

November 9, 1998

Tennessee Valley Authority
ATTN: Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: MEETING SUMMARY - BROWNS FERRY NUCLEAR STATION (BFNS)

Dear Mr. Scalice:

This refers to the open management meeting that was conducted at NRC Region II Office on November 5, 1998, for discussion of Site Engineering Performance. A list of attendees and a copy of your presentation handout are enclosed.

It is our opinion that this meeting was beneficial in that we obtained a better understanding of your performance assessment, accomplishments, and areas of focus.

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

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

Sincerely,

Original signed by
Kerry D. Landis

Kerry D. Landis, Chief
Engineering Branch
Division of Reactor Safety

Docket Nos. 50-259, 50-260, 50-296
License Nos. DPR-33, DPR-52, DPR-68

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

cc w/encls: (See page 2)

9811230358 981109
PDR ADOCK 05000259
P PDR

1845

cc w/encls:
Senior Vice President
Nuclear Operations
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Jack A. Bailey, Vice President
Engineering and Technical Services
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Karl W. Singer
Site Vice President
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P. O. Box 2000
Decatur, AL 35602

General Counsel
Tennessee Valley Authority
ET 10H
400 West Summit Hill Drive
Knoxville, TN 37902

Raul R. Baron, General Manager
Nuclear Assurance
Tennessee Valley Authority
4J Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Robert G. Jones, Plant Manager
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P. O. Box 2000
Decatur, AL 35609

Mark J. Burzynski, Manager
Nuclear Licensing
Tennessee Valley Authority
4J Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Timothy E. Abney, Manager
Licensing and Industry Affairs
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P. O. Box 2000
Decatur, AL 35609

Chairman
Limestone County Commission
310 West Washington Street
Athens, AL 35611




State Health Officer
Alabama Department of Public Health
434 Monroe Street
Montgomery, AL 36130-1701

(Distribution w/encls - See page 3)

Distribution w/encls:

L. R. Plisco, RII
 H. Christensen, RII
 L. Raghaven, NRR
 A. DeAgazio, NRR
 F. J. Hebdon, NRR
 R. P. Carrion, RII
 P. A. Taylor, RII
 T. K. Morrissey, RII
 W. C. Bearden, RII
 C. F. Smith, RII
 E. D. Testa, RII
 D. H. Thompson, RII
 L. S. Mellen, RII
 PUBLIC

NRC Senior Resident Inspector
 U. S. Nuclear Regulatory Commission
 10833 Shaw Road
 Athens, AL 35611

OFFICE	RII:DRS	RII:DRS	RII:DRP				
SIGNATURE							
NAME	GSmith:pd	KLandis	HChristensen				
DATE	11/9/98	11/9/98	11/9/98	11/ /98	11/ /98	11/ /98	11/ /98
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY

DOCUMENT NAME: S:\DRS\EB\BRFMTSUM.WPD



Tennessee Valley Authority
Browns Ferry Nuclear Plant
Site Engineering



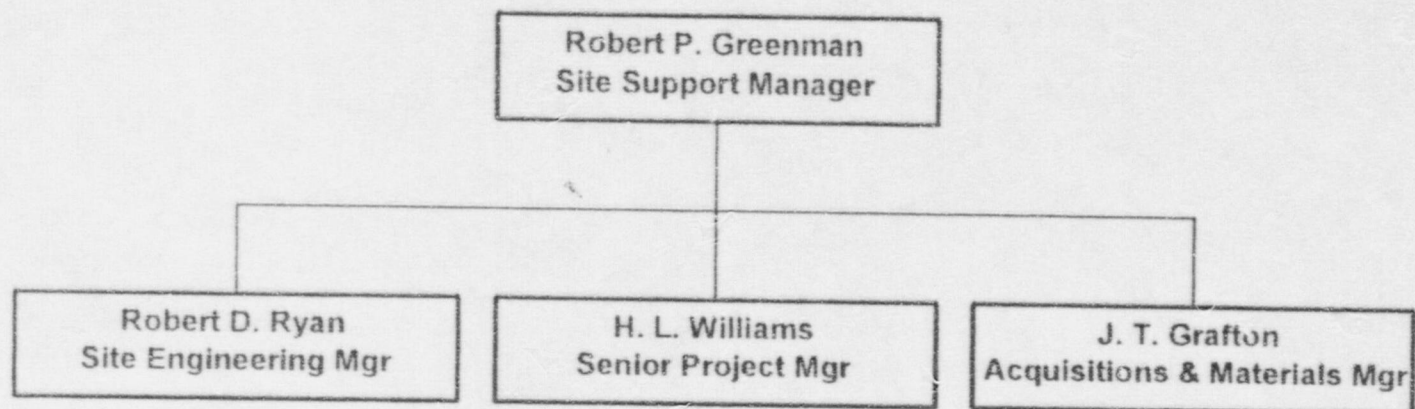
TVA / NRC MEETING
NRC OFFICES - ATLANTA, GEORGIA
NOVEMBER 5, 1998

Printed on Recycled Paper

AGENDA

- INTRODUCTION T. ABNEY
- SITE SUPPORT ORGANIZATION B. GREENMAN
- PLANT PERFORMANCE B. GREENMAN
- PERFORMANCE INDICATORS B. GREENMAN
- ENGINEERING ORGANIZATION OVERVIEW B. RYAN
- DESIGN ENGINEERING J. SHAW
- SYSTEMS ENGINEERING B. MOLL
- PERFORMANCE INITIATIVES B. RYAN
- CONCLUSION B. GREENMAN

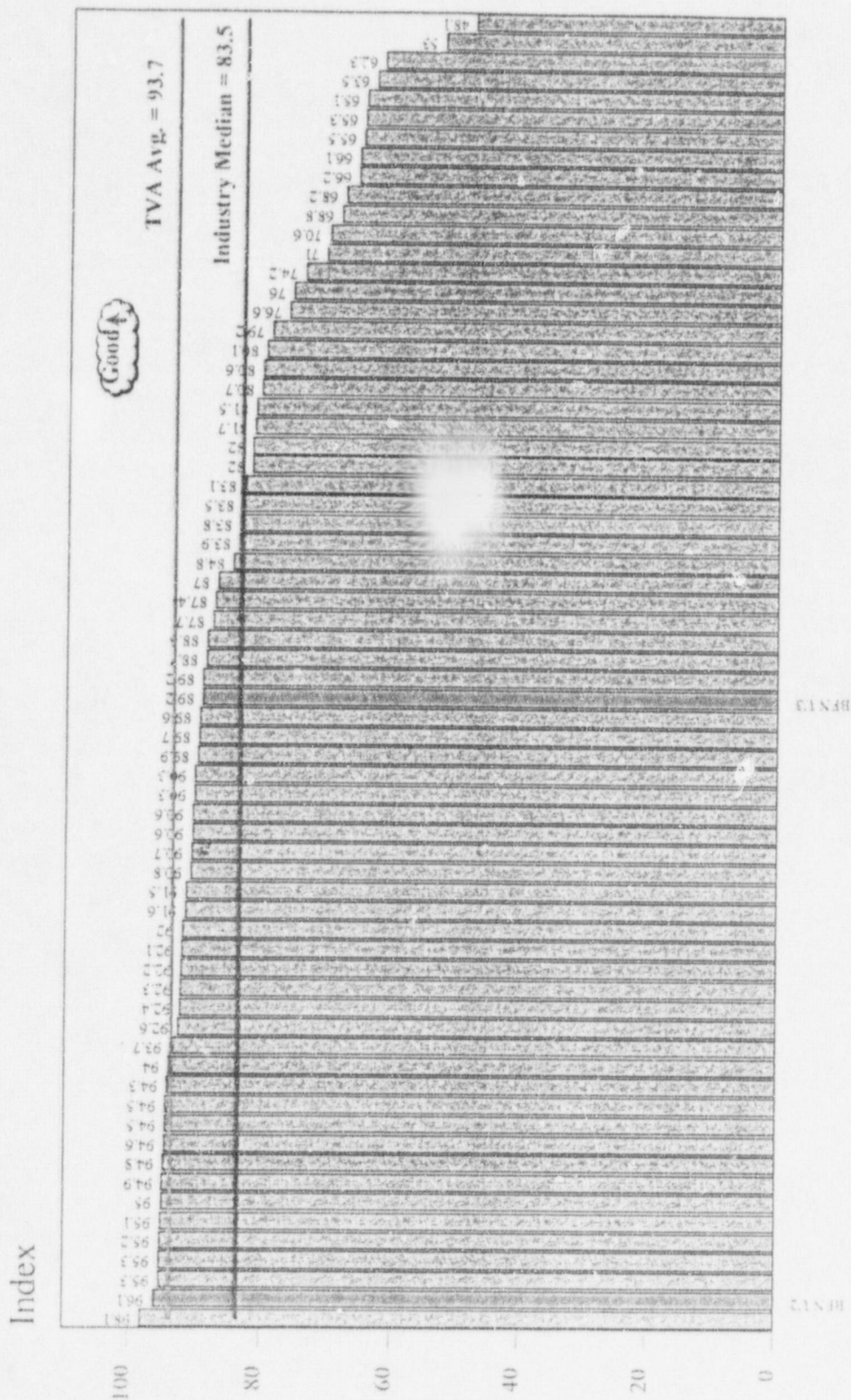
SITE SUPPORT ORGANIZATION



Plant Performance

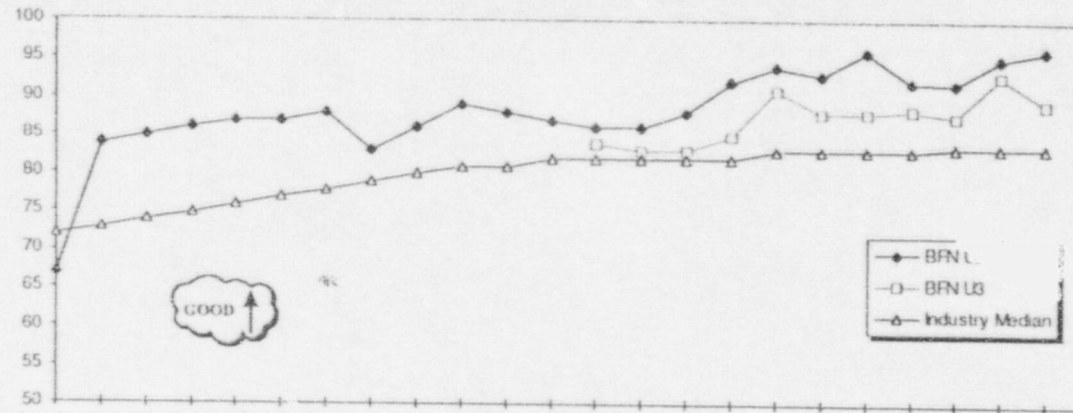
- **Unit 2**
 - 335 Days, Longest Continuous Run (10/1/98)
 - Cycle 10 Outage Scheduled for April 1999
- **Unit 3**
 - Set TVA Record For Large Units (390 days continuous) During Cycle Operation
 - Cycle 8 Refueling Outage Completed on October 15, 1998 (25 days and 2 hrs.)

Plant Performance INPO Performance Index 2nd Quarter 1998 Data



Plant Performance (Continued)

INPO Performance Index

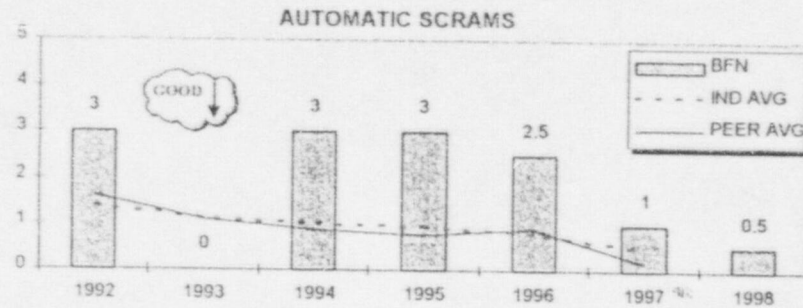


	1993				1994				1995				1996				1997				1998			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
BFN U2	87	84	85	86	87	87	88	83	86	89	88	87	86	86	88	92	94	93	96	92	92	95	96.1	
BFN U3													84	83	83	85	91	88	88	88	88	93	89.2	
Industry Median	72	73	74	75	76	77	78	79	80	81	81	82	82	82	82	83	83	83	83	83	84	84	83.5	

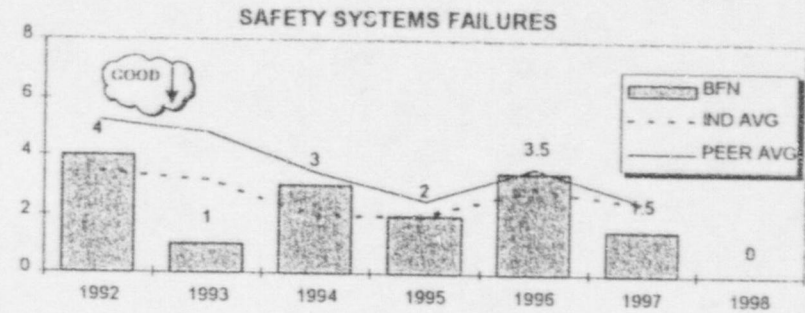
Performance Indicator	BFN UNIT 2 (9/30/98)			BFN UNIT 3 (9/30/98)		
	Value	Target Value	Index	Value	Target Value	Index
Unit Capability Factor	94.1	90.0	16.0	91.9	90.0	16.0
Unplanned Capability loss Factor	1.76	0.0	10.6	2.50	0.0	10.0
Unplanned Automatic Scrams	1.25	1.0	7.5	0.0	1.0	8.0
HPCI/RCIC System Availability	0.0114	0.015	10.0	0.010	0.015	10.0
RHR System Availability	0.0070	0.01	10.0	0.0096	0.01	10.0
Emergency AC System Availability	0.0182	0.01	8.0	0.0182	0.01	8.0
Thermal Performance	100.01	100	6.0	99.67	100	5.0
Fuel Reliability	14.3	300	8.0	2317	300	2.2
Chemistry Index	1.061	1.10	7.0	1.051	1.10	7.0
Collective Radiation Exposure	199.61	200	8.0	199.61	200	8.0
Industrial Safety Accident Rate	0.015	0.3	5.0	0.02	0.3	5.0
Weighted Index			96.1			89.2

Plant Status/Performance

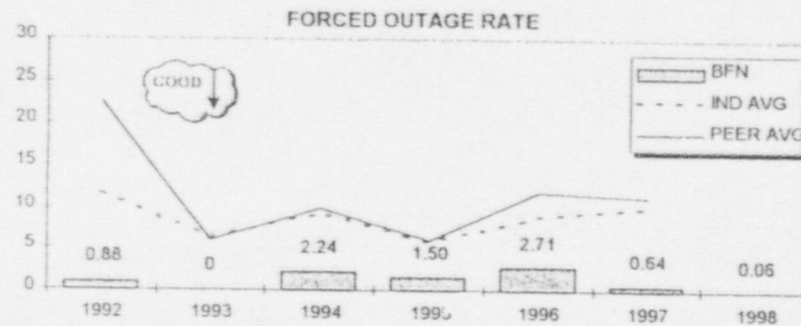
AEOD Indicators



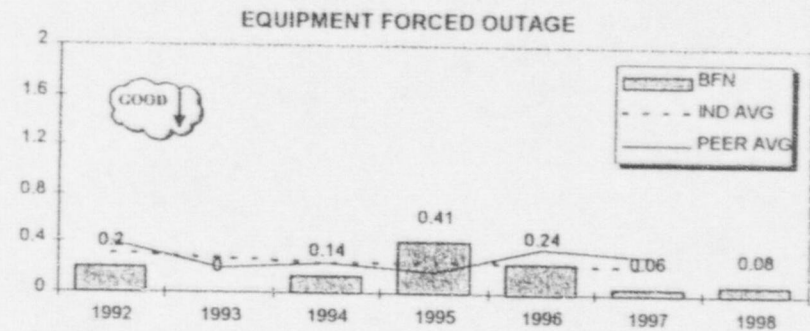
Note: Industry Data after 3rd Qtr. is projected through 1997
 BFN data 1992, 1993, 1994, 1995, is Unit 2 only.
 1996 and 1997 Per Unit; BFN actuals through October 1998.



Note: Industry Data after 3rd Qtr. is projected through 1997
 BFN data 1992, 1993, 1994, 1995, is Unit 2 only.
 1996 and 1997 Per Unit; BFN actuals through October 1998.



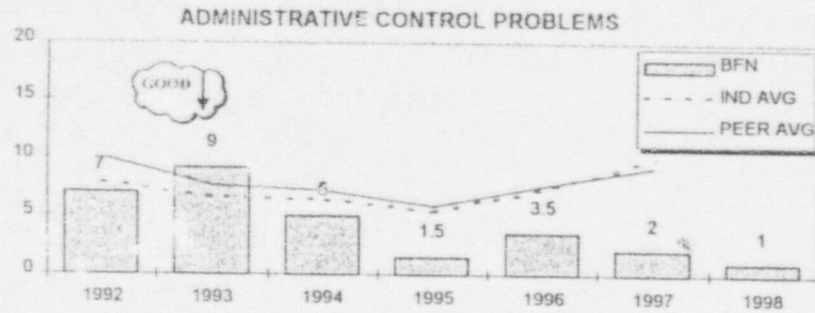
Note: Industry Data after 3rd Qtr. is projected through 1997
 BFN data 1992, 1993, 1994, 1995, is Unit 2 only.
 1996 and 1997 Site Data; BFN actuals through October 1998.



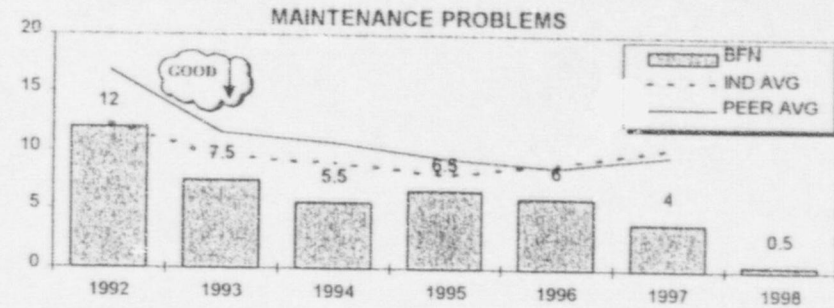
Note: Industry Data after 3rd Qtr. is projected through 1997
 BFN data 1992, 1993, 1994, 1995, is Unit 2 only.
 1996 and 1997 Site Data; BFN actuals through October 1998.

Plant Status/Performance

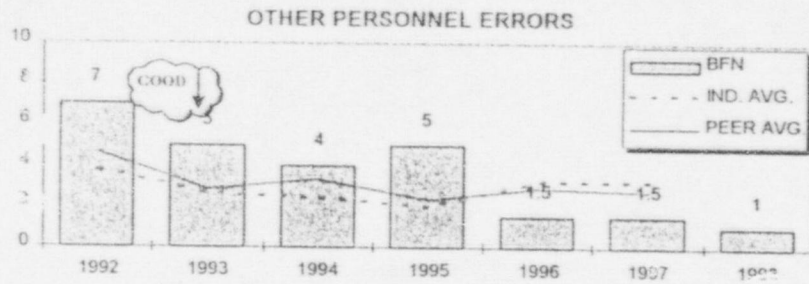
AEOD Indicators



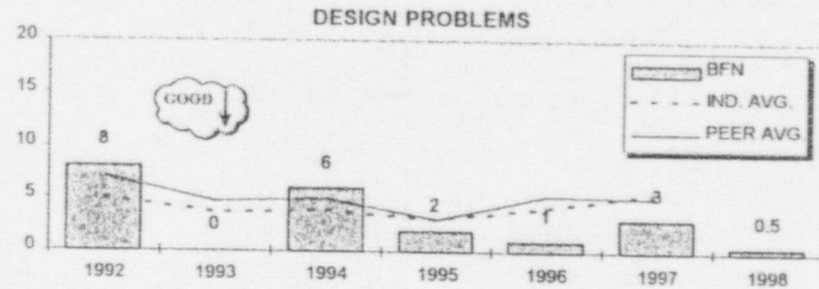
Note: Industry Data after 2nd Qtr. is projected through 1997
BFN data 1992, 1993, 1994, 1995, is Unit 2 only.
1996 and 1997 Per Unit; BFN actuals through 3rd Qtr. 1998



Note: Industry Data after 2nd Qtr. is projected through 1997
BFN Per Unit; BFN actuals through 3rd Qtr. 1998

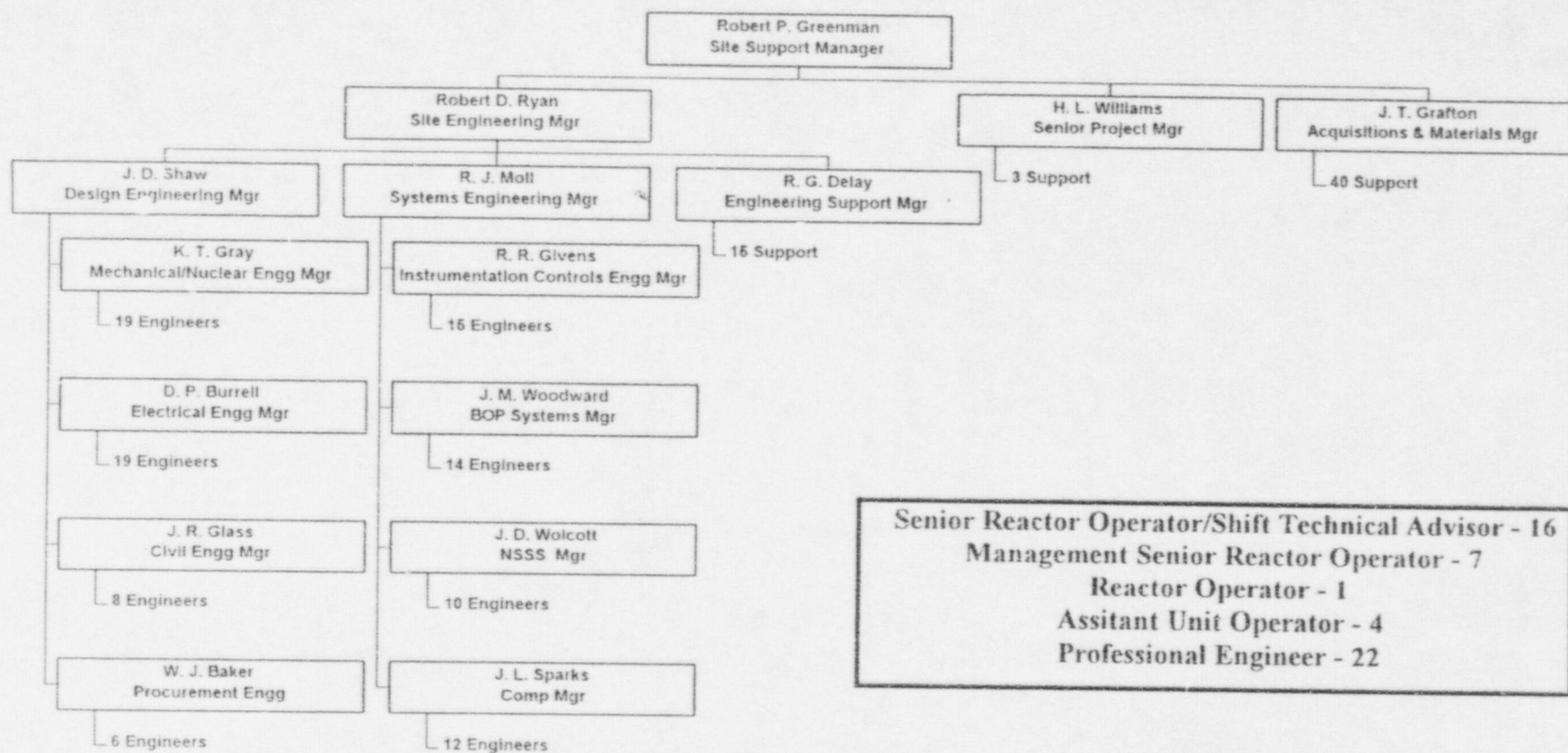


Note: Industry Data after 2nd Qtr. is projected through 1997
BFN data 1992, 1993, 1994, 1995, is Unit 2 only.
1996 and 1997 Per Unit; BFN actuals through 3rd Qtr. 1998



Note: Industry Data after 2nd Qtr. is projected through 1997
BFN data 1992, 1993, 1994, 1995, is Unit 2 only.
1996 and 1997 Per Unit; BFN actuals through 3rd Qtr. 1998

SITE ENGINEERING ORGANIZATION



DESIGN ENGINEERING

STRENGTHS/ACCOMPLISHMENTS

- Design Overview
- Design Philosophy
 - ◇ Reduce Backlog
 - ◇ Reduce Time for Design Change Issuance while Maintaining Quality
 - ◇ Focus on Long Term Issue Resolution
 - RWCU Heat Exchanger Repair
 - RWCU Pump Run-out
 - Scram Frequency Reduction Issues
 - Main Turbine Oil Tank Temperature Control

DESIGN ENGINEERING(continued)

STRENGTHS/ACCOMPLISHMENTS(continued)

- Design Activities
- Unit 3 Cycle 8 Outage (49 DCN's)
 - ◇ Power Uprate To 3458 MWT
 - ◇ Replace Torus ECCS Suction Strainers
 - ◇ Add "3A1" Condenser Waterbox Inlet Strainer
 - ◇ Power Range Neutron Monitoring
 - ◇ Replace Core Spray Piping from Slip Joint to Shroud
 - ◇ Recirculation Speed Controller Replacement

DESIGN ENGINEERING(continued)

STRENGTHS/ACCOMPLISHMENTS(continued)

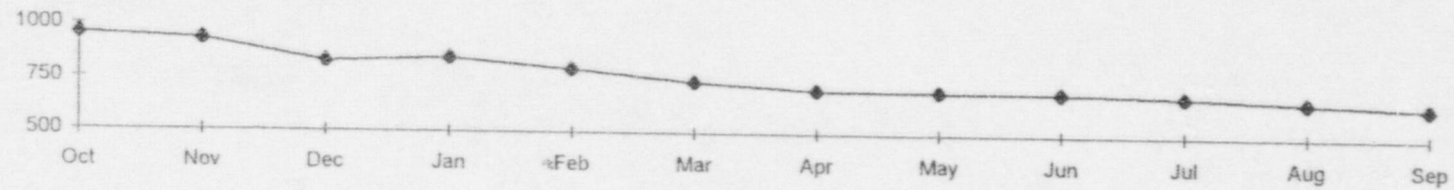
- **FSAR Review and Update**
 - ◇ Verify Consistency / Accuracy
 - ◇ Incorporate Power Uprate, Extended Fuel Cycle, ITS Changes
 - ◇ 1120 Issues Identified
 - ◇ No USQs, Operability Impacts or Significant Plant Modifications

Focus Areas

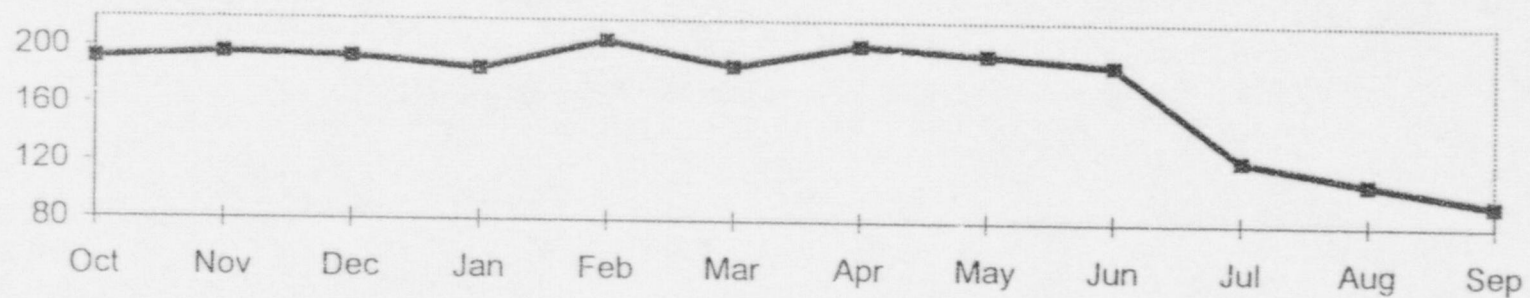
- **Backlog Reduction**
 - ◇ Complete closure of change packages
 - ◇ Eliminate no longer needed changes and work activity
 - ◇ Provide better oversight of current work activities

DESIGN ENGINEERING(continued)

SE OPEN ECNs/DCNs



OPEN ENGINEERING WORK ORDERS



DESIGN ENGINEERING(continued)

FOCUS AREAS(continued)

- **Risk Informed Maintenance (Sentinel)**
 - ◇ Provide heightened awareness of risk environment
 - ◇ Online assessment of equipment out of service
 - ◇ Deterministic - 1/99
 - ◇ Probabilistic - 12/99
- **Design Process Improvements**
 - ◇ Obsolete Equipment
 - ◇ Process Redesign
 - ◇ Team Development
 - ◇ Design Application

SYSTEMS ENGINEERING

STRENGTHS/ACCOMPLISHMENTS

- **Support of Plant Operation**
 - ◇ INPO Strength
 - ◇ 24 Hour Systems & Design Support
 - ◇ Implementation of Improved Technical Specifications
- **Troubleshooting**
 - ◇ Rod Block Monitor
 - ◇ Conductivity Excursion
 - ◇ RCIC Oil Foaming

SYSTEMS ENGINEERING (continued)

STRENGTHS/ACCOMPLISHMENTS(continued)

- Unit 3 Cycle 8 Outage Activities

- ◇ 26 MOVATS - Completed implementation of GL 89-10
- ◇ Integrated Leak Rate Test at New Pressure
- ◇ Reactor Pressure Vessel Leak Check
- ◇ Y2K Testing of ICS and Upgrade of Foxboro Digital Controls

SYSTEMS ENGINEERING (continued)

FOCUS AREAS

- **Temporary Alterations (TACFs)**
 - ◇ Reduce the number of ways plant configurations may be altered
- **Program Definition**
 - ◇ Clear and concise definition of program basis, requirements, and implementation details. Institutionalize the corporate knowledge
- **Involvement in Work Planning and Scheduling**
- **Process Improvements**
 - ◇ Risked Based ISI
 - ◇ Predictive Maintenance

PERFORMANCE INITIATIVES

FOCUS AREAS

- **Performance Based Self Assessments**

- ◇ Are the right people getting the right information in time to make a difference?
- ◇ Are the right people doing the right work at the right time?
- ◇ Are we a learning organization?

- **Human Performance**

- ◇ STAR 7 Program
- ◇ Use of Self-Checking Simulator
- ◇ Do What's Right Training
- ◇ Individual and Team Development

PERFORMANCE INITIATIVES (continued)

FOCUS AREAS (continued)

- **Update Engineering Support Personnel Training and Qualification**
- **Correct Previously Identified Performance Issues**
 - ◊ Attention to Detail in Engineering Products
 - ◊ Thoroughness in Evaluation of Data and Support of Testing
 - ◊ Quality of Assessments for License Changes
 - ◊ Follow Through on Identified Problems