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AUG 18 1993

Docket Nos. 50-390, 50-391  
License Nos. CPPR-91, CPPR-92

Tennessee Valley Authority  
ATTN: Dr. Mark O. Medford, Vice President  
Technical Support  
3B Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Gentlemen:

SUBJECT: MEETING SUMMARY - WATTS BAR UNITS 1 AND 2

This letter refers to the meeting conducted at the Watts Bar site on August 6, 1993. The meeting was at our request to discuss the status of ongoing and planned activities at Watts Bar. A list of attendees and a copy of the TVA handout are enclosed. It is our opinion that this meeting was beneficial and provided a better understanding of TVA's activities.

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

Sincerely,

(Original signed by E. Merschoff)

Ellis W. Merschoff, Director  
Division of Reactor Projects

Enclosures:

- 1. List of Attendees
- 2. Presentation Summary

cc w/encls: (See page 2)

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A PDR



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Tennessee Valley Authority

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cc w/encls:

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Knoxville, TN 37902

D. Nunn, Vice President,  
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W. J. Museler  
Vice President, Watts Bar Site  
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Watts Bar Nuclear Plant  
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TVA Representative  
Tennessee Valley Authority  
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General Counsel  
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400 West Summit Hill Drive  
ET 11B 33H  
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The Honorable Robert Aikman  
County Executive  
Rhea County Courthouse  
Dayton, TN 37321

The Honorable Garland Lanksford  
County Executive  
Meigs County Courthouse  
Decatur, TN 37322

M. H. Mobley, Director  
Division of Radiological Health  
T.E.R.R.A. Building, 6th Floor  
150 9th Avenue North  
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Danielle Droitsch  
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Bill Harris  
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Ten Mile, TN 37880

bcc w/encls: (See page 3)

Tennessee Valley Authority

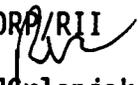
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bcc w/encls:

E. W. Merschhoff, DRP/RII  
P. E. Fredrickson, DRP/RII  
B. M. Bordenick, OGC  
M. S. Callahan, GPA/CA  
A. F. Gibson, DRS/RII  
B. S. Mallett, DRSS/RII  
P. A. Taylor, DRS/RII  
G. C. Lainas, NRR  
F. J. Hebdon, NRR  
L. C. Plisco, OEDO  
P. S. Tam, NRR  
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U. S. Nuclear Regulatory Commission  
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DRP/RII  
  
PFredrickson  
08/13/93

DRP/RII  
  
JCrlenjak  
08/14/93

ENCLOSURE 1

LIST OF ATTENDEES

NAME

TITLE

Participants:

NRC

S. Ebnetter	Regional Administrator, Region II (RII)
E. Merschoff	Director, Division of Reactor Projects (DRP), RII
A. Gibson	Director, Division of Reactor Safety, RII
F. Hebdon	Director, Project Directorate II-4, Office of Nuclear Reactor Regulation (NRR)
J. Crljenjak	Chief, Branch 4, DRP, RII
P. Fredrickson	Chief, Section 4B, DRP, RII
P. Tam	Senior Project Manager, NRR
R. Latta	Senior Operations Engineer, NRR
G. Walton	Senior Resident Inspector (Constr.), DRP, RII
K. VanDoorn	Senior Resident Inspector (Opns.), DRP, RII
K. Ivey	Resident Inspector, DRP, RII
J. Lara	Resident Inspector, DRP, RII
P. Humphrey	Resident Inspector, DRP, RII
K. Clark	Public Affairs Officer, RII

TVA

M. Medford	Vice President, Technical Support
D. Nunn	Vice President, Nuclear Projects
R. Eytchison	Vice President, Nuclear Operations
W. Museler	Site Vice President
N. Kazanas	Vice President, Completion Assurance
D. Moody	Plant Manager
S. Caskel	Operating Experience Manager
P. Pace	Site Compliance Licensing Manager
R. Johnson	Unit 1 Project Engineer
D. Malone	Quality Engineering Manager
R. Baron	General Manager, Nuclear Assurance
B. Schofield	Nuclear Licensing Manager
R. Lewis	Site QA Records Project Manager
B. Martocci	Public Relations Manager
J. Blackburn	Project Manager

Observers:

A. Harris	TVA
F. McCuistion	TVA
T. Birchfield	
S. Smith	Foundation for Global Sustainability
D. Droitsch	Foundation for Global Sustainability
V. Miller	Chattanooga News Free Press
R. Higgins	Chattanooga Times

R. Hawkins  
C. Burnside  
E. Magilley

WMYU  
Federal Emergency Management Agency  
SWEC

**TVA/NRC WATTS BAR MANAGEMENT MEETING  
FRIDAY, AUGUST 6, 1993**

**AGENDA**

- |              |  |                             |
|--------------|--|-----------------------------|
| <b>I.</b>    | <b>OPENING REMARKS</b>                                     | <b>NRC/TVA-EBNETER/NUNN</b> |
| <b>II.</b>   | <b>SCHEDULE AND MAJOR MILESTONES</b>                       | <b>TVA-MUSELER</b>          |
| <b>III.</b>  | <b>PLANT STATUS</b>  | <b>TVA-MOODY</b>            |
| <b>IV.</b>   | <b>AREA COMPLETIONS PROGRAM</b>                            | <b>TVA-MUSELER</b>          |
| <b>V.</b>    | <b>CORRECTIVE ACTION PROGRAMS AND<br/>SPECIAL PROGRAMS</b> | <b>TVA-MUSELER</b>          |
| <b>VI.</b>   | <b>NRC OPEN ITEMS</b>                                      | <b>TVA-PACE</b>             |
| <b>VII.</b>  | <b>SEQUOYAH LESSONS LEARNED</b>                            | <b>TVA-CASTEEL</b>          |
| <b>VIII.</b> | <b>QA RECORDS PROGRAM/<br/>CATD'S</b>                      | <b>TVA-KAZANAS/MEDFORD</b>  |
| <b>IX.</b>   | <b>RCP THERMAL BARRIER LINE</b>                            | <b>TVA-JOHNSON</b>          |
| <b>X.</b>    | <b>CLOSING REMARKS</b>                                     | <b>NRC/TVA-EBNETER/NUNN</b> |

**I. OPENING REMARKS**

**NRC/TVA-EBNETER/NUNN**

**II. SCHEDULE AND MAJOR  
MILESTONES**

**TVA-MUSELER**

## REMAINING PROJECT MILESTONES

✓	<b>Base Engineering Complete</b>	<b>June 1993</b>
✓	<b>Reactor Primary System Complete</b>	<b>July 1993</b>
	<b>Open Vessel Testing</b>	<b>August 1993</b>
	<b>Hot Functional Testing</b>	<b>November 1993</b>
	<b>Unit 1 Fuel Load</b>	<b>Spring 1994</b>

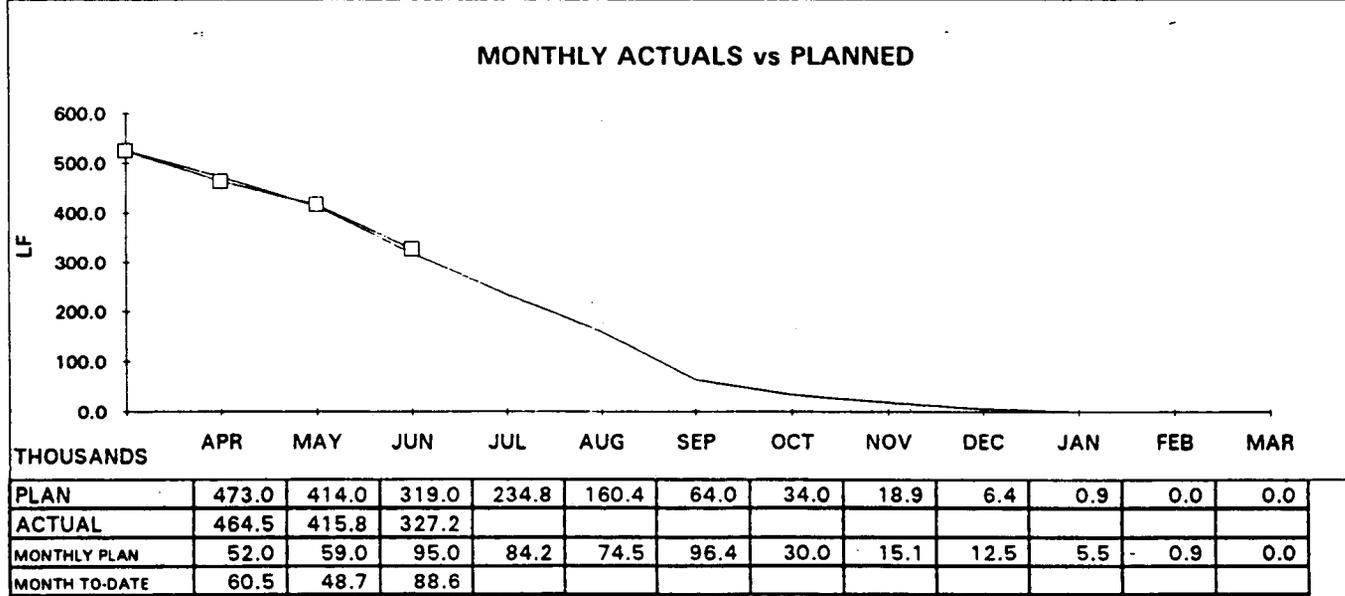
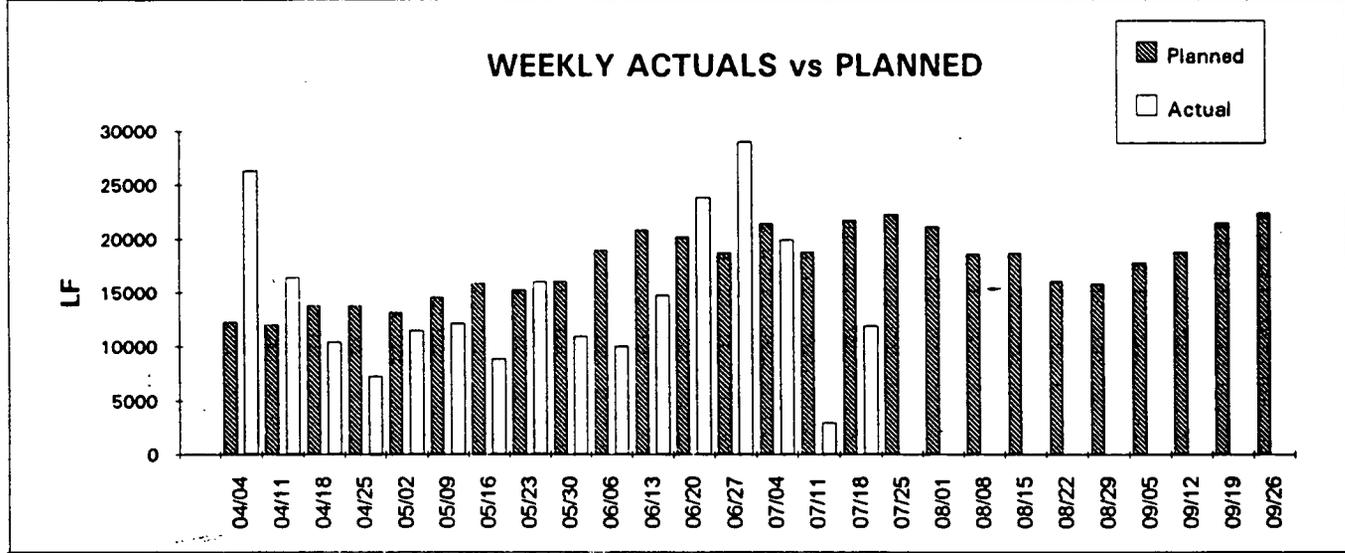
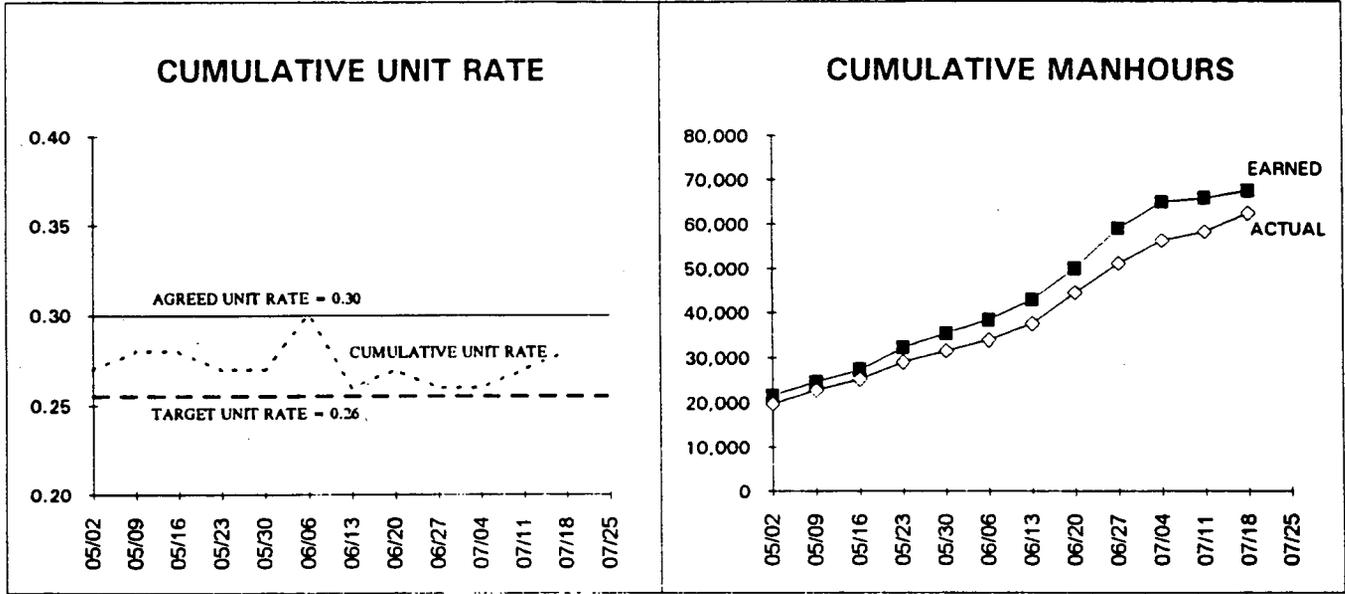
**SYSTEM RELEASES SCHEDULE SUMMARY**  
**- Based upon the July 1993 Schedule Evaluations -**

* Milestone	System Releases Scheduled W/E 08/01/93	Total System Releases Actual W/E 08/01/93	Delta
Engineering (146 Total)	146	146	-
Modifications (214 Total)	91	94	+3
Maintenance (188 Total)	81	87	+6
NE SPAE I (124 Total)	53	53	-
Start Preop (115 Total)	30	30	-
SUT Complete (141 Total)	36	36	-
NE SPAE II (141 Total)	36	36	-
Plant Acceptance (140 Total)	35	35	-

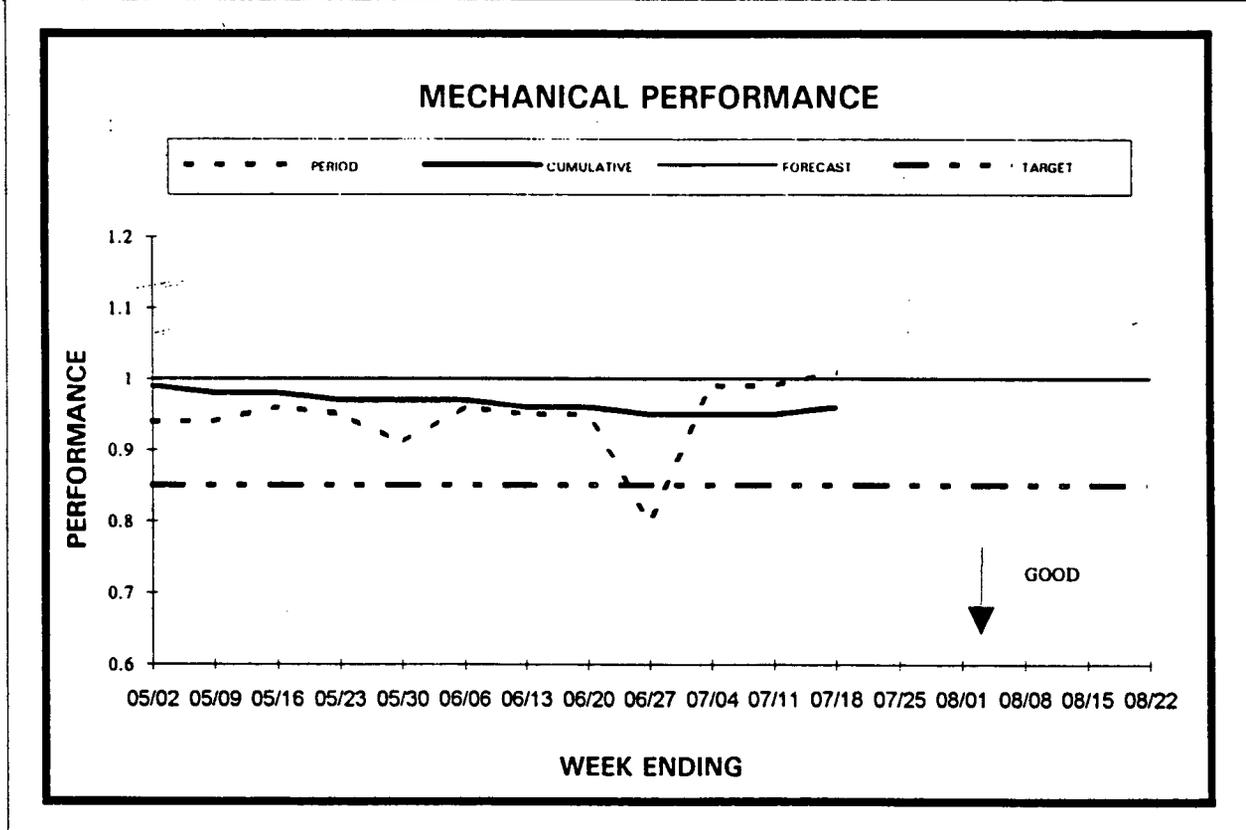
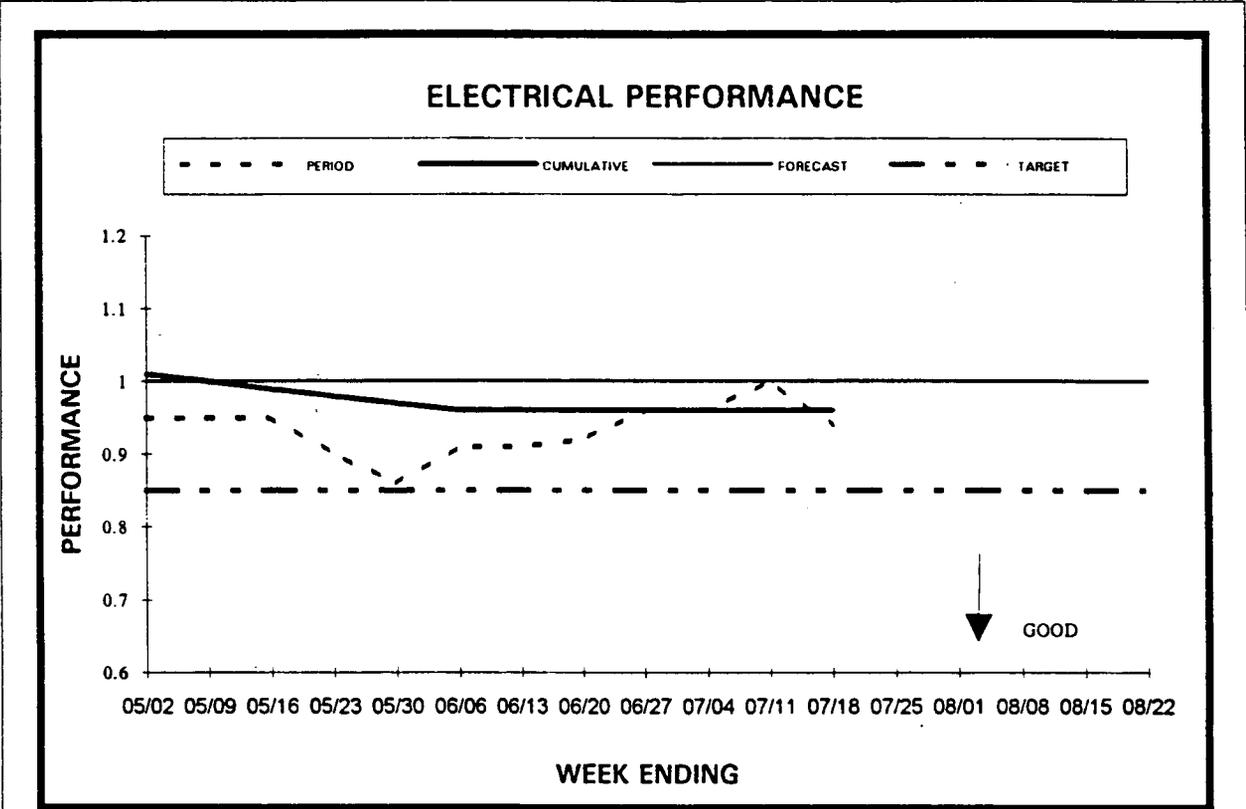
NOTE: Revised SPAE I totals.

\* Milestone totals vary due to subscoping.

# WBN - MODIFICATIONS POWER and CONTROL CABLE

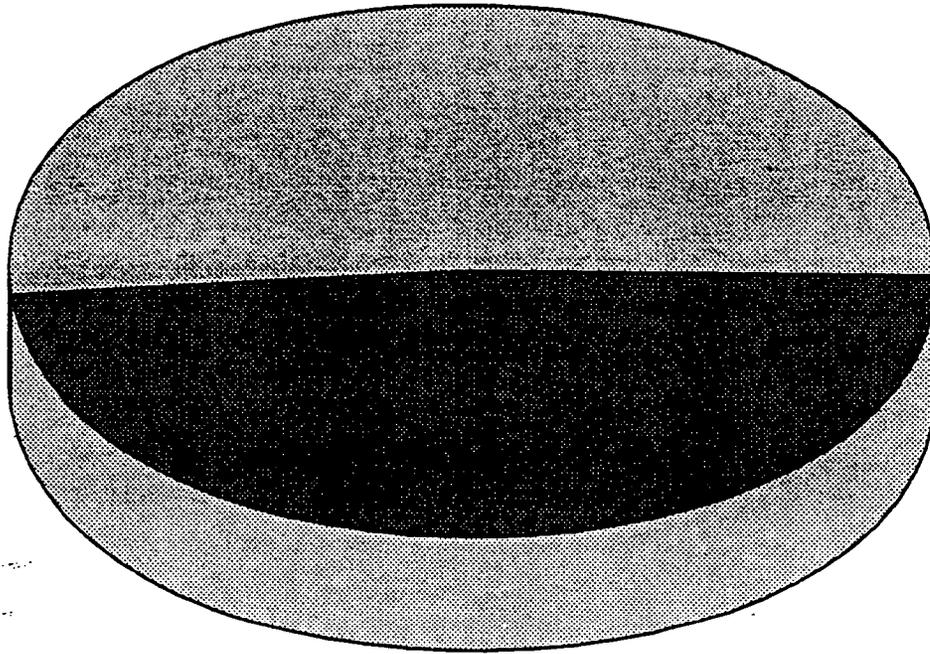


# WBN MODIFICATIONS



# MOVATS

Complete 173 51.6%



Remaining 162 48.4%

Test Status

(TOTAL = 335)

# STARTUP PROGRAM STATISTICS

- **PROCEDURE PREPARATION STATUS**
  - 184 Total procedures
  - 86 Approved for use or in review cycle
  - 12 PTIs currently in NRC review
  
- **COMPONENT STATUS**
  - 25,092 Total tests
  - 11,488 Complete (46%)
  
- **PREOPERATIONAL TESTS (PTIs, ATIs)**
  - 115 System tests required
  - 30 System tests complete (26%)

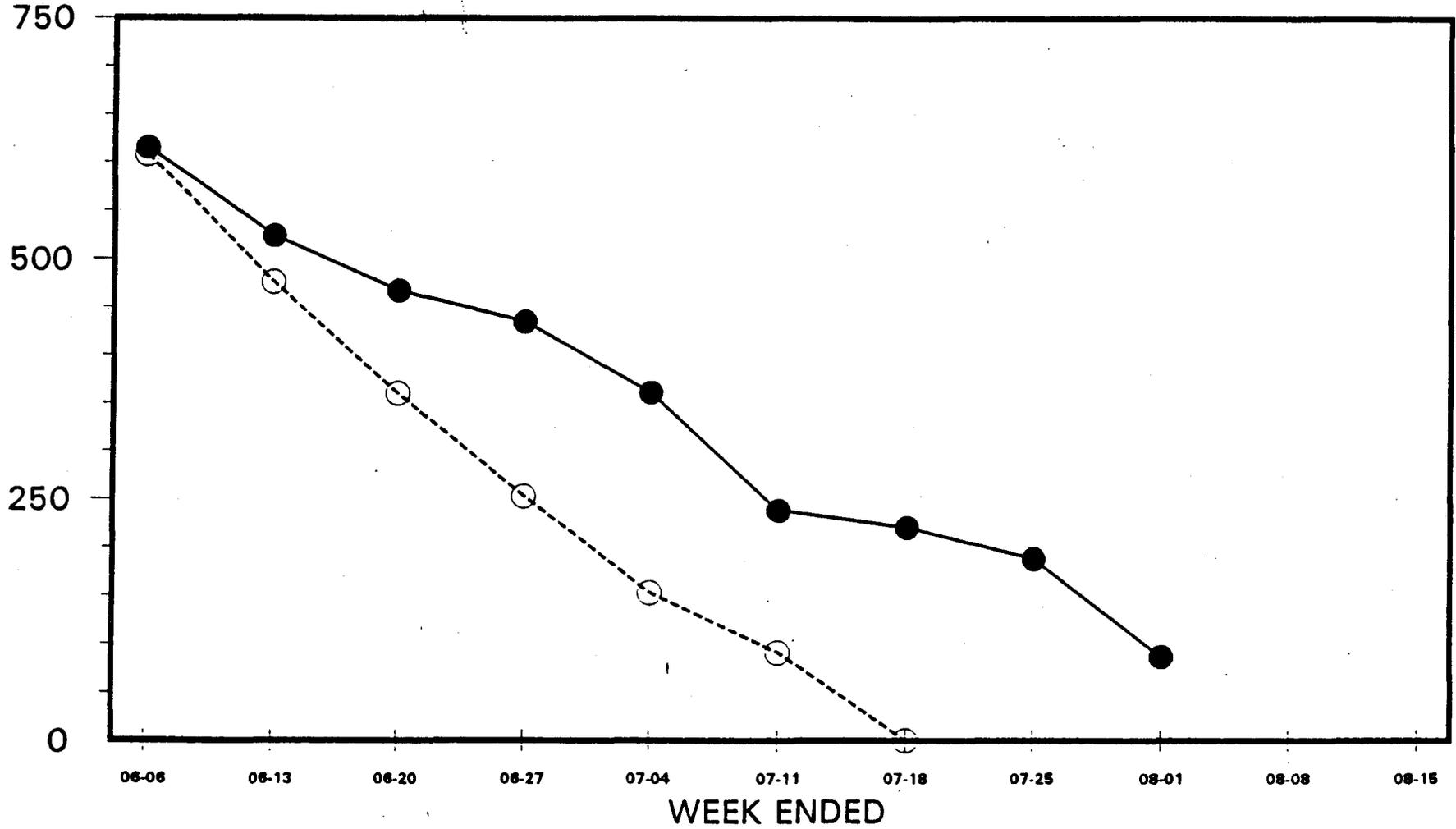
# **STARTUP PROGRAM IMPROVEMENTS**

- **Additional FSAR consistency check (documented)**
- **Procedure Writers Guide Review**
- **Additional editorial review of procedures for administrative items (consistent step references, etc.)**
- **Review of selected procedures currently in the NRC pipeline.**
- **Clarification of plant procedure use in preop tests.**
- **Procedure Quality Indicator established.**
- **Plant manager approval of all PTIs before submittal to the NRC.**

# OVT SYSTEMS SUMMARY

## COMPONENT TESTING

TOTAL TESTS



PLANNED  ACTUAL 

### **III. PLANT STATUS**

**TVA/MOODY**

# **OPERATOR LICENSING**

## **MINIMUM TECH SPEC STAFFING**

- **25 Licenses (12 ROS/13 SROS)**

## **WBN PLAN**

- **49 Licenses by fuel load**
- **60 Licenses by August 1994**

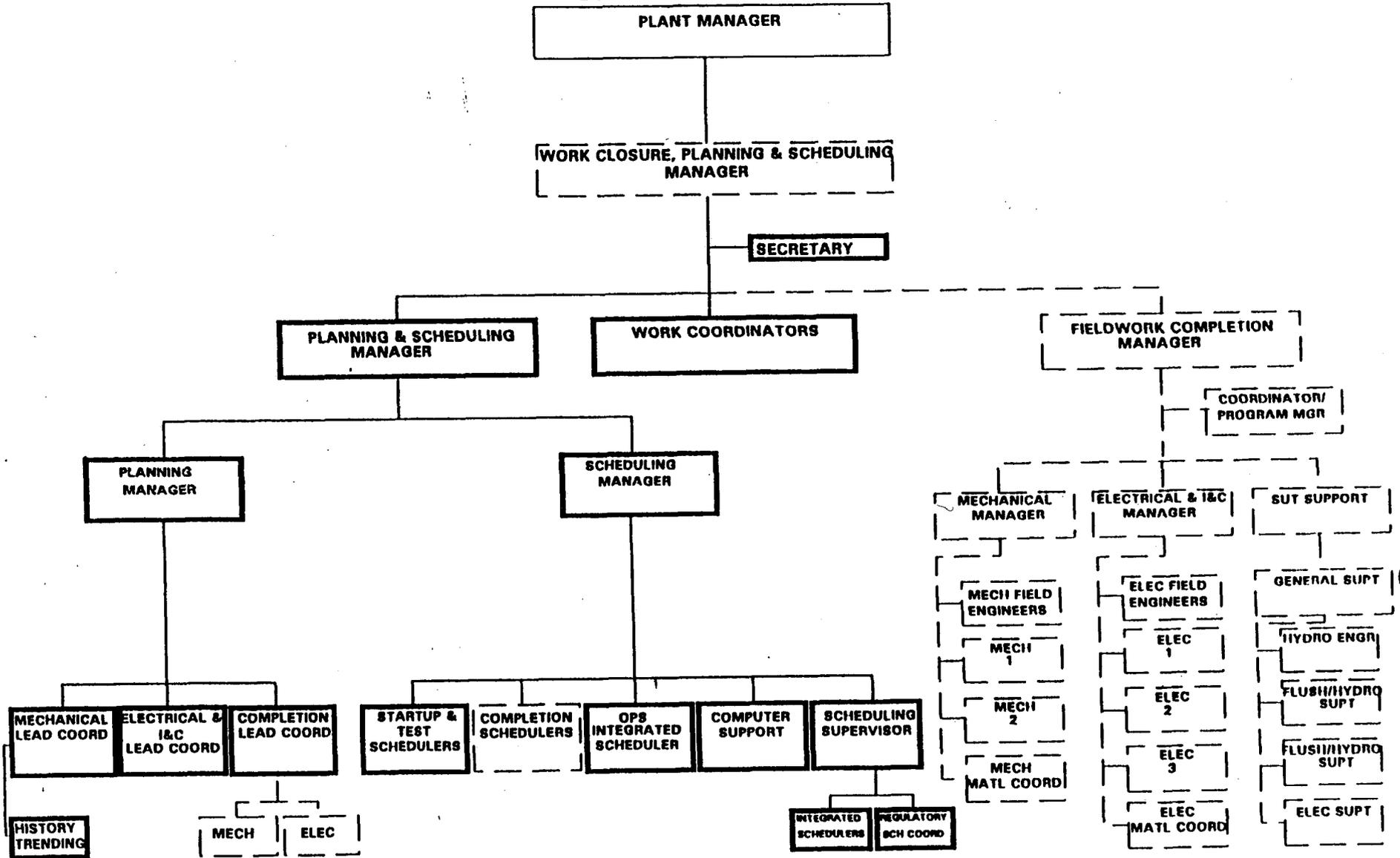
## **EXAM MONTHS COORDINATED WITH NRC**

- **July 1993 - 19 Candidates (written/simulator exams complete)**
  - **To be examined on JPMs in January 1994**
- **Feb 1994 - 27 Candidates**
- **Aug 1994 - 22 Candidates**

## **COMPLETIONS GROUP**

- **Integrated scheduling of startup and plant physical work.**
- **Provide the Startup Program with the necessary craft support for testing and hydros.**
- **Clearinghouse for all work requests/work orders.**
- **Reduce outstanding work requests/work orders prior to turnover to startup.**

**WATTS BAR NUCLEAR PLANT  
INTERIM WORK ORDER COMPLETION ORGANIZATION  
BUDGETED ORGANIZATION**



12

— BUDGETED PLANNING, SCHEDULING, AND OUTAGE MANAGEMENT ORG  
 - - BUDGETED COMPLETIONS ORG

## **OPERATIONAL READINESS**

- **Procedures are being upgraded and field validated as systems are turned over to the plant.**
- **Configuration control is being implemented on systems turned over to the plant.**
- **Training programs are in place and are INPO accredited.**
- **SQN lessons learned are being evaluated for applicability to WBN.**

**IV. AREA COMPLETIONS PROGRAM    TVA-MUSELER**

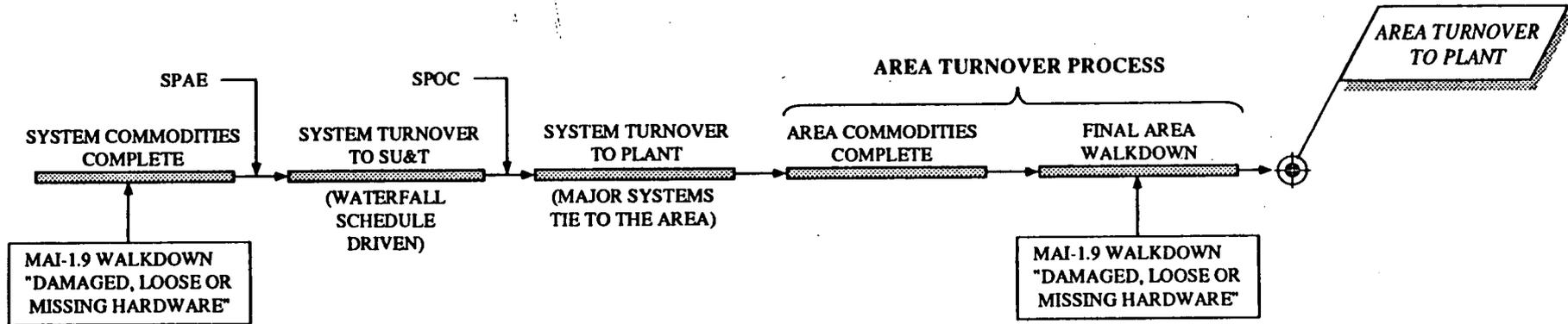
# AREA COMPLETIONS PROGRAM

## OBJECTIVES

- **Complete non-system physical work by area.**
- **Establish plant control of areas prior to fuel load.**
- **Ensure damaged, loose, and missing hardware items are corrected.**
- **Ensure that system related components are not damaged or are repaired after major testing is completed (HFT, ESFAS, CLRT, Etc.)**

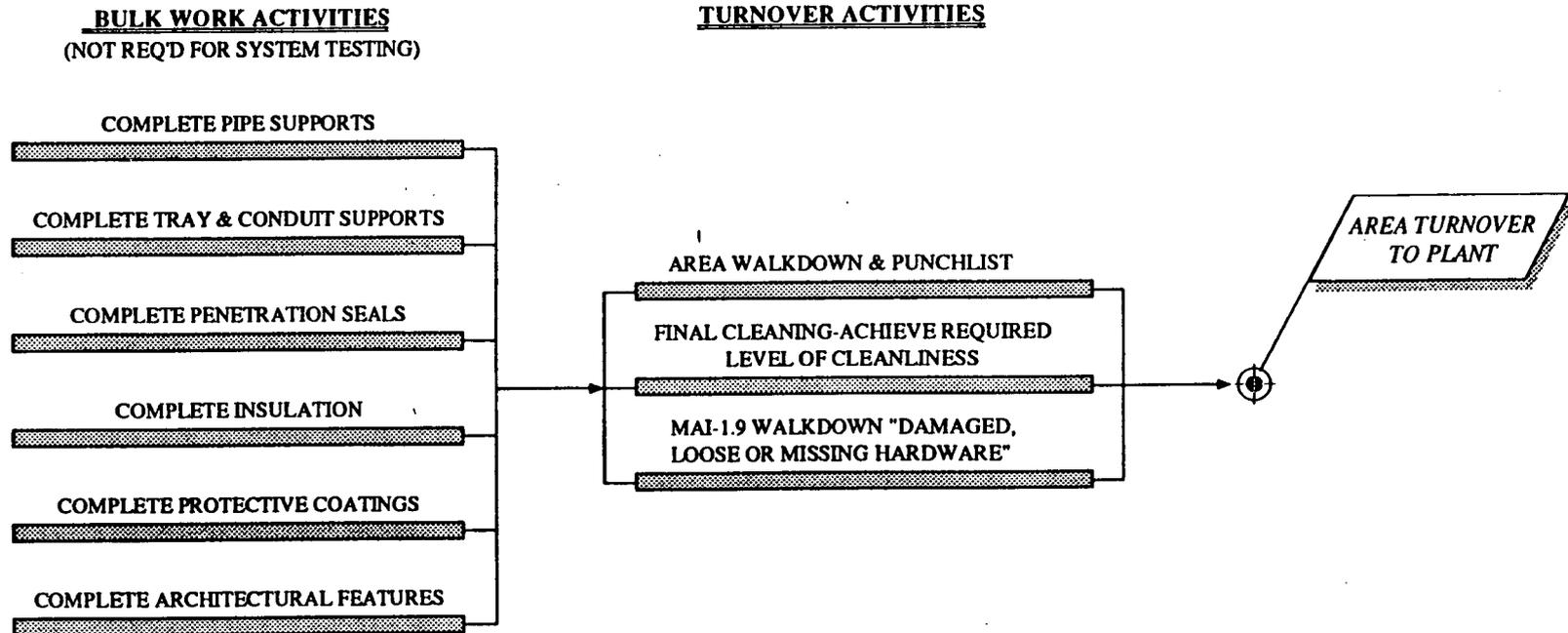
# — IMPLEMENTATION —

## I. Overall System/Area Completion Sequence



15

## II. Detailed Area Completion/Turnover Sequence





## **CORRECTIVE ACTION PROGRAMS/SPECIAL PROGRAMS**

- **Two thirds of CAP/SPs have passed the TVA 75% milestone.**
- **One fourth of CAP/SP are complete.**
- **Remaining CAP/SP work largely tied to system and area completions.**
- **Seventeen CAP/SPs are scheduled for closure near fuel load.**
- **Developing interim closure process to address review of later CAP/SPs.**

## CAP/SP NEAR TERM COMPLETION STATUS

CAP/SP	75%	100%
Heat Code Traceability	X	X
Concrete Quality Program	X	X
Seismic Analysis	X	X
Use-As-Is CAQs	X	X
Soil Liquefaction	X	X
Welding Issues	X	X
Master Fuse List	X	X
Microbiologically Induced Corrosion	X	8/93
Containment Cooling	X	10/93
Vendor Information	X	11/93
Q-List	X	11/93
Detailed Control Room Design Review	X	3/94
Hanger and Analysis Update Program	X	3/94
Design Baseline and Verification Program	X	3/94
Fire Protection	X	3/94
Moderate Energy Line Break Flooding	X	3/94
Replacement Items	X	4/94
QA Records	X	4/94
Equipment Seismic	8/93	3/94
Electrical Issues	8/93	4/94
HVAC Duct and Supports	9/93	3/94
Instrument Lines	10/93	3/94
Electrical Conduit and Supports	10/93	3/94
Cable Issues	10/93	4/94
Cable Tray and Supports	11/93	3/94
Radiation Monitoring	11/93	3/94
Equipment Qualification/Mech. EQ	11/93	4/94

**VI. NRC OPEN ITEMS**

**TVA-PACE**

## NRC OPEN ITEMS

- **Current NRC Open Items** **310**

### **OPEN ITEM CLOSE-OUT AFFECTED BY:**

- **System Ties** **134**
- **CAP Programmatic/hardware** **69**
- **Programmatic Issues** **45**
- **Area Turnover** **15**
- **Others** **47**

**VII. SEQUOYAH LESSONS LEARNED TVA/CASTEEL**

# **WATTS BAR REVIEW OF THE SEQUOYAH ISSUES**

## **AREAS UNDER REVIEW**

- **Restart Evaluation List**
- **Site Improvement Plan**
- **Technical Programs Review**
  - **Approximately 1400 items**
  - **Review for hardware and program/process impacts**

## **LESSONS LEARNED**

- **Individually, Watts Bar will be able to address each of the Sequoyah items.**
- **Operating attitude (people issues)**

**VIII. QA RECORDS PROGRAM/  
CATD'S**

**TVA-KAZANAS/  
MEDFORD**

# QA RECORDS PROJECT

- **REMAINING WORK**
  - Complete implementation of corrective actions and recurrence control.
  - Complete CAP final report.
  - Confirmatory review of retrievability for current records.
  
- **STATUS OF NRC INSPECTIONS**
  - Two inspections covering four of twenty record plans completed.
    - Cable
    - Large Bore Pipe
    - Small Bore Pipe
    - Instrument lines
  - Results to Date
  
- **CURRENT RECORD ISSUES**
  - Backlog for microfilming and indexing
  - Approach
    - Priority is pre-indexing and retrieval
    - Process improvement - pre-indexing
    - Process/efficiency evaluation performed
    - Additional resources

## **CORRECTIVE ACTION TRACKING DOCUMENTS**

- **TVA will perform a confirmatory review of Employee Concern Special Program resolutions (categories C, D, and E).**
- **TVA will submit a description of the scope for this review by August 20, 1993.**
- **Following the submittal, TVA will schedule a meeting to discuss.**

**IX. RCP THERMAL BARRIER LINE**

**TVA-JOHNSON**

# RCP THERMAL BARRIER LINE

- **Other Region II Plant**

- HX isolated with non safety-related, air operated valve (high pressure/low pressure break).
- Relief capacity less than postulated in-leakage (167 vs 275 GPM).
- Containment isolation valves not rated for RCS pressure.
- Failure to isolate leak inside containment.

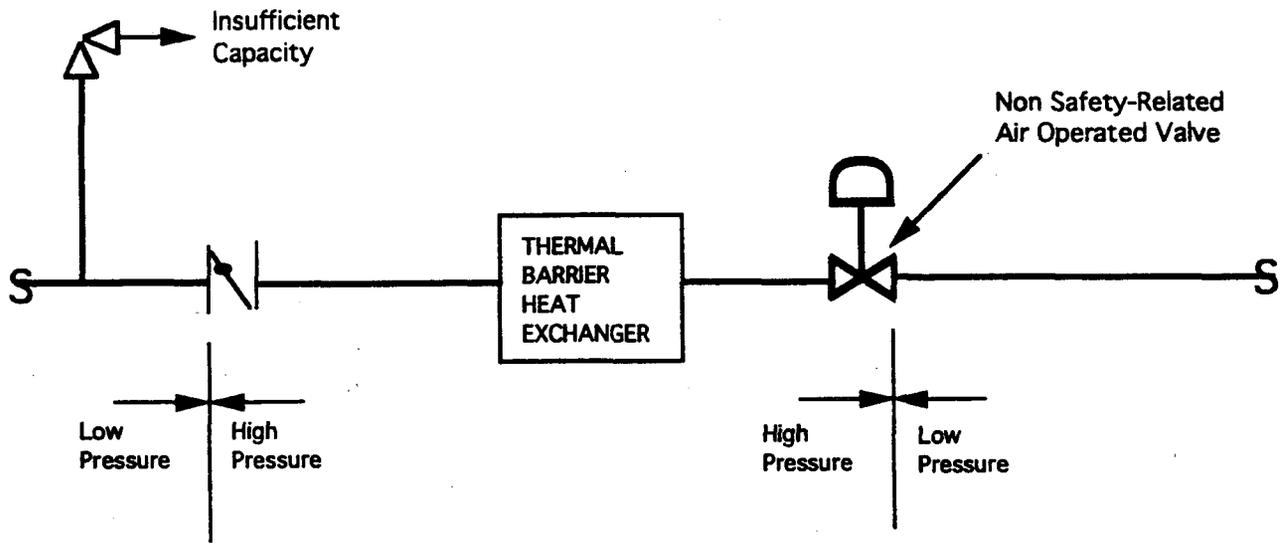
- **Watts Bar Nuclear Plant**

- HX isolated with safety-related valves (high pressure/low pressure break).
- Upstream isolation with dual check valves.
- No relief valve in low pressure piping between check valves and containment isolation valves.
- Check valves are not leak checked, but are in ISI program for operability verification.
- Potential over pressurization of low pressure CCS piping inside containment.
- Postulated pipe failure would result in less than technical specification leakage (<10 GPM) inside containment.

- **TVA Actions**

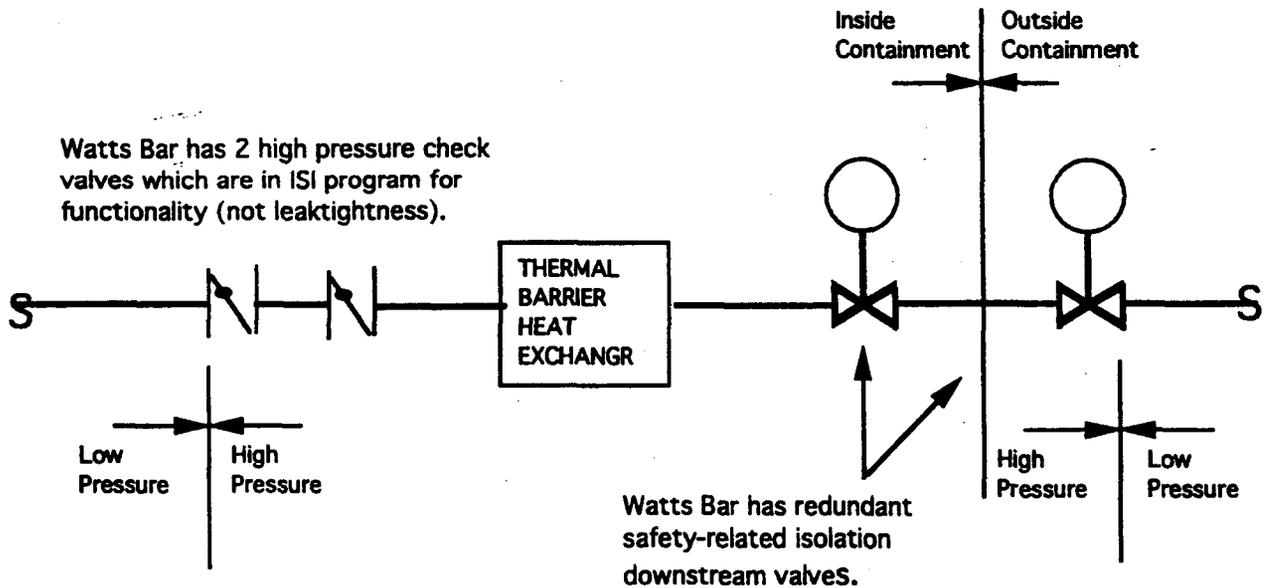
- Problem evaluation report WBPER930166.
- Install relief valve

# OTHER REGION II PLANT



"Isolation valves are provided . . . outside the containment building, but these are not designed to withstand reactor pressure." Fix was to install additional relief capacity upstream and downstream of thermal barrier.

# WATTS BAR



**X. CLOSING REMARKS**

**NRC/TVA-EBNETER/NUNN**