



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

Docket Nos. 50-390  
and 50-391

June 29, 1993

APPLICANT: Tennessee Valley Authority (TVA)  
FACILITY: Watts Bar Nuclear Plant, Units 1 and 2  
SUBJECT: MEETING SUMMARY - JUNE 23, 1993, MANAGEMENT MEETING  
REFERENCE: Meeting notice by P. S. Tam, May 26, 1993

On June 23, 1993, NRC and TVA representatives met at the Watts Bar site to discuss issues that warrant senior management attention. Enclosure 1 is the list of participants and observers. Enclosure 2 is the collection of slides used by TVA personnel in their discussion with the staff, with Page 1 being the meeting agenda.

TVA stated that the target date for fuel loading is April 1994. On June 20, 1993, TVA completed all base engineering (i.e., TVA expects that it will issue no more design change notices, DCNs; all future changes will be originated from field implementation). TVA expressed confidence in meeting the targeted fuel loading date.

The following action items are agreed upon by participants:

- o A meeting will be held for TVA to give the staff an overview of the Program for Assurance of Completion and Assurance of Quality (PAC/AQ).
- o The staff will pursue timely closeout of the licensing issue regarding use of U-bolts.
- o TVA will discuss effectiveness of the employee concerns programs in a future management meeting. The staff recommended that employee concerns be considered part of TVA's Licensing Certification Plan.
- o TVA committed to incorporate lessons learned from recent Sequoyah events into Watts Bar programs.
- o TVA agreed to provide the staff with the current site organization chart.
- o TVA agreed to assess what can be done to accelerate the production rate of inspection open issue closeout packages.

9307070284 930629  
PDR ADOCK 05000390  
A PDR

**NRC FILE CENTER COPY**

*Memorandum*  
*RF01*  
*1/1*

The staff noted a positive trend in that TVA was able to report results in this meeting, and not just proposed what it planned to do.

Original signed by

Peter S. Tam, Senior Project Manager  
Project Directorate II-4  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Participant and Observer List
2. TVA Slides

cc w/enclosures:

See next page

Distribution

Enclosure 1

T. Murley/F. Miraglia

J. Partlow

S. Varga

G. Lainas

F. Hebdon

B. Clayton

OGC

E. Jordan

K. Clark, RII

R. Crlenjak, RII

S. Ebnetter, RII

P. Frederickson, RII

C. Julian, RII

ACRS (10)

L. Plisco

Enclosure 1 and 2

Docket File

PDR & LPDR

WBN Reading

E. Merschhoff

P. Tam

OFFICE:	PDII-4/LA	PDII-4/PM	RII	PDII-4/D	
NAME:	BClayton <i>BC</i>	PTam <i>PST</i>	RCrlenjak	FHebdon <i>FH</i>	
DATE:	6/28/93	6/28/93	6/29/93	6/29/93	

DOCUMENT NAME: 623MTG

*↑ Crlenjak, Merschhoff & Fredrickson  
Concurrence by  
E-mail today  
PST*

cc:

Mr. W. H. Kennoy, Director  
Tennessee Valley Authority  
ET 12A  
400 West Summit Hill Drive  
Knoxville, Tennessee 37902

Mr. D. E. Nunn, Vice President  
3B Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Mr. W. J. Museler, Vice President  
Watts Bar Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 800  
Spring City, Tennessee 37381

Mr. B. S. Schofield, Manager  
Nuclear Licensing and Regulatory Affairs  
Tennessee Valley Authority  
5B Lookout Place  
Chattanooga, Tennessee 37402-2801

Mr. G. L. Pannell, Site Licensing Manager  
Watts Bar Nuclear Plant  
Tennessee Valley Authority  
P. O. Box 800  
Spring City, Tennessee 37381

TVA Representative  
Tennessee Valley Authority  
11921 Rockville Pike  
Suite 402  
Rockville, Maryland 20852

Mr. Michael H. Mobley, Director  
Division of Radiological Health  
3rd Floor, L and C Annex  
401 Church Street  
Nashville, Tennessee 37243-1532

General Counsel  
Tennessee Valley Authority  
ET 11H  
400 West Summit Hill Drive  
Knoxville, Tennessee 37902

The Honorable Robert Aikman  
County Executive  
Rhea County Courthouse  
Dayton, Tennessee 37321

The Honorable Garland Lanksford  
County Executive  
Meigs County Courthouse  
Route 2  
Decatur, Tennessee 37322

Regional Administrator  
U.S.N.R.C. Region II  
101 Marietta Street, N.W.  
Suite 2900  
Atlanta, Georgia 30323

Senior Resident Inspector  
Watts Bar Nuclear Plant  
U.S.N.R.C.  
Route 2, Box 700  
Spring City, Tennessee 37381

Danielle Droitsch  
Energy Project  
The Foundation for  
Global Sustainability  
P. O. Box 1101  
Knoxville, Tennessee 37901

Bill Harris  
Route 1, Box 26  
Ten Mile, Tennessee 37880

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

LIST OF PARTICIPANTS AND OBSERVERS

MANAGEMENT MEETING

June 23, 1993

Participants:

<u>Name</u>	<u>Affiliation</u>
William C. Bearden	NRC Region II
James E. Blackburn	TVA Quality Assurance
P. Capozzi	TVA Watts Bar PAC/AQ Project Manager
Jon D. Christensen	TVA Watts Bar Site Quality
Ken Clark	NRC Region II Public Relations
R. V. Crlenjak	NRC Region II Project Branch 4
Stewart D. Ebnetter	NRC Region II
W. L. Elliott	TVA Watts Bar Engineering
R. M. Eytchison	TVA Nuclear Operations
Paul Fredrickson	NRC Region II Project Branch 4
Michael M. Glasman	NRC Resident Inspector
Frederick J. Hebdon	NRC Project Directorate II-4
Gary Humphrey	NRC Resident Inspector
Caudle Julian	NRC Region II Engineering Branch
Nick C. Kazanas	TVA Completion Assurance
Bryant Kinney	TVA Public Relations
Oliver Kingsley	TVA Generation Group
Gus C. Lainas	NRC Division of Reactor Projects Region II
Julio Lara	NRC Resident Inspector
Robert Lewis	TVA Watts Bar QA Records Project
Mark Medford	TVA Corporate Office
D. E. Moody	TVA Watts Bar Plant Manager
Barbara Martucci	TVA Watts Bar Public Relations
Ellis W. Merschoff	NRC Region II Division of Reactor Projects
Bill Museler	TVA Watts Bar
Dwight Nunn	TVA
George Pannell	TVA Watts Bar Site Licensing
James C. Partlow	NRC Associate Directorate of Projects
Mark Salley	TVA Corporate Engineering
Bruce S. Schofield	TVA Nuclear Licensing
Peter Tam	NRC Project Directorate II-4
Glenn A. Walton	NRC Senior Resident Inspector

Observers:

<u>Name</u>	<u>Affiliation</u>
Sandra Burchfield	
Terry H. Burchfield	
Jeremy Burchfield	
Mark Burchfield	
Tera Burchfield	
Danielle Droitsch	Global Sustainability
Amy Geisel	News Sentinel
Lisa Gurevitch	WTVC-TV Chattanooga
Ann Harris	TVA
Randall Higgins	Chattanooga Times
Victor Miller	News-Free Press, Chattanooga
H. B. Rankin	
Gordon T. Taras	G & M E. E. Inc.
Mary L. Taras	G & M E. E. Inc.

**WATTS BAR**  
**JUNE 23, 1993**



**TVA/NRC WATTS BAR MANAGEMENT MEETING  
WEDNESDAY, JUNE 23, 1993**

**AGENDA**

- |      |  |                      |
|------|--|----------------------|
| I.   | OPENING REMARKS                                    | NRC/TVA-PARTLOW/NUNN |
| II.  | SCHEDULE AND MAJOR MILESTONES                      | TVA-MUSELER          |
| III. | PLANT READINESS                                    | TVA-MOODY            |
| IV.  | LICENSING ISSUES                                   | TVA-ELLIOTT/PANNELL  |
|      | TECHNICAL  | TVA-ELLIOTT          |
|      | 1. Status of Thermo-Lag Testing/Modification       |                      |
|      | 2. Status of Eagle-21 Instrumentation              |                      |
|      | 3. U-Bolt Hangers                                  |                      |
|      | 4. Accumulator Tank Cladding                       |                      |
|      | GENERAL  | TVA-PANNELL          |
|      | 1. Technical Specification Development             |                      |
|      | 2. FSAR Completion                                 |                      |
|      | 3. Generic Issues                                  |                      |
|      | 4. Corrective Action Programs and Special Programs |                      |
|      | 5. NRC Open Items Workoff Curve                    |                      |
|      | 6. Licensing Certification Plan                    |                      |
|      | 7. NRC Staff Level of Effort                       |                      |
| V.   | QA RECORDS CORRECTIVE ACTION PROGRAM               | TVA-KAZANAS          |
| VI.  | PAC/AQ OVERVIEW                                    | TVA-CAPOZZI          |
| VII. | CLOSING REMARKS                                    | NRC/TVA-PARTLOW/NUNN |

**II. SCHEDULE AND MAJOR MILESTONES**

**TVA-MUSELER**

# SYSTEM RELEASES SCHEDULE SUMMARY

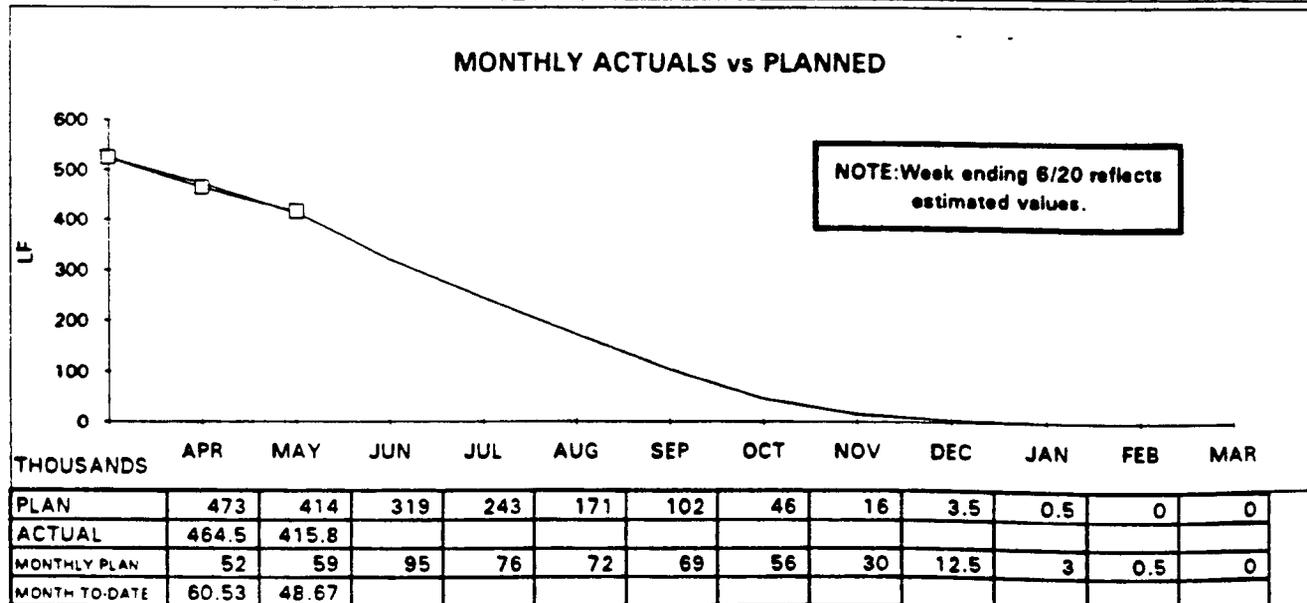
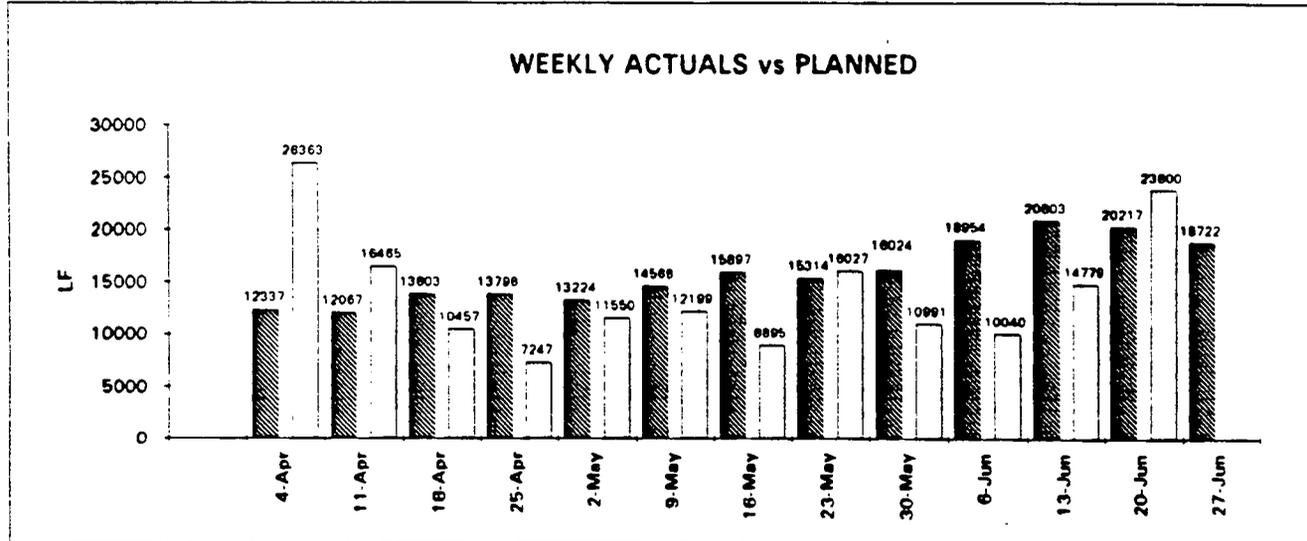
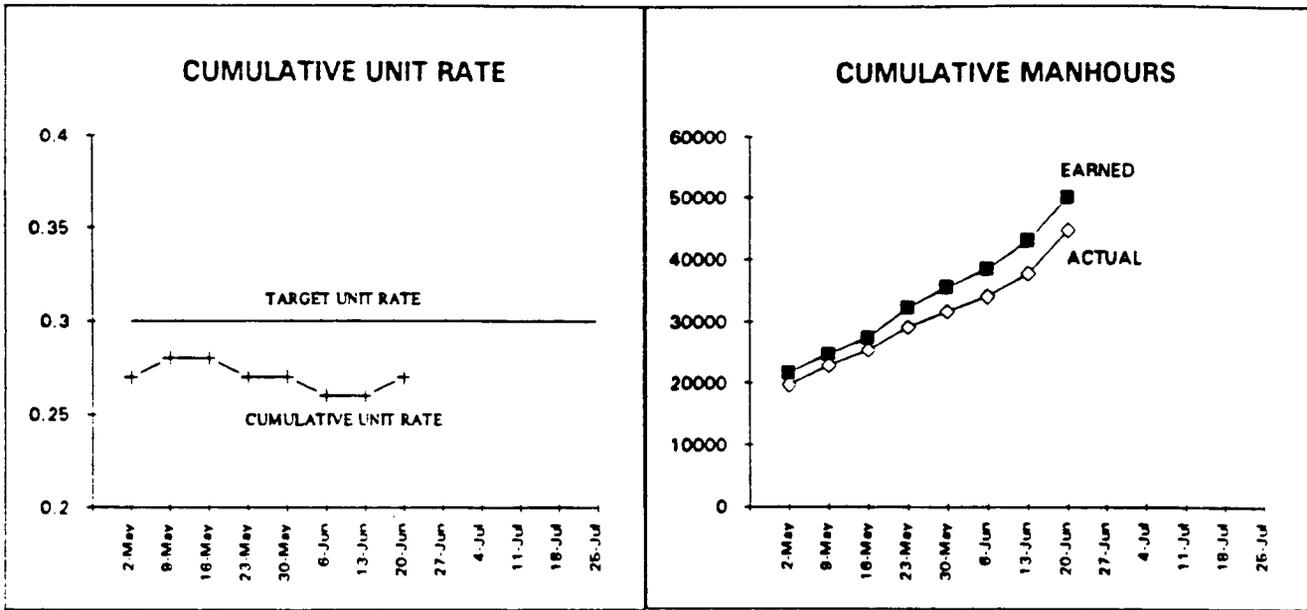
-Based upon the April 1993 Recovery Schedule-

* Milestone	System Releases Scheduled W/E 06/20/93	Total System Releases Actual W/E 06/20/93	Delta
Engineering (146 Total)	146	146	--
Modifications (188 Total)	77	77	--
Maintenance (178 Total)	68	68	--
SPAE I (123 Total)	47	47	--
Start Preop (113 Total)	26	26	--
SUT Complete (141 Total)	33	33	--
SPAE II (142 Total)	33	34	+1
Plant Acceptance (143 Total)	30	29	-1

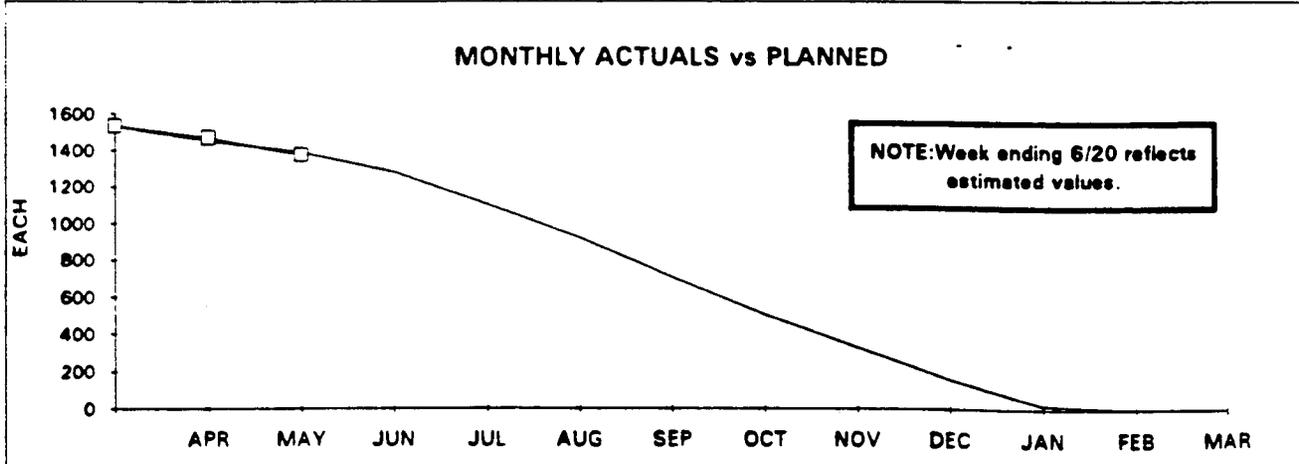
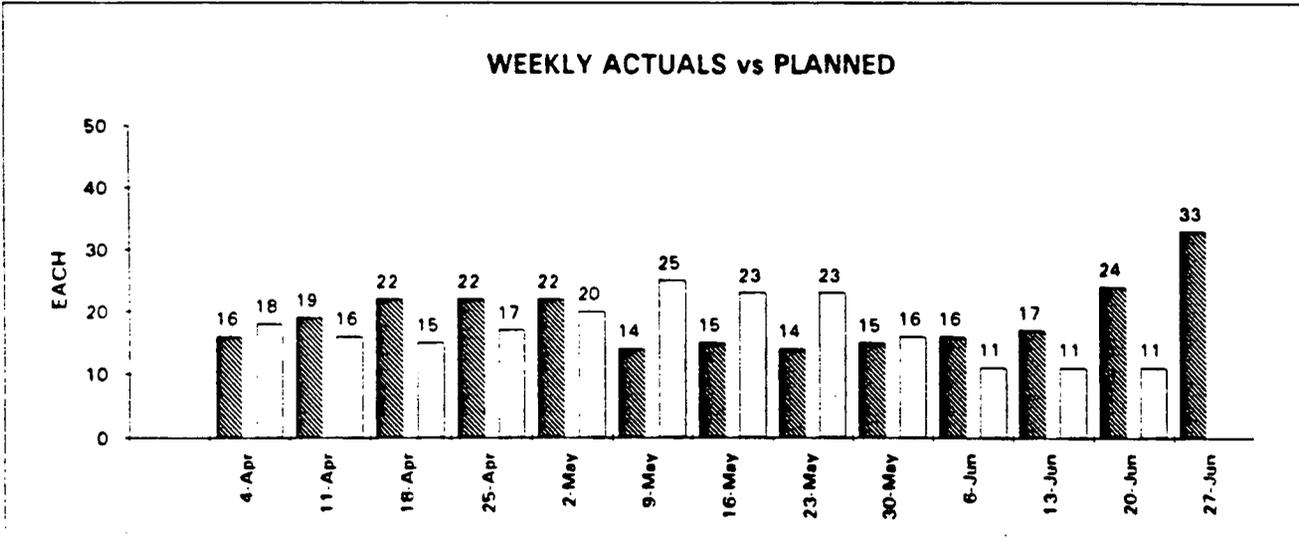
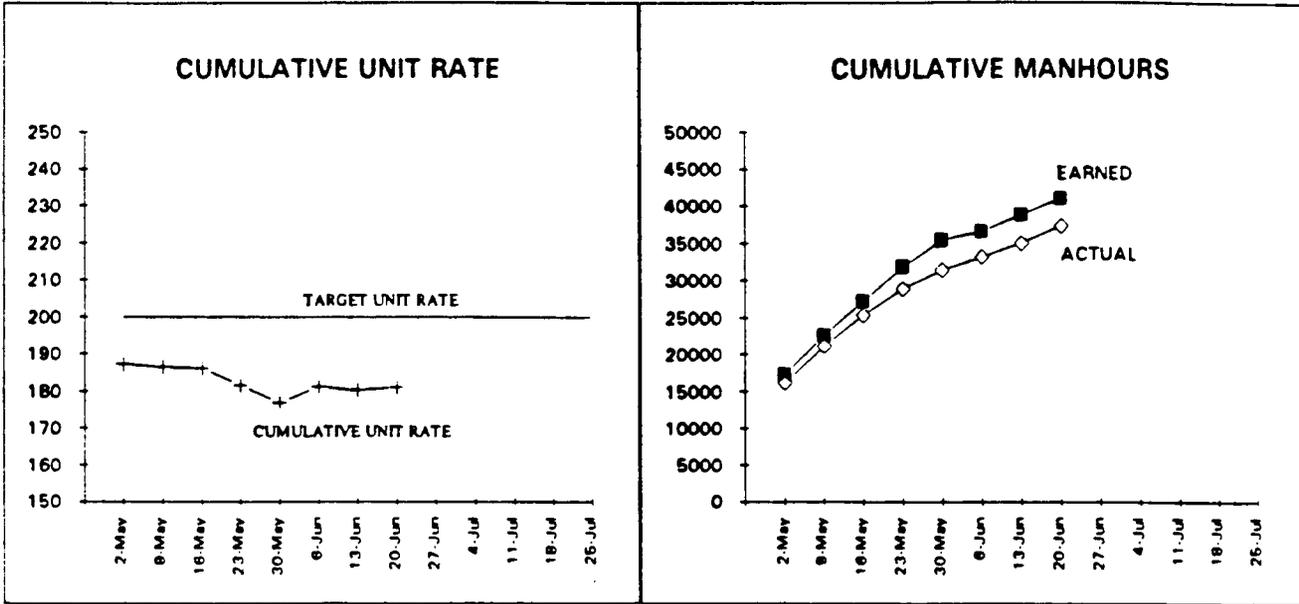
NOTE: Revised SPAE I totals.

\* Milestone totals vary due to subscoping.

# WBN - MODIFICATIONS POWER and CONTROL CABLE



# WBN - MODIFICATIONS LARGE BORE SUPPORTS MODS



PLAN	1453	1388	1283	1103	918	702	499	327	158	23	0	0
ACTUAL	1466	1375										
MONTHLY PLAN	79	65	105	180	185	216	203	172	169	135	23	0
MONTH TO-DATE	66	91										

# STARTUP PROGRAM STATISTICS

- **PROCEDURE PREPARATION STATUS**

- 187 total procedures
- 29 approved for use
- 46 draft complete (in review cycle)
- 12 PTIs currently in NRC review
- 9 Additional PTIs scheduled for NRC submittal in June

- **COMPONENT STATUS**

- 28771 total tests
- 9475 complete (33%)

- **PREOPERATIONAL TESTS (PTIs, ATIs)**

- 187 Preop tests required
- 23 Preop tests complete (12%)

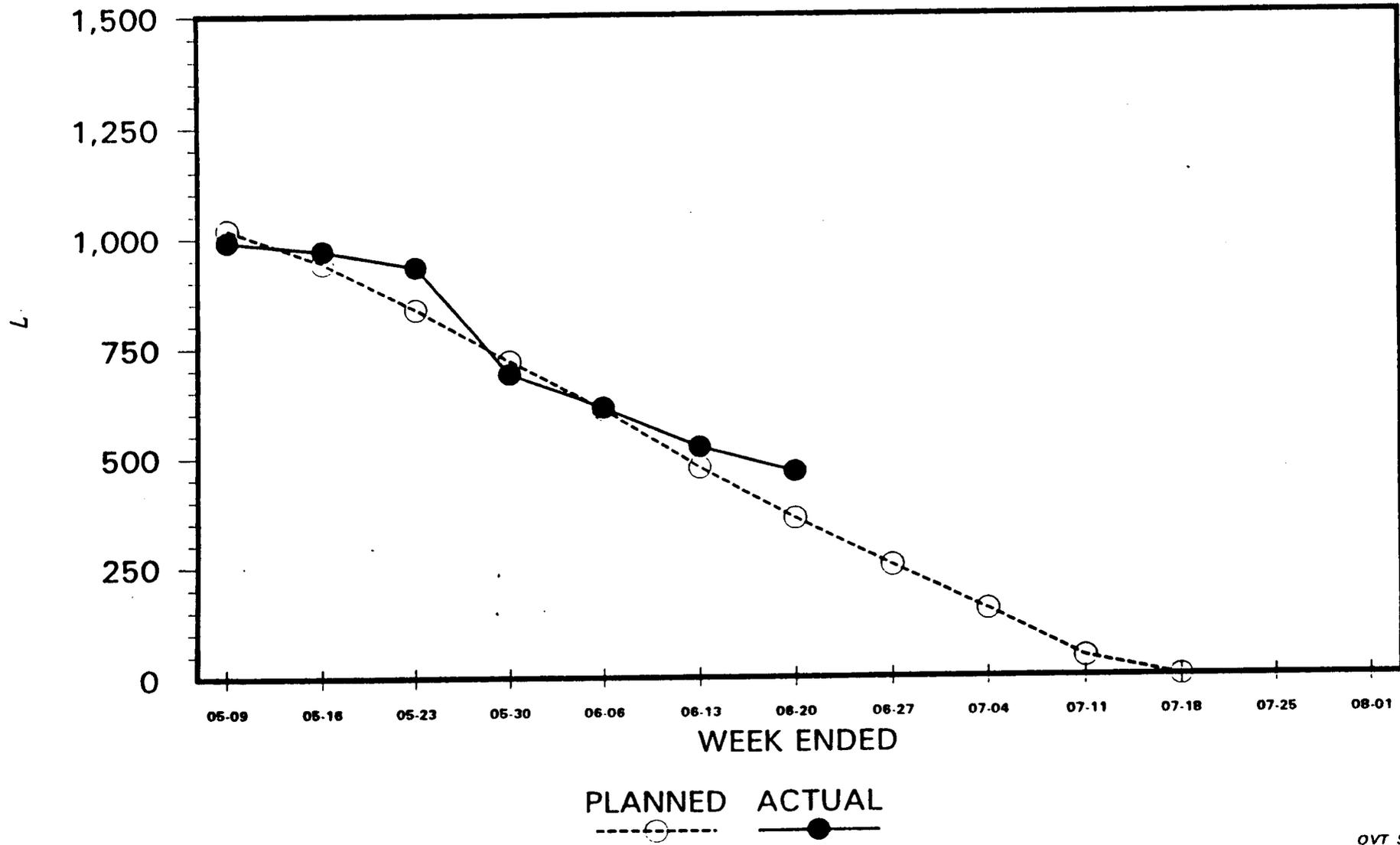
# STARTUP TEST PROGRAM STATUS

- Procedures on schedule
- NRC reviews positive
- Tests performing well
- Component testing effort

# OVT SYSTEMS SUMMARY

## COMPONENT TESTING

TOTAL TESTS



# SCHEDULE AND MAJOR MILESTONES

- **MAJOR MILESTONES**

- Base Engineering June 20, 1993 (Complete)
- Reactor coolant system mods complete July 4, 1993
- Start open vessel testing August 16, 1993
- Start hot functional testing November 8, 1993
- Start CILRT January 18, 1994

# SCHEDULE AND MAJOR MILESTONES

- **MAJOR CHALLENGES**

- Quality
- Continue to improve productivity
- Component testing restraints
- Material (breakage)
- Organizational/operational readiness

**III. PLANT READINESS**

**TVA-MOODY**

# OPERATIONAL READINESS

## PROGRAMS

- Development and implementation of programs required to support fuel load and operation are on schedule.
- Operational readiness self-assessments being utilized to measure programs against INPO criteria.
- The Procedure Upgrade Program to write and field-verify procedures is on track. These procedures are being field validated and used in the SUT Program when practical to do so.
- Emergency Operating Procedure upgrade is complete.

## HARDWARE

- 29 systems transferred to the Plant via the System Preoperability Check list (SPOC) Process.
- Configuration control is established on all transferred systems
- There are approximately 33 open corrective maintenance work orders and 39 open preventive maintenance work orders on the 29 transferred systems.

# OPERATIONAL READINESS (cont.)

## PEOPLE

- The organizational structure is in place.
- Staffing is essentially complete.
- WBN training programs are INPO accredited, and training is scheduled to support fuel load.

The subject training programs are:

- Non licensed Operator
- Reactor Operator
- Senior Reactor Operator
- Continuing Training for Licensed Personnel
- Shift Technical Advisor
- Shift Supervisor
- Instrument and Control Technician
- Health Physics (RADCON) Technician
- Radiochemical Laboratory Analyst
- Electrical Maintenance
- Mechanical Maintenance
- Engineering Support Personnel

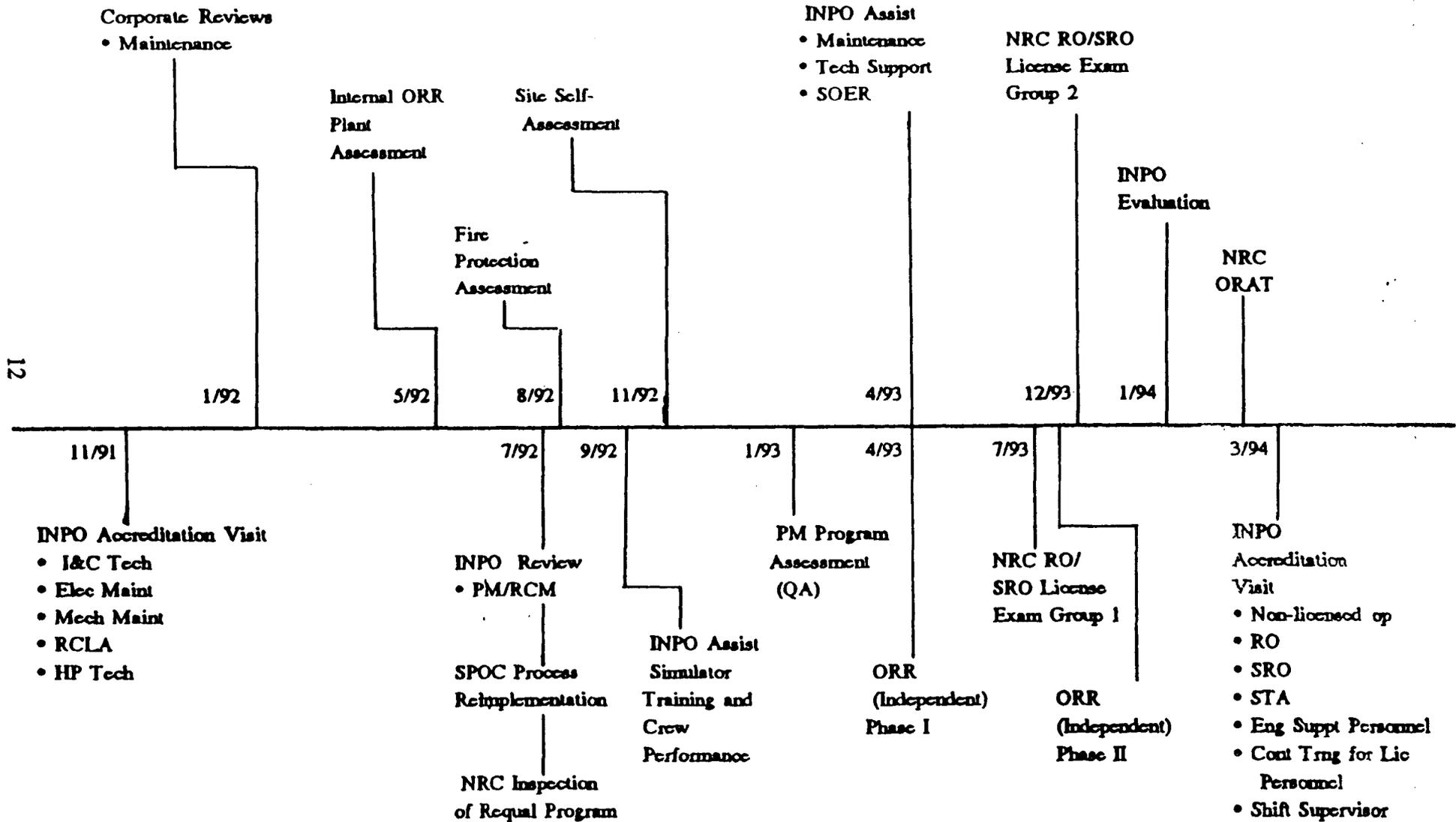
## LESSONS LEARNED FROM SQN ARE BEING REVIEWED FOR INCLUSION IN WBN PROGRAMS.

- Programs
- Hardware
- People

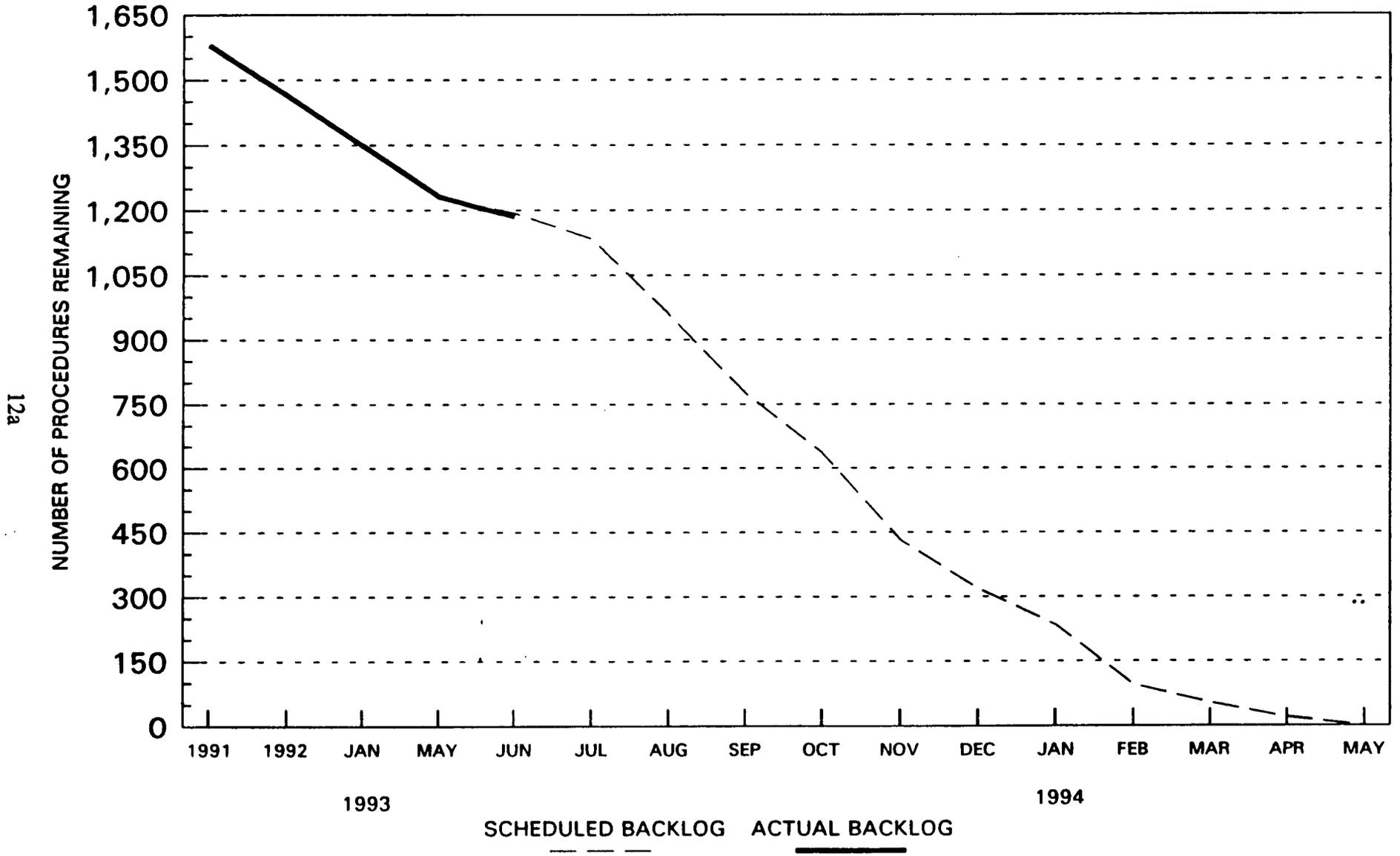
## LICENSE EXAMS

- 19 candidates will be taking the NRC license exam the weeks of 7/12/93 and 7/19/93. The second group of operators will begin training soon with exams to be scheduled 12/93.

# OPERATIONAL READINESS ACTIVITIES



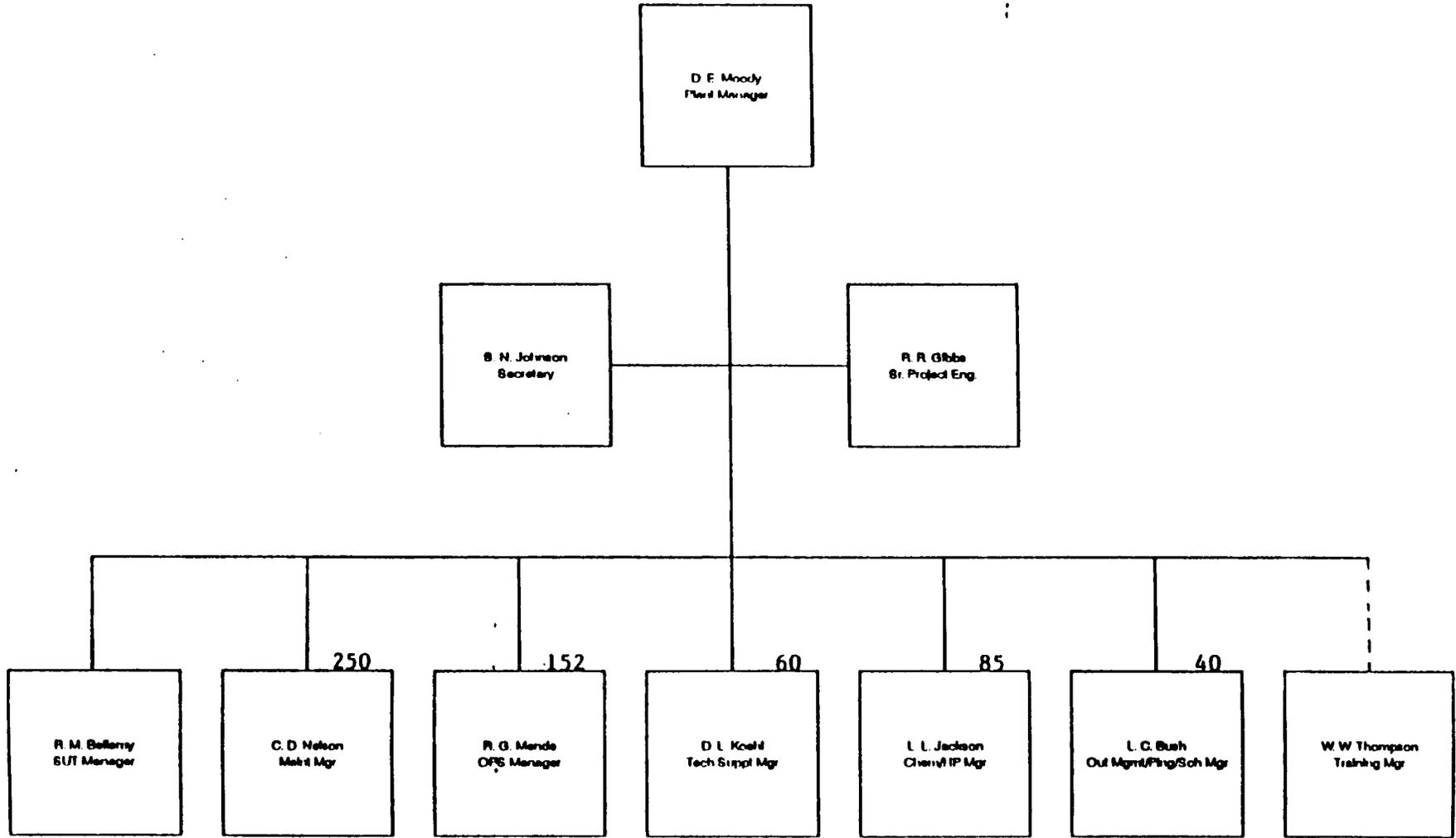
# WBNP PROCEDURES UPGRADE PROJECT - WORKOFF SCHEDULE (SIs, ODIs, TRIs, IMIs, MIs, TIs)



# WATTS BAR

## PLANT ORGANIZATION

13









**IV. LICENSING ISSUES**

**TVA-ELLIOTT/PANNELL**

# **THERMO-LAG TESTING/MODIFICATION**

- **COORDINATED TESTING METHODOLOGY WITH NRC**

- Held meetings with NRC
- NRC concurred with test methods
- Continuing dialog with NRC

- **FIRE ENDURANCE TESTING - OMEGA POINT LABS, TEXAS**

- Conduit testing performed by TVA
- Cable tray testing performed by Texas Utilities (TVA witness)
- Acceptable configurations established.

- **CONDUIT AMPACITY TESTING - TVA CHATTANOOGA LABS**

- Derate factor will be less than previous design values  
(4-6% vs 9-10%)
- No impact

- **CABLE TRAY AMPACITY TESTING - COORDINATED WITH TEXAS UTILITIES AT OMEGA POINT LABS, TEXAS**

- Derate factor is higher than current design value (31.6% vs 12.5%)
- No impact per preliminary analysis

- **SUBMIT COMPLETE PACKAGE TO NRC - JULY 9, 1993**

- **JOINT MEETING TVA/NRC - WEEK OF JULY 19, 1993**

# EAGLE-21 INSTRUMENTATION

- **NO EQUIPMENT PROBLEMS OR LICENSING ISSUES SPECIFIC TO WBN HAVE BEEN IDENTIFIED**
- **INDUSTRY EXPERIENCE**
  - Sequoyah
  - Zion
  - South Texas (partial system)
  - Turkey Point (partial system)
  - Diablo Canyon (SER expected June 93)
- **EQUIPMENT STATUS AT WBN**
  - Installed except for associated mods to Solid State Protection System (SSPS)
  - Initial acceptance testing by Westinghouse
- **LICENSING SUBMITTALS**
  - Detailed technical description of design and operation - Complete (February 26, 1992)
  - Response to 1st RAI - Complete (October 26, 1992)
  - FSAR changes - Complete (November 5 and November 30, 1992)
  - 2nd RAI from NRC received - June 18, 1993
  - Description of software verification and validation (V&V), Aug. 15, 1993
  - Revised Westinghouse setpoint methodology document - Aug. 15, 1993
- **NRC/INDUSTRY ISSUES**

# U-BOLT ISSUE

- NRC ISSUE RAISED IN CIVIL IDI JULY 1992 - STABILITY OF U-BOLT SUPPORTS QUESTIONED
- TVA RESPONSE SEPTEMBER 1992:
- ADDITIONAL INFORMATION REQUESTED BY NRC DECEMBER 1992
- TVA RESPONSE DECEMBER 1992
  - DEVELOPED ACCEPTANCE CRITERIA WITH R. L. CLOUD AS CONSULTANT
  - VERIFIED DYNAMIC TEST DATA
- MET WITH NRC TECHNICAL STAFF MARCH 1993
- ADDITIONAL INFORMATION SUBMITTED APRIL 1993
- QUESTIONS RAISED IN MAY 25, 1993, TELECON WITH NRC
  - WAS STRESS INTENSIFICATION FACTOR APPROPRIATELY USED
  - PIPE LOCAL DEFORMATION VERSUS DEFLECTION LIMIT ON SUPPORT
  - FIT-UP STRESSES DURING PIPE INSTALLATION
- RESPONSE TO TECHNICAL QUESTIONS TRANSMITTED TO THE NRC JUNE 21, 1993
- TVA BELIEVES USE OF U-BOLTS TO BE TECHNICALLY VALID AND SUPPORTED BY INFORMATION PROVIDED TO THE NRC
- PROMPT NRC REVIEW AND RESPONSE NEEDED

# ACCUMULATOR TANK CLADDING

- SAFETY-INJECTION ACCUMULATOR TANKS

  - SA516 Grade 70 carbon steel with SA240 Type 304 stainless steel roll bonded cladding

- LIQUID PENETRANT INSPECTION ASSOCIATED WITH A SAMPLE NOZZLE REPLACEMENT IDENTIFIED LINEAR INDICATIONS IN THE CLADDING ADJACENT TO THE REPLACED NOZZLE

  - Excavation and welding produced additional indications

- TVA HAS ADDED AT LEAST ONE LAYER OF STAINLESS STEEL WELD MATERIAL TO EACH EXCAVATED AREA

- DISCUSSED WITH NRR MARCH 25, 1993

- FRACTURE MECHANICS ANALYSIS COMPLETED IN ACCORDANCE WITH ASME SECTION XI - RESULTS ACCEPTABLE

- SUBMITTAL DATED APRIL 16, 1993, REQUESTING AUTHORIZATION TO APPLY SECTION XI FRACTURE MECHANICS METHODOLOGY

- NRC QUESTIONS RECEIVED ON JUNE 8, 1993

  - Preliminary TVA response discussed by telecon with NRC reviewers on June 21, 1993

- REQUEST NRC APPROVAL OF TVA SUBMITTAL

# TECHNICAL SPECIFICATIONS DEVELOPMENT

- **DRAFT TECHNICAL SPECIFICATIONS TO NRC AUGUST 27, 1992**
- **NUREG-1431 ISSUED BY NRC SEPTEMBER 30, 1992**
- **PROOF AND REVIEW (P&R) DEVELOPED JANUARY AND FEBRUARY 1993**
- **PROOF & REVIEW TECHNICAL SPECIFICATIONS ISSUED BY NRC  
MARCH 31, 1993**
- **FINAL DRAFT RESOLUTION MEETINGS DURING JULY AND AUGUST**
- **NRC ISSUE FINAL DRAFT OF TECHNICAL SPECIFICATIONS  
5 MONTHS BEFORE FUEL LOAD FOR TVA CERTIFICATION  
(NOVEMBER-DECEMBER 1993)**
- **NRC STAFF HAS BEEN VERY SUPPORTIVE OF TECHNICAL SPECIFICATION REVIEWS**

# FSAR COMPLETION PROJECT

**PHASE I** - Finalize portions of the FSAR for each system in the SPAE Phase II stage.

**PHASE II** - Review entire chapter for technical adequacy and RG 1.70 and NUREG 0800 requirements and produce an amendment to include current text, tables, and figures for each chapter.

**PHASE III** - Complete all open items identified in the "Open Items" book on a chapter basis.

**PHASE IV** - Amend any chapter necessary to incorporate the open items

**PHASE V** - Certify the FSAR on a chapter basis.

# AMENDMENT SCHEDULE

1. May 31, 1993                      Amendment 73 (Chapter 4)  
   Amendment 74 (Chapter 14A)
  
2. June 30, 1993                      Amendment 75 (Chapter 8)
  
3. July 30, 1993                      Amendment 76 (Chapters 1 & 14B)  
   Amendment 77 (Chapter 11)
  
4. Aug. 31, 1993                      Amendment 78 (Chapter 5)  
   Amendment 79 (Chapter 3)
  
5. Sept. 30, 1993                      Amendment 80 (Chapter 15)  
   Amendment 81 (Chapter 7)
  
6. Oct. 29, 1993                      Amendment 82 (Chapter 10)  
   Amendment 83 (Chapter 2)
  
7. Nov. 30, 1993                      Amendment 84 (Chapter 12)  
   Amendment 85 (Chapter 6)
  
8. Dec. 30, 1993                      Amendment 86 (Chapter 9)  
   Amendment 87 (Chapters 13, 16, & 17)

# GENERIC ISSUES

- **NUREG-0737 ITEMS (TMI ISSUES)**

- Maintain listing of each TMI issue in Licensing Project Plan along with Region II status and NRR Status
- Open TMI issues tracked on NRC-NRR TAC list and Chapter 1 of SER
- Status and/or closure packages prepared for remaining open items

- **SALEM ATWS ISSUES**

- Open items tracked on NRR TAC list
- Closure of each issue listed in SER supplement (Chapter 15)
- Implementation tracked by commitment closure process

- **SAFETY EVALUATION REPORT ISSUES**

- 28 remaining open issues
- Status discussed in monthly NRC/TVA status meetings

- **NRC OPEN ITEMS**

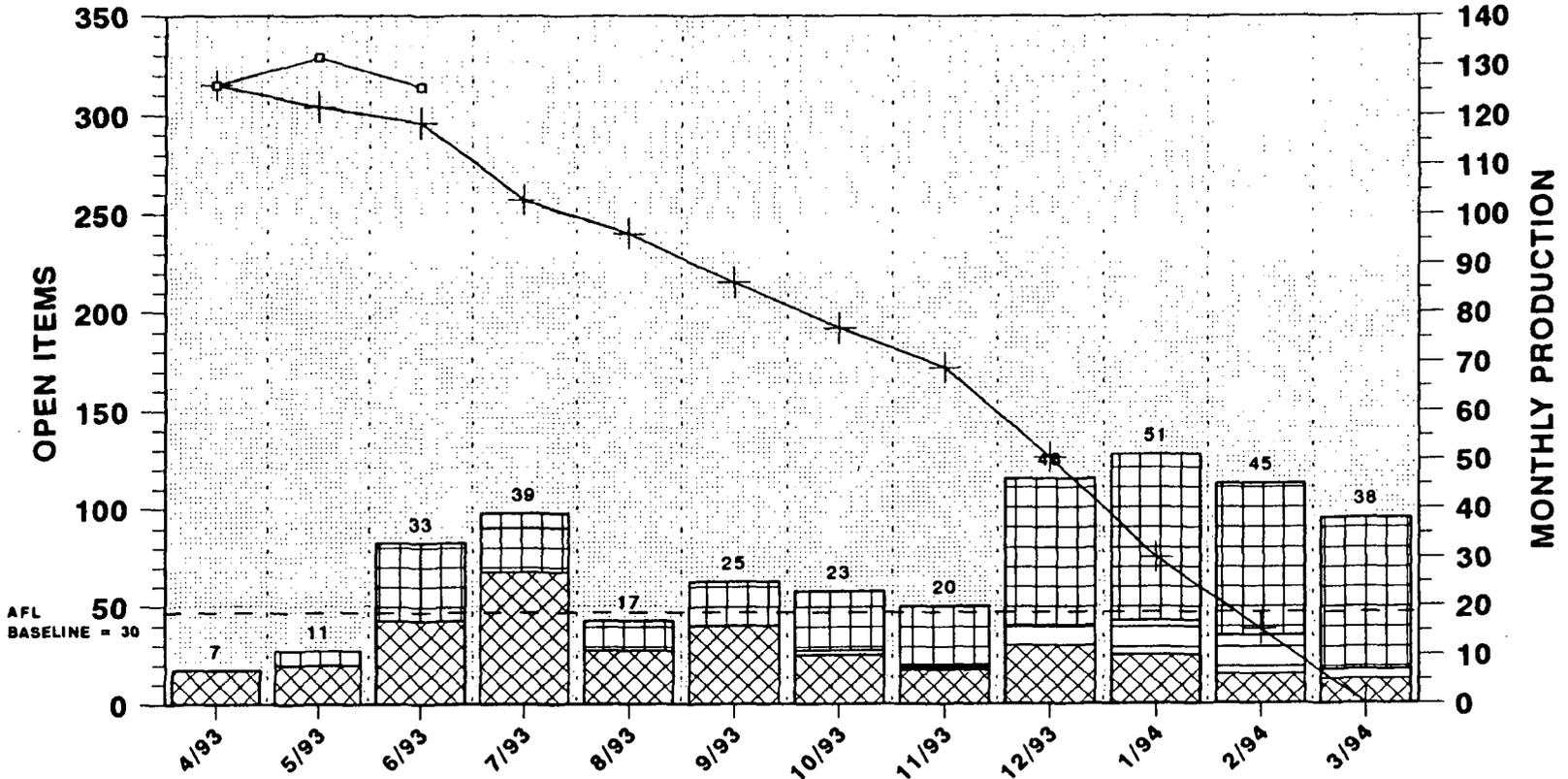
- **OPEN GENERIC ISSUES TRACKED ON NRC'S TAC LIST WITH STATUS REVIEWED IN MONTHLY NRR PROJECT MANAGER'S STATUS MEETING**

## 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
Detailed Control Room Design Review	X	12/93
Replacement Items	X	7/93
Microbiologically Induced Corrosion	X	7/93
Hanger and Analysis Update Program	X	03/94
Vendor Information	X	9/93
QA Records	X	9/93
Design Baseline and Verification Program	X	1/94
Fire Protection	6/93	02/94
Q-List	6/93	11/93
Equipment Seismic	6/93	03/94
Instrument Lines	8/93	02/94
Equipment Qualification/Mech. EQ	10/93	02/94
Electrical Issues	7/93	02/94
Moderate Energy Line Break Flooding	7/93	03/94
HVAC Duct and Supports	7/93	03/94
Electrical Conduit and Supports	10/93	03/94
Cable Tray and Supports	10/93	03/94
Containment Cooling	6/93	9/93
Radiation Monitoring	9/93	12/93
Cable Issues	9/93	2/94

# NRC OPEN ITEMS WORKOFF CURVE WBN-LICENSING

CONTACT:  
K. BOYD  
X8837



26

WATERFALL SYSTEMS		0	3	16	12	6	9	12	12	30	34	31	31
NON-WATERFALL SYSTEMS		0	0	0	0	0	0	1	1	4	7	8	2
PROGRAMMATIC ISSUES		7	8	17	27	11	16	10	7	12	10	6	5
PERIOD ADDED		33	22	16									
PERIOD ACTUAL*		31	8	28									
PERIOD PLANNED		25	29	33	39	17	25	23	20	46	51	45	38
PLANNED WORKOFF		315	304	296	257	240	215	192	172	126	75	38	0
ACTUAL TO GO		315	329	314									

\* PERIOD ACTUAL:  
WATERFALL SYSTEMS = 13  
PROGRAMMATIC ISSUES = 8  
NRC DID NOT ISSUE OI = 9

# LICENSING CERTIFICATION PLAN

- **BACKGROUND PLANNING**
  - Review of 1985 Certification
  - Plant Visits - Comanche Peak
  - Review of all post 1985 Certifications (17)
  - Development of Position
  - Generation of Plan
  
- **PLAN ELEMENTS**
  - Operational Readiness vs "Certification"
  - CAPs and SPs
  - PAC/AQ
  - TS/FSAR/SSER Certification
  - Open Item Closeouts
  - "Roll-Up" Mini-Certifications
  
- **SCHEDULE**
  - Plan Completed - approach being implemented (July)
  - "Mini-Certification" Form drafted
  - Presentations being scheduled
  
- **MANAGERS**
  - Buy-in
  - Understanding responsibility

# **NRC STAFF LEVEL OF EFFORT**

- **CURRENTLY RECEIVING ADEQUATE RESOURCES DEDICATED FROM NRR AND RII**
  
- **NRR REVIEWS:**
  - Technical Specifications
  - FSAR Amendments
  - TAC List Items/SSER Closures
  
- **RII INSPECTIONS:**
  - CAP/SP Team Inspections
  - Open Items
  - Pre-Op Testing
  - Employee Concerns
  
- **LICENSING RESOURCE ALLOCATION TO WBN - DEDICATED REVIEWERS**

**V. QA RECORDS CORRECTIVE ACTION PROGRAM TVA-KAZANAS**

# QA RECORDS CORRECTIVE ACTION PROGRAM

- **ADDITIONAL SYSTEMATIC RECORD REVIEWS (ASRR) COMPLETE**
  - Reviews for quality and technical content complete
  - Hardware inspections completed
  - Problem resolution completed with extent of condition underway
    - Equipment Anchorage
    - Vendor Radiographs
    - Vendor CMTRs
  
- **RECORD PLANS IDENTIFY PRIMARY CONSTRUCTION/INSTALLATION RECORDS**
  - Initial submittal of all plans to NRC for review
  - Validation accomplished by completing problem resolution
  - Verification accomplished by site QA reviews

24 now available for inspection  
14 remaining to be available in July
  
- **NRC INSPECTIONS OF RECORD PLANS TO BEGIN JULY 12**
  
- **MATERIAL CONTROL ISSUES**
  - TVA submittal to NRC providing results of reviews and conclusion that material control in the past was adequate June 1, 1993.
  - NRC completed material testing with results supporting TVA conclusions.
  
- **RECORDS CAP CORRECTIVE ACTION IMPLEMENTATION COMPLETE IN SEPTEMBER**
  - Problem resolution and EOC evaluation
  - Historic records indexing
  - Records management system improvements
  - CAP final report

# OVERALL COMPLETION ASSURANCE ASSESSMENT

- **ENGINEERING**

- OVERALL, SATISFACTORY

- **MODIFICATIONS**

- OVERALL SATISFACTORY,  
SOME PROBLEMS WITH WORK PLANS

- **STARTUP & TEST**

- OVERALL SATISFACTORY

- WORK ORDER IMPLEMENTATION ISSUE BEING ADDRESSED

- **PLANT**

- OVERALL SATISFACTORY

- **OVERALL PROBLEM AREAS WHERE IMPROVEMENT IS NEEDED**

- ELECTRICAL WORK PLANS

- TRAINING

- QUALITY OVERSIGHT EFFORTS

**VI. PAC/AQ OVERVIEW**

**TVA-CAPOZZI**

# **PROGRAM FOR ASSURANCE OF COMPLETION AND ASSURANCE OF QUALITY (PAC/AQ)**

## **PURPOSE OF PAC/AQ**

**PROVIDE ADDITIONAL VERIFICATIONS THAT WBN IS DESIGNED AND  
CONSTRUCTED AS COMMITTED AND IS READY FOR OPERATION.**

# PAC/AQ STATUS AND RESULTS

## PROTOTYPE

- The prototype review was performed on the Essential Raw Cooling Water (ERCW System 67) to debug program and obtain early data on the plant.
- This prototype effort expended over 16,000 man-hours.

## PHASE I - Identification of Commitments

- All commitments are known, tabulated, and accessible in one data base.
- This phase expended over 12,000 man-hours.

## PHASE II - Matching of Commitments

- Commitments have been matched to their implementing documents.
- This phase expended over 25,000 man-hours.

## PHASE III - Technical Review of Implementing Documents

- Detailed technical reviews were performed on all the Corrective Action Programs (CAPs), Special Programs (SPs), and selected processes.
- This phase expended over 6,000 man-hours.

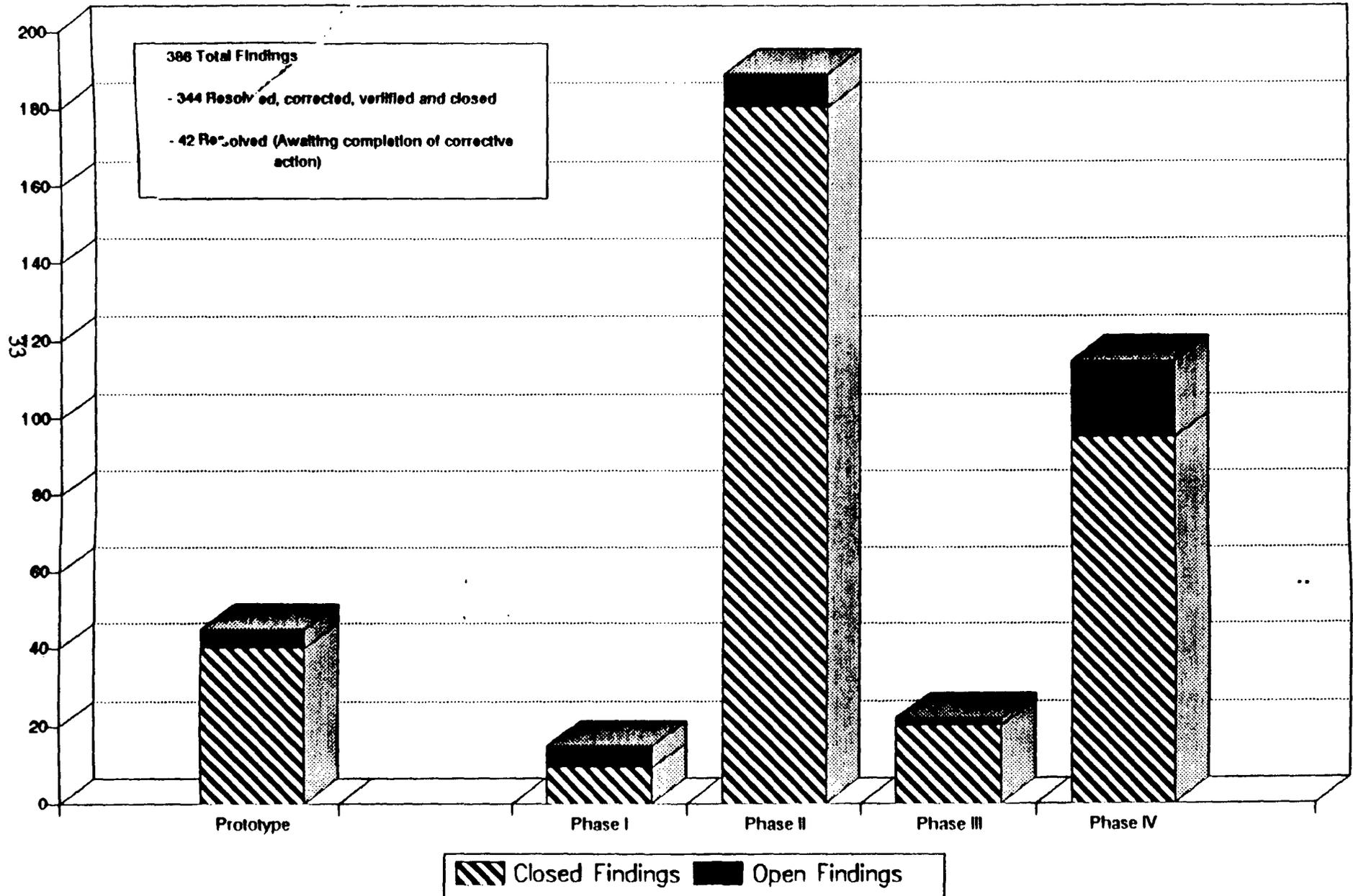
## PHASE IV - Implementation Verification Including The Review of Plant Hardware

- Three Vertical Slice Reviews (VSRs) were performed on the following systems:
  - 6.9kV Shutdown Power (System 211)
  - Control Air (System 32)
  - Component Cooling (System 70)
- Extensive walk downs and desk top reviews were performed for all three system
- This phase expended over 18,000 man-hours.

## PHASE V - Oversight of Operational Readiness Review

- To start 11/93 and continue to one month prior to fuel load.
- This phase will expend approximately 10,000 man-hours.

# PAC/AQ Identified Findings and Status



# **OVERALL PAC/AQ CONCLUSIONS**

- **COMMITMENTS KNOWN, CAPTURED, TRACKED, AND MET.**
- **PLANT MEETS DESIGN AND REGULATORY REQUIREMENTS**