UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011 8064

APR 17 1996

Entergy Operations, Inc.
ATTN: D. Hintz, President and CEO
P.O. Box 31995
Jackson, Mississippi 39286

SUBJECT: ENTERGY OPERATIONS, INC. MANAGEMENT MEETING

This refers to the meeting conducted in the Entergy Operations, Inc. corporate office on April 4, 1996. This meeting related to discussions among Senior Entergy managers from the Entergy corporate office and each of the four Entergy sites and responsible NRC personnel from both the Region IV office and the NRC headquarters Office of Nuclear Reactor Regulation.

The meeting provided a summary of the Entergy performance at each site in 1995 in the areas of safety performance, cost, and operating performance. Additionally, your staff shared the goals in those three areas for 1996. Several specific topics discussed, which had been planned by your staff to improve operating and cost performance, included sharing resources, upgrading licensed thermal power levels and extending operating cycles to 24 months, and establishing guidelines for online maintenance. Other topics discussed included the implementation of Improved Technical Specifications and the performance of self-assessments.

Following the formal presentation, group discussion allowed all parties to express their views on the future role of self-assessments and performance-based regulation.

Several specific topics addressed during the afternoon session focused on longer term projects and included the status of steam generators at the pressurized water reactors, storage of spent fuel in the independent spent fuel storage installation at Arkansas Nuclear One, employee concern programs, and downsizing strategies/philosophies required to meet the goals of maintaining performance, cost, and safety.

We appreciated the open and candid discussions by all the personnel present.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter will be placed in the NRC's Public Document Room.

Should you have any questions concerning this matter, we will be pleased to discuss them with you.

Sincerely,

J. E. Dyer, Director
Division of Reactor Projects

Dockets:
ANO: 50-313; 50-368
GGNS: 50-416
RBS: 50-458
W3: 50-382

Enclosures:
1. Attendance List
2. Licensee Presentation

cc:
Entergy Operations, Inc.
ATTN: J. W. Yelverton, Vice President
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Russellville, Arkansas 72801-0967

Entergy Operations, Inc.
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Operations - Grand Gulf
P.O. Box 756
Port Gibson, Mississippi 39150

Entergy Operations, Inc.
ATTN: Michael B. Sellman, Vice
President Operations
Waterford
P.O. Box B
Killona, Louisiana 70066

Entergy Operations, Inc.
ATTN: John R. McGaha, Vice President -
Operations, River Bend Station
P.O. Box 220
St. Francisville, Louisiana 70775

Entergy Operations, Inc.
ATTN: Executive Vice President
& Chief Operating Officer
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Jackson, Mississippi 39286-1995

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ATTN: Vice President
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County Judge of Pope County
Pope County Courthouse
Russellville, Arkansas 72801

Arkansas Department of Health
ATTN: Bernard Bevill, Acting Director
Division of Radiation Control and
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Claiborne County Board of Supervisors
ATTN: President
Port Gibson, Mississippi 39150

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Port Gibson, Mississippi 39150

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Attorney General
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Office of the Governor
State of Mississippi
Jackson, Mississippi 39201

Mike Moore, Attorney General
Frank Spencer, Asst. Attorney General
State of Mississippi
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Jackson, Mississippi 39225

State Board of Health
ATTN: Dr. F. E. Thompson, Jr.
State Health Officer
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Jackson, Mississippi 39205

Division of Radiation Health
Mississippi Department of Health
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Jackson, Mississippi 39215-1700

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Plant Operations
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St. Francisville, Louisiana 70775

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ATTN: Director - Nuclear Safety
River Bend Station
P.O. Box 220
St. Francisville, Louisiana 70775

Entergy Operations, Inc.
ATTN: Manager - Licensing
River Bend Station
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St. Francisville, Louisiana 70775

The Honorable Richard P. Ieyoub
Attorney General
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Baton Rouge, Louisiana 70804-9095

H. Anne Plettinger
3456 Villa Rose Drive
Baton Rouge, Louisiana 70806

President of West Feliciana
Police Jury
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St. Francisville, Louisiana 70775

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Systems Engineering
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Baton Rouge, Louisiana 70895

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Jackson, Mississippi 39286-1995

Entergy Operations, Inc.
ATTN: Jerrold G. Dewease, Vice President
Operations Support
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Jackson, Mississippi 39286-1995

Entergy Operations, Inc.
ATTN: D. R. Keuter, General
Manager Plant Operations
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Killona, Louisiana 70066

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Licensing Manager
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Chairman
Louisiana Public Service Commission
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Baton Rouge, Louisiana 70825-1697

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Parish President
St. Charles Parish
P.O. Box 302
Hahnville, Louisiana 70057

Mr. William A. Cross
Bethesda Licensing Office
3 Metro Center
Suite 610
Bethesda, Maryland 20814

bcc to DMB (IE45)

bcc distrib. by RIV:

L. J. Callan
DRP Director
Branch Chief (DRP/D)
Project Engineer (DRP/D)
Branch Chief (DRP/TSS)
Resident Inspector
DRS-PSB
MIS System
RIV File
Leah Tremper (OC/LFDCB, MS: TWFN 9E10)

230000

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PE:DRP/D	AC:DRP/D	RSLO	PAO	D:DRP
GAPick;cm	PHHarrell	CAHackney	BWHenderson	JEDyer
04/15/96	04/16/96	04/ /96	04/ /96	04/17/96

OFFICIAL RECORD COPY

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bcc to DMB (IE45)

bcc distrib. by RIV:

L. J. Callan
DRP Director
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GAPick;cm	PHHarrell	CAHackney	BWHenderson	JEDyer
04/15/96	04/16/96	04/ /96	04/ /96	04/17/96

OFFICIAL RECORD COPY

ENCLOSURE 1

ATTENDEES

EOI PERSONNEL

D. Hintz, President and CEO
J. Yelverton, Exec VP & COO
R. Barkhurst, VP
M. Sellman, VP Operations, WT3
R. Hutchinson, VP Operations, GGNS
J. McGaha, VP Operations, RBS
J. Dewease, VP Operations Support
F. Titus, VP Engineering
J. Blount, General Attorney
L. Waldinger, General Manager, ANO
D. Mims, Director, NS&L, ANO
J. Hagan, General Manager, GGNS
M. Meisner, Director, NS&L, GGNS
J. Fisicaro, Director, NS&L, RBS
D. Keuter, General Manager, WT3
R. Burski, Director, NS&L, WT3
J. Roberts, Director, NS&L, Echelon
L. England, Licensing Coordinator, Echelon

NRC Headquarters

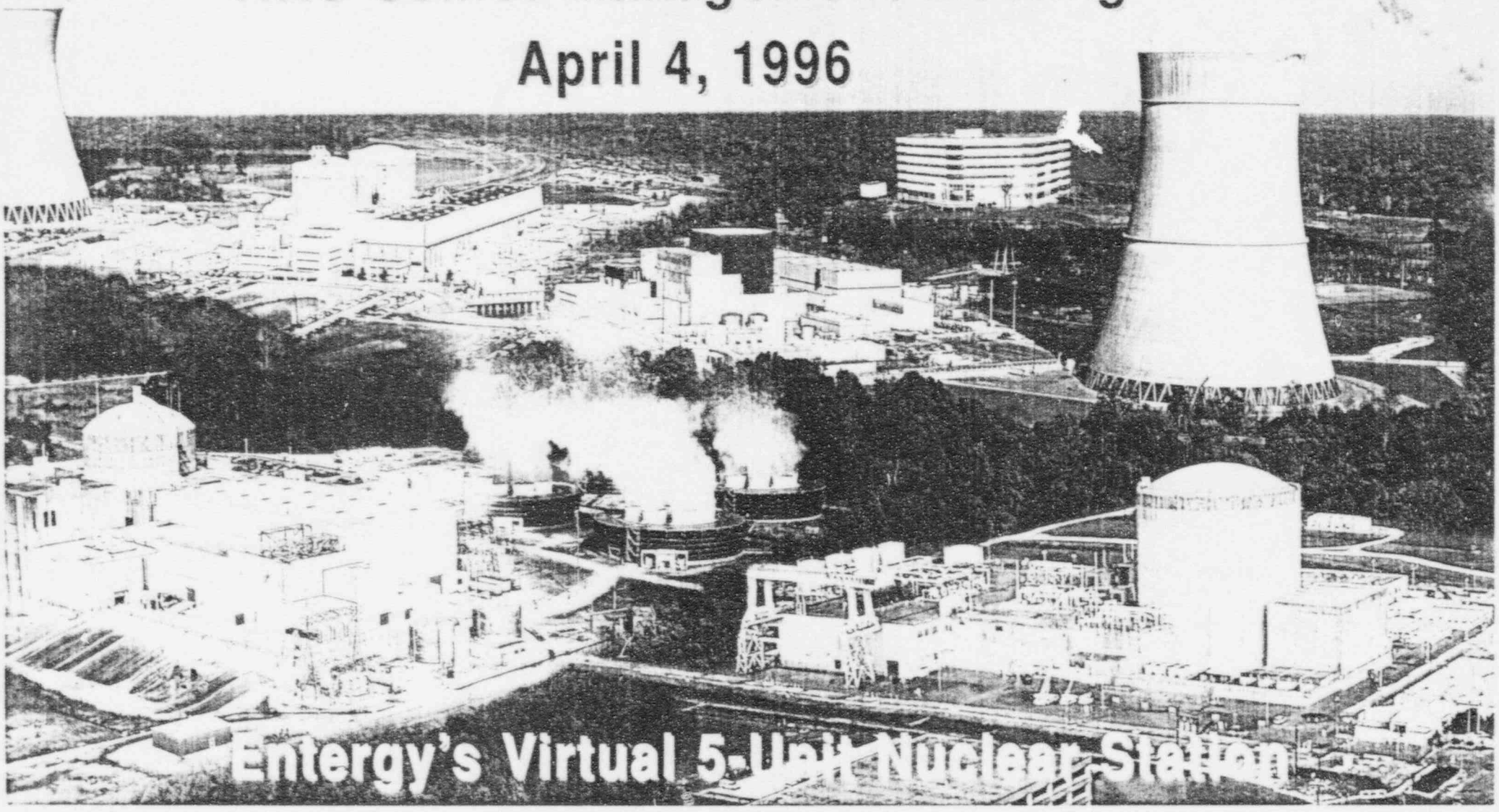
J. Roe, Office of Nuclear Reactor Regulation (NRR)
E. Adensam, NRR
W. Beckner, NRR
G. Kalman, NRR
J. Donohew, NRR
C. Patel, NRR

NRC Region IV

J. Callan, Regional Administrator
J. Dyer, Director, Division of Reactor Projects (DRP)
K. Brockman, Deputy Director, Division of Reactor Safety (DRS)
P. Harrell, Acting Chief (AC):DRP/D
T. Reis, AC:DRP/C
J. Tedrow, Senior Resident Inspector (SRI):GGNS
W. Smith, SRI:RBS
L. Keller, SRI:WT3

Enclosure 2

Entergy Operations, Inc.
NRC Senior Management Meeting
April 4, 1996



NRC/ENTERGY OPERATIONS, INC.
SENIOR MANAGEMENT MEETING

FINAL AGENDA

April 4, 1996
7:30 a.m. - 2:00 p.m.
Echelon One Auditorium, Jackson, MS

	Welcome & Opening Remarks	Don Hintz/NRC
8:00	Entergy Overview/1995 Review	Don Hintz
8:30	1996 Entergy & EOI Vision	Jerry Yelverton
8:50	Break	
9:00	EOI Shared Resources	Ross Barkhurst
9:30	EOI Plans for Power Uprates & 24 Month Fuel Cycles	Mike Sellman
10:00	EOI Plans for On - Line Maintenance	John McGaha
10:30	Break	
10:40	EOI Improved Tech/Spec Projects	Lon Waldinger
11:00	Self Assessments - Engineering Perspective	Fred Titus
11:20	GGNS Experience in Region IV	Randy Hutchinson
11:30	Group Discussion - Future Role of Assessments - Peformance Based Regulation - EOI Need for NRC Support for Changes	Randy Hutchinson, Moderator
Noon	Lunch	

Afternoon Session

12:30	Steam Generator Status	Fred Titus
12:50	EOI Spent Fuel Storage	Fred Titus
1:10	Employee Concern Program	Jerrold Dewease
1:40	Downsizing Strategies and Philosophies	Jerry Yelverton
2:00	NRC/EOI Closing Remarks / Adjourn	Don Hintz

EOI/NRC SENIOR MANAGEMENT MEETING
April 4, 1996
ATTENDEES LIST

ENTERGY OPERATIONS, INC.

Don Hintz, President & CEO

Jerry Yelverton, Executive VP & COO

Ross Barkhurst, VP

Mike Sellman, VP Operations, WF3

Randy Hutchinson, VP Operations, GGNS

John McGaha, VP Operations, RBS

Jerrold Dewease, VP Operations Support

Fred Titus, VP Engineering

Joe Blount, General Attorney

Lon Waldinger, General Manager, ANO

Dwight Mims, Director, NS&L, ANO

Joe Hagan, General Manager, GGNS

Mike Meisner, Director, NS&L, GGNS

Joel Dimmette, General Manager, RBS

Jim Fisicaro, Director, NS&L, RBS

Dan Keuter, General Manager, WF3

Ray Burski, Director, NS&L, WF3

Jerry Roberts, Director, NS&L, Echelon

Les England, Licensing Coordinator, Echelon

NUCLEAR REGULATORY COMMISSION

Jack Roe, Director, Division of
Reactor Projects, - III, IV

Elinor Adensam, Deputy Director , Division of
Reactor Projects, - III, IV

Joe Callan, Regional Administrator, Region IV

James Dyer, Deputy Director, Division. of Reactor
Projects, Region IV

Bill Beckner, Director,
Project Directorate IV-1, NRR

Phil Harrell, Acting Chief,
Project Branch D,
Division of Reactor Projects, Region IV

Terry Reis, Acting Chief,
Project Branch C.
Division of Reactor Projects, Region IV

George Kalman, Senior Project Manager, ANO

Jack Donohew, Project Manager, GGNS

Jeff Tedrow, GGNS Senior Resident Inspector

Ward F. Smith, RBS Senior Resident Inspector

Chandu Patel, Project Manager, WF3

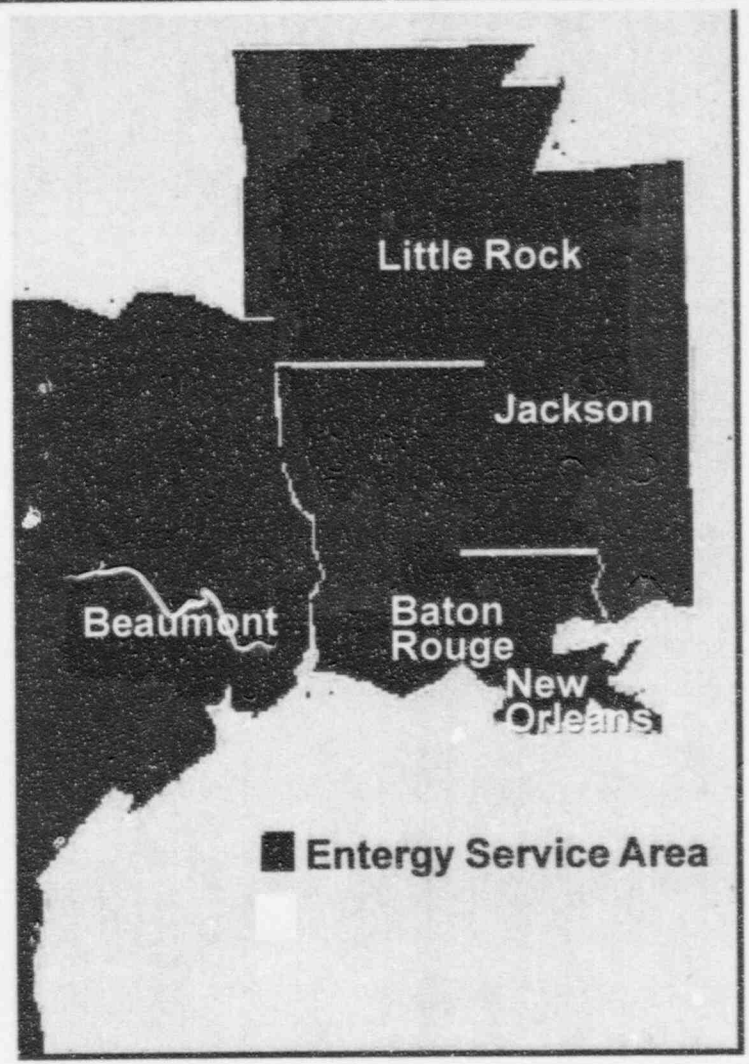
Lee Keller, WF3 Senior Resident Inspector

Entergy Overview

Don Hintz
President & CEO
Entergy Operations, Inc.

The Entergy Service Area

- 2.3 Million Retail Customers
- 112,000 Square Miles Service Area



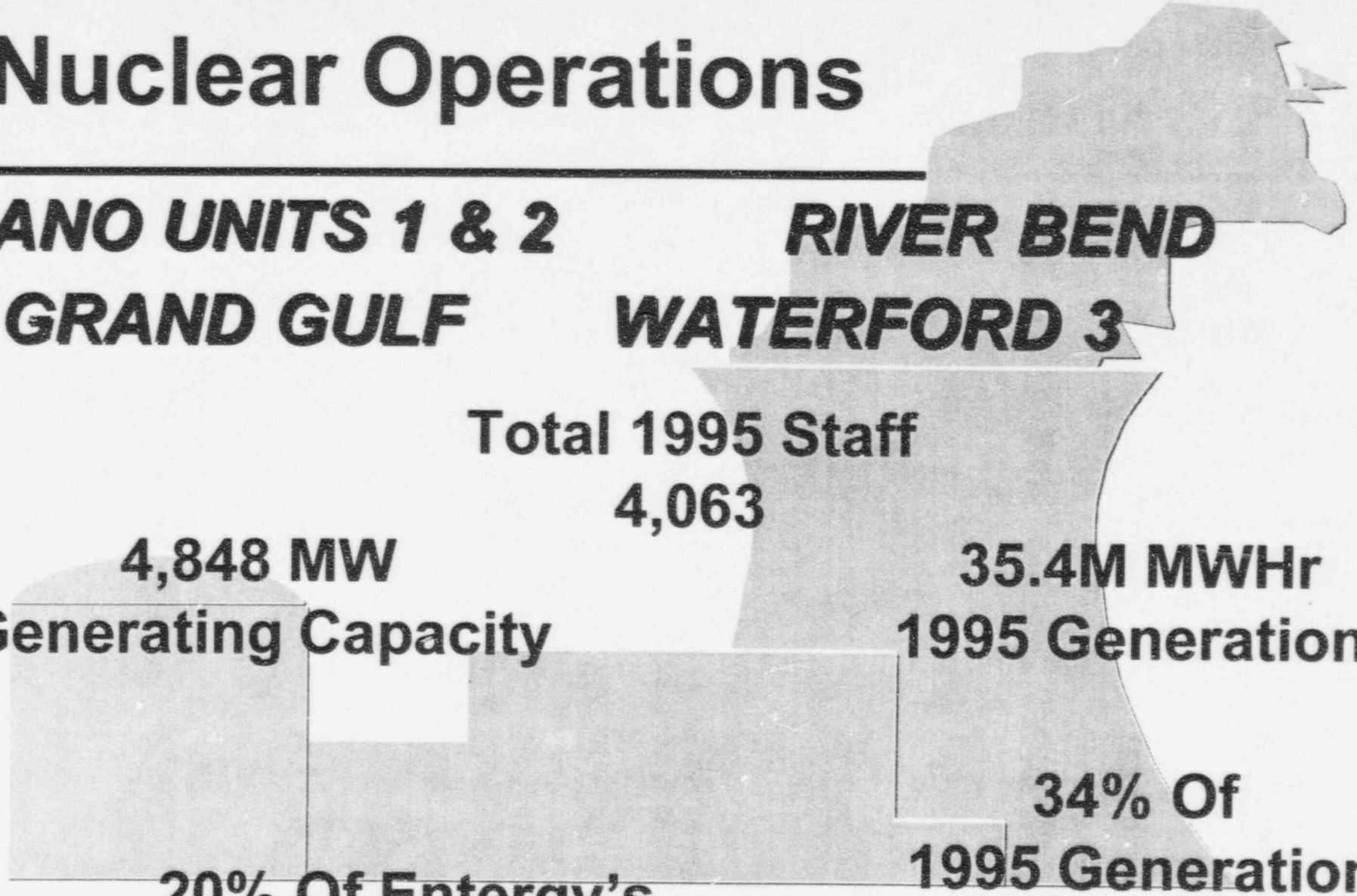
Nuclear Operations

ANO UNITS 1 & 2

GRAND GULF

RIVER BEND

WATERFORD 3



Total 1995 Staff
4,063

4,848 MW
Generating Capacity

20% Of Entergy's
Installed Capacity

35.4M MWHr
1995 Generation

34% Of
1995 Generation

Nuclear Operations

President
& CEO
D.C. Hintz

Executive VP
& COO
J.W. Yelverton

VP
R.P. Barkhurst

Eng VP
F.W. Titus

Ops Support
VP
J. Dewease

ANO VP
Vacant

Grand Gulf VP
C.R. Hutchinson

RB VP
J.R. McGaha, Jr.

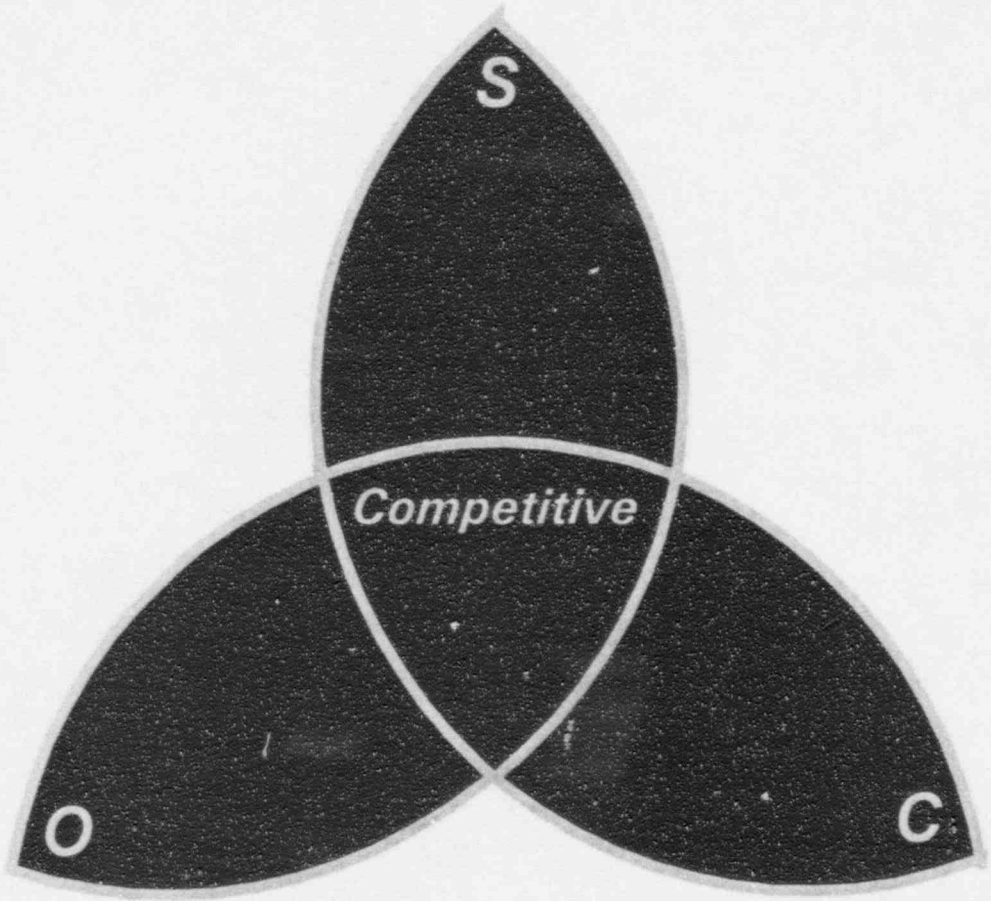
Waterford 3 VP
M.B. Sellman

Business Services
Director
C.C. Shanks

Nuclear Fuels
Director
F.B. Rives

Total Quality
Director
T.F. Gerrets

1995 Results



Operating Performance

Thru April 4, 1996

- ANO-1 - 261 Days On Line
- ANO-2 - 119 Days On Line
- Grand Gulf - 196 Days On Line
- River Bend - 50 Days On Line
- Waterford 3 - 149 Days On Line

Operating Performance
1995 Review

MWHr Generated

ANO 1	5,972,623
ANO 2	5,694,494
Grand Gulf	8,013,321
River Bend	7,929,591
Waterford 3	7,763,449

Total Nuclear
35,373,478 MWHr

Unit Capability Factor

ANO 1*	81.4%
ANO 2*	72.5%
Grand Gulf*	76.9%
River Bend	98.3%
Waterford 3*	82.4%

* Refueling Outage

1995 Highlights

- ANO-1 - 46 Day Refueling Outage
- ANO-1 - Surpassed Previous Run Record of 298 Days Set In 1993, 304 Days Continuous Run
- GG - HP Turbine Upgrade - 30 MW Additional MDC; 38 MW Actual
- GG - Broke Its Own World Record For Most Power Produced (31,163 MWHr) In 24 Hr Period; Old Record Set In 1988, 31,130 MWHr

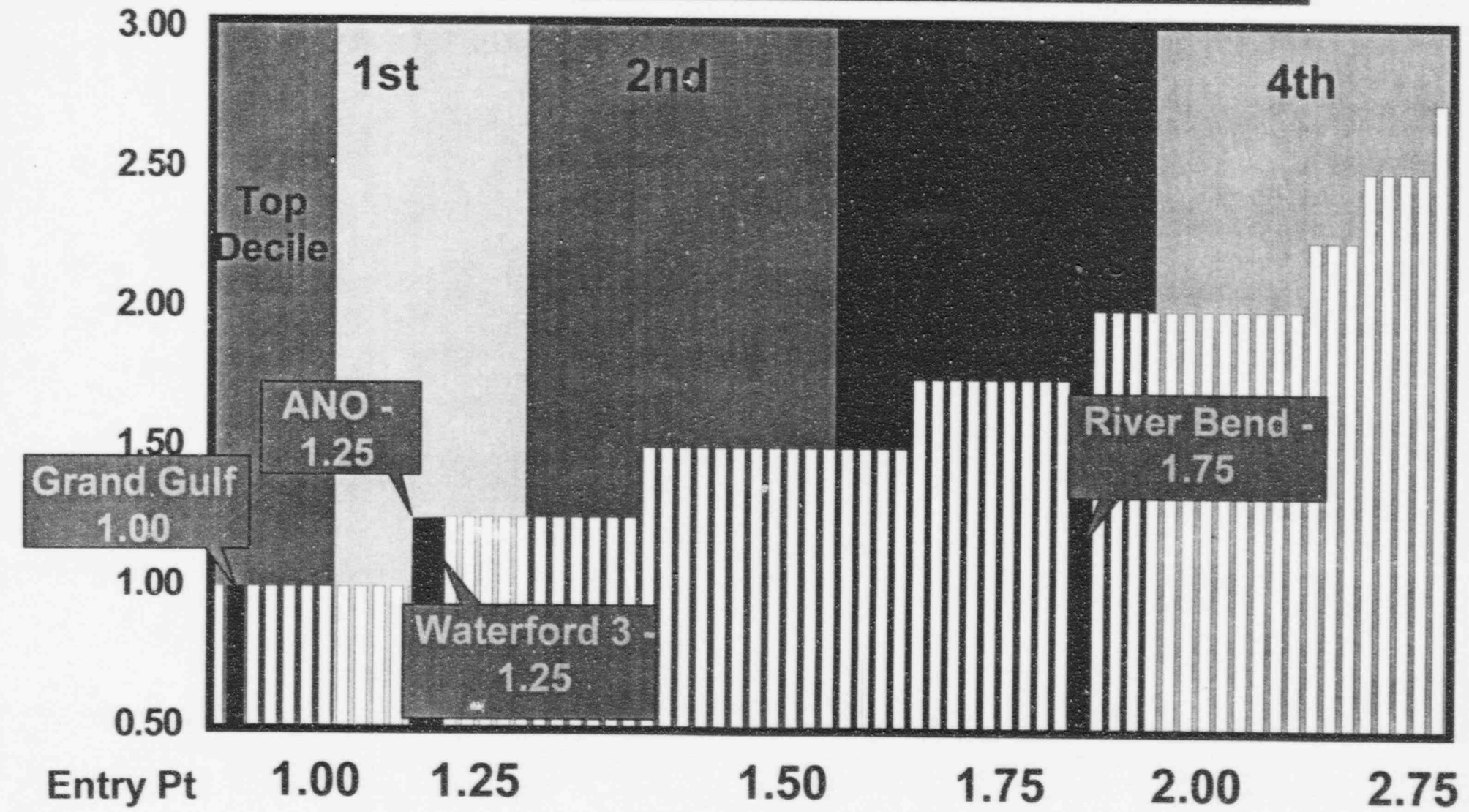
1995 Highlights

- Grand Gulf - INPO "1" February 1995
- River Bend - 372 Days Continuous Operation
- River Bend - 39 Day Refueling Outage - Shortest of Any EOI Unit
- W3 - 43 Day Refueling Outage
- W3 - 362 Days Continuous Operation

INPO Ratings
1988 - 1995

	ANO	GG	RB	W3
1995	-	1	-	-
1994	1	-	3	2
1993	1	1	4	2
1992	2	-	-	-
1991	2	1	2	1
1990	3	-	-	-
1989	-	1	3	1
1988	2	-	-	-

1995 Four-Category NRC SALP Scores



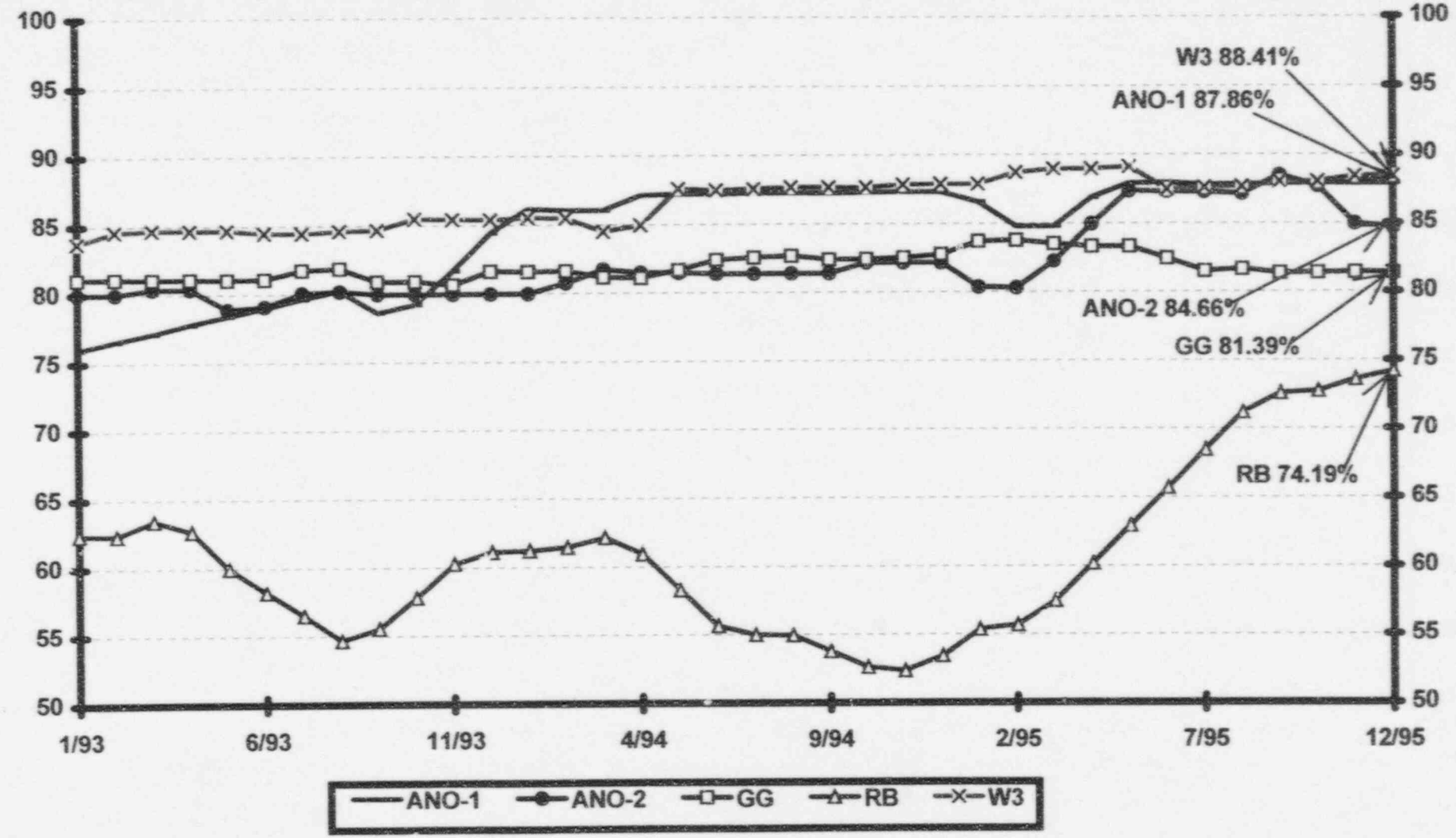
1995 Review
NRC SALP Scores

	ANO	RB	W3
Plant Operations	1	2	2
Maintenance	1	2	1
Engineering	2	2	1
Plant Support	1	1	1
SALP Average	1.25	1.75	1.25

1995 Violations Summary

	Severity Level						
	I	II	III	IV	V	Total	1994 Total
ANO	-	-	2	12	-	14	24
GG	-	-	-	5	-	5	10
RB	-	-	-	17	1	18	37
W3	-	-	-	13	-	13	20

EOI Unit Capability Factors: 3 Year Averages



Operating Performance
1995 Days Off Line

	ANO 1		ANO 2		GG		RB		W3	
	94	95	94	95	94	95	94	95	94	95
RFO	-	46	43	58	-	67	82	-	48	43
MCO	-	-	-	18	-	-	-	-	-	-
Other	5	6	-	11	20	13	56	2	1	19
Total	5	52	43	87	20	80	138	2	49	62

Outage Duration (Days)

	ANO 1	ANO 2	GG	W3	RB
1993	42	-	66	-	-
1994	-	43	-	48	82
1995	46	58	67	43	-
1996	-	-	-	-	39

Through 1st qtr 1996

1996 Safety/Regulatory

	NRC SALP End Date	INPO Visits
ANO	7/96	8/96
Grand Gulf	2/96	None (1/97)
River Bend	None	4/96
Waterford 3	10/96	3/96

1996 Entergy and EOI Vision

Jerry Yelverton
Executive VP & COO
Entergy Operations, Inc.

Entergy Vision

Winning through
innovative and profitable
actions – exceeding customer
expectations everywhere
we serve.

Focus 2000 Initiatives

- ✦Aggressively manage our core business
- ✦Broaden Entergy Power's development business
- ✦Expand our unregulated customer service business
- ✦Pursue a strategy of managing the transition to competition

Entergy Corporation

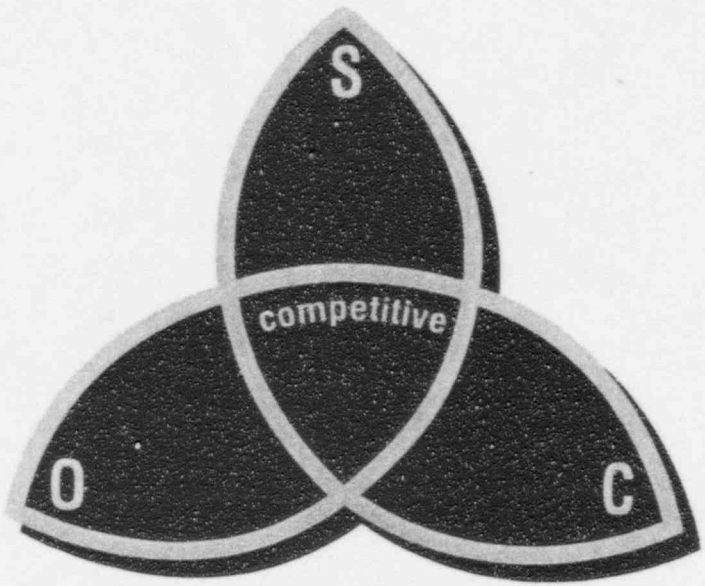
Best in Class

- Fossil
- Customer Service
- Support

Nuclear is *Taking the Lead* in Focus 2000

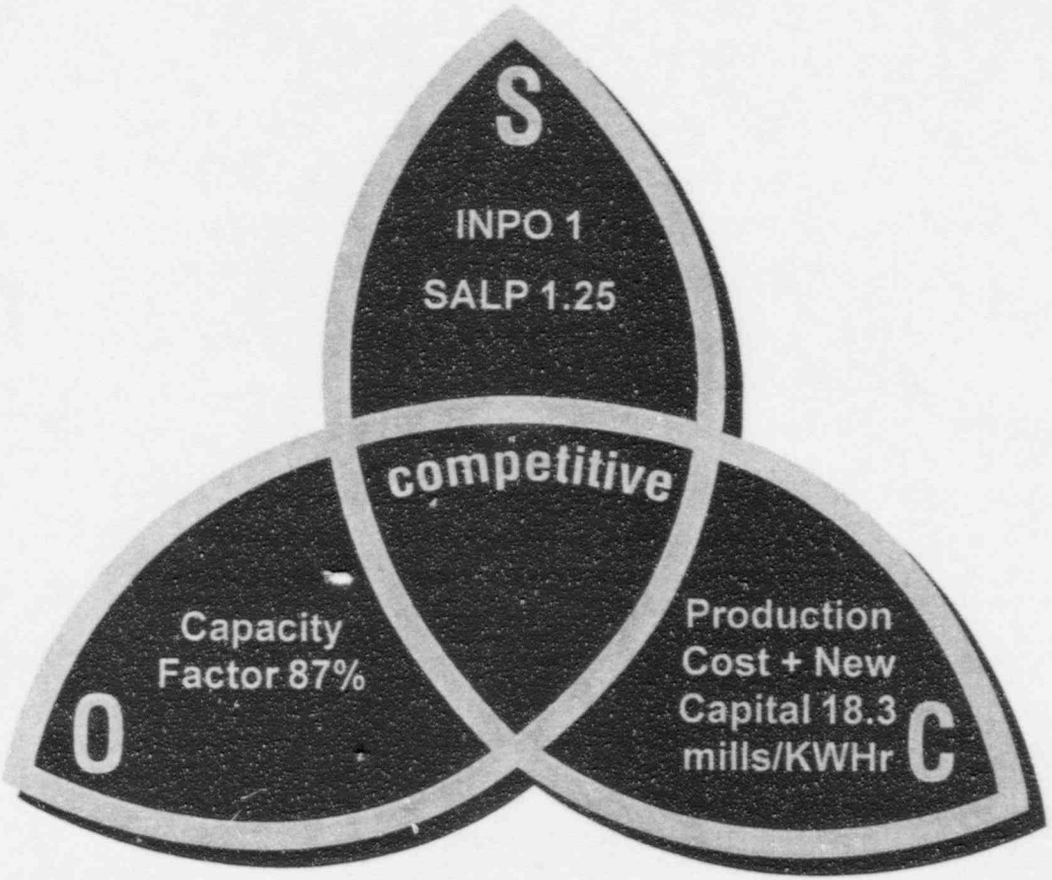
- ***Taking the Lead*** **means:**
  - **Being the best among similar plants**
  - **Balanced focus on**
    - **Safety / regulatory performance**
    - **Operating performance**
    - **Cost performance**

Road Map '98



Taking the Lead

1998 Target Measures



1995 Total Cost (mills/KWHr)

•Production Cost + New Capital	21.4
–Plant Insurance	0.6
–Decommissioning	1.3
–Property Taxes	0.8
–Benefits, incentive comp, A&G	2.1
–Payroll Taxes	0.5
–Fuel Lease	0.8
•Entergy Operations total	27.5

1998 Market Price Projection

- 25 mills/KWHr
- 25 mills/KWHr = 2.5¢ per KWHr

- *EOI 1995 Total Cost is 27.5 mills/KWHr=2.75¢/ KWHr*

1998 "Business As Usual" Projection

• Production cost + new capital	23.0
- Plant Insurance	0.7
- Decommissioning	2.0
- Property Taxes	1.7
- Benefits, incentive comp, A&G	2.3
- Payroll Taxes	0.5
- Fuel Lease	0.8
• Entergy Operations total	31.0

Entergy Operations Cost Target

(mills/KWHr)

✦Production Cost + New Capital	18.3
✦Costs we don't directly control	+ 6.7
✦Total	25.0

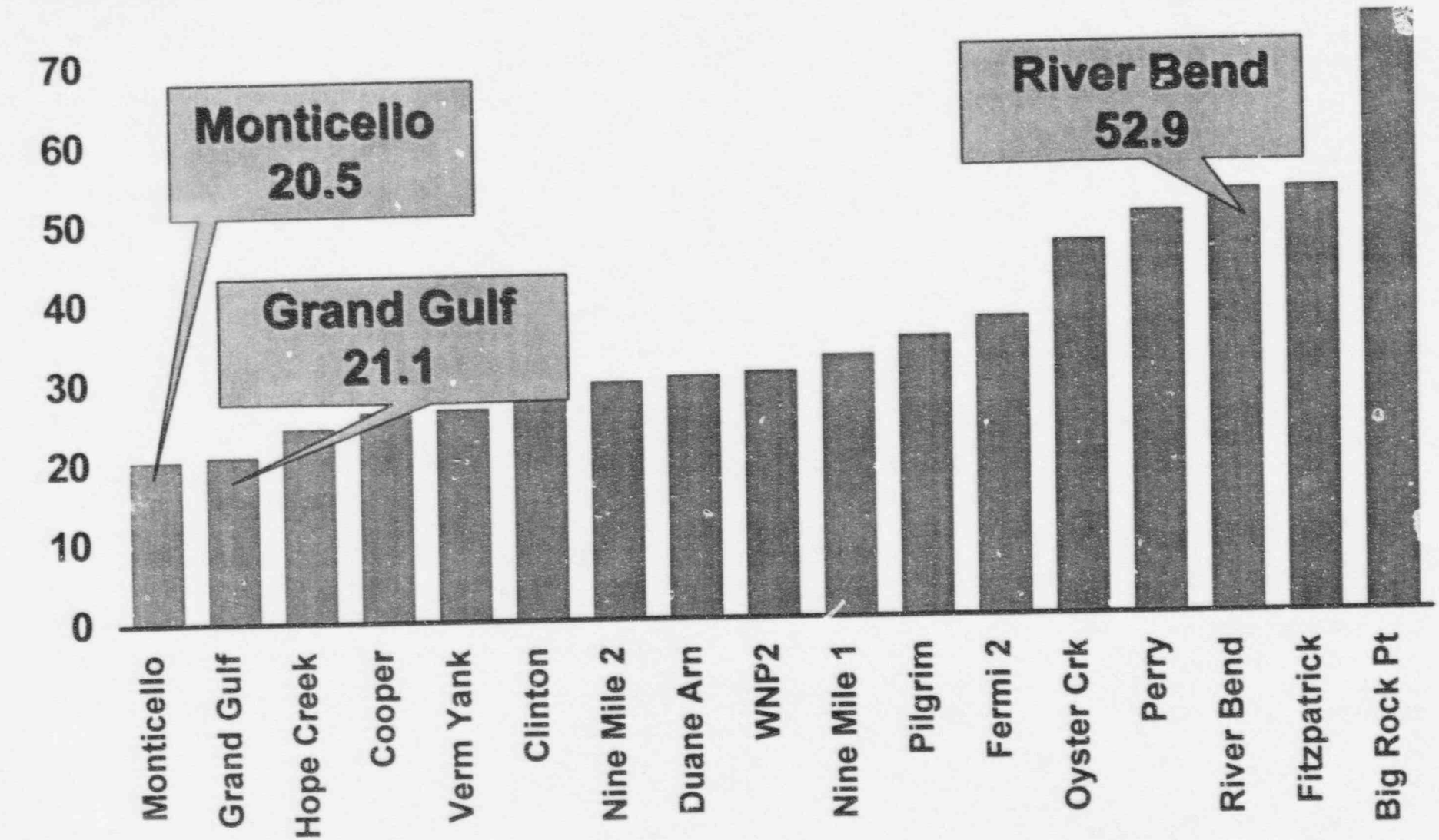
Single Unit PWRs

Production Cost + New Capital

1992-94

Mills/KWHr

Single Unit BWRs
Production Cost + New Capital
1992-94



Entergy Target

3 PWRs - ANO 1 (B&W), ANO 2 (CE), And Waterford 3 (CE)

2 BWRs - Grand Gulf (GE) And River Bend (GE)

Average Of 5 Units

Taking the Lead Target

Production Cost +New Capital

Best Single Unit PWR (WH) **16.8 X 3 = 50.4**

Best Single Unit BWR (GE) **20.5 X 2 = 41.0**

91.4 ÷ 5 = 18.3 Mills/KWHr

How do we get to 18.3 mills / KWHr ?

Outage Cost Reduction

To reduce cost by 0.8 mills/KWHr:

- Refueling Outage costs must be reduced by 30%.
- Refueling Outages must last no longer than 30 days.

Outage Strategy

- Resource sharing
- Outage work only
- Reduce contractors

Outage Reduction Impact on Generation

- Increase availability 5%
- Reduce production cost 5%

Staffing Reduction

1.3 mills/KWHr reduction:

- **Equivalent to 17% reduction**
- **Total EOI employees and baseline contractors**

Entergy Operations Challenge

•Current production cost + new capital		21.4
•Add Inflation	1.6	23
•Reduce new capital	1.1	21.9
•Reduce outage costs	0.8	21.1
•Increase generation	0.9	20.2
•Reduce River Bend fuel and O&M	0.6	19.6
•Reduce staffing	1.3	18.3

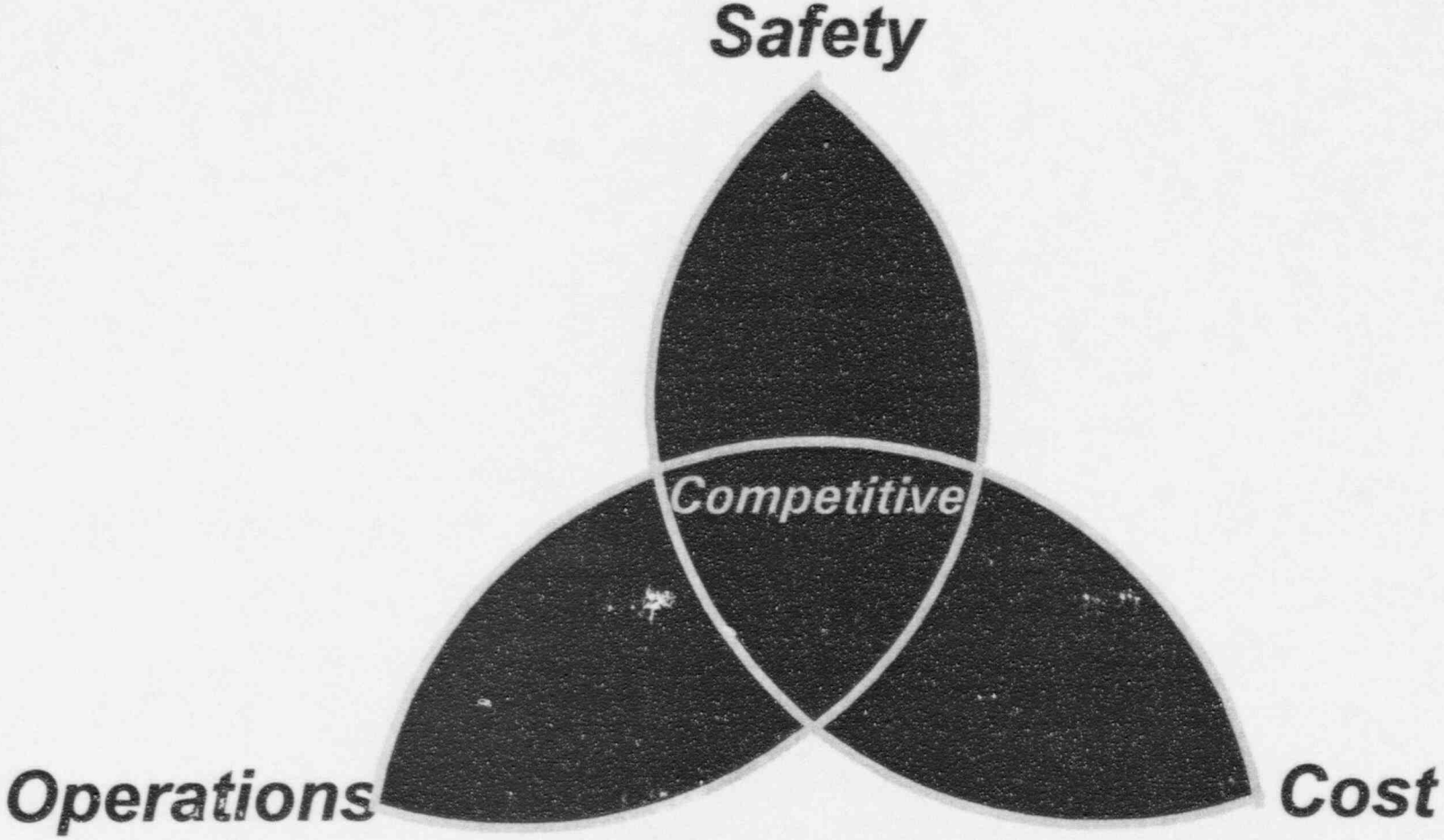
How can Entergy Operations compete at 25 mills/KWHr?

•Production Cost + New Capital	18.3
–Plant Insurance	0.6
–Decommissioning	1.8
–Property Taxes	1.6
–Benefits, incentive comp, A&G	1.4
–Payroll Taxes	0.5
–Fuel Lease	0.8
•Entergy Operations total	25.0

Summary

- Reduce Capital expenditures
- Increase Generation
  - Power Uprate
  - 24 Month Fuel Cycle
- Reduce Outage Costs
  - Resource Sharing
  - On-Line Maintenance
  - Improved T/S
- Reduced Staffing
- One Nuclear Station with Five Units

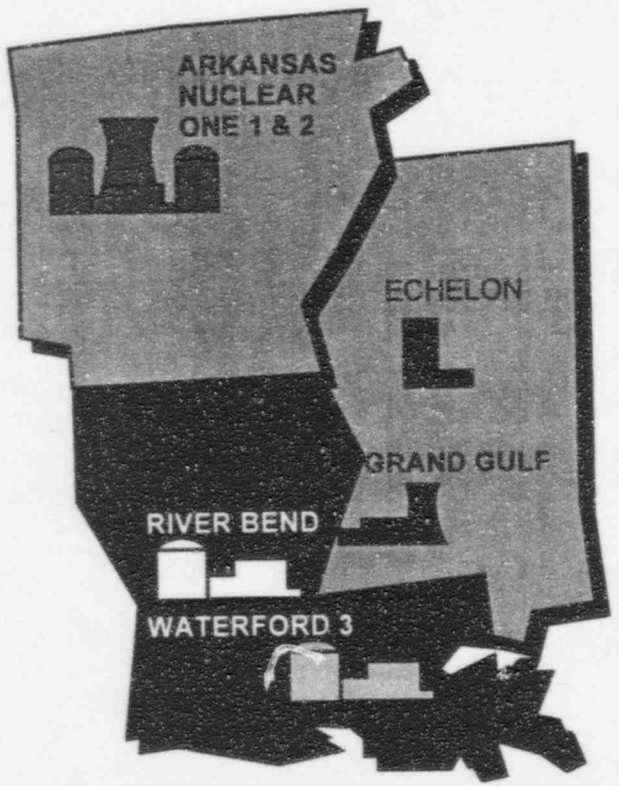
Nuclear Best In Class

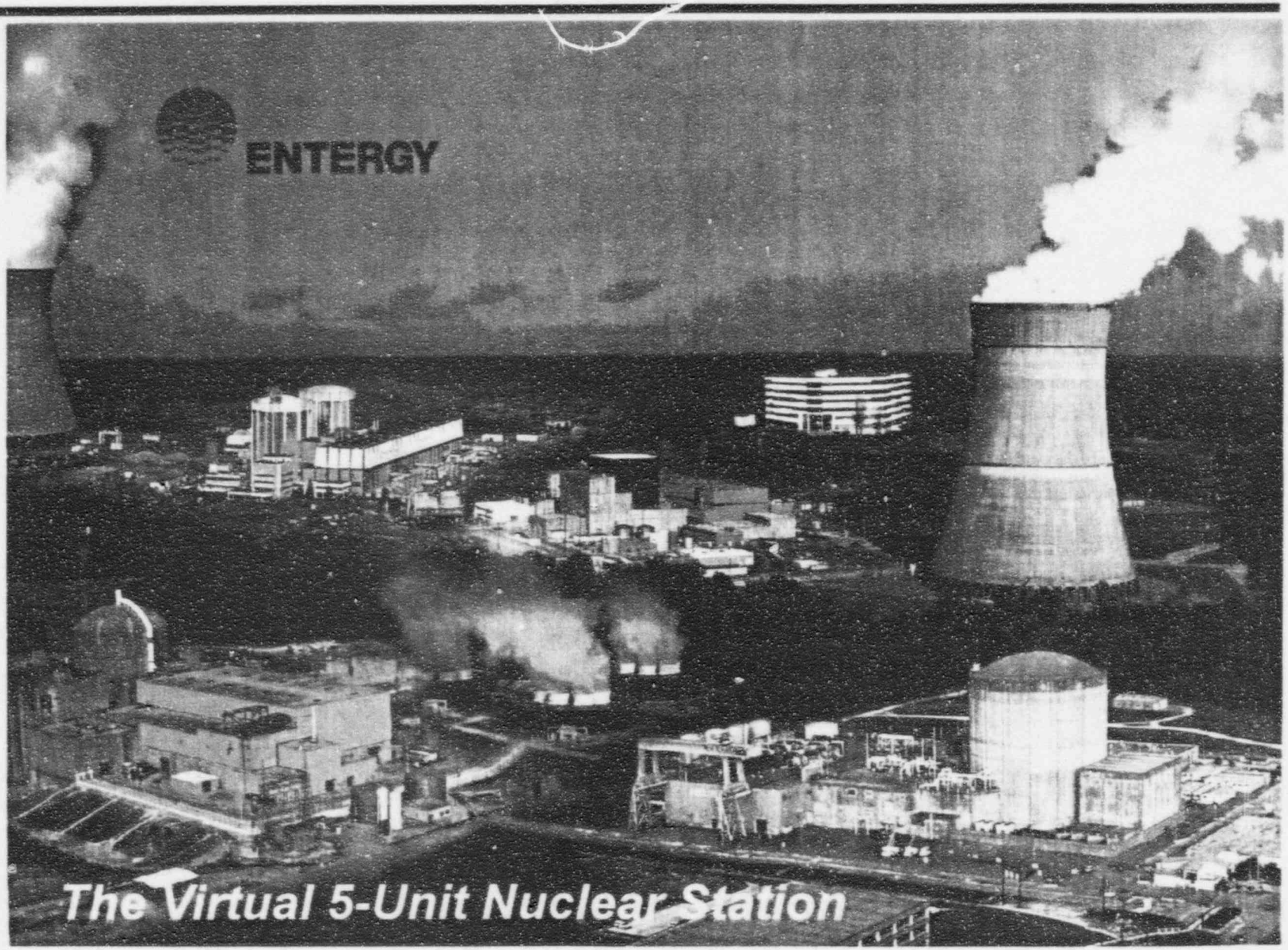


EOI SHARED RESOURCES

Ross Barkhurst
Vice President

EOI Shared Resources




ENTERGY
The Virtual 5-Unit Nuclear Station

EOI Shared Resources

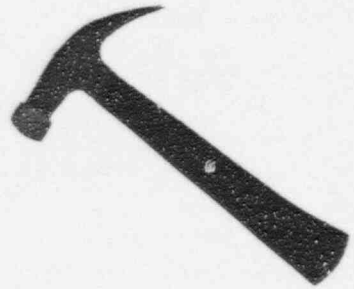
- PROCESS DRIVERS
- WHY SHARE RESOURCES?
- HOW TO SHARE RESOURCES?
- WHAT IS A SHARED RESOURCE?
- WHAT RESOURCES DID WE SHARE AT RBS
- PROCESS BENEFITS
- SHORTER OUTAGES
- CHALLENGES

Process Drivers

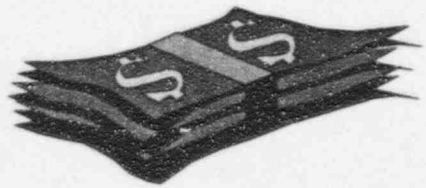
- COST
- PRESERVING CORE COMPETENCIES

Why Share Resources?

- SHARE EXPERTISE
- SAVE JOBS



- SAVE MONEY



How To Share Resources

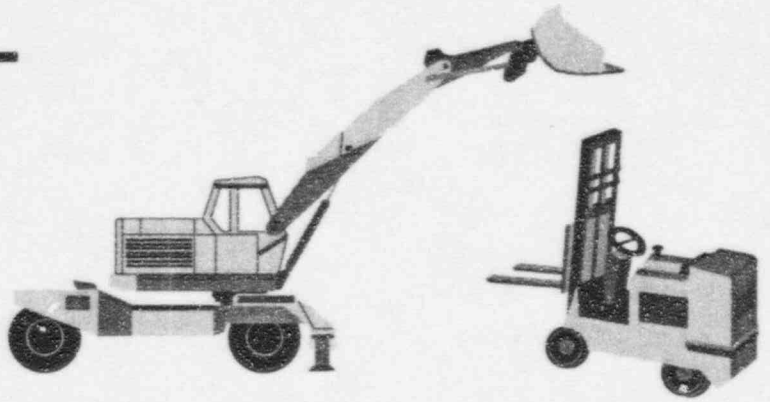
- TALK TO PEERS

- SET UP TEAMS
- EVOLVE ☑

JUST DO IT

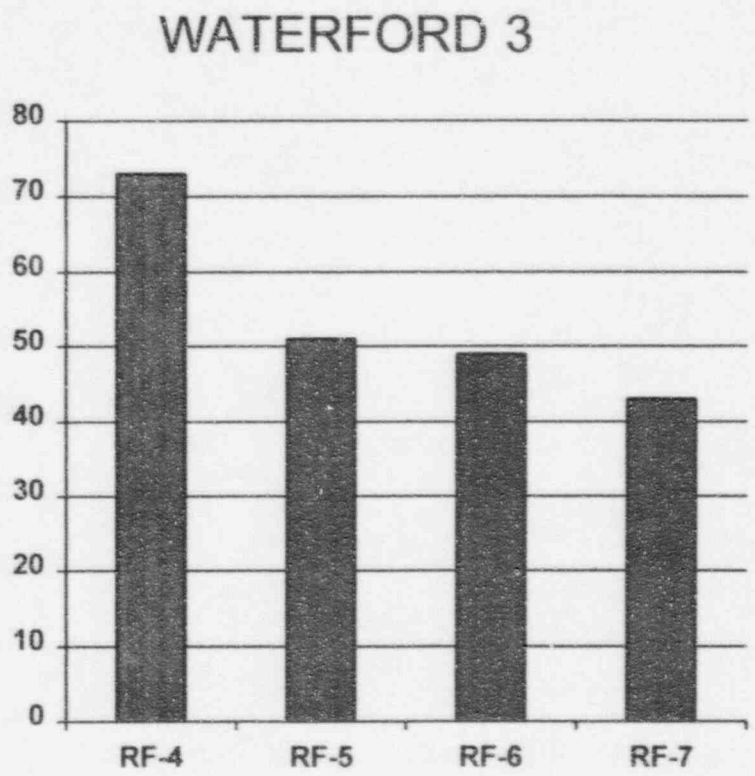
What is a Shared Resource ?

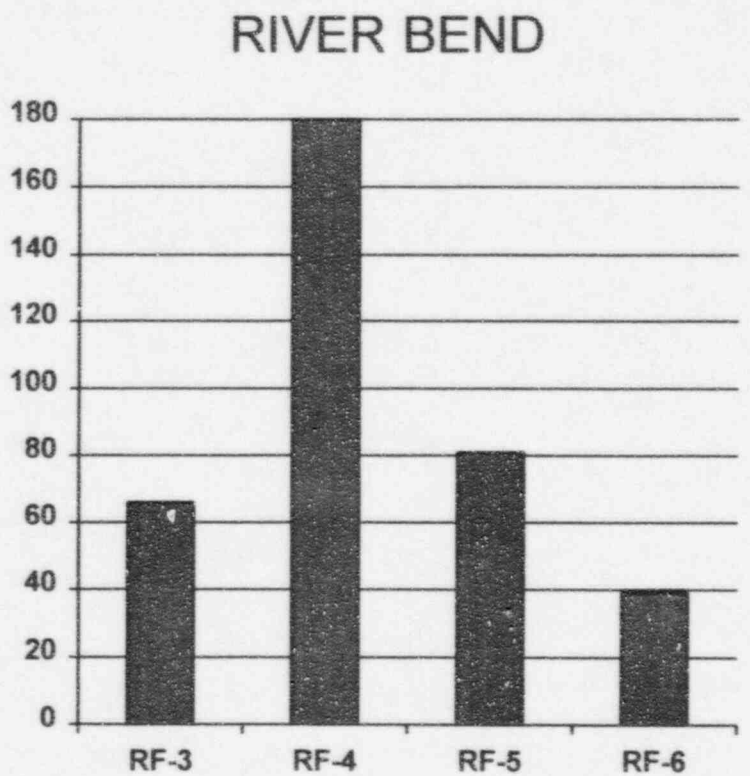
- EQUIPMENT



- PEOPLE

Shorter Outages!





Shorter Outages!

WATERFORD 3 HISTORY

REFUEL 4	73 DAYS
REFUEL 5	51 DAYS
REFUEL 6	49 DAYS
REFUEL 7	***43 DAYS***

RIVER BEND HISTORY

REFUEL 3	66 DAYS
REFUEL 4	180 DAYS
REFUEL 5	81 DAYS
REFUEL 6	***39 DAYS***

Challenges

- LIVING / TRAVEL ARRANGEMENTS
- “KISS”
- “PODR”

Process Benefits

- HIGHER QUALITY OF WORK
- MORE OWNERSHIP
- LESS CONTRACT SUPPORT
- MULTI-SITE UNIT CONCEPT
- BETTER TRAINED

Shared Resources at River Bend

	W3	GGNS	ECH	ANO
MAINT.	34	34	0	87
TEAMS	19	8	5	3
HP	25	33	0	14
QA/QC	6	3	0	7
ENGR./ CONST.	9	15	3	7
OTHERS	6	7	0	13
TOTAL	99	100	8	131

338 TOTAL!

Summary:

- BENEFICIAL TO RECEIVING SITES
- QUALITY WORK FIRST TIME
- OWNERSHIP
  - SYSTEM WIDE TEAMWORK
  - FLEXIBILITY - SHARING
- COST SAVINGS
- JOBS
  - PRESERVES
  - ENHANCES CORE COMPETENCIES

Items to Watch

- IMPACT ON SENDING SITES
  - OVERTIME
  - BACKLOGS
  - DISTRACTION
- FUTURE
  - EVOLUTION
  - TEAM CONCEPT

Power Uprate

Mike Sellman
Vice President, Operations
Waterford 3

Power Uprate

- Entergy's Long Term Resource Plan
  - Future Electrical Demand Need
  - Cost Competitive Alternatives
- Entergy Operations Road Map 1998
  - Increase Generation
  - Reduce Overall Cost
- All Sites Considered

Waterford 3

- Feasibility Study Complete
- 8% Thermal (72.5 Mwe) Board Approved
- Detailed Engineering Analysis Initiated
- Licensing Submittal Scheduled for Spring 1997
- Implementation Scheduled for Fall 1998 (RF9)
- Limited Hardware Changes
  - Replace Turbine Nozzle Blocks

Waterford 3 (Continued)

- NRC/W-3 Meeting January 23, 1995
- Small Break LOCA Realistic Evaluation Model
  - Full Review to Support Spring 1997 Submittal Not Possible
- Alternative Approach Agreement
  - Evaluation Model Revision with PARCH/REM Code
  - Staff Review Can Support Spring 1997 Submittal

Grand Gulf

- Feasibility Study Being Performed
  - Scheduled to be complete June 1996
- Uprate of 5%- 7% Thermal Appears to be Possible

Arkansas Nuclear One

- Unit 1
  - Feasibility Study Being Performed
  - Uprate of 8% Thermal Appears to be Possible
  - Concerns Over Equipment Life Cycle Maintenance
- Unit 2
  - Feasibility Study Being Performed
  - Uprate of a 6.5% Thermal Appears to be Possible
  - May Implement With Steam Generator Replacement

River Bend

- Feasibility Study to Begin in 1996
- Uprate of 5% Steam Flow (42MWe) is Possible

24 Month Cycles

- Entergy Operations Road Map 1998
  - Reduce Number Of Outages
  - Increase Output
  - Schedule to Meet System Demands
  - Allow for More Resource Sharing
- All Sites Considered
  - Feasible at All Sites

BWR's

- Issues
  - Higher Core Power Density
  - Large Batch Sizes
  - Multiple Fuel Design Changes
  - Coastdown During Transition Cycles
  - Fuel Reliability

PWR's

- Issues
  - Enrichment Increases
  - Requires Advanced Poisons
  - Large Batch Sizes
  - Burnups >60,000 MWD/MTU
  - Fuel Reliability
- Requires High Boron/Lithium Concentrations
  - Use of Enriched Boron

On-Line Maintenance

John McGaha
Vice President, Operations
River Bend Station

EOI On-Line Maintenance Policy

- **Perform CM and PM Maintenance as Appropriate to:**
  - Ensure Safe Plant Operation
  - Achieve Appropriate Balance Between Safety System Reliability and Availability
  - Ensure Reliable Operation of the Plant
  - Enable Most Efficient Resource Utilization
- **Use Qualitative and Quantitative Tools to Assess Risk**
- **Trend Safety System Availability vs. Challenging Goals**

Work Scheduling

- Base Maintenance/Surveillance Schedules Contain Preventative Maintenance (PM), Surveillances to Ensure Safety System and Critical BOP Reliability, Availability, and Performance
- Corrective Maintenance, Special PMs, Modifications Added to Base Schedules to:
  - Improve System Operation
  - Restore/Improve Material Condition
  - Optimize Resource Utilization

Qualitative Review

- Estimated System Availability/Reliability Benefits Weighed Against Increased Risk
- Risk Minimized Through Schedule and Other Constraints
  - 3.0.3 Entry Disallowed
  - Limit to <50% Allowable Out of Service Time (AOT) Scheduled Without Special Approval
  - Concurrent Cross Divisional Outages Disallowed
  - Simultaneous Critical BOP Work Disallowed
  - No Concurrent Trip Sensitive Work
  - External Conditions Considered
- Operational Perspective

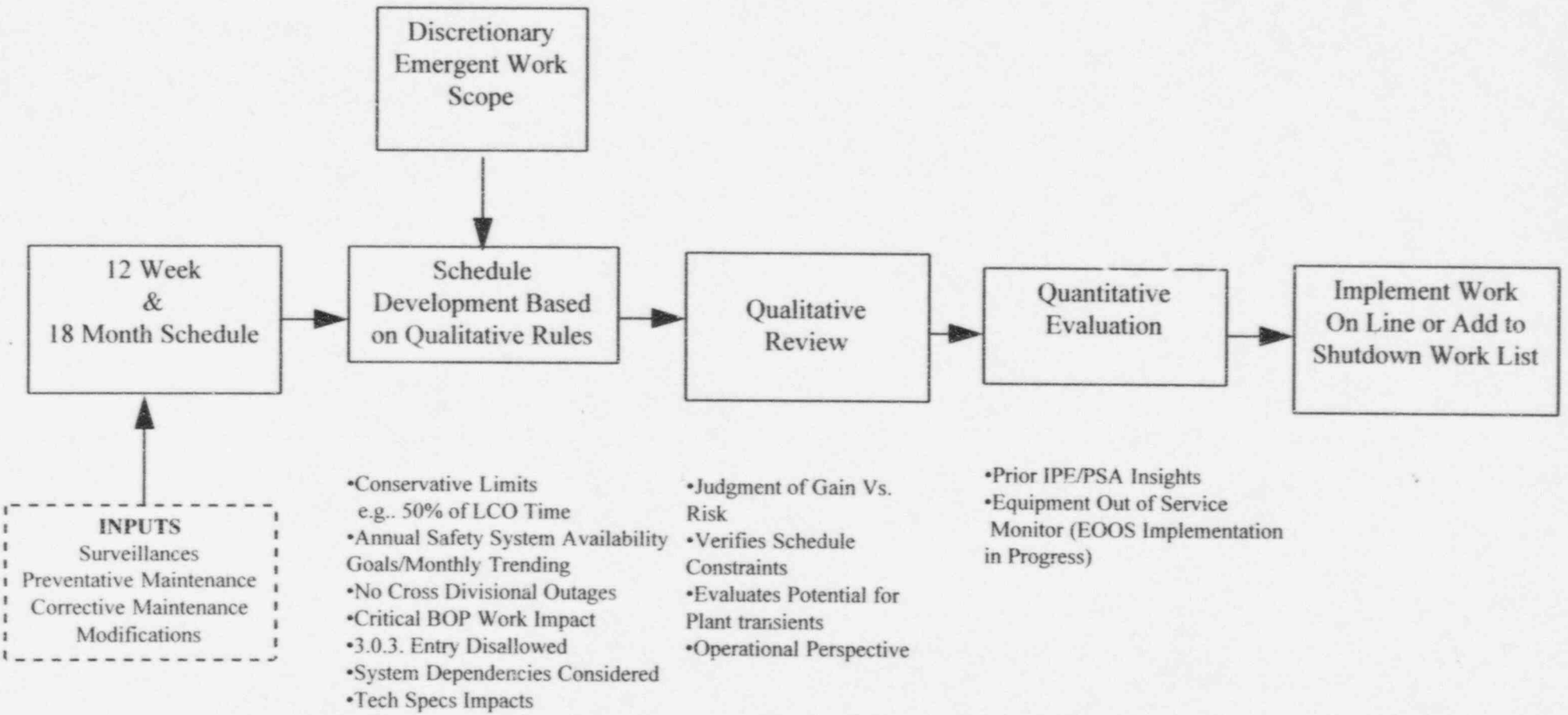
Quantitative Review

- Current
  - Insights Based on IPE/PRA
  - Initial Implementation of Computer Based On-Line Risk Model (similar to ORAM for S/D)
- Future
  - Full Implementation of Computer Based On-Line Risk Model for Scheduled Work
  - Evaluate Use of On-Line Risk Model for Emergent Work

Benefits of On-Line Maintenance

- Correct Operator Workarounds
- Improve Safety System Reliability
- Prepare for Outage Challenges (SDC)
- In House Personnel Availability/Quality of Work
- Avoid Outage Distractions
- Allow More Focused Approach to Work
- Improved Plant Availability

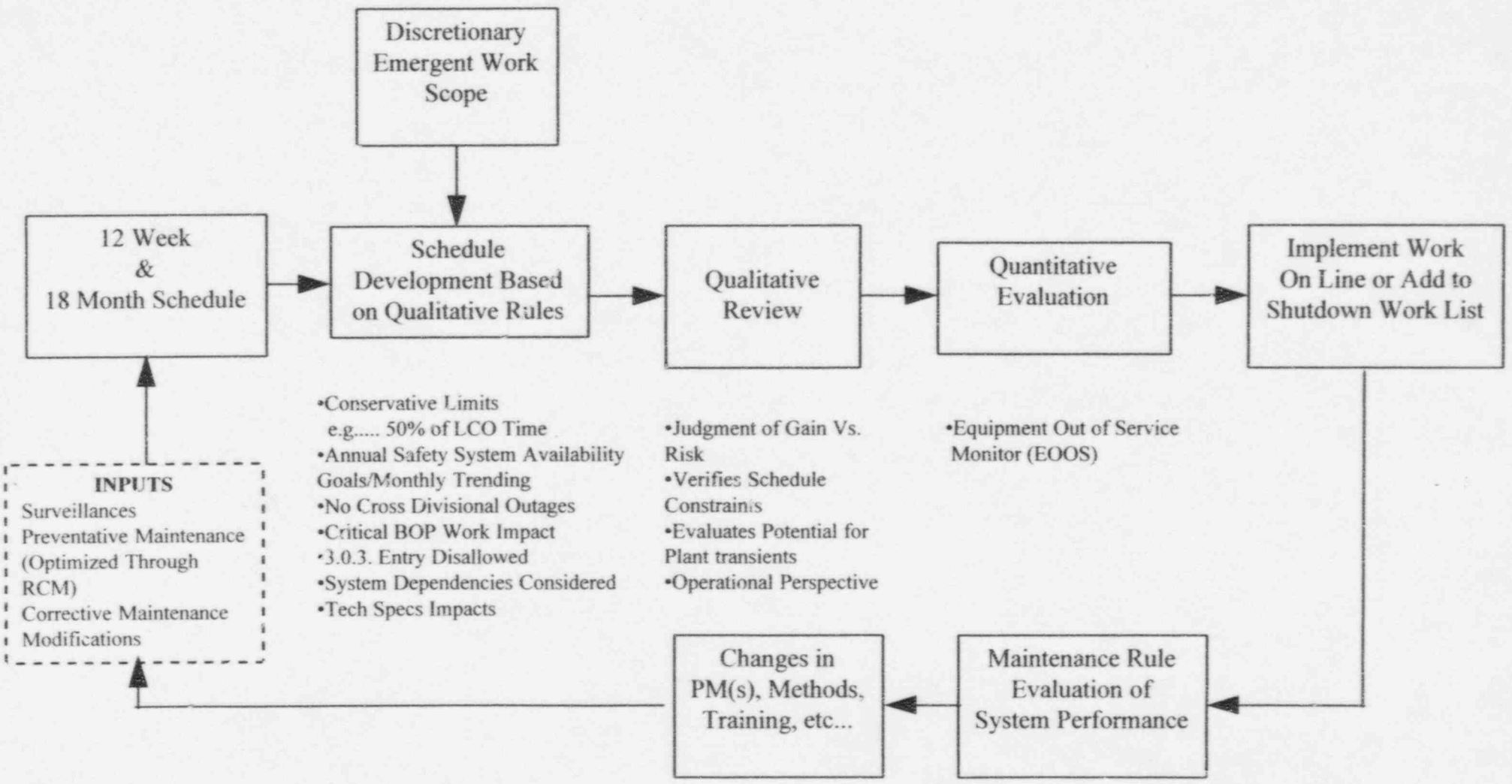
Current Process



Future

- Maintenance Rule
- Reliability Centered Maintenance
- Equipment Out of Service Monitor (EOOS)
- On-Line Assessment

Future Process



Examples Of On-Line Work Reviews

Description: Refurbish Several Valve Actuators and Perform VOTES Testing on One RHR System

- **Benefit:** System Reliability Enhanced, Work Planned for Completion During Existing System Outage
- **Risk:** Bounded by a Single Inoperable RHR System, No Potential for Plant Transient, All Other ECCS Available
- **Result:** Work Completed Within Planned Schedule, Improved System Reliability

Examples Of On-Line Work Reviews

Description: Containment Airlock Door Seal Replacement (EQ PM) and Testing

- **Benefit:** Outage Airlock Access Unrestricted, Airlock More Available to Close During Outages, Better Utilization of Resources, More Focused Approach
- **Risk:** Containment Integrity Assured by Other Door Locked Shut During Work, Contingency Planning Extensive
- **Result:** Seals Replaced and Tested Within LCO

Examples Of On-Line Work Reviews

Description: Standby Service Water Pump Impeller Bolt Check (Decided Not to Perform On-Line)

- **Benefit:** Plant Determined Benefit To Doing Work On Line Did Not Justify Exceeding Base PM Work Window (>50% AOT), Decided to Add to Outage Scope
- **Risk:** Plant Risk Bounded by One Division Out of Service, Risk of Entering Shutdown Action Statement Could be Minimized Through Contingency Plans
- **Result:** Decided Not to Perform On-Line, Conservative Decision Making

Examples Of On-Line Work Reviews

Description: Feed Pump Outage (Seal Mod.) Delayed Until HPCS Was Restored From Planned Maintenance

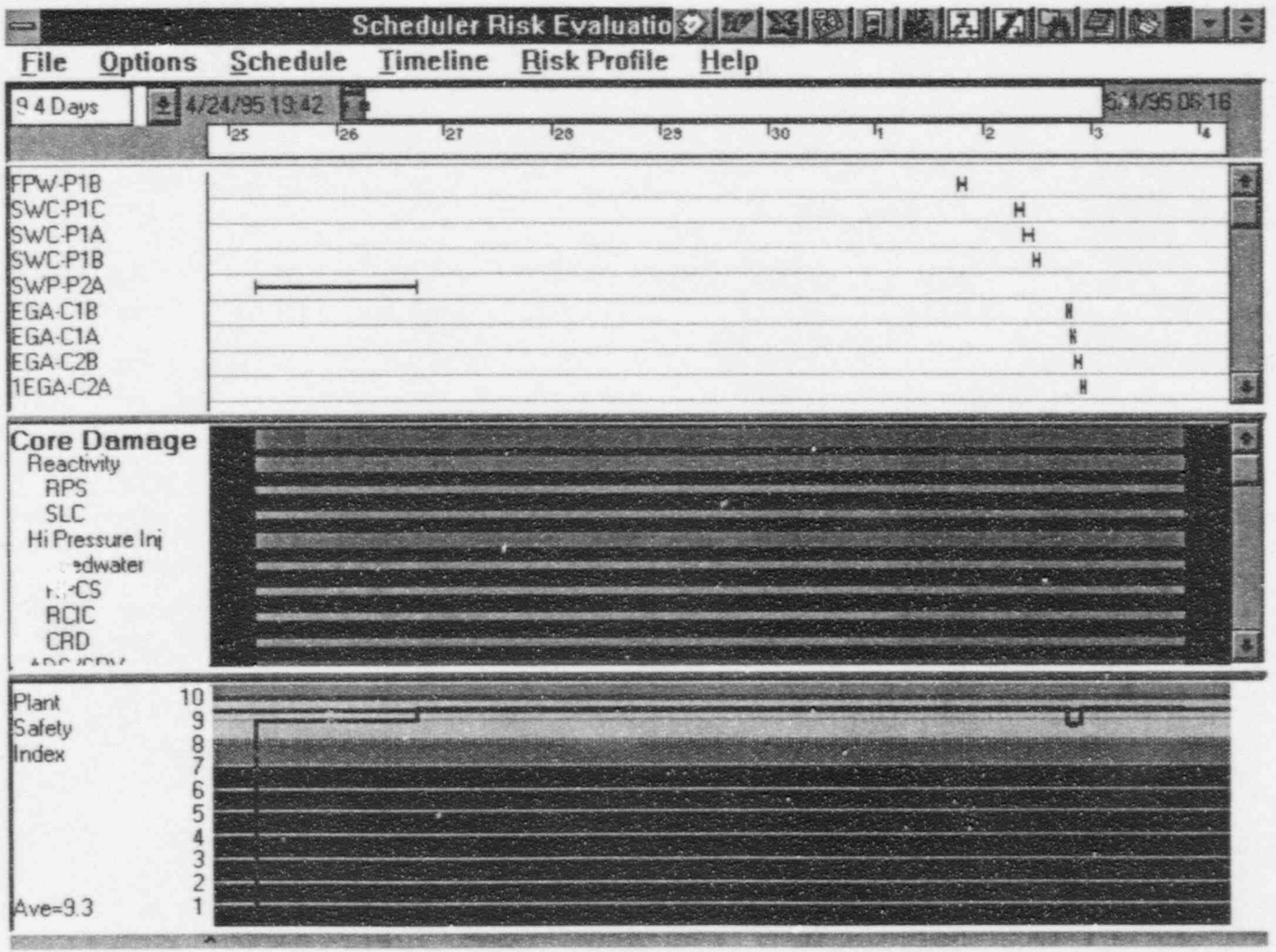
- **Benefit:** Qualitative Evaluation Recognized Potential for Plant Transient and Delayed Feed Pump Work Until High Pressure Core Spray Was Available
- **Risk:** Recognized Risk of Loss of Feedwater Transient With One High Pressure Safety System Unavailable
- **Result:** Decided to Delay Work

Examples Of On-Line Work Reviews

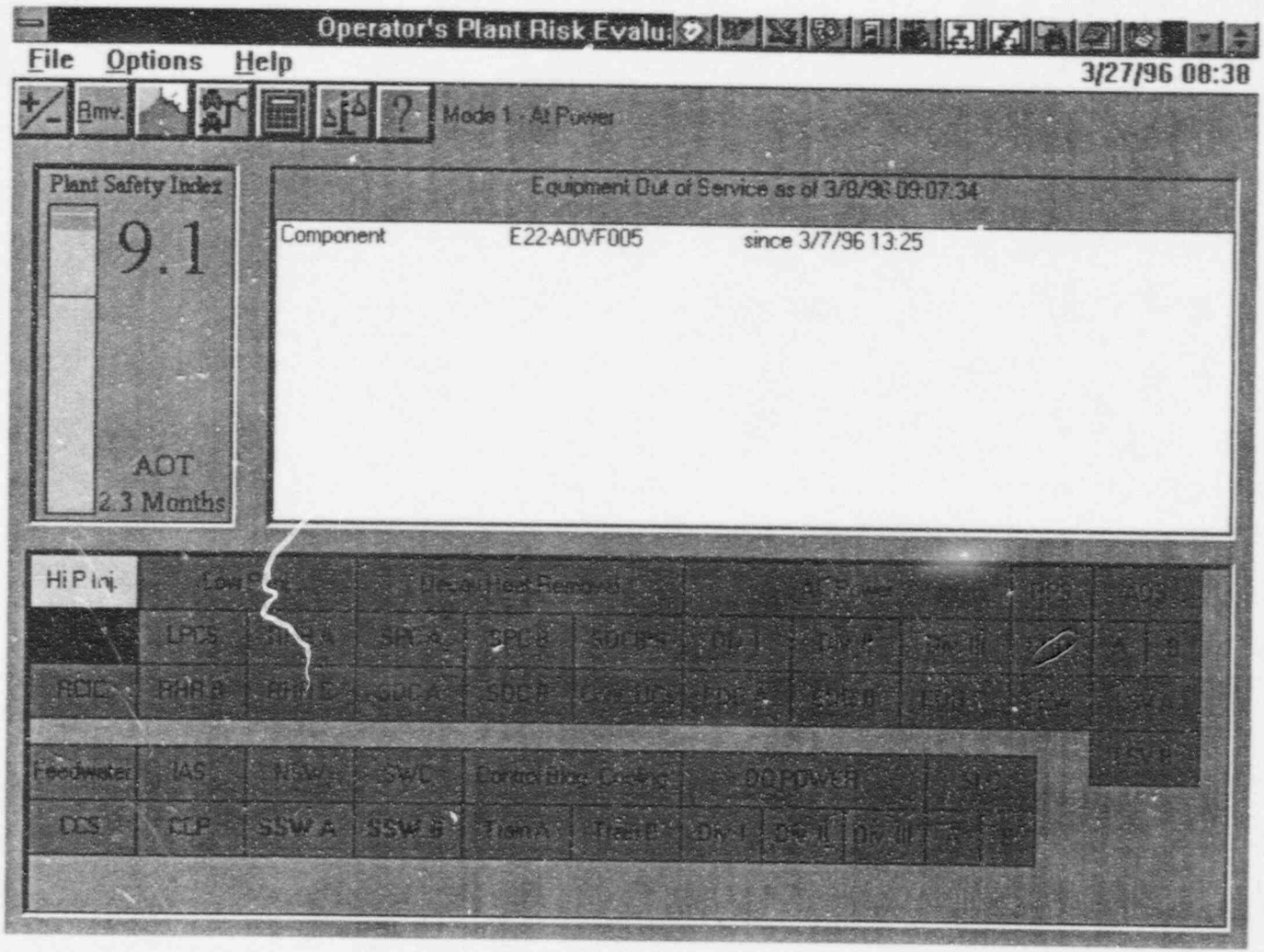
Description: Performed Service Water to RHR Heat Exchanger Snubber Testing

- **Benefit:** RHR Heat Exchanger Operability Not Challenged During Shutdown Cooling Use, Minimized RHR Work During Outage
- **Risk:** One RHR System Inoperable, All Other ECCS Operable, Spare Snubbers Available as a Contingency
- **Result:** Work Completed Within Scheduled Time

EOOS Demonstration



EOOS Demonstration



EOI Improved TS Projects

Lon Waldinger

General Manager, Plant Operations

Arkansas Nuclear One

Introduction

- EOI is committed to implementing Improved TS for all its units

- Challenge:
  - (2) BWR-6 Standard TS Units
  - (2) CE-Digital Standard TS Units
  - (1) B&W Custom TS Unit

EOI Unit Status

- ANO-1 - Preparing for 3Q96 Submittal, Implementation 2Q97
- ANO-2 - Committed to implement ITS Target Implementation 1Q98
- GGNS - Implemented March, 1995
- RBS - Implemented October, 1995
- W3 - Committed to implement ITS. Target Submittal preparation after 1998 power uprate

Expected Benefits of ITS

- ✦Enhanced safety
- ✦Reduced cost
- ✦Improve effectiveness of EOI and NRC resources and interface
- ✦Facilitate resource sharing between EOI units

Process

- Process is refined for each Unit application based on EOI and Industry experience
- Three project phases:
  - Submittal Preparation
  - Submittal Review/Approval
  - Implementation

Process Enhancements (ANO-1)

- ✦Package reviews by Operations Crews
- ✦Procedure reviews after Onsite Safety Committee review
- ✦Familiarization training of Ops. Crews after Onsite Safety Committee review
- ✦Trial run of new Surveillance Requirements before implementation day

Industry Activities

- ANO represents the BWOG on the NEI TS Task Force
- ANO and W3 are participating in the CEOG Mini-Group for TS Conversions
- GGNS and RBS participate in the BWROG efforts
- ANO-1 is a pilot project for electronic ITS

Process Concerns

- Revision of draft ITS procedures to reflect NRC comment resolutions during Submittal Review/Approval phase
- Impact on training of NRC comment resolutions during Submittal Review/Approval phase
- Impact of NRC Staff resources on duration of Submittal Review/Approval phase

Summary

- EOI is committed to implementing Improved TS at its units
- Experience from other plants is being used to refine and enhance the conversion process product quality
- The scope of a conversion effort is large but still exceeded by the benefits

GGNS Experience in Region IV

Randy Hutchinson
Vice President, Operations
Grand Gulf Nuclear Station

GGNS Region IV Transition

- Overall positive and relatively smooth transition
- Familiarization through meetings/visits rather than inspection
- Region IV Senior management
  - Fresh viewpoints
  - Desire to focus on what's important to safety

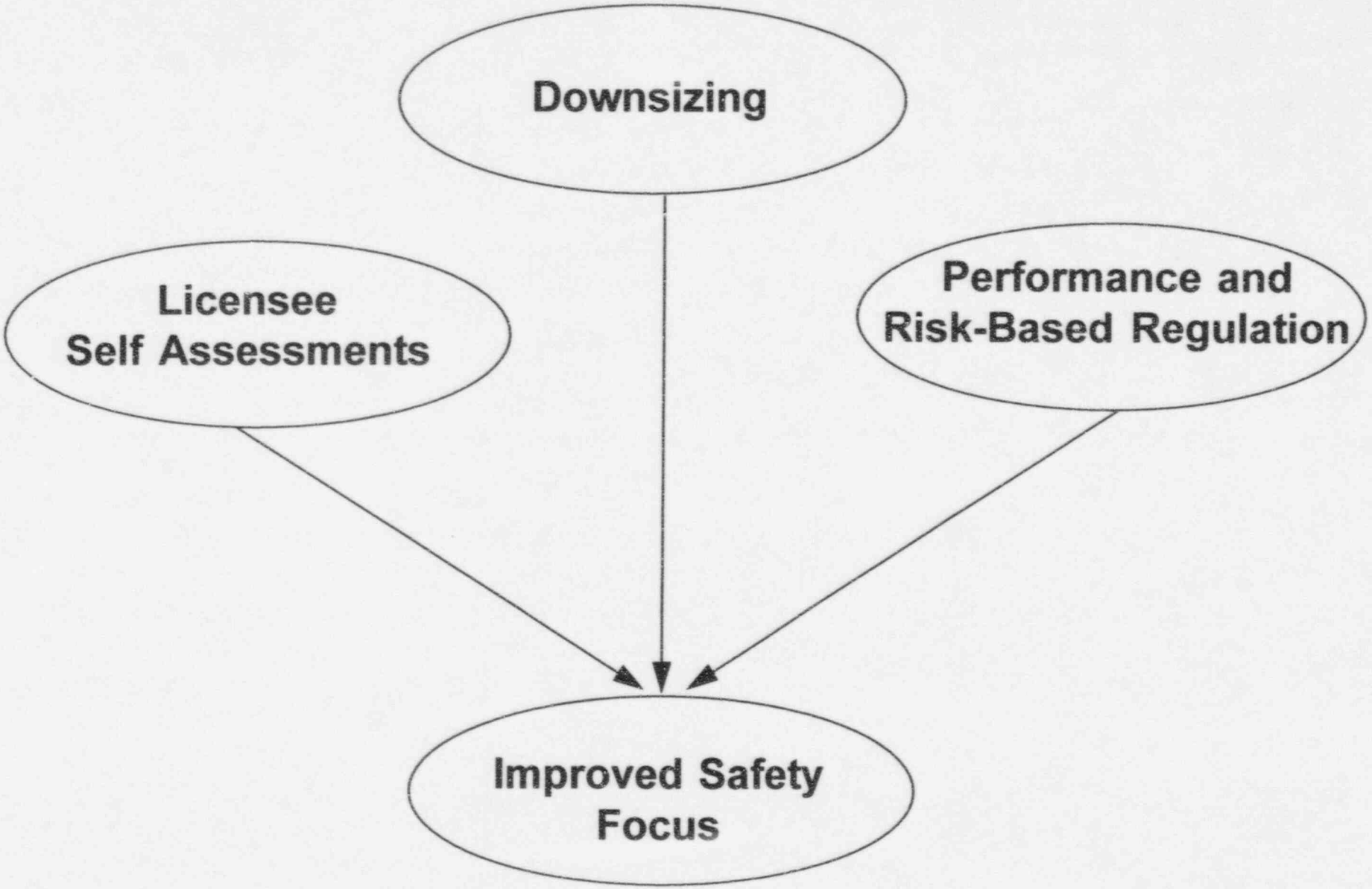
Differences From Region II

- Resident inspector's role and scope more restricted
- Less direct communication with Branch Chief level
- Less willing to let go of issues
- Changes in inspection reports from exited statements

Group Discusion

Randy Hutchinson
Vice President, Operations
Grand Gulf Nuclear Station

Discussion


Downsizing
Licensee
Self Assessments
Performance and
Risk-Based Regulation
Improved Safety
Focus

Future Role of Assessments

- Routine part of EOI activity
- Surfaces problems as well or better than NRC inspections
- Can replace most NRC inspections with increased safety benefit

Performance/Risk Based Regulation

- Risk-based criteria determine what is important to safety
- Performance based programs determine how to manage activities important to safety
- Managing/inspecting to carefully selected performance measures can significantly eliminate less productive work

NRC Support

- Recent indications point to a slowdown in NRC support for elimination/modification of low safety significant requirements

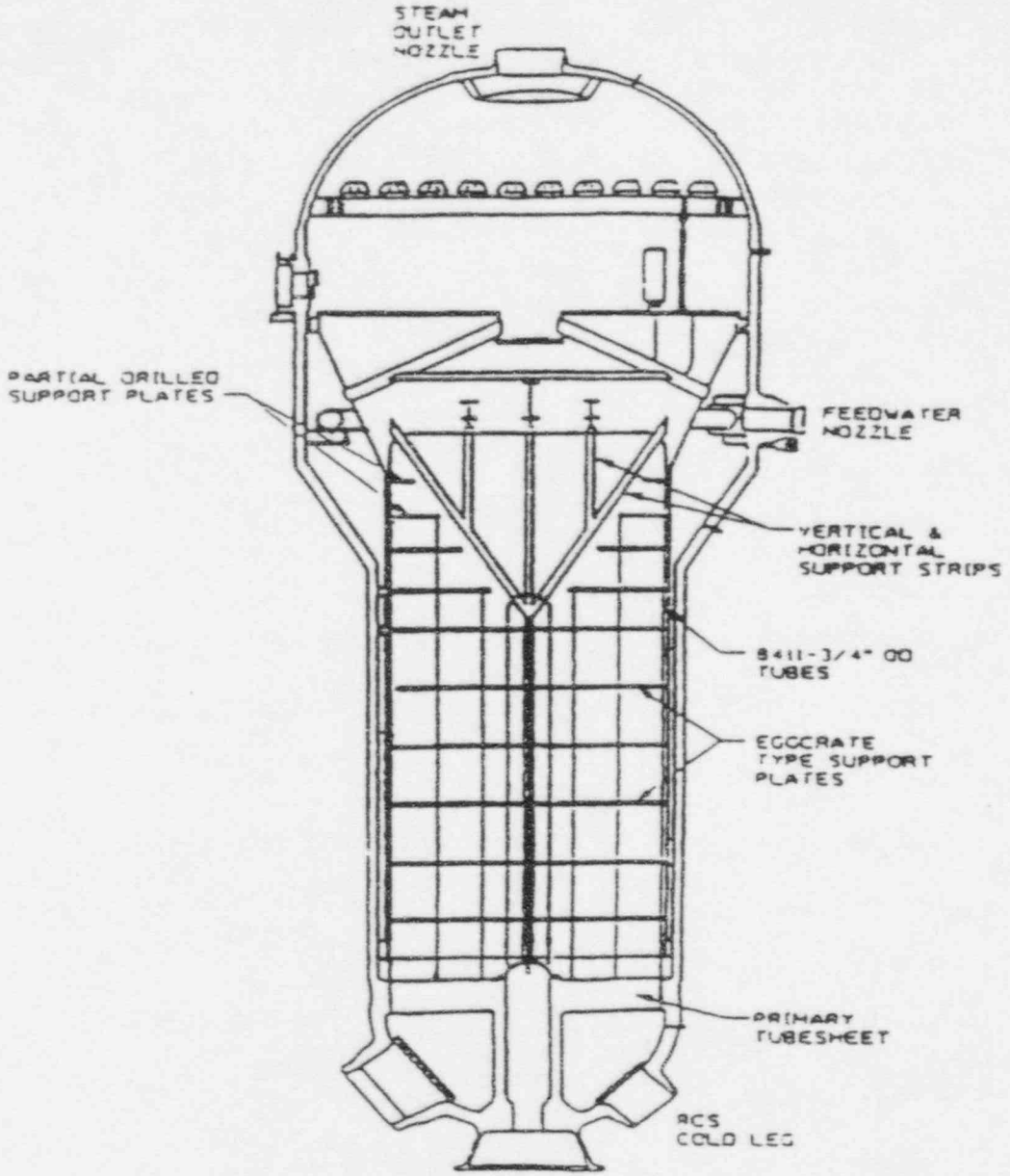
- Improved safety focus in a downsized environment argues for a renewed commitment to safety beneficial change

Steam Generator Status

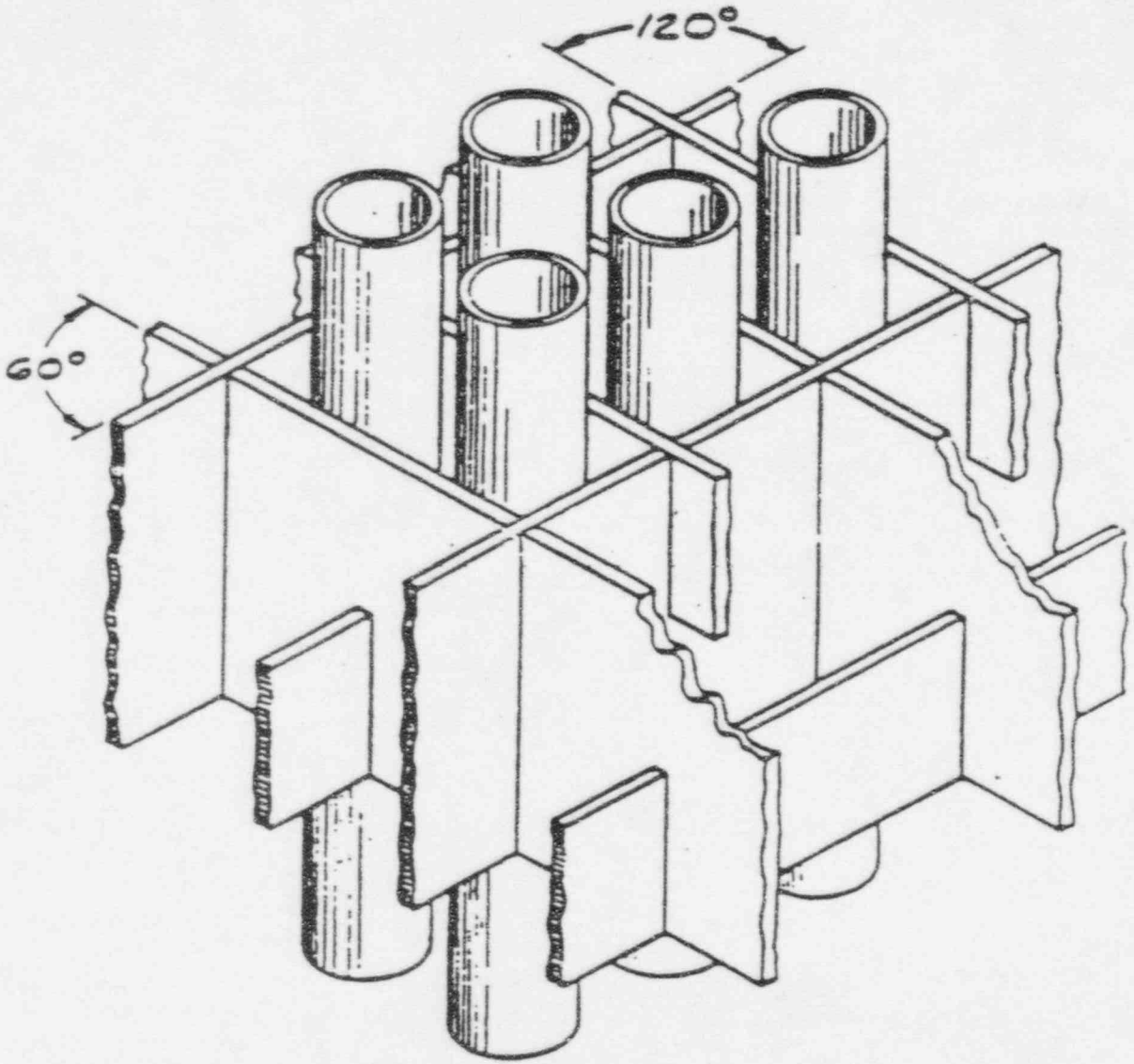
Fred Titus

Vice President, Engineering

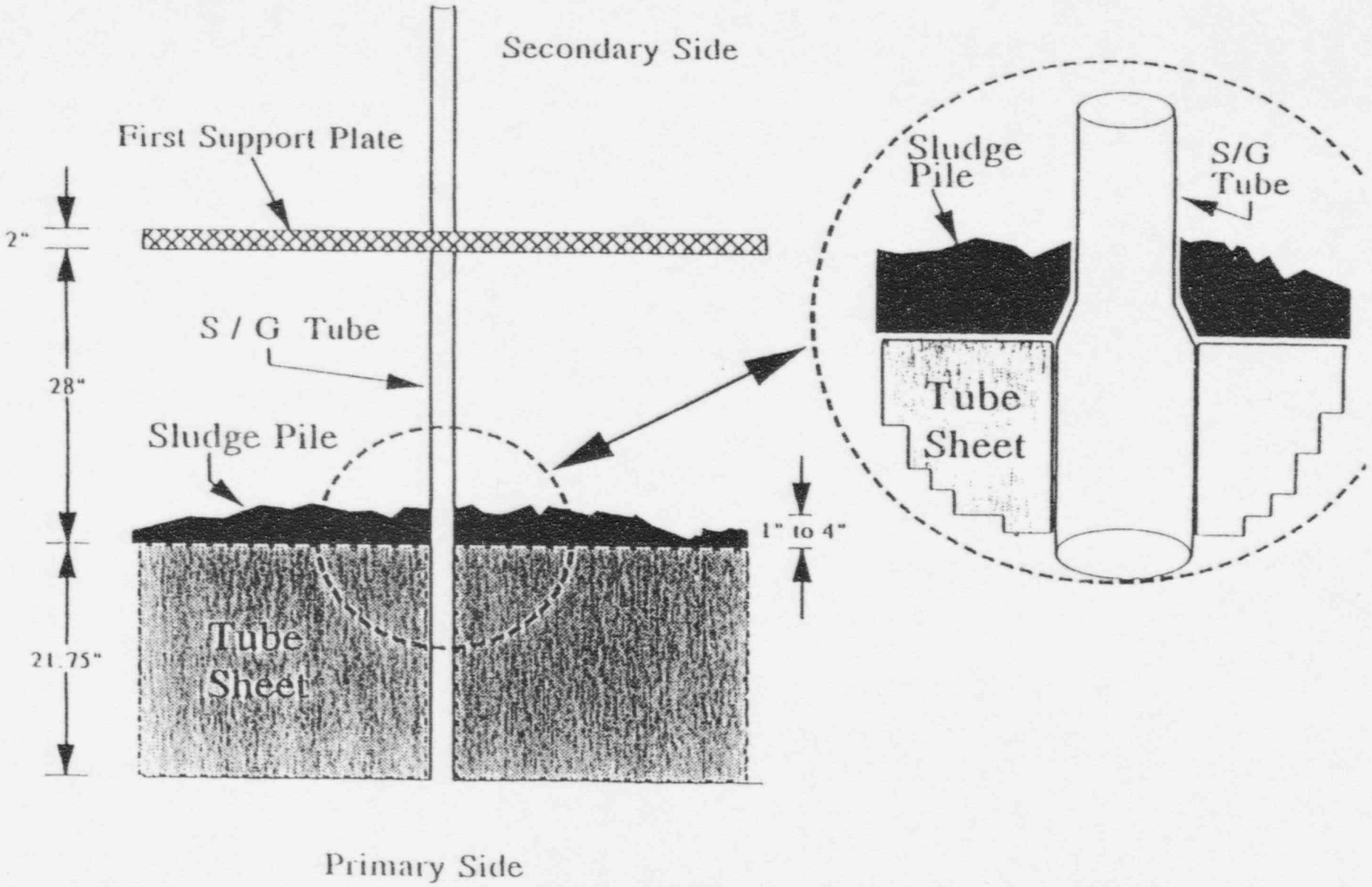
Steam Generator



Eggcrate Tube Supports



Steam Generator Tube/ Tube Sheet Interface



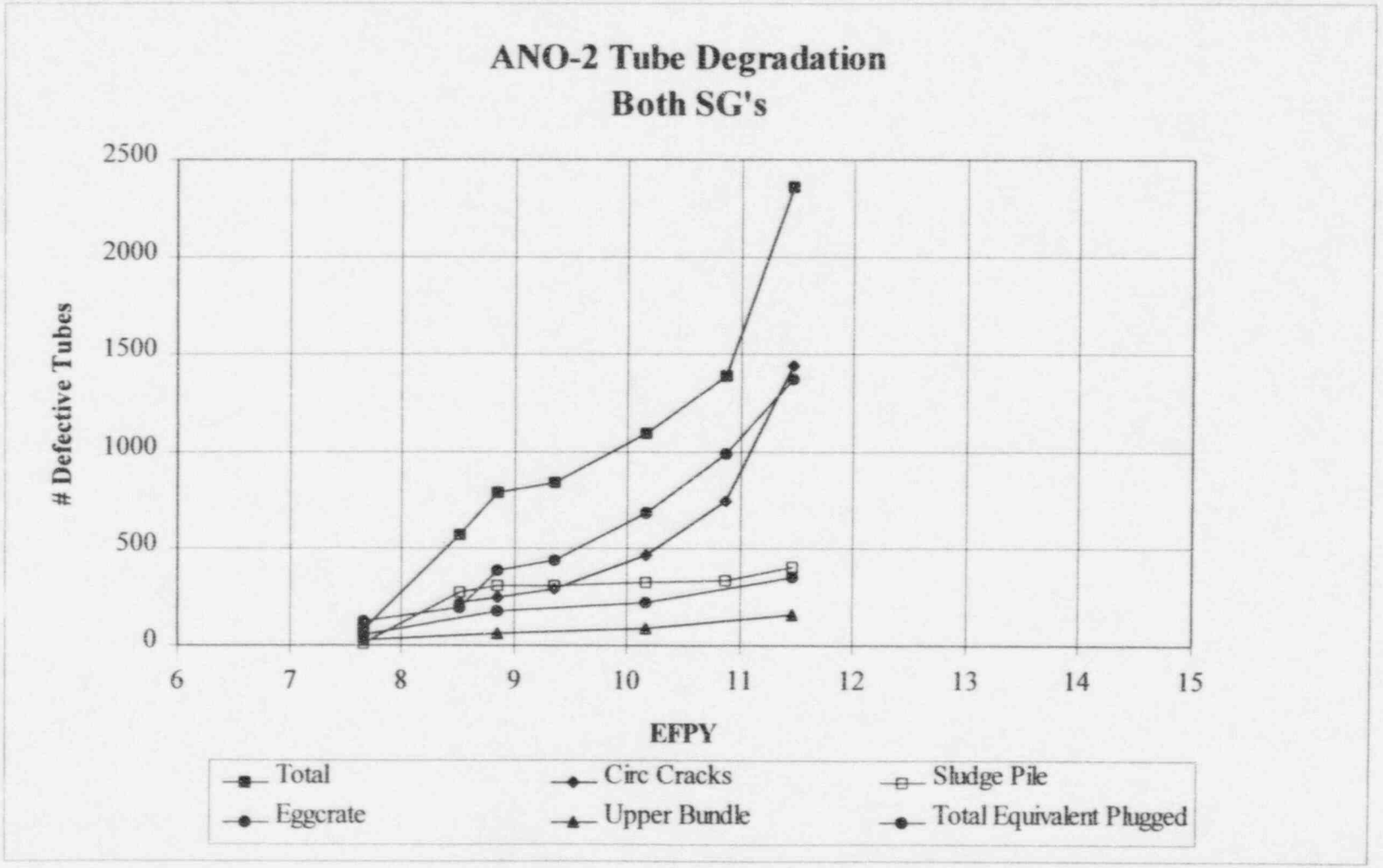
SG Health Summary

Plant	*SG Model*	*Problems*	*Plugging*	*Health*
aterford 3	CE 3410	TTS Circ Cracks, Wear	3.7%	Very Good
ANO 1	B&W OTSG	IGA, Vibration, Wear	2.4%	Good
ANO 2	CE 67	ODSCC: TTS Circ, Axial EC, Freespan; Denting,	8%	Fair

ANO-2 Inspection Results

✦ Number of Defects:	S/G-A	S/G-B	TOTAL
– Circumferential	523	215	738
– Axial	63	85	148
– Sleeves	17	4	21
– Sludgepile	62	21	83
– Total defects	665	325	990
✦ Sleeves Installed:	442	180	622
✦ Plugs Installed:	200	150	350
✦ Equivalent Plug % (1/96)	9.2%	6.8%	8%

ANO-2 S/G Flaw Summary



What Does This Mean?

- Degradation continues at an undesirable rate
  - Circ Cracks (Tube Sheet)
  - Axial (Tube Support Plates & Sludgepile)
  - Axial (Free Span)
  - Plugged Tubes = 8% Limit = 10%

- Improved Detection also finds more:
  - Finding more, but smaller cracks
  - Sizing for circ cracks under development

S/G Action Plan

- ANO 2 is Key EOI Focus
- Leading Generic Efforts
  - EPRI SGDSM Circ Crack ARC
  - Chemistry G/L Committee
  - NDE G/L Committee
  - CEOG SG Task Force
  - Support tube pulls at other plants
- Midsummer Generic ARC Submittal

S/G Action Plan (Cont'd.)

- S/G Replacement Decision:
  - Conceptual Studies in Process
  - No Decision has been made
  - Reevaluate after next outage

EOI Spent Fuel Storage

Fred Titus
Vice President, Engineering

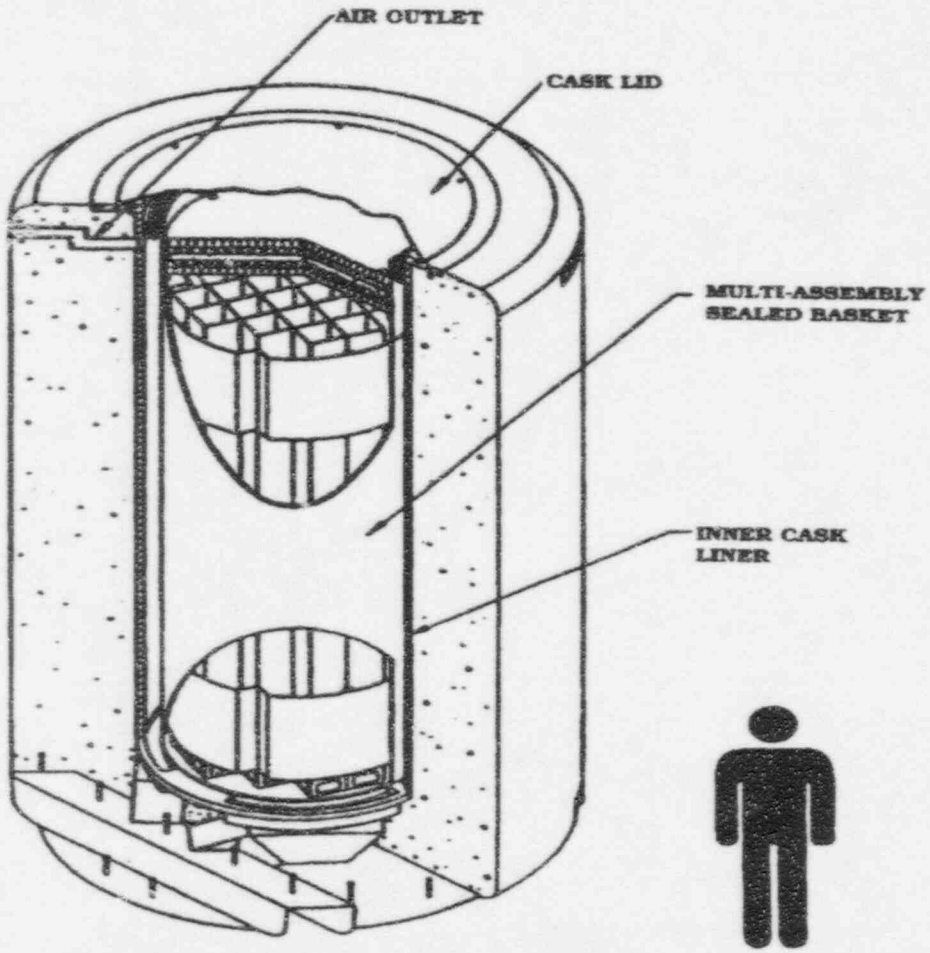
Fuel Storage Overview

Entergy Operations Facility	Year Full Core Reserve Lost	Projected Early DOE Acceptance Date	Approach
ANO-1	1996	2001	Dry Fuel Storage
ANO-2	1997	2006	Dry Fuel Storage
GGNS	2003	2014+	TBD
RBS	2008	2014+	TBD
W3	2000	2014+	Evaluating Reracking

ANO Program Management

- Extensive EOI Quality Control and Supplier Quality involvement during cask fabrication
- Multi-disciplined project team matrixed to focus resources on preparation, testing and implementation
- Oversight activities
- Review of prior industry experience to gain lessons learned
- Site lessons learned

ANO Spent Fuel Dry Storage Cask



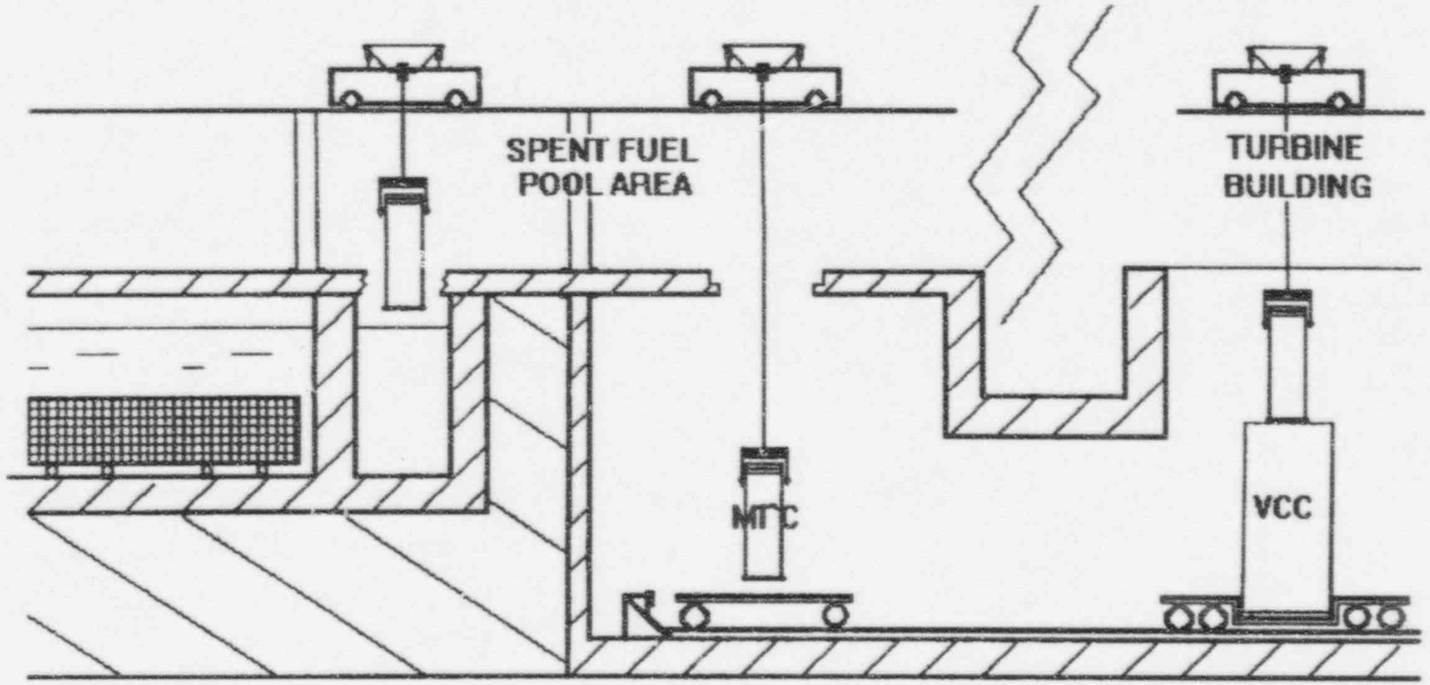
Multi-Assembly Sealed Basket (MSB)

- Capacity for 24 fuel assemblies
- One inch wall, 62.5 inch diameter and 192.3 inches long
- SA-516 carbon steel
- The composite loaded vessel without water weighs 35 tons
- Enamel coating for decontamination ease

Ventilated Concrete Cask (VCC)

- Consists of the cask shell and bolted lid
- 18 feet 9 inches high, and 11 foot diameter
- 29 inches of concrete and rebar with a 2½ inner steel liner
- Designed for:
  - Shielding
  - Flood
  - Seismic
  - Temperature extremes
- Site specific fire & explosion review
- The concrete cask without the fuel basket weights 108 tons

Loading Sequence



Schedule Milestones

◆ Selected Design	MAR 92
◆ Pad Construction Completed	MAY 94
◆ Cask Construction Completed	MAY 95
◆ Corporate Assessment	NOV 95
◆ 2 Training Exercises	MAR & APR 96
◆ Dry Run	MAY 96
◆ Submit 72.82 Report	MAY 96
◆ First Loading	JUNE 96
◆ Submit First Loading Report	JULY 96

EOI Fuel Storage Issues

- DOE Projected Dates for Acceptance of Spent Fuel for Storage:
  - -Interim 2004+
  - -Long Term 2015+
- DOE Acceptance Criteria for Multi-Purpose Casks is Not Specified
- NRC Approval of the Following Issues Will Be Needed for the Sierra Cask System:
  - -Transportation License
  - -Burn-Up Credit
  - -Storage of Control Assemblies
- Sierra Spent Fuel Dry Storage System Currently Limited to a 20 Year Storage Period from the Loading of Each Cask.

Conclusions

- EOI is Pursuing Leading Edge Spent Fuel Storage Technology Alternatives
- ANO's Approach to Vendor Oversight, Project Team Management and Process Controls Have Resulted in a Comprehensive Program for Onsite Handling and Storage of Dry Spent Fuel
- ANO Will Evaluate the Next Phase to Ensure More Cost-Effective Approaches are Identified and Implemented
- Long-Term Storage, Transportation and Disposal Issues Require Resolution

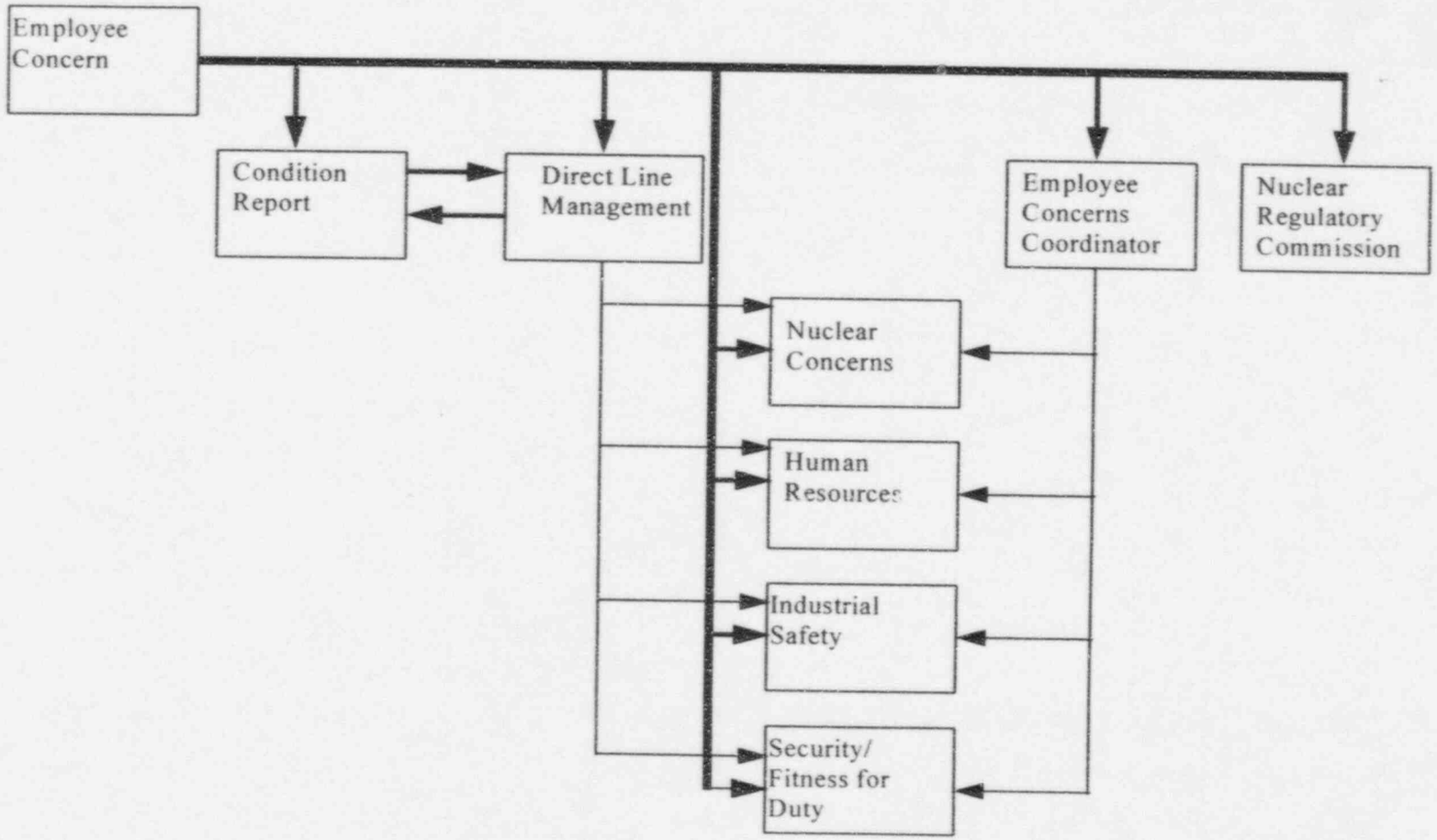
Employee Concerns Program

Jerrold Dewease
Vice President, Operations Support

Program Overview

- EOI Program
- Assessment Results
- Summary

EOI Employee Concerns Program

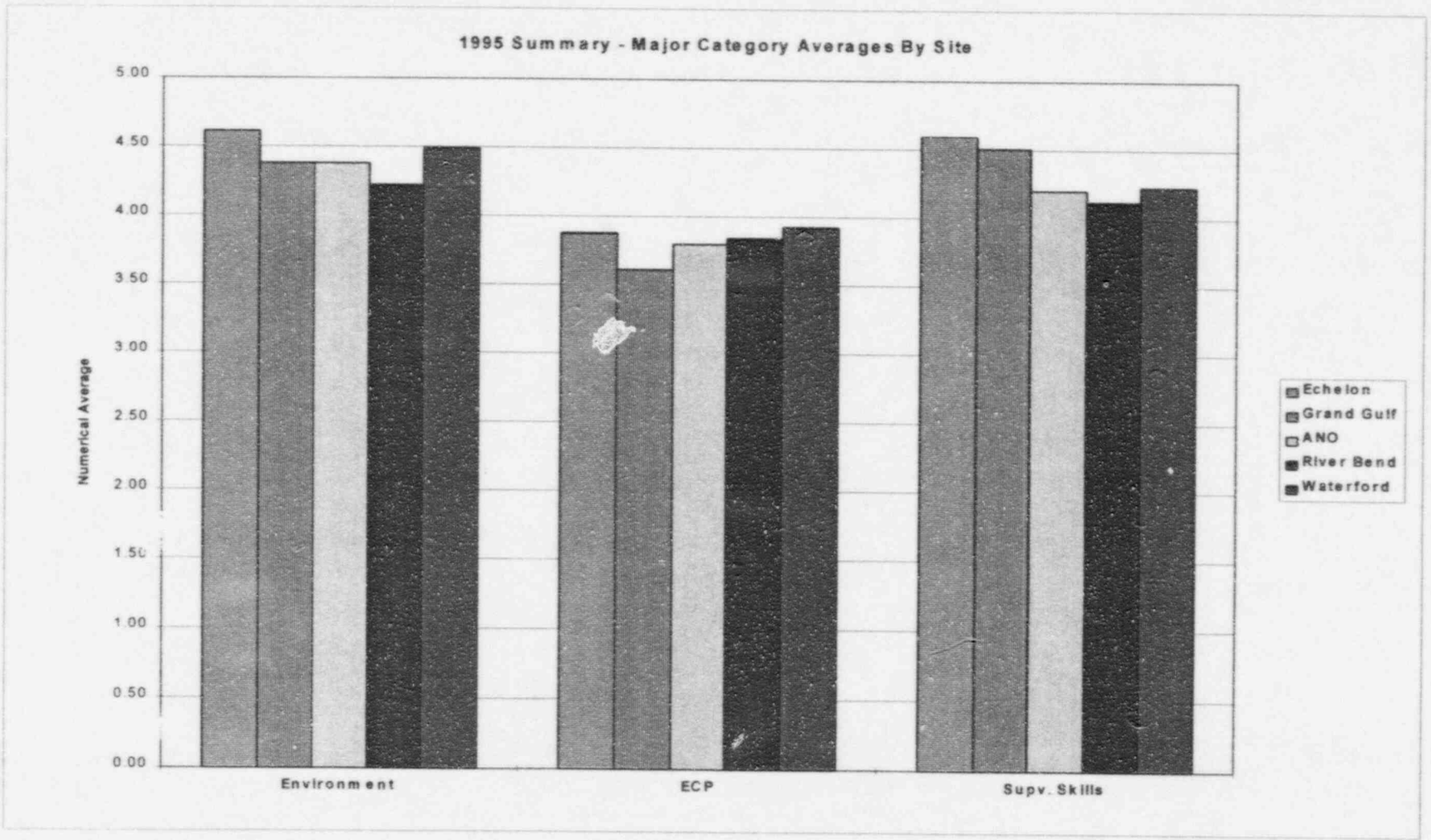


Periodic Assessment

- Spring 1994
- November 1995
- Entergy Employee Survey '95

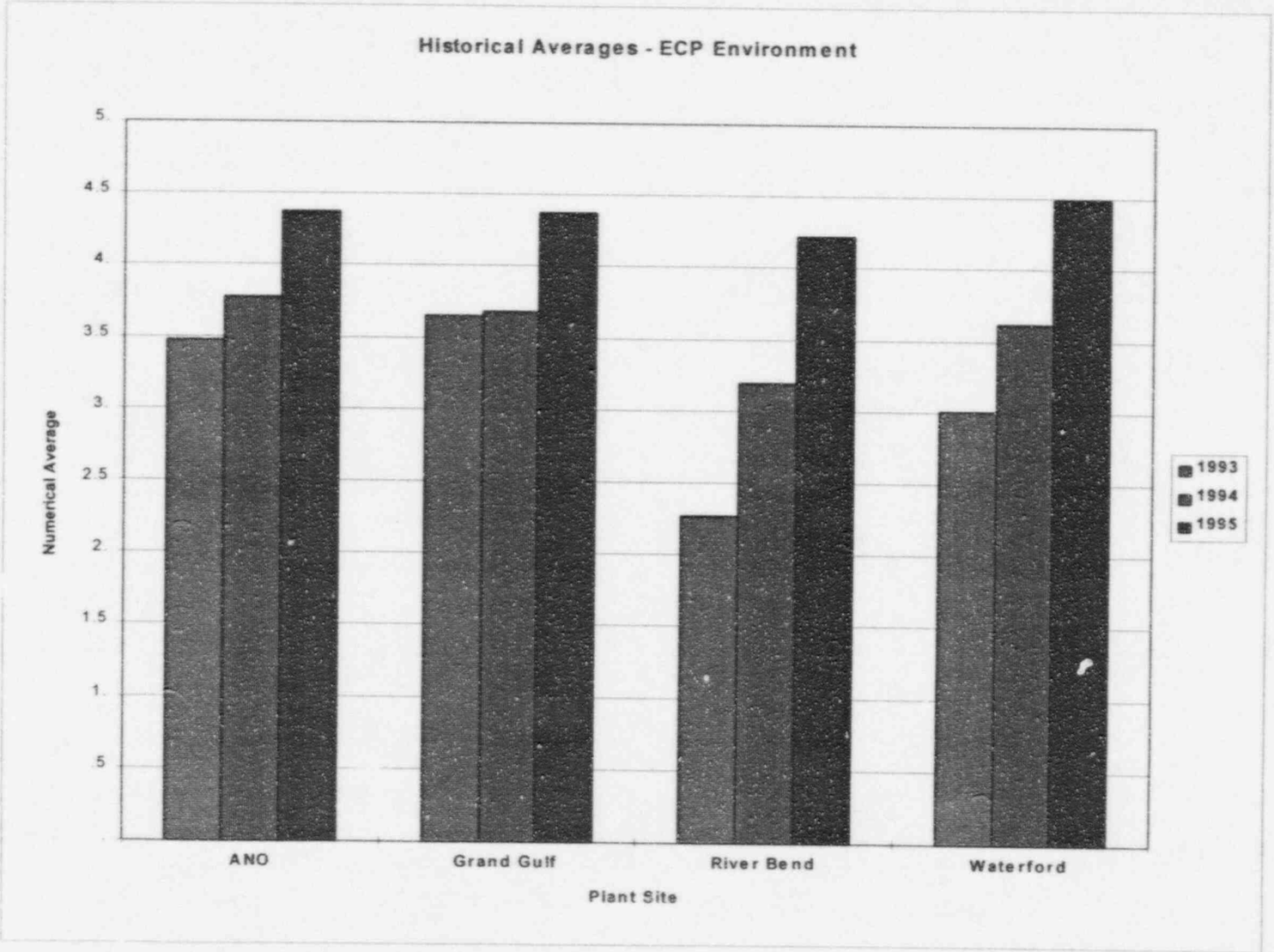
Major Category Averages By Site

1995 Summary



Historical Averages - ECP Environment

1993 - 1995



Small population of employees does “not agree”

What are we doing?

Summary

- Nuclear Safety - first
- Overall program appears to be improving
- Improve program weaknesses indicated by “disagree” population
- Continuously monitor and improve program

Downsizing Strategies & Philosophies

Jerry Yelverton
Executive VP & COO
Entergy Operations, Inc.

Nuclear Operating Philosophy

- Safety/Regulatory Performance
- Operating Performance
- Cost

Critical Success Factors

- Safety/regulatory performance
  - Safety Culture
  - Technical competence
  - Open comminucations
- Operations performance
  - Plant materiel condition
  - Highly skilled, well trained workforce
  - Outage optimization
- Cost performance
  - Cost culture
  - Cost management
  - Total Quality culture

Many Approaches Needed for Cost Competitiveness

- Reduce Capital Expenditures
- Resource Sharing
- Shorter Outages
- Increased Generation
- Reduced Staffing

Reduced Staff Must Support Operating Philosophy

- Goal Is Not Downsizing
- Downsizing is Another Approach
  - Least impact on cost performance
  - Greatest impact on morale

Culture Change Needed

- Entitlement
- Earning
- Fear

Changing Environment

- Work Ethic in a Competitive Environment is Different than in Regulated Environment

- Entitlement Culture Change is Required

Characteristics of Future EOI Employee

- Performs at Higher Levels
- Is Adaptable
- Adds Value

Ranking Identifies Needed Employees

- Identifies Best Performers
- Upgrades Lowest 10% of Workforce

Lessons Learned

- **Better Employee Communications Needed**
  - Changing guidelines affected credibility
- **Rolled Out with Other Initiatives**
  - Confusing to workforce

Voluntary Severance Package

- Needed for 1998 Targets
- Provided Employees with Reasons for Need
- Allowed Employees to Make Decisions

Results

- Goals Met
  - 252 Target
  - 267 Actual
- Forced Severance Not Needed
- Positive Employee Feedback

Performance & Ranking in the Future

- Ongoing Tool
- Performance Counts Most
- Ranking is an Indicator
- Better Performance Feedback to Employee

EOI Committed to Help Employees Redeploy to Other Needed Areas

Self-Assessments
Engineering Perspective

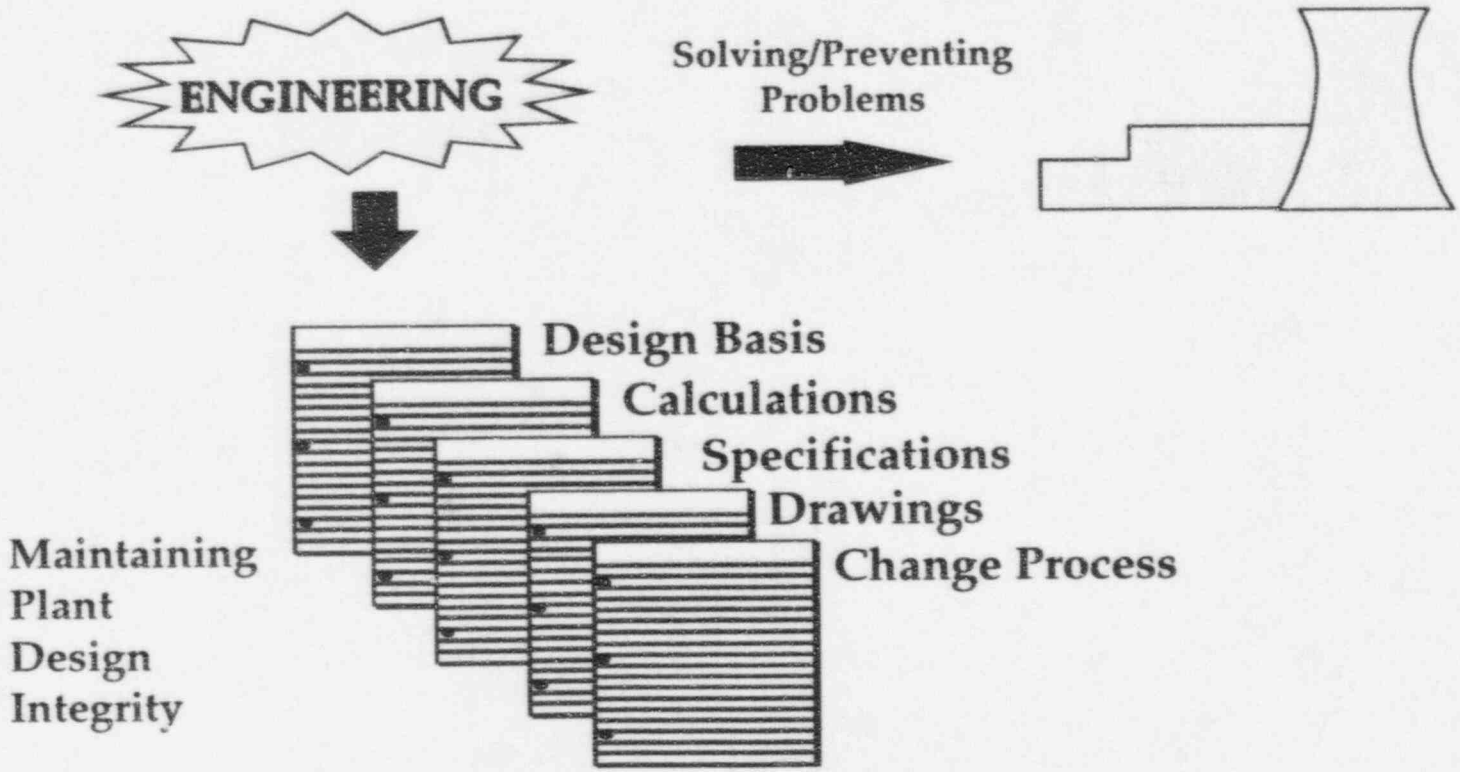
Fred Titus

Vice President, Engineering

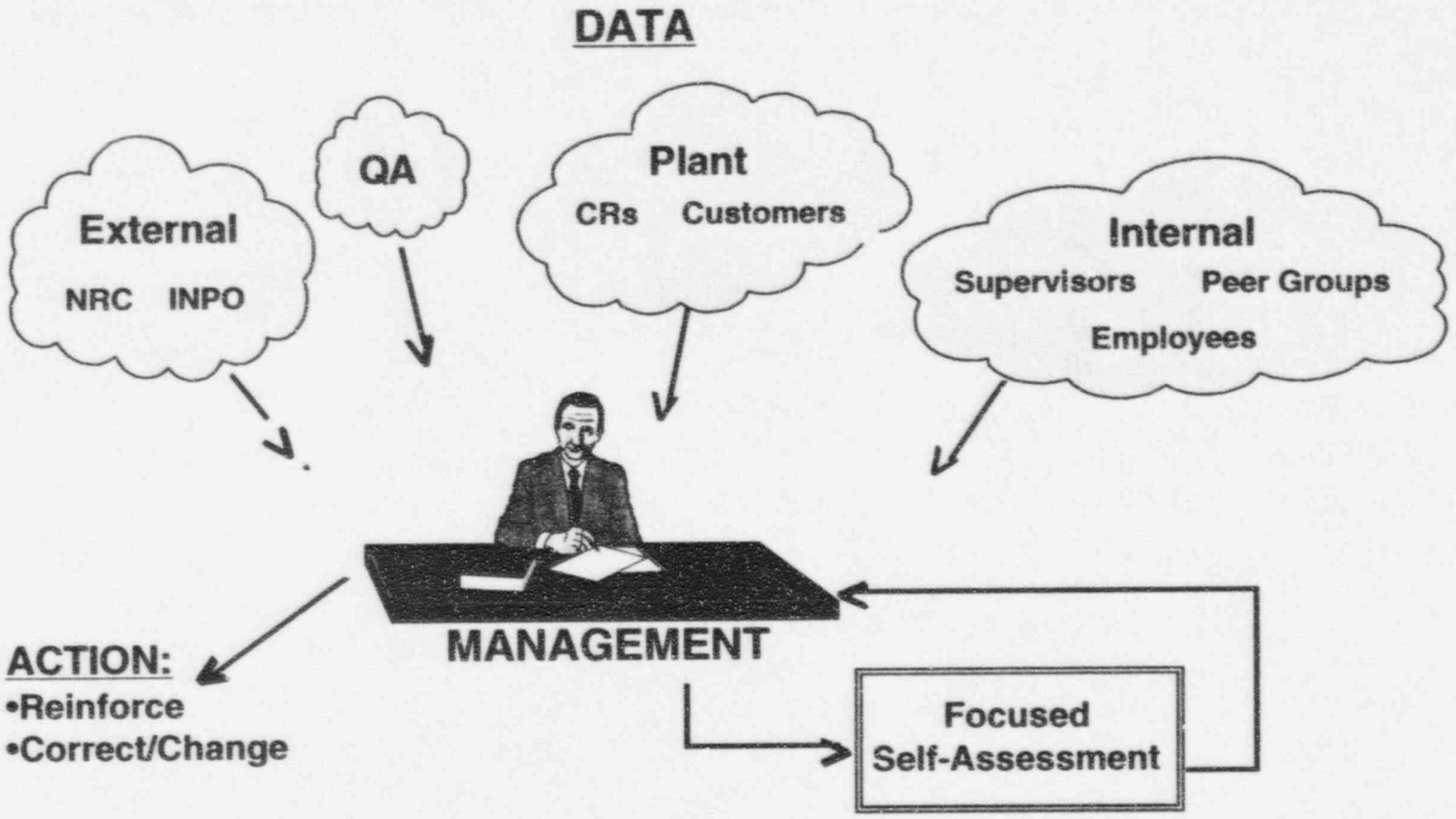
Building Blocks to Engineering Excellence

Measuring Success

Two Key Dimensions of Engineering



Role of Self-Assessment



CHALLENGE:

- Extract Trends/Problems before they become significant self-revealing events
- Self-Assessment is a vital tool

Continuum of Self-Critical Evaluation

✦ Continuous Improvement	NWTs
✦ Best Practices	Peer Group
✦ Consistency	Peer Group
✦ Self-Evaluation	Peer Group
✦ Self Assessments:	
– Informal	Peer Group
– Very formal	Typical: - Assessment Group Lead - Peer Expertise - External Input

Examples of Success

	ANO	GG	RBS	W3
✦ EQ Program				X
✦ FAC Program	X	X	X	X
✦ IST Program			X	
✦ Fire Protection/Appx. R			X	
✦ MOV Program				X
✦ NDE/ECT	X			X
✦ Configuration Mgmt.			X	
✦ System Mini-SSFI	X	X	X	X
✦ Minor Mods	X			

New Challenge

- Grand Gulf Engineering/CA Assessment
- Dual Role:
  - Compliance and
  - Self-Assessment
- Great Opportunity to:
  - Increase Efficiency
  - Improve Effectiveness
  - Enhance Safety
- Outcome: Successful

Keys to Success

- **Team Makeup/Approach:**
  - Assessment Group Leadership
  - Team Expertise/Experience
  - ANO, RBS, W3 Participation
  - Non-EOI Utility Perspective

Advantages

- Team Background => Pursued Important Issues
- Less Defensiveness=>Willing to Discuss Beyond "compliance"
  => Opinions/Judgments Valued
- Challenged Potential Operator Work Arounds
- Benefits to Team Members

Concerns

- Unique NRC Interface:
  - Compliance vs. Enhancement
  - Docketing question
- Awaiting NRC Report
- Follow-up Discussion Likely Needed

1996 Assessments

- Each Site and Department Makes Yearly Plan:
  - Site Wide Assessments
  - Department Focused Assessments
- Check and Adjust During the Year

Example: Waterford 3 Engineering

ASSESSMENT AREA	MONTH
✦ IST Program Evaluation	March
✦ Maintenance Rule	April
✦ System Review - HPSI	May
✦ Engineering	June
✦ System Review - Air/Nitrogen Accum.	June
✦ Check Valve Program	June
✦ System Review - Rad. Monitors	July
✦ System Review - EDG's	August
✦ SSFI - HVAC	October
✦ System Review - 4160V.	December

Conclusions

- Self-Assessments Are A Key Management Tool For Improvement
- EOI Will Continue to Work to Improve Effectiveness of Self-Assessments