March 31, 1998

South Carolina Electric & Gas Company
ATTN: Mr. Gary J. Taylor
Vice President, Nuclear Operations
Virgil C. Summer Nuclear Station
P. O. Box 88
Jenkinsville, SC 29065

SUBJECT: MEETING SUMMARY - SUMMER NUCLEAR STATION

Dear Mr. Taylor:

This refers to the open meeting that was conducted at your request in the Region II office on March 17, 1998, for you to present information regarding your recent refueling outage performance and operator improvement initiatives. A list of attendees and a copy of your presentation handout are enclosed.

It is our opinion that this meeting was beneficial, in that, it provided the NRC staff with additional information on your refueling outage and operator initiative plans.

In accordance with Section 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Should you have any questions concerning this letter, please contact us.

Sincerely,

Orig signed by M. B. Shymlock for

Robert C. Haag, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Docket No. 50-395
License No. NPF-12

Enclosures: 1. List of Attendees
2. Licensee Presentation Handouts

cc w/encls: See page 2

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cc w/encls:
R. J. White
Nuclear Coordinator Mail Code 802
S.C. Public Service Authority
Virgil C. Summer Nuclear Station
P. O. Box 88
Jenkinsville, SC 29065

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Winston and Strawn
1400 L Street, NW
Washington, D. C. 20005-3502

Chairman
Fairfield County Council
P. O. Box 60
Winnsboro, SC 29180

Virgil R. Autry, Director
Radioactive Waste Management
Bureau of Solid and Hazardous
Waste Management
S. C. Department of Health
and Environmental Control
2600 Bull Street
Columbia, SC 29201

R. M. Fowlkes, Manager
Operations (Mail Code 303)
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
P. O. Box 88
Jenkinsville, SC 29065

April Rice, Manager
Nuclear Licensing & Operating
Experience (Mail Code 830)
Virgil C. Summer Nuclear Station
P. O. Box 88
Jenkinsville, SC 29065

LIST OF ATTENDEES

Nuclear Regulatory Commission

J. Jaudon, Director, Division of Reactor Safety (DRS), Region II (RII)
M. Padovan, Project Manager, Project Directorate II-1, Office of Nuclear Reactor Regulation
M. Lesser, Acting Director, Division of Reactor Projects (DRP), RII
R. Haag, Chief, Branch 5, DRP, RII
K. Barr, Chief, Plant Support, DRS, RII
W. Rogers, Senior Reactor Analysis, RII
D. Jones, Inspector, DRS, RII

South Carolina Electric and Gas Company

S. Byrne, Plant Manager
J. Archie, Manager Planning and Scheduling
A. Torres, RF-11 Outage Manager
M. Fowlkes, Operations Manager
M. Zaccone, Licensing Engineer

Enclosure 1

Distribution w/encls:
M. Padovan, NRR
P. Fillion, RII
R. Gibbs, RII
R. Aiello, RII
D. Jones, RII
W. Stansberry, RII
PUBLIC

NRC Resident Inspector
U.S. Nuclear Regulatory Commission
Route 1, Box 64
Jenkinsville, SC 29065

OFFICE	RII:DRP	RII:DRP													
SIGNATURE															
NAME	LGarner	PHopkins													
DATE	3/31/98	3/31/98	3/	/98	3/	/98	3/	/98	3/	/98	3/	/98	3/	/98	
COPY?	(YES) NO	YES NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	

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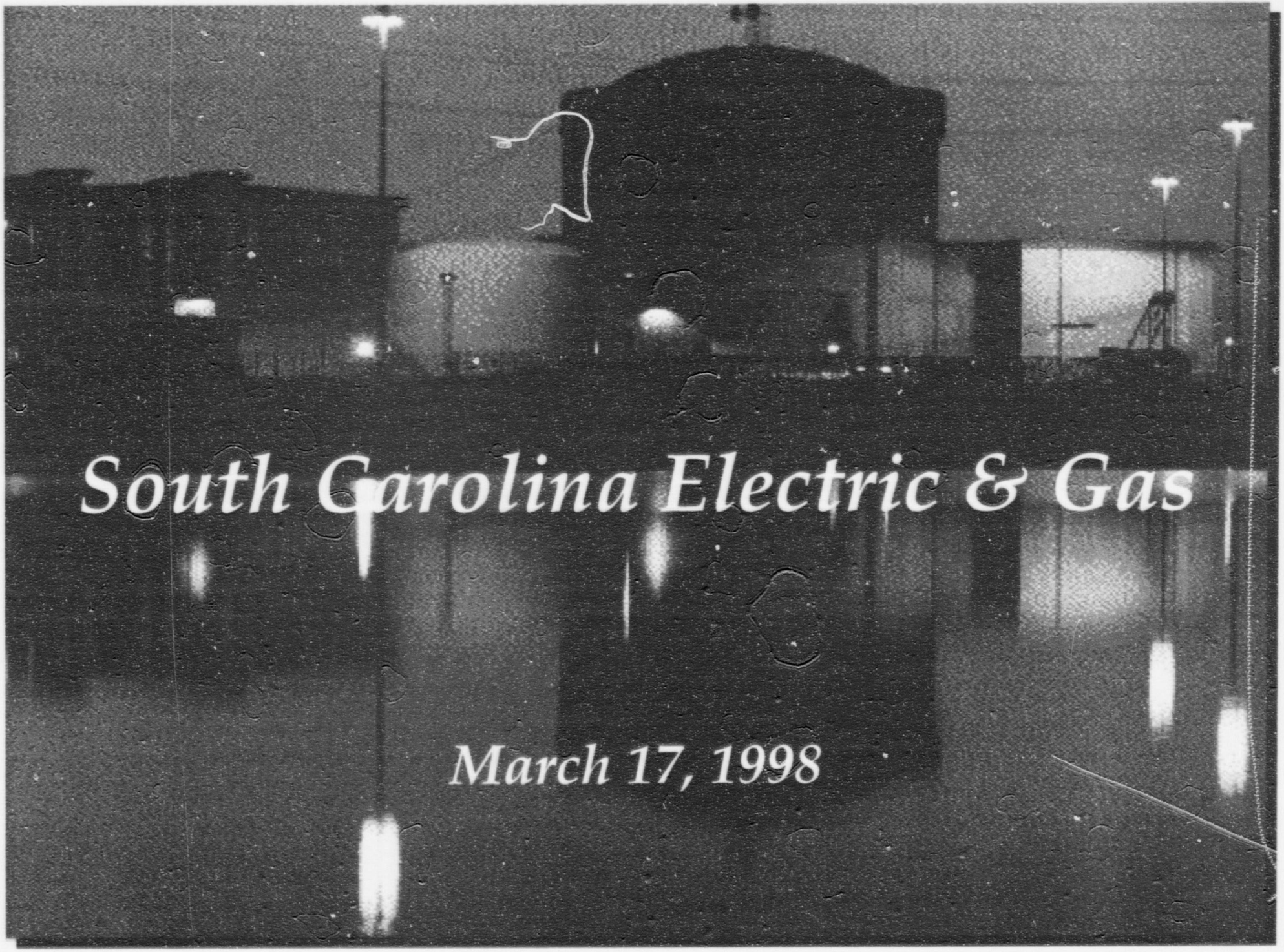
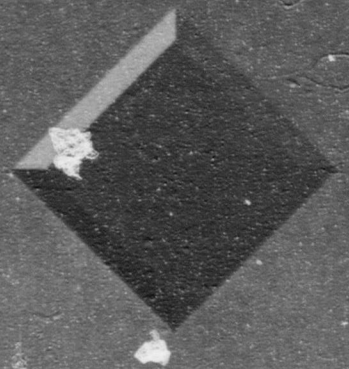
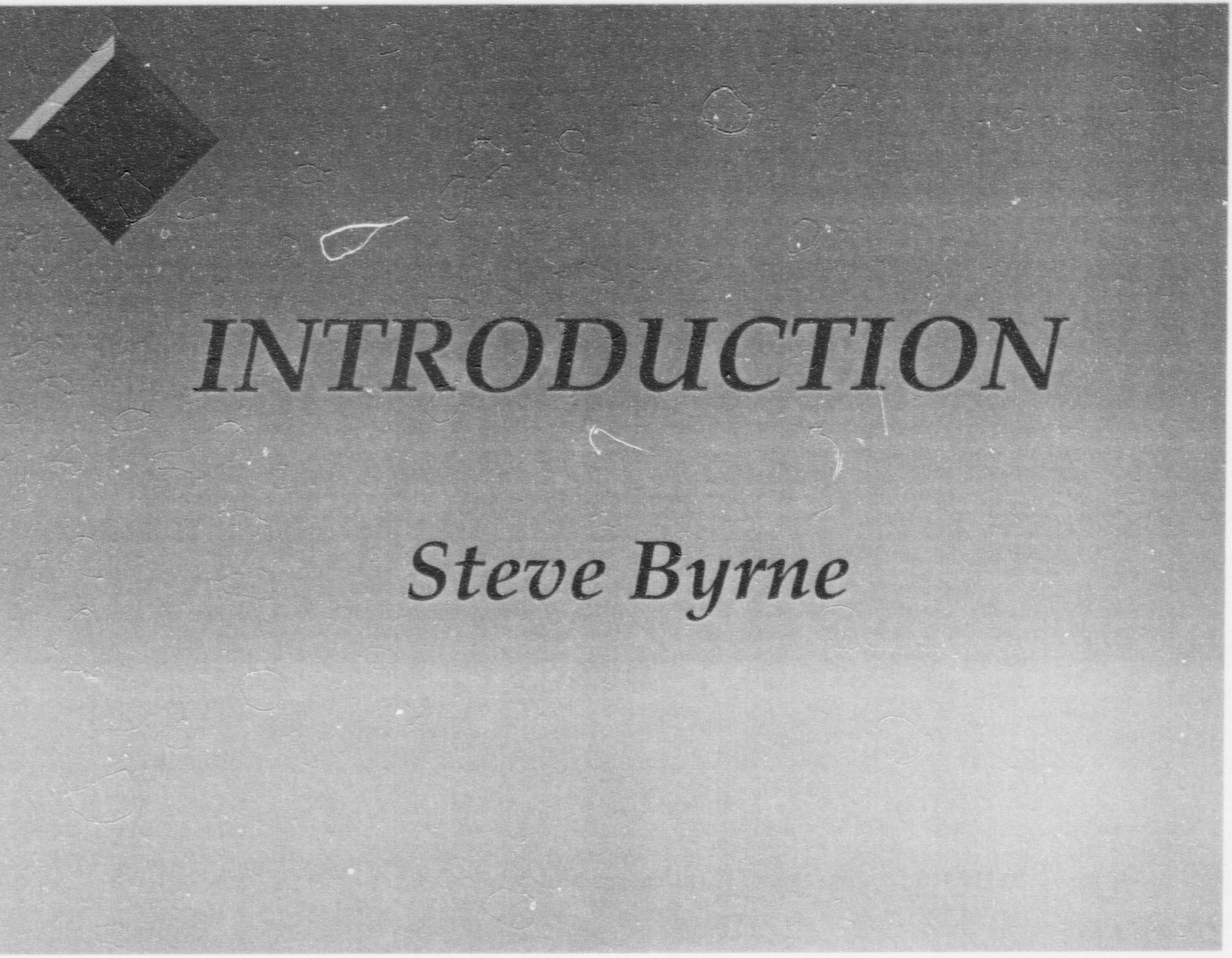


Enclosure 2

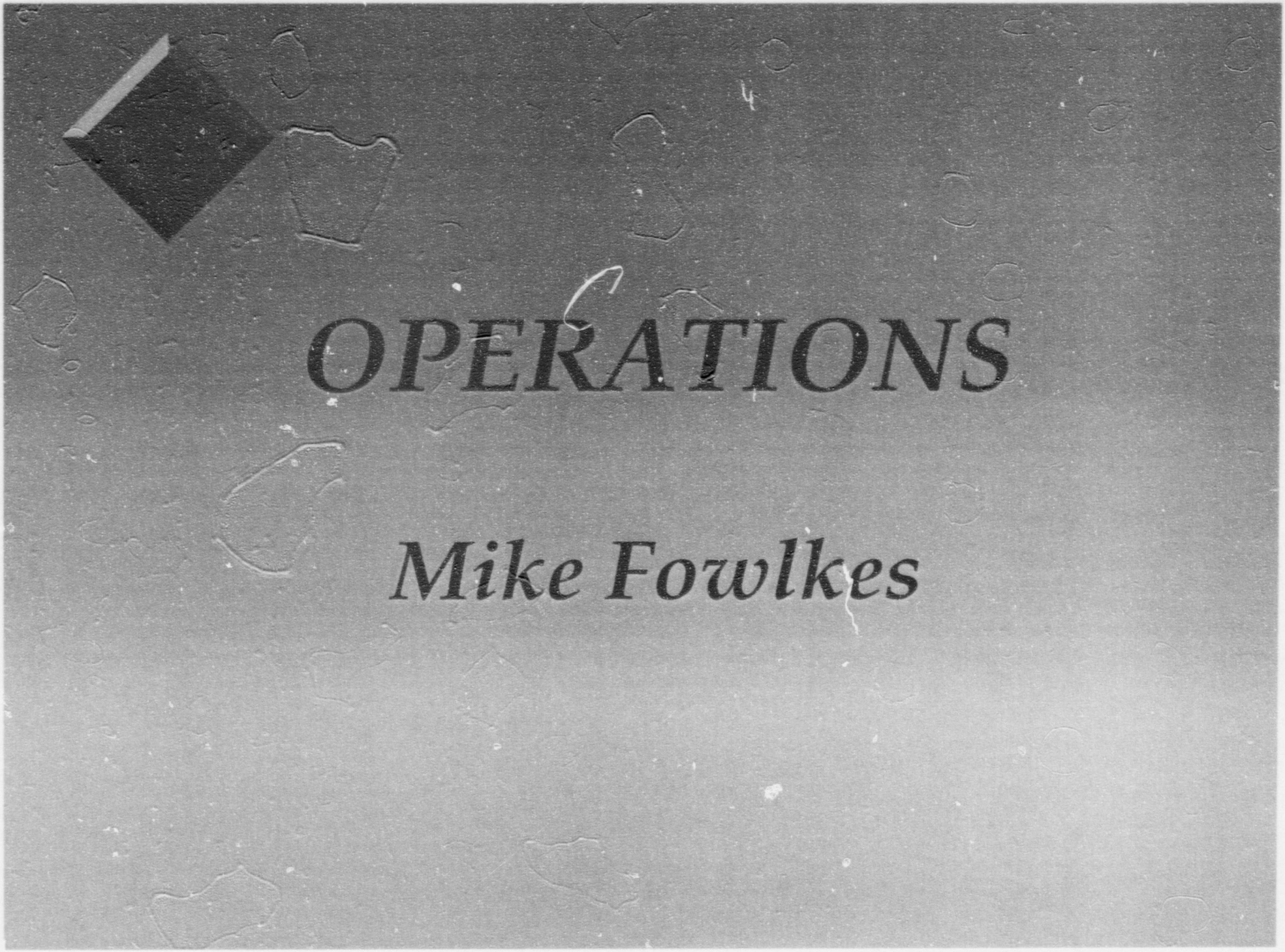


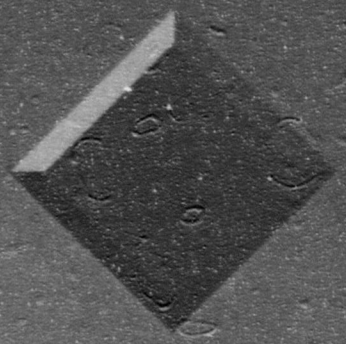
INTRODUCTION	*Steve Byrne*
OPERATIONS	*Mike Fowlkes*
REFUEL 10 UPDATE	*Jeff Archie*
SNUBBER TESTING	*Alan Torres*
SUMMARY	*Steve Byrne*



INTRODUCTION

Steve Byrne

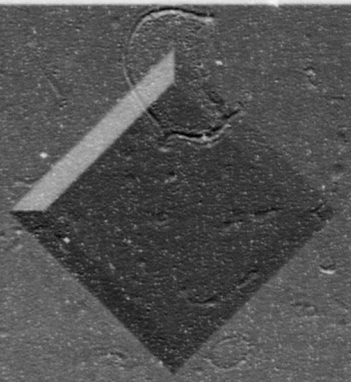

OPERATIONS
Mike Fowlkes



OPERATIONS

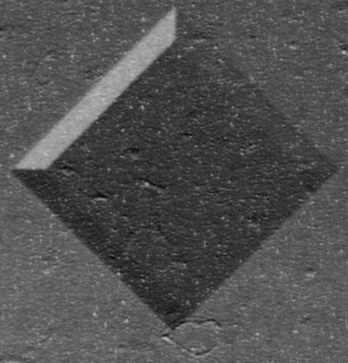
"A SAFETY RICH CULTURE"

- Why was change necessary?
- What are we doing differently?
- How has it been received?
- What have been the results?



WHY WAS CHANGE NECESSARY?

- Six Operator Errors from May 1996 to May 1997
- Benchmarking Visits to Other Stations
- Self-Assessments with CDSV Group
- Declining Performance at Other Stations

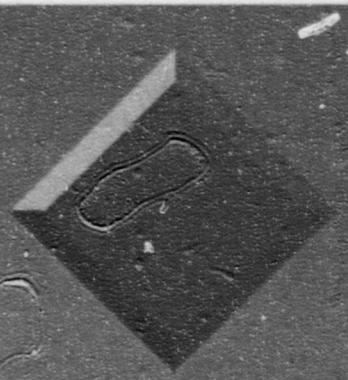


WHAT ARE WE DOING DIFFERENTLY?

- Observations and Feedback
- Improvements in Written Standards and Expectations
- Improved Professionalism
- More Involvement and Ownership in Training

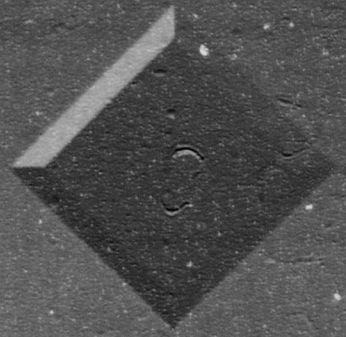
WHAT ELSE ARE WE DOING DIFFERENTLY?

- Conservative Decision Making Seminars
- Supervisor (SRO) Dedicated to Corrective Action Followup
- Continual Emphasis on a Safety "Rich" Culture by Both Words and Actions



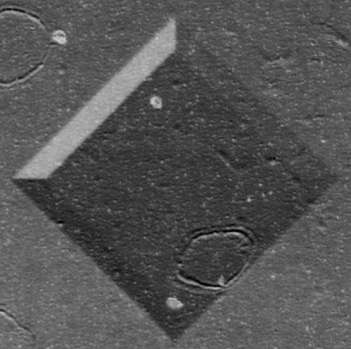
How has it been received?

- Initial Reluctance to Change
- Improved Standards and Expectations... THE WAY OF DAY-TO-DAY BUSINESS
- Eagerness for Continual Improvement Through Self-Assessment and Benchmarking
- New Perspective for Management Involvement



WHAT HAVE BEEN THE RESULTS?

- No Significant Operator Errors Since May 1997
- Refueling Outage with NO Events Adverse to Safety or Plant Operations
- Improved Professionalism for Operations Staff
- Successful Results of New Licensed Operator Class
- INPO 1 Rating in Operations and Overall
- Favorable Observations in NRC Inspections



FOREMOST RESULT:

A Sense of Pride and Ownership in Maintaining the Tradition of a Safety "Rich" Culture

REFUEL 10

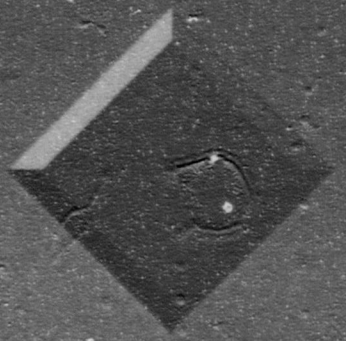
Jeff Archie

AGENDA

- Review of RF-10 Objectives
- Outage Process & Implementation Enhancements
- Significant Work Scope Completed
- Summary

Review of RF-10 Objectives

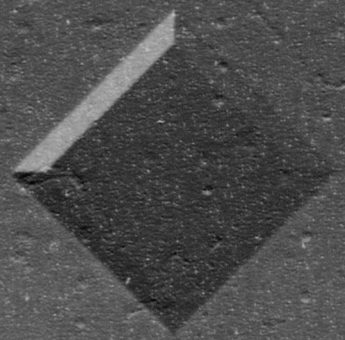
- Outage Start
  - October 4, 1997
- Continued Excellence in Nuclear Safety
- Achieve Business Plan Objectives
  - Dose ≤ 95 Man Rem
  - Duration ≤ 35 Days
  - Cost ≤ 15 Million



SAFETY

Nuclear Safety

- No Safety Significant Events
- Expected Nuclear Safety Awareness Achieved
- No Reduced Inventory OPS
- Safety Over Schedule Philosophy Maintained



SAFETY

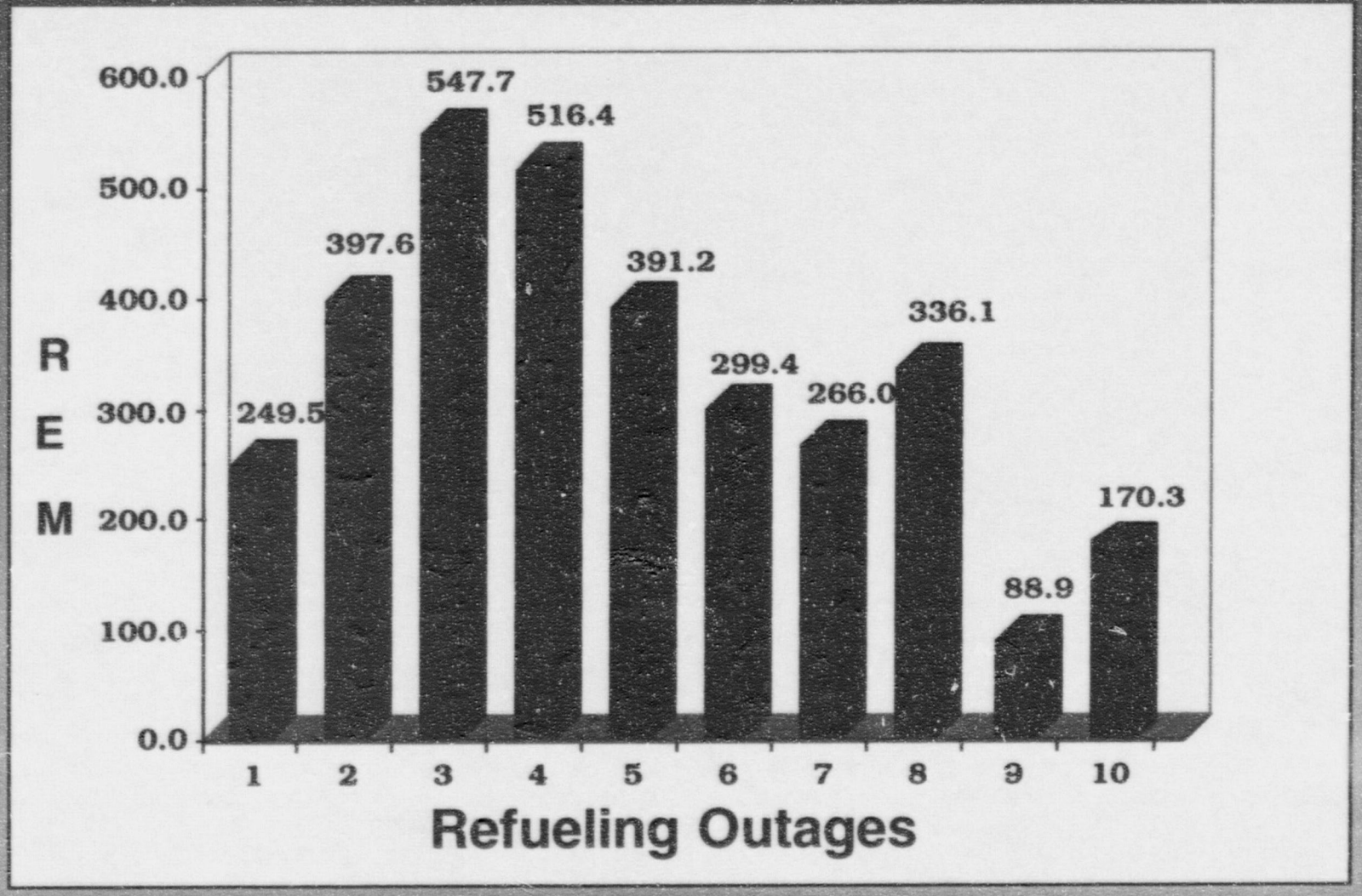
Industrial Safety

- Two Lost time Accidents
- No Contractor Lost Time Accidents
- Overall Safety Awareness Improved Over RF-9 Resulting From Increased Training and Supervisory Actions

Outage Exposure

- Projected To Be 95 Man-Rem
- Actual 170 Man-Rem
- Contributors
  - Unanticipated RCS Contamination Levels Resulting From Crud Burst
  - Elevated Dose Rates The Entire Outage
  - Emergent Snubber Testing Scope

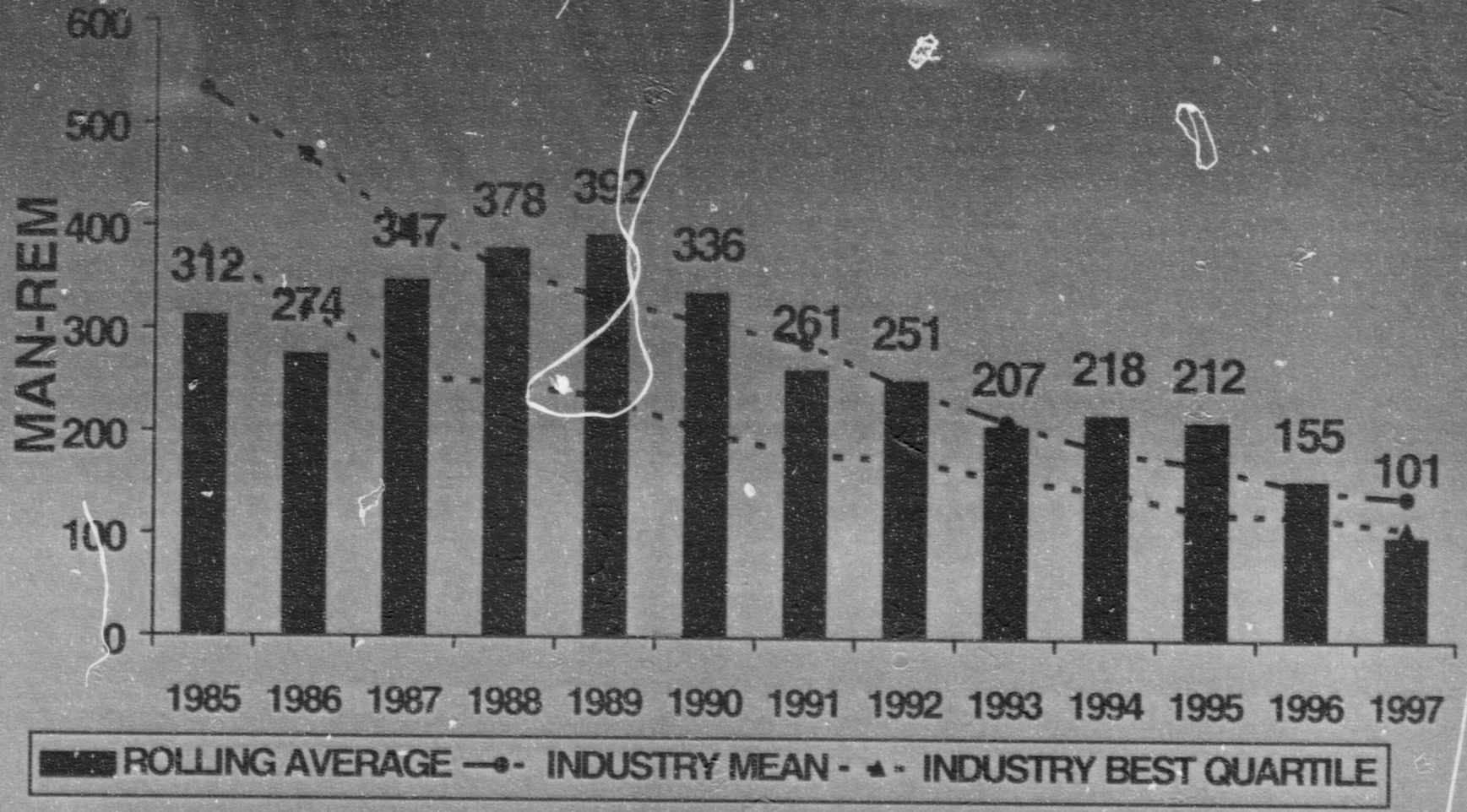
V. C. Summer Dose History



V. C. SUMMER NUCLEAR STATION

EXPOSURE HISTORY

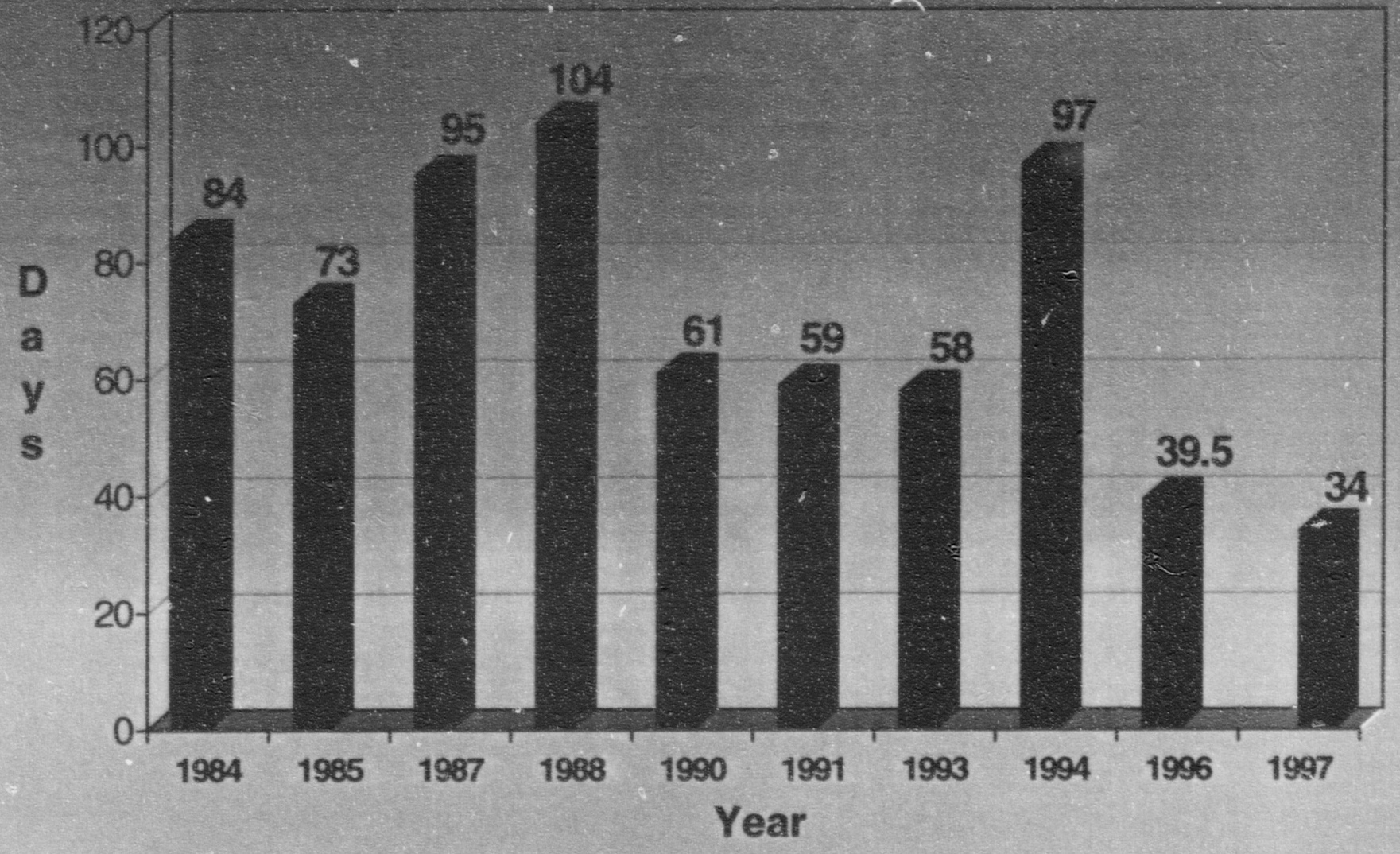
3 YEAR ROLLING AVERAGE

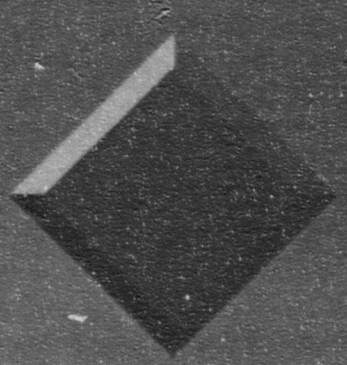


DURATION

- Breaker to Breaker Work Window of 34 Days 5 Hours
  - Shortest Duration Outage to Date
  - ≤ 35 Day Duration Goal Met
  - Continues Expected Trend of Gradual Incremental Improvement

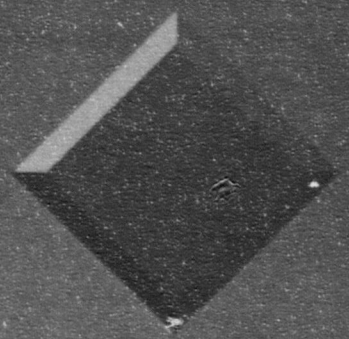
Virgil C. Summer Nuclear Station Outage History





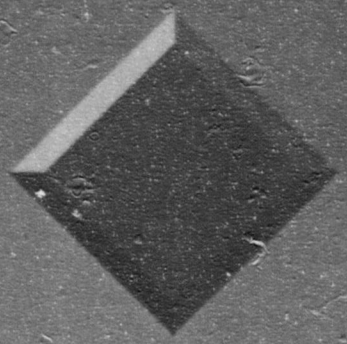
Outage Cost

- Business Plan Goal of ≤15 Million
- RF 10 Actuals Approximately 13.4 Million



RF-10 ENHANCEMENTS

- Teamwork and Communication
- Use of OPS Window Managers
- Manageable Plant Modification Scope
- Pre-Outage Task Reviews
- Resource Sharing Within Company



Significant Work Scope Completed

- Completion of 29 Modification Packages
- Fuel Handling Machine Upgrade
- Completion of Snubber Reduction
- Seal Maintenance on 'C' RCP
- ECT Inspections of 'C' Steam Generator

System Engineering

Status of Plant System Performance

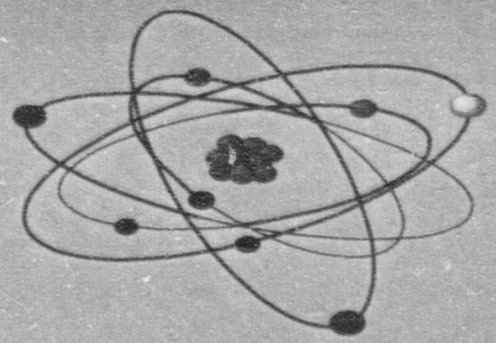
September 1997

Risk Significant ITMR Systems

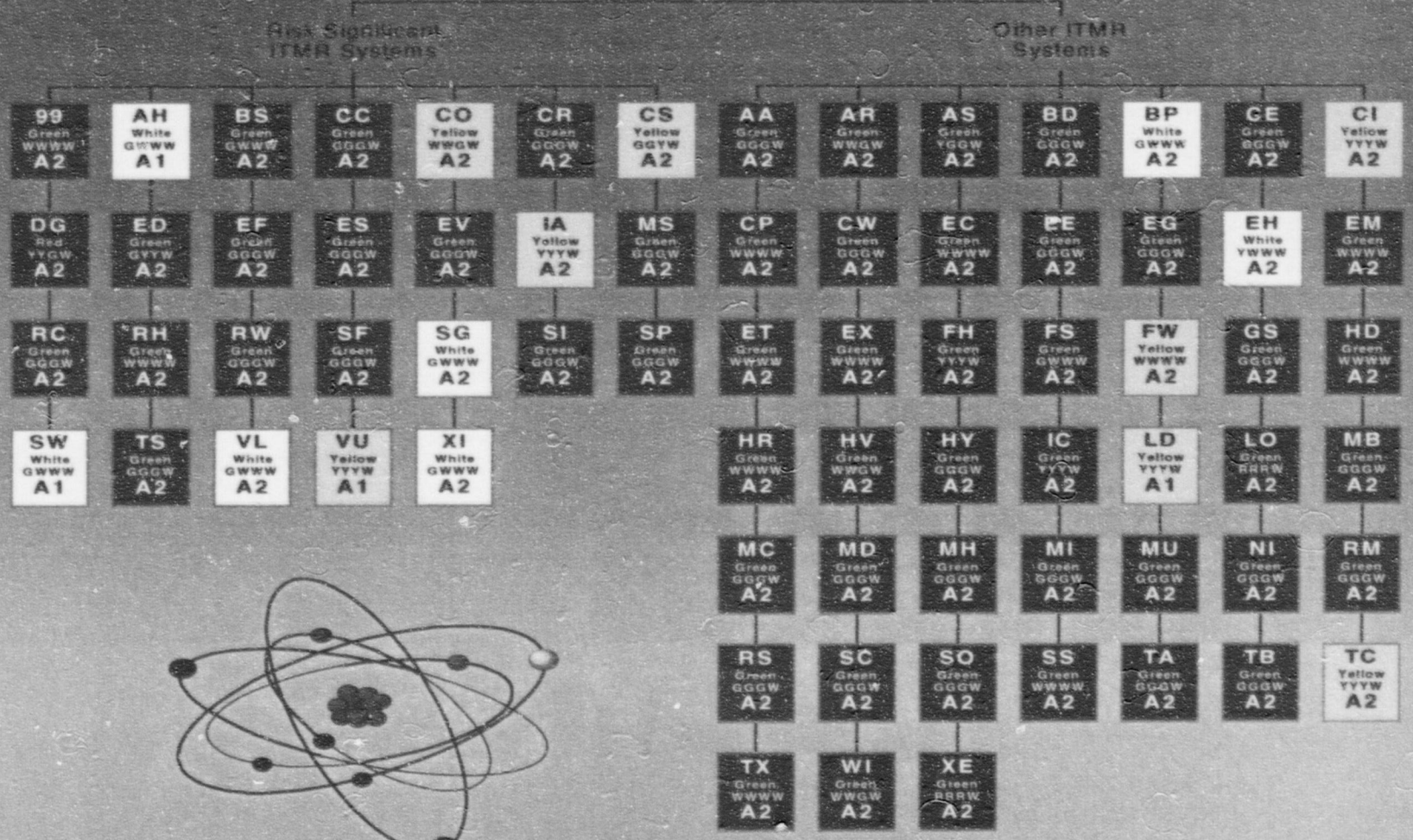
99	AH	BS	CC	CO	CR	CS
White GWWW A2	White YGGW A1	White GGGW A1	Green GGGG A2	Green GWWW A2	Green GGGG A2	Yellow GGGG A1
DG Green YYYY A2	ED Yellow GGGY A2	EF Green YYGG A2	ES Green YYGG A2	EV Green GGGG A2	IA Yellow GGYY A2	MS Green GGGG A2
RC Green GGGG A2	RH White YWWW A1	RW Green GGGG A2	SF Green GGGG A2	SG White GGGW A2	SI Green GGGG A2	SP Green GGGG A2
SW White YGGW A1	TS Green GGGG A2	VL White GGGW A2	VU Yellow YYYY A1	XI White GGGW A1		

Other ITMR Systems

AA	AR	AS	BD	BP	CE	CI
Green GGGG A2	Green GWWW A2	Green YYYG A2	Green GGGG A2	White GGGW A1	Green GGGG A2	Yellow GYYY A2
CP White GWWW A2	CW Green GGGG A2	EC White GGWW A2	EE Green GGGG A2	EG Green GGGG A2	EH White YYYW A2	EM White GGWW A2
ET White GGWW A2	EX White GGWW A2	FH Yellow YYYY A2	FS White GGGW A2	FW White YYWW A2	GS Green GGGG A2	HD White GGWW A2
HR White GGWW A2	HV Green GWWW A2	HY Green GGGG A2	IC Yellow YYYY A2	LD Yellow YYYY A1	LO Red RRRR A2	MB Green GGGG A2
MC Green GGGG A2	MD Green GGGG A2	MH Green GGGG A2	MI Green GGGG A2	MU Green GGGG A2	NI Green GGGG A2	RM Green GGGG A1
RS Green GGGG A2	SC Green GGGG A2	SO Green GGGG A2	SS White GWWW A2	TA Green GGGG A2	TB Green GGGG A2	TC Yellow YYYY A2
TX White GWWW A2	WI Green GWWW A2	XE Red RRRR A2				

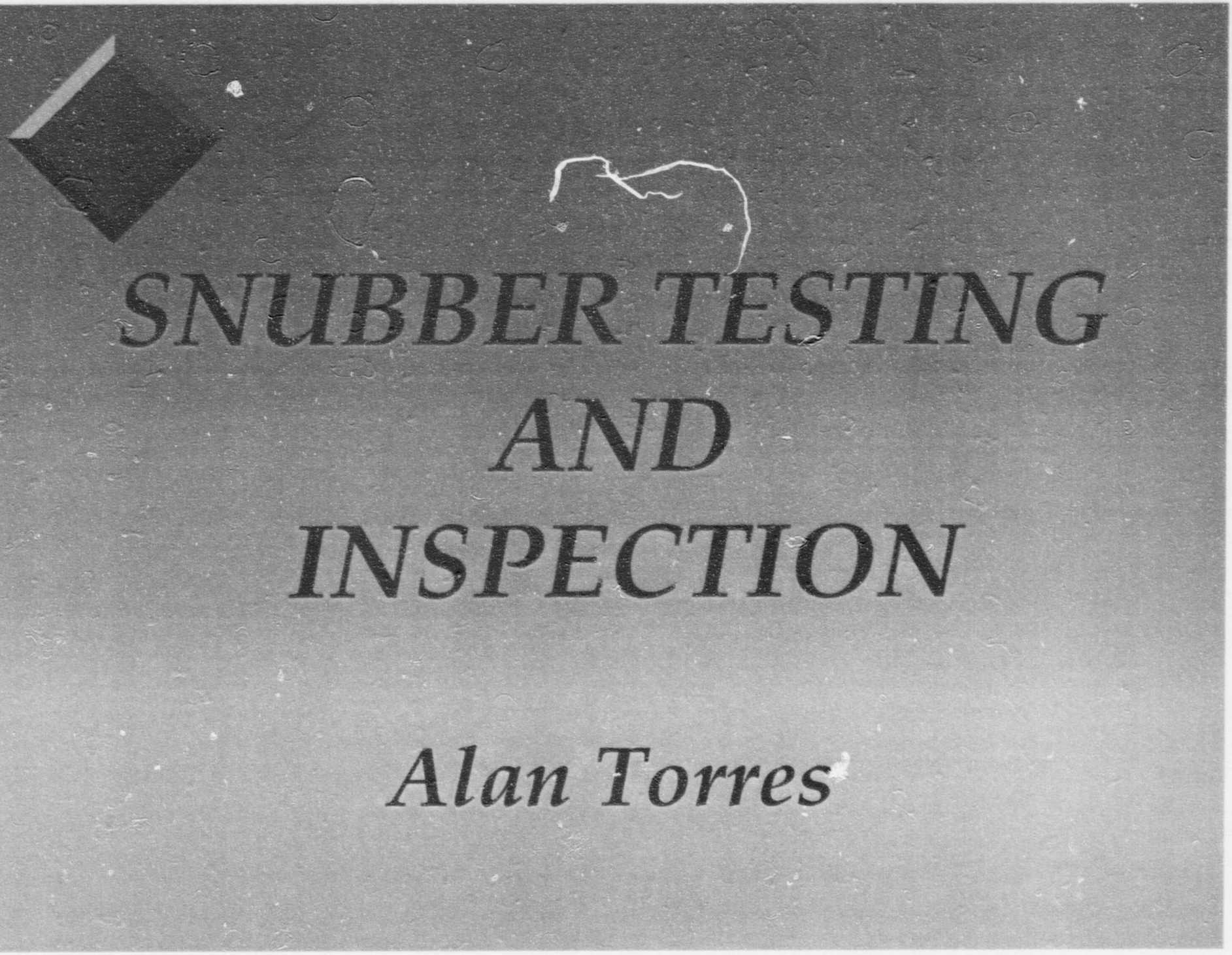


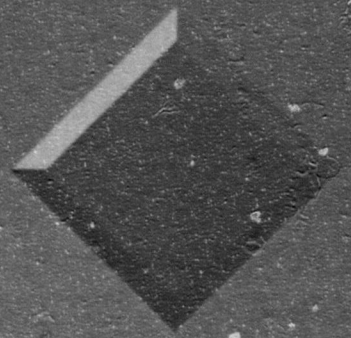
System Engineering
Status of Plant System Performance
November 1997



SUMMARY

- Excellence in Nuclear and Industrial Safety Continue to be Part of Station Culture
- Equipment Issues and Operator Work-Arounds Eliminated as Part of Outage Scope
- Modifications Implemented to Enhance Station Reliability


SNUBBER TESTING
AND
INSPECTION
Alan Torres



AGENDA

- Pre-Outage Problems Found
- Outage Scope
- Outage
- Summary of Results

PRE-OUTAGE

- Problems Found During Snubber Reduction
  - Increased Drag on Snubber Reduction Components
  - Evidence of Fretting Corrosion found in PSA 1's and 3's

PRE-OUTAGE (CONT)

- PSA snubber is a mechanical shock arresstor used for thermal and dynamic movement control.

- Fretting corrosion is the wearing away of the base material in fine particles.

PRE-OUTAGE (CONT)

- "Change" in Outage Strategy
  - Catagorized Failure Mode Groups
    - Test all T/S PSA 1 & 3 Snubbers in RB Due to Generic Fretting Corrosion Concern during the outage
    - Put the Remaining in a 10% Sample Inspection Plan
  - Due to ALARA concerns all T/S PSA 1 & 3 Snubbers in RB were replaced

Outage Scope

- Tech /Spec Snubber Inspection / Testing Plan
  - "37" Randomly Selected
    - Visual Inspection
    - Functional Testing
  - Visual Inspections
    - Remaining 374 Tech Spec Snubbers

OUTAGE SCOPE (CONT)

- Snubber Reduction Program
  - Snubber to Strut Replacements (174)
  - Snubber Removal (100)
  - Hanger Modifications (28)
  - Spring & Strut Removal (21)
  - Total of 274 Snubbers Tested

Outage

- Same Failure Mechanism Found in Tech Spec PSA 1/4 & 1/2 Snubbers
  - Inspect and Test all Tech Spec PSA 1/4 & 1/2 Snubbers (Driven by Failures)
- Inspect and Test all Tech Spec PSA 1 & 3 Snubbers Outside RB

RESULTS

- Number of T/S Snubbers Visually Inspected - 411
  - One Visual Failure (Rotated Clamp)
- Number of T/S Snubbers Functionally Tested - 411
  - 44 Were Degraded
    - between 1.5 and 5% Drag Force
  - 29 Failed
    - > 5% Drag Force or Locked Up

SUMMARY

Steve Byrne