steering Team (BEST) Sponsored (three sites/GO)
  - ◆ Management Observation Program
  - ◆ Corporate - Regulatory and Performance



# **INDIVIDUAL**

- ◆ **Level I Safety Assessment**
- ◆ **Questioning Attitude and STAR**
- ◆ **Risk Assessment**
- ◆ **Pre-Job Briefings**
- ◆ **Field Involvement**
- ◆ **Post Job Critiques**
- ◆ **Maintenance Job Delays**
- ◆ **Work Window Manager Critiques**

# GROUP ASSESSMENTS

- ◆ **Self Assessments performed by site groups**
  - ◆ NSD--607 “ Self Assessments” provide a structure for:
    - ◆ **Planning** - provides guidance to assist in selecting assessment opportunities
    - ◆ **Preparation** - develop clear objectives for the assessment
    - ◆ **Implementation** - drive the assessment to look at “why” problems exist
    - ◆ **Action Tracking** - requires findings and recommendations to be documented in PIP

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# **BESTS**

- ◆ **Chemistry**
- ◆ **Radiation Protection**
- ◆ **Training**
- ◆ **Work Control**

# SRG ASSESSMENTS

- ◆ **The Safety Review Group (SRG) provides the site with an independent review of programs and processes.**
  - ◆ Assessments developed from:
    - ◆ Management Requests
    - ◆ Industry Concerns
    - ◆ Problem Investigation Process (PIP) Trending
  - ◆ Performed by:
    - ◆ Individuals
    - ◆ Teams
      - ◆ Augmented by: Site, Corporate, Industry Experts
  - ◆ Corrective Actions documented in PIP
  - ◆ “Quick Hitters” observe activities (instead of processes or programs)

# **MANAGEMENT OBSERVATIONS**

- ◆ **Site and Corporate Management involved**
- ◆ **Managers observe activities outside normal working group**
- ◆ **Reinforces Management Expectations**
- ◆ **Feedback to Management of Observed Activity**
- ◆ **Benefits the observing manager and the observed work group**

# CORPORATE ASSESSMENTS

- ◆ **Regulatory Audits - routine audits required by commitment**

- ◆ CFR Requirements
- ◆ NSRB Issues
- ◆ Other
  - ◆ SITA
  - ◆ SEIT

- ◆ **Performance Assessments**

- ◆ Assessments similar to site SRG but at a corporate level
- ◆ Benefit of being multi-site
- ◆ Teams have site or industry expert involvement
- ◆ Corrective actions communicated weekly



**DPC**

# 1996 ASSESSMENT PROGRESS

	<b>IN-PROGRESS</b>	<b>YTD COMPLETE</b>
<b>Implant Reviews</b>	<b>11</b>	<b>35</b>
<b>Group Assessments</b>	<b>62</b>	<b>121</b>
<b>Management Observation</b>	<b>N/A</b>	<b>111</b>
<b>Regulatory Audits</b>	<b>3</b>	<b>5</b>
<b>Performance Assessments</b>	<b>2</b>	<b>7</b>

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# RESULTS

## 1996 INPO E&A

- ◆ “... We were favorably impressed with ... comprehensive use of Self-Assessment, and strengthened use of Operating Experience to identify and achieve improvements.”

# **SPECIFIC IMPROVEMENTS**

- ◆ **Airlock Door operation, maintenance and ownership**
- ◆ **Operations Test Group Training Program improvements**
- ◆ **Fuel Handling improvements to include PPE use, communication, and FME precautions**
- ◆ **New and improved Work Around Process**
- ◆ **Contractor In-processing improvements**
- ◆ **Improved Equipment Receipt Inspection Process**
- ◆ **Discontinued use of house keeping tags on Out of Service equipment**
- ◆ **Improvements to Block Tag Out**
- ◆ **Identified low level DBD, FSAR, and procedure discrepancies**

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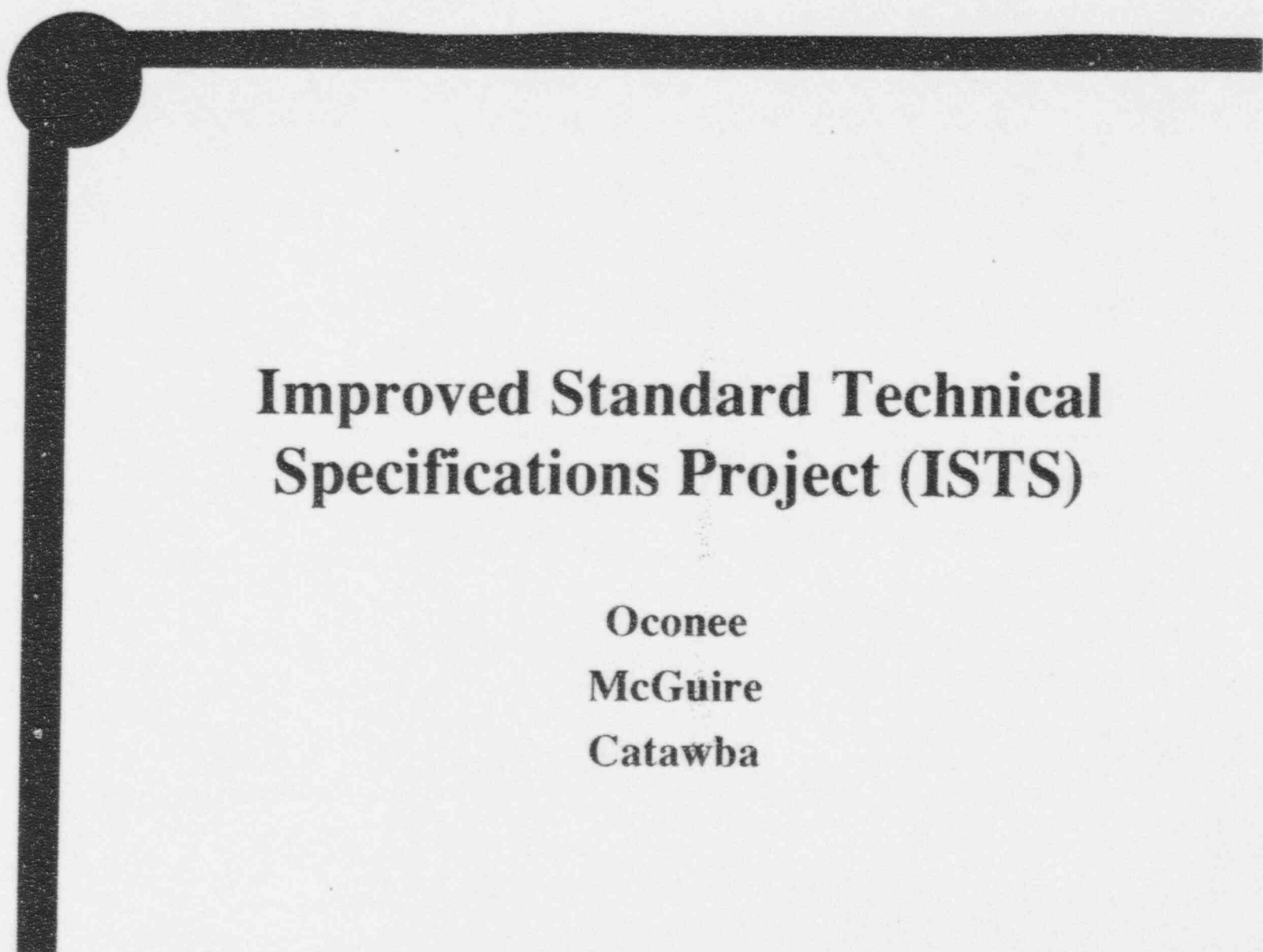


# **SELF ASSESSMENTS PROVIDE FOR CONTINUOUS IMPROVEMENT**




DPC

# ISTS STATUS



# **Improved Standard Technical Specifications Project (ISTS)**

**Oconee  
McGuire  
Catawba**



# ISTS

- ◆ Background
- ◆ Current Status
- ◆ Submittal



## Background

- ◆ **Oconee**

- ◆ Custom Technical Specifications
- ◆ NUREG 1430

- ◆ **McGuire and Catawba**

- ◆ Standard Technical Specifications
- ◆ NUREG 1431



## **Current Status**

- ◆ **Initial Draft**
- ◆ **Technical Review**
- ◆ **Resolution of Comments**
- ◆ **Plant Operations Review Committee**
- ◆ **Nuclear Safety Review Board**
- ◆ **Integrated Review**





## Submittal to NRC

- ◆ **Oconee**
  - ◆ October, 1997
  
- ◆ **McGuire and Catawba**
  - ◆ March, 1997



## **Submittal to NRC**

- ◆ **Oconee**
  - ◆ November, 1997
- ◆ **McGuire and Catawba**
  - ◆ March, 1997

DPC

# **OPERATING EXPERIENCE DATABASE**

# **OPERATING EXPERIENCE DATABASE**

**A “Windows” Based Client/Server Application that  
provides for the Identification, Evaluation, and  
Retrieval of Industry and Duke Power Internal  
Operating Experience Information from the Desktop.**

# **CONTAINS OVER 11,000 INDUSTRY DOCUMENTS**

- ◆ **INPO Documents - OE, SER, SOER, etc.**
- ◆ **NRC Documents - AL, GL, IN, etc.**
- ◆ **Vendor Documents and Industry Good Practices.**
- ◆ **Access to Duke's Internal Operating Information is Available Through Any One or All Four PIP Databases.**



# **OPERATING EXPERIENCE CULTURE**

- ◆ **Significant Information is Communicated Daily for Awareness.**
- ◆ **Extensively Used in Resolution of Plant Challenges.**
- ◆ **Routine Part of Training.**
- ◆ **Internal Experiences Documented for Later Reference.**
- ◆ **Internal Experiences are Shared With the Industry**

# **SUCCESS STORIES**

- ◆ **Define High Risk Fire Areas Based on Industry Experience to Develop Drill Scenarios and Future Training.**
- ◆ **Identification of Replacement Surge Capacitors for Reactor Coolant Pumps.**
- ◆ **Replacement of the Main Generator Fuse/Diode Assembly based on Industry Experience.**
- ◆ **An Emergency Tech Spec Change Was Made at ONS based on Industry Experience.**