November 22, 1995

Tennessee Valley Authority
ATTN: Mr. Oliver D. Kingsley, Jr.
President, TVA Nuclear and
Chief Nuclear Officer
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: MEETING SUMMARY - SEQUOYAH NUCLEAR PLANT OUTAGE SUMMARY, DOCKET NOS. 50-327, 50-328

Dear Mr. Kingsley:

On November 20, 1995, the NRC staff met at the Region II office with representatives of the Tennessee Valley Authority's Sequoyah Nuclear Plant staff. The purpose of this meeting was for Sequoyah management to provide a summary of performance for the recently completed Unit 1 refueling outage. Enclosure 1 is a list of the individuals who attended the meeting, and Enclosure 2 contains a copy of the material supplied by the licensee.

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 and its enclosures will be placed in the NRC Public Document Room.

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

Sincerely,

Original Signed by
M. S. Lesser

Mark S. Lesser, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Enclosures: 1. List of Attendees
2. Handout Material

cc w/encls: (See page 2)

IE01

cc w/encls:
Mr. O. J. Zeringue, Senior Vice Pres.
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Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Dr. Mark O. Medford, Vice Pres.
Engineering & Technical Services
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. D. E. Nunn, Vice Pres.
New Plant Completion
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. R. J. Adney, Site Vice Pres.
Sequoyah Nuclear Plant
Tennessee Valley Authority
P. O. Box 2000
Soddy Daisy, TN 37379

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

Mr. P. P. Carier, Manager
Corporate Licensing
Tennessee Valley Authority
4G Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Ralph H. Shell
Site Licensing Manager
Sequoyah Nuclear Plant
Tennessee Valley Authority
P. O. Box 2000
Soddy Daisy, TN 37379

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

Mr. Michael H. Mobley, Dir.
Div., of Radiological Health
3rd Floor, L and C Annex
401 Church Street
Nashville, TN 37243-1532

County Judge
Hamilton County Courthouse
Chattanooga, TN 37402

Ms. Ann Harris
305 Pickel Road
Ten Mile TN 37880

Distribution w/encls: (See page 3)

Distribution w/encls:
E. W. Merschoff, RII
M. S. Lesser, RII
S. E. Sparks, RII
F. J. Hebdon, NRR
D. E. LaBarge, NRR
Document Control Desk

NRC Resident Inspector
U. S. Nuclear Regulatory Commission
2600 Igou Ferry
Soddy-Daisy, TN 37379

NRC Resident Inspector
U. S. Nuclear Regulatory Commission
1260 Nuclear Plant Road
Spring City, TN 37381

SEND TO PUBLIC DOCUMENT ROOM?			YES (circled)	NO		
OFFICE	DRP/RII					
SIGNATURE	S E Sparks					
NAME	SSparks:vyg					
DATE	11/24/95	11/ /95	11/ /95	11/ /95	11/ /95	11/ /95
COPY?	YES (circled) NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\BR6.SQ\MM1120.SUM

LIST OF ATTENDEES

NRC

S. D. Ebneter, Regional Administrator, Region II (RII)
E. W. Merschoff, Director, Division of Reactor Projects (DRP), RII
A. F. Gibson, Director, Division of Reactor Safety (DRS), RII
M. S. Lesser, Branch Chief, Branch 6, DRP, RII
W. E. Holland, Senior Resident Inspector, Branch 6, DRP, RII
F. J. Hebdon, Director, Project Directorate II-3, Office of Nuclear Reactor Regulation (NRR)
D. E. LaBarge, Senior Project Manager, NRR
K. P. Barr, Chief, Plant Support Branch, DRS, RII
D. B. Forbes, Radiation Specialist, DRS, RII

Licensee Attendees:

O. D. Kingsley, President, TVA Nuclear
R. J. Adney, Site Vice President
R. F. Driscoll, Nuclear Assessment and Licensing Manager
R. H. Shell, Site Licensing Manager
T. Flippo, Site Support Manager
M. Burzynski, Engineering and Materials Manager
G. Fader, Unit 2 Cycle 7 Outage Manager
J. Reynolds, Operations Superintendent
L. Pruett, Sequoyah Operations
P. Leady, Shift Operations Supervisor
L. Bergen, Site Program Manager

Enclosure 1

TVA/NRC MEETING
MANAGEMENT MEETING
TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT

NOVEMBER 20, 1995
NRC REGION II OFFICE

Enclosure 2

TVA/NRC MEETING
NOVEMBER 20, 1995
NRC REGION II OFFICE

AGENDA

INTRODUCTION	R. J. ADNEY
UNIT 1 CYCLE 7 OUTAGE	G. B. FADER
SITE IMPROVEMENT PLAN	T. A. FLIPPO
OPERATIONAL IMPROVEMENTS AND INITIATIVES	J. R. REYNOLDS
ENGINEERING IMPROVEMENTS	M. J. BURZYNSKI
NUCLEAR ASSURANCE OVERSIGHT	R. F. DRISCOLL
CLOSING	R. J. ADNEY

UNIT STATUS

- UNIT 1 IS IN MODE 1 PROGRESSING TOWARD 30% REACTOR POWER. THE UNIT WAS TAKEN OFF LINE ON 11/18/95 AS A RESULT OF PROBLEMS WITH THE TURBINE INTERCEPT VALVES. THE UNIT 1 CYCLE SEVEN OUTAGE WAS SUCCESSFULLY COMPLETED ON 11/11/95.

- UNIT 2 IS OPERATING AT APPROXIMATELY 100% POWER. THE UNIT HAS BEEN ON-LINE FOR 171 DAYS. THE UNIT 2 CYCLE SEVEN OUTAGE IS CURRENTLY SCHEDULED TO BEGIN IN MAY OF 1996.

- THE NEW SECURITY SYSTEM WAS PLACED IN SERVICE ON 11/20/95.

MAJOR MODIFICATIONS

- REPLACED ALL LOWER COMPARTMENT COOLERS (4 SETS)
- REPLACED FIVE ELECTRICAL PENETRATIONS
- ARROW-HART CONTACTOR REPLACEMENTS
- REPLACED TWO FEEDWATER NOZZLE TRANSITION PIECES (FINAL 2)
- PIPING REPLACEMENTS (EROSION/CORROSION) 850 FT. LARGE BORE, 2600 FT. SMALL BORE. NO GROWTH IN SCOPE AS A RESULT OF OUTAGE INSPECTIONS.
- CHEMISTRY SAMPLING UPGRADES
- MSIV/MSCV MODIFICATIONS (4)
- DIESEL GENERATOR GOVERNOR MODIFICATION
- MAIN GENERATOR OUTPUT BREAKER REPLACEMENT
- CAPACITOR BANK MODIFICATION

MAJOR MAINTENANCE WORK

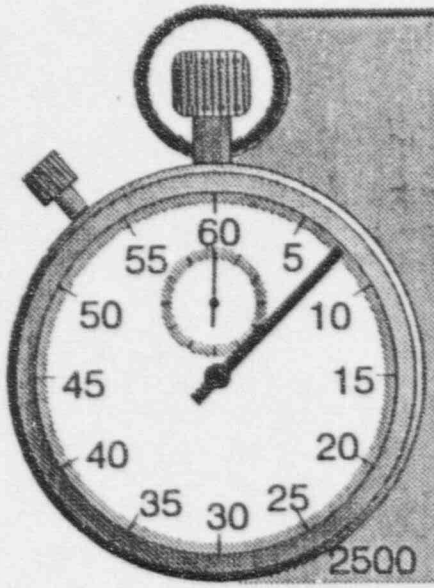
- 1586 WORK ORDERS COMPLETED (~ 470 EMERGENT WOs)
- 837 PREVENTIVE MAINTENANCE ACTIVITIES
- LOW PRESSURE TURBINE/MAIN GENERATOR WORK
- TWO RCP SEAL REPLACEMENTS
- RCP MOTOR
- EXTRACTION STEAM BELLOWS INSPECTION/REPLACEMENT
- TEMPORARY LEAK REPAIRS CLEARED
- OUTAGE TEMPORARY ALTERATIONS CLEARED
- UT FUEL/RCCA INSPECTIONS
- REACTOR HEAD FUNNEL REPAIRS
- STEAM GENERATOR CHEMICAL CLEANING/SLUDGE LANCING/EC TESTING
- MAINTAINED STEADY NONOUTAGE BACKLOG

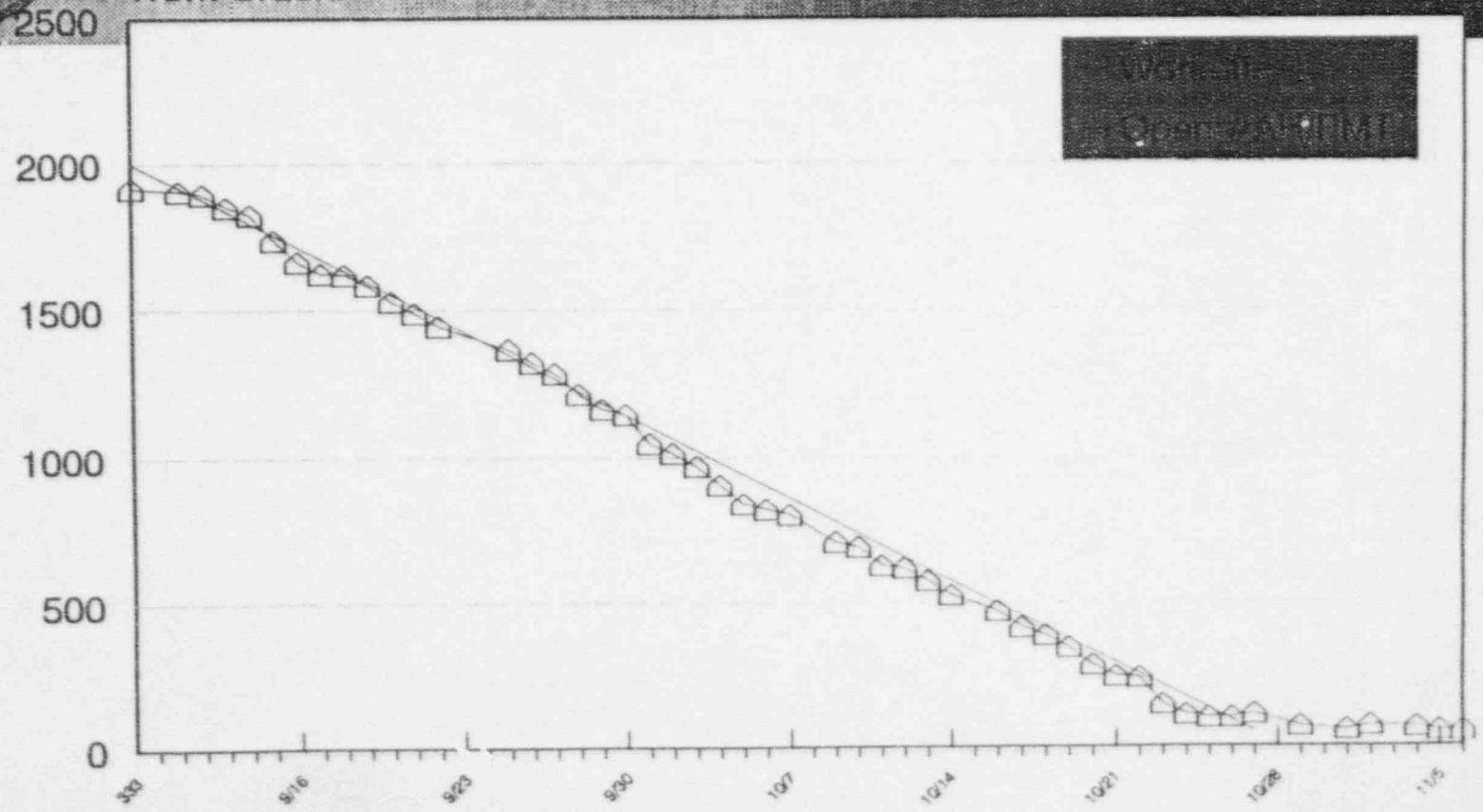
OUTAGE PROCESS IMPROVEMENTS

- OPERATIONS INITIATIVES
- TEAM BUILDING
- OUTAGE MILESTONE MANAGERS
- SOFTWARE ENHANCEMENTS FOR ACTIVITIES' STATUSING
- COMMUNICATIONS
- OUTAGE CRITIQUE INFO COLLECTION
- PORC REVIEW OF SCHEDULE CHANGES
- INTEGRATED OUTAGE AND DAILY SCHEDULES
- VACUUM REFILL
- FULL SCALE LEVEL MONITOR (ESPECIALLY HELPFUL DURING MIDLOOP OPERATION)

Outage Scope Completion

Sequoyah U1C7 Outage Review





LESSONS LEARNED FOR FUTURE OUTAGES

- SG TUBE CRACK - TUBE PULL

- COMPLEX OR INFREQUENTLY PERFORMED TEST - PROCESS IMPROVEMENT

- BENT THERMOCOUPLE COLUMN

- CANOPY SEAL WELDS

- SAFETY VALVE

- PREOUTAGE MATERIAL MILESTONES

UNIT 2 PERFORMANCE DURING U1C7 OUTAGE

- UNIT 2 OPERATION HAD PRIORITY OVER THE OUTAGE UNIT

- THE APPROPRIATE WORK ORDERS WERE COMPLETED TO ENSURE SAFE AND RELIABLE OPERATION OF THE UNIT

- PREVENTIVE MAINTENANCE ACTIVITIES WERE MAINTAINED WITHIN PLANT REQUIRED FREQUENCY.

- A FORCED OUTAGE PLAN WAS MAINTAINED

- UNIT 2 OPERATED AT APPROXIMATELY 100% POWER THROUGHOUT THE UNIT 1 CYCLE 7 OUTAGE.

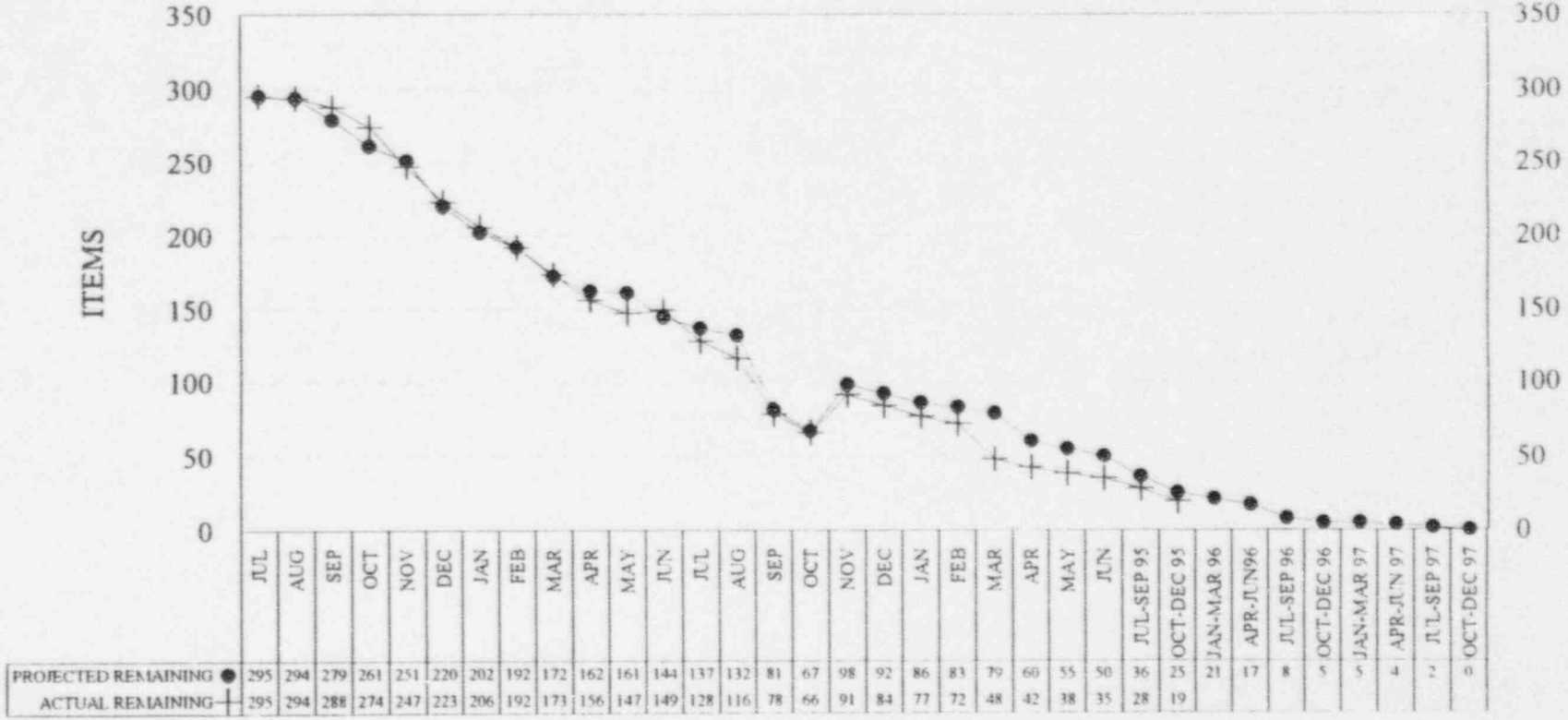
SITE IMPROVEMENT PLAN

- IN THE SUMMER OF 1993 SQN IMPLEMENTED A RESTART PLAN FOR BOTH UNITS AT SQN. THIS RESTART PLAN CONTAINED APPROXIMATELY 300 DIFFERENT ACTIONS.

- THE RESTART PLAN WAS TRANSITIONED TO THE SITE IMPROVEMENT PLAN ONCE THE UNITS RESTARTED.

- PRESENTLY, THE SITE IMPROVEMENT PLAN IS CONTAINED AS PART OF THE SITE BUSINESS PLAN. NINETEEN ITEMS REMAIN FROM THE ORIGINAL RESTART PLAN.

1993 RESTART SITE IMPROVEMENT PLAN



OPERATIONAL IMPROVEMENTS AND INITIATIVES

- CHANGES HAVE BEEN MADE WITHIN THE OPERATIONS DEPARTMENT TO IMPROVE THE COMMAND AND CONTROL OF THE OPERATIONS ORGANIZATION.

- ORGANIZATIONAL CHANGES HAVE BEEN MADE TO STRENGTHEN THE MANAGEMENT STRUCTURE OF THE OPERATIONS TEAM.

- EVALUATIONS OF ALL OPERATIONS DEPARTMENT PERSONNEL HAVE BEEN CONDUCTED IN ORDER TO ACCURATELY EVALUATE THE REQUIREMENTS OF THE OPERATIONS DEPARTMENT.

- OPERATIONS MANAGEMENT HAS INCREASED ITS EMPHASIS ON COMMUNICATION

- OPERATIONS MANAGEMENT HAS DEVELOPED WRITTEN EXPECTATIONS RELATIVE TO OPERATOR PERFORMANCE

- OPERATIONS MANAGEMENT DEVELOPED AND IMPLEMENTED AN INTEGRATED PLAN FOR THE U1C7 OUTAGE

- THE PERFORMANCE INDICATORS OVER THE LAST SEVERAL MONTHS ARE VERY POSITIVE.

ENGINEERING IMPROVEMENTS

- ENGINEERING BACKLOGS ARE NO LONGER AN IMPEDIMENT TO PLANT OPERATIONS AND MAINTENANCE ACTIVITIES.

- THE NATURE OF DESIGN CHANGES AT SEQUOYAH HAVE IMPROVED SINCE 1993.

- THE ENGINEERING ORGANIZATION IS NOW CAPABLE OF DEVELOPING AND MEETING PLANT SCHEDULES.

- THE ENGINEERING OPERATIONS SUPPORT GROUP HAS FIRMLY ESTABLISHED ITS ROLE IN SUPPORT OF ROUTINE MAINTENANCE ACTIVITIES.

- THE ENGINEERING ORGANIZATION'S RELIANCE ON OUTSIDE CONTRACTOR SUPPORT HAS BEEN ELIMINATED.

Sequoyah Nuclear Engineering Backlogs

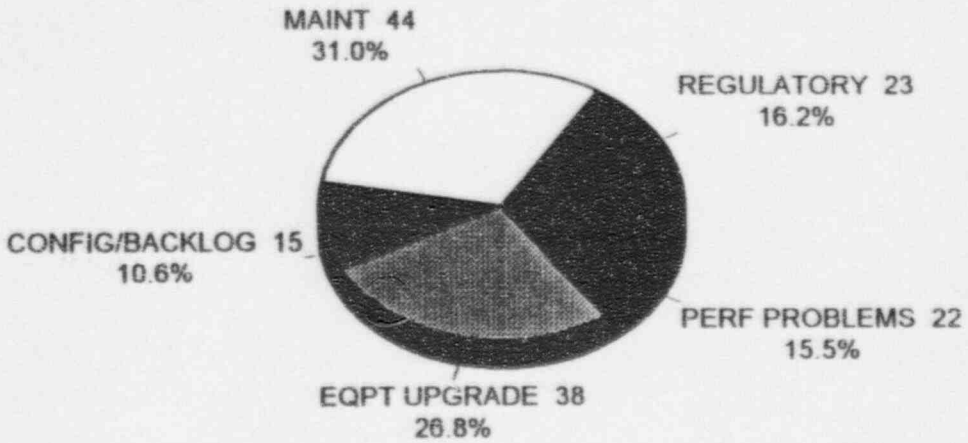
Historical Perspective

Backlog Area	End of FY93	Now	Target Date
Secondary Drawings	30500	17603	9/98
Category 3E Drawings	4000	None	℄
Old Category 2 Drawings	1624	None	℄
Vendor Manual Changes	1850	None	℄
Drawing Deviations	750	None	℄
Engineering Procurement Issues			
Old Dedication Items	656	None	℄
Engineering Hold Items	107	None	℄
Old ECN Closure	78	None	℄
Employee Concern CATDs	11	None	℄
DCNs Awaiting Implementation	219	131	Ongoing
DCNs In Work	103	78	Ongoing
Corrective Action Items			
Number Open	143	129	Ongoing
Average Age (Days)	459	219	

November 6, 1995

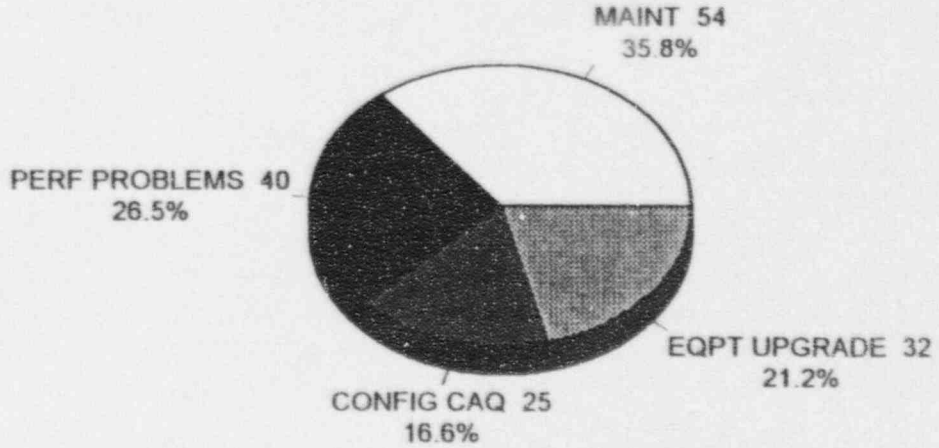
SEQUOYAH DESIGN CHANGES

ISSUED IN FY93



TOTAL ISSUED - 142

ISSUED IN FY94 & 95

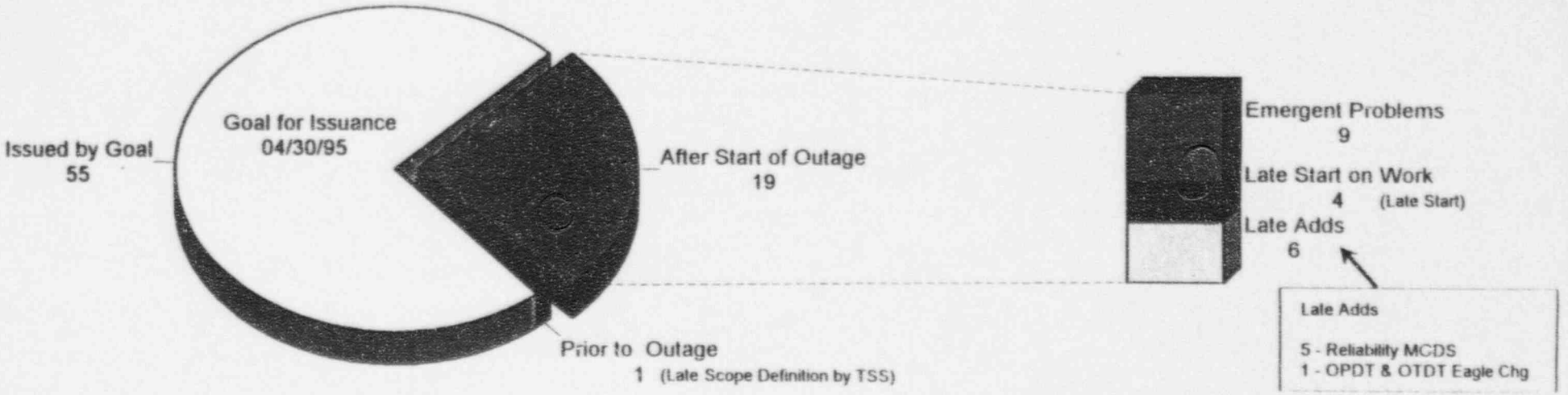


TOTAL ISSUED - 151

- FOCUS IS MORE PLANT ORIENTED
- WORKLOAD IS REDUCED
- PERFORMANCE ISSUES MORE EMPLOYEE-DRIVEN

SEQUOYAH UNIT 1 CYCLE 7

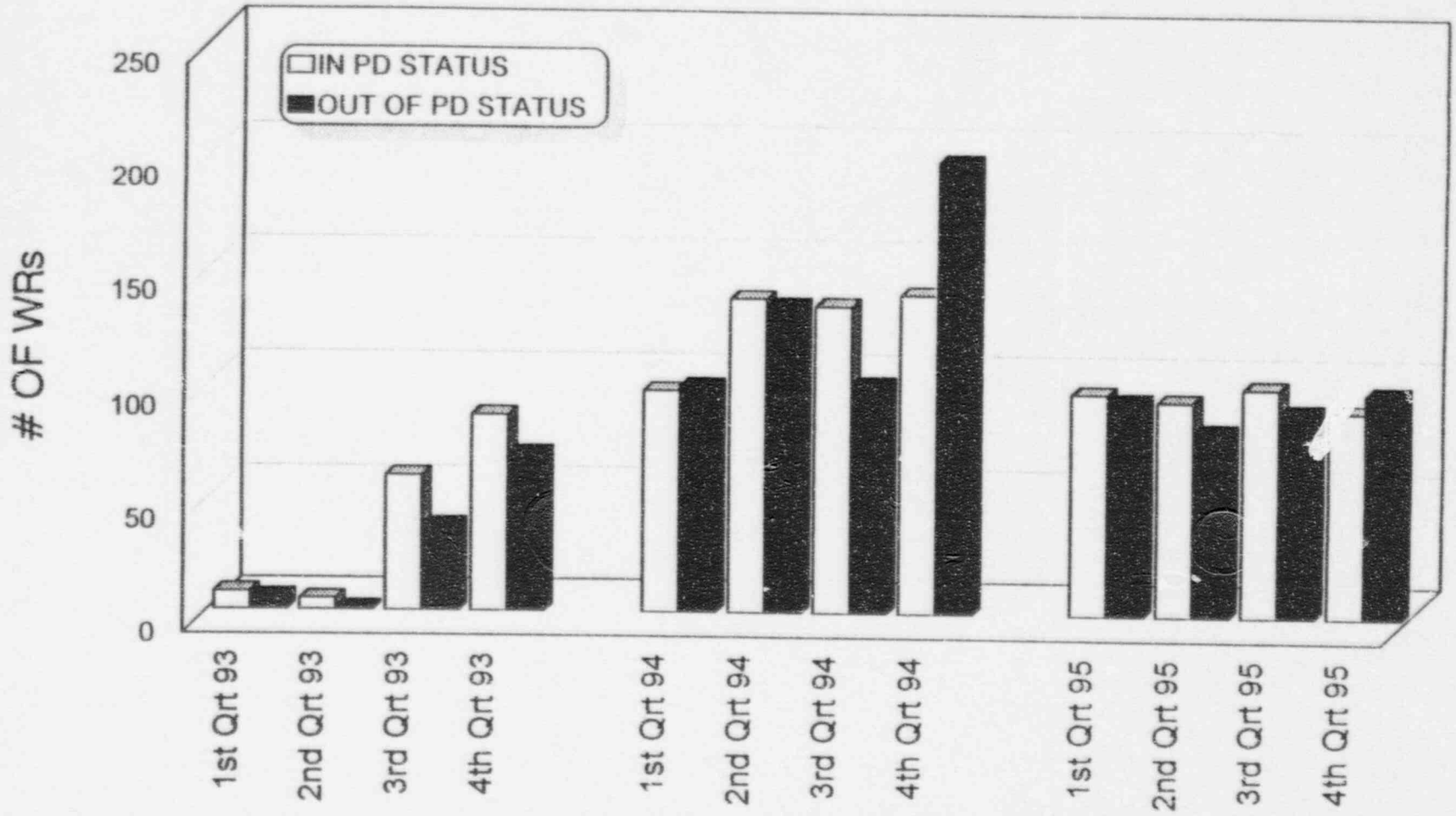
DESIGN CHANGES



- GOOD OUTAGE MILESTONE ADHERENCE
- INCREASED CAPABILITY TO RESPOND TO EMERGENT ISSUES

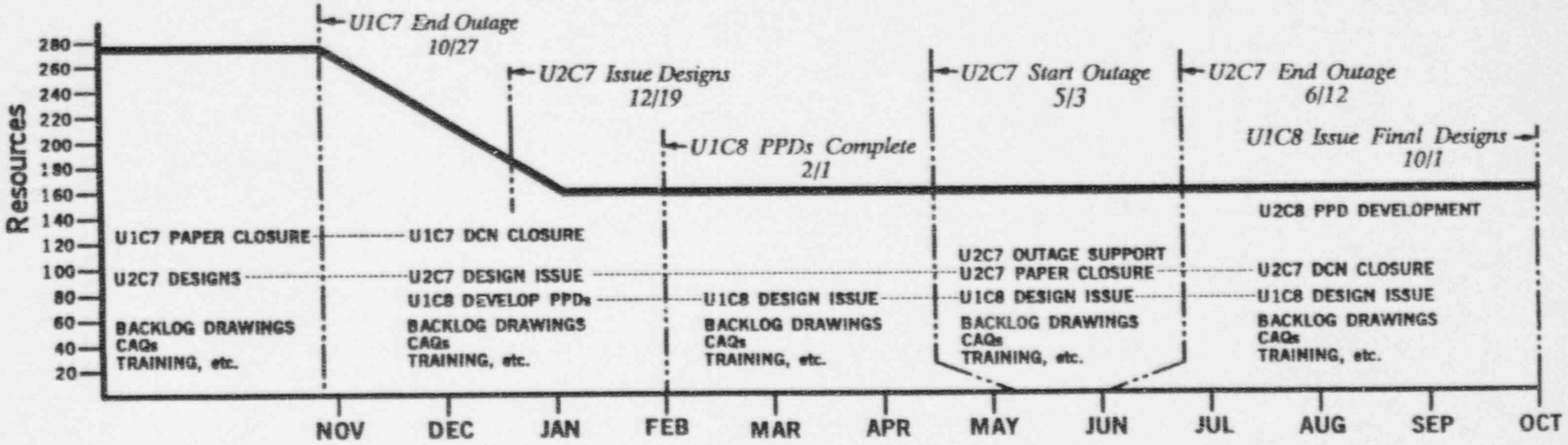
SEQUOYAH ENGINEERING

SUPPORT TO MAINTENANCE



- ESTABLISHED GOOD MAINTENANCE SUPPORT FOCUS
- ADDRESSED BACKLOG OF MATERIAL CONDITION ITEMS
- OPERATED IN STEADY STATE MODE IN FY95

Sequoyah Engineering Scheduling Philosophy FY 96



#1 Priority → U1C7 Paper Closure (Nov.)
#2 Priority → U2C7 Design Issue (Dec 19)
#3 Priority → U1C8 Design Starting (Feb 1)
#4 Priority → U1C8 Design Complete (Oct 1)

NUCLEAR ASSURANCE OUTAGE OVERSIGHT

- AREAS OBSERVED DURING THE U1C7 OUTAGE
  - FOREIGN MATERIAL EXCLUSION CONTROLS
  - INDUSTRIAL SAFETY AND SCAFFOLDING
  - SUPERVISION IN THE FIELD AND STAR
  - OUTAGE RISK MANAGEMENT
  - CLEARANCES AND WELDING
  - PROCEDURE AND DRAWING USE
  - OVERTIME AND CONTRACTOR CONTROL
  - MATERIAL STAGING AND STORAGE
  - CONTROL ROOM AND UNIT START-UP REVIEW
  - RADCON PRACTICES

- OBSERVATION STRENGTHS
  - SUPERVISION IN THE FIELD AND STAR
  - PROCEDURE AND DRAWING USE
  - CONTROL ROOM - COMMAND AND CONTROL
  - WELDING AND SCAFFOLDING
  - CHEMICAL TRAFFIC CONTROL
  - RADCON PRACTICES
  - OUTAGE RISK MANAGEMENT AND MILESTONE MANAGERS

- OBSERVATION WEAKNESSES
  - FOREIGN MATERIAL EXCLUSION
  - INDUSTRIAL SAFETY
  - HOUSEKEEPING

- OUTAGE OVERSIGHT RESULTS INDICATE MANAGEMENT EXPECTATIONS WERE ACHIEVED

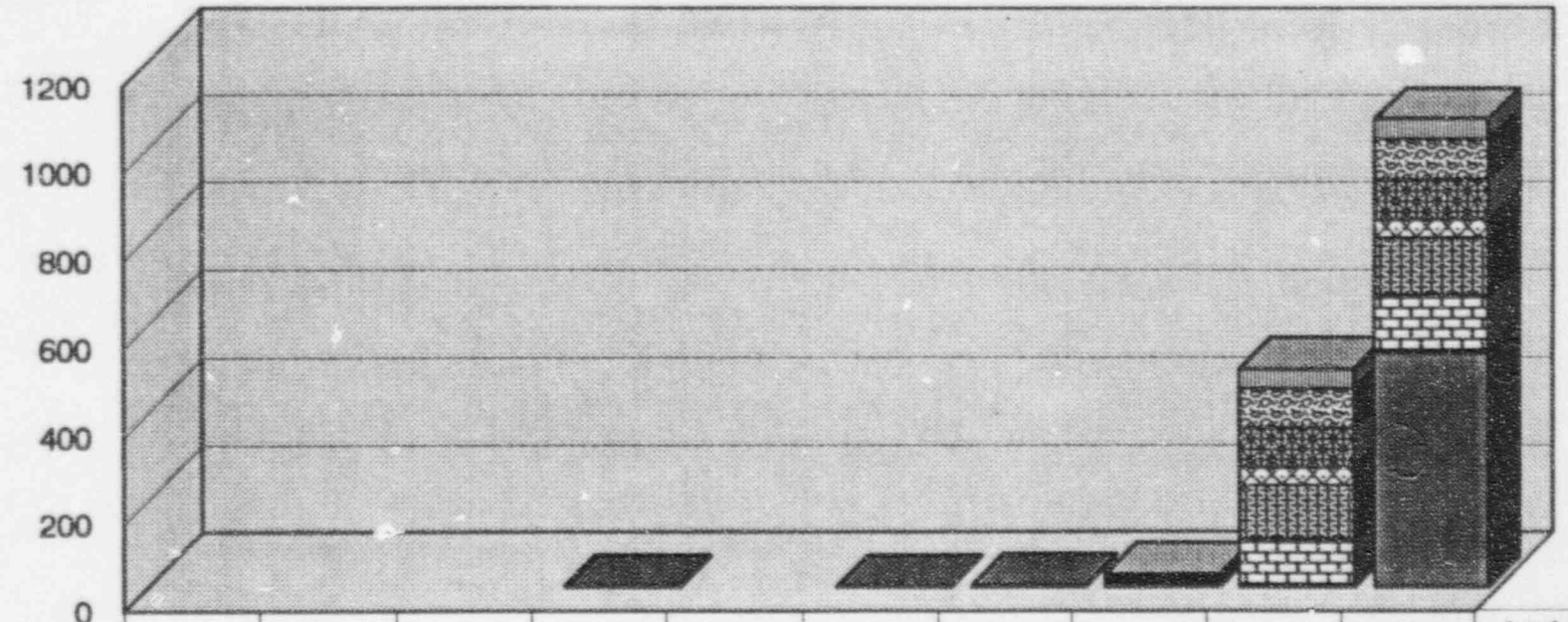
NUCLEAR ASSURANCE OVERSIGHT

- ENHANCEMENTS HAVE BEEN MADE TO THE CORRECTIVE ACTION PROCESS.
  - LEAD INVESTIGATORS TRAINING
  - CORRECTIVE ACTION PROCESS EXPERTS (CAPEs)
  - SUPERVISOR TRAINING
  - QUALITY IMPROVEMENT TEAM
  - CORRECTIVE ACTION PROCEDURE REVISION
  - MANAGEMENT REVIEW COMMITTEE IMPROVEMENTS

- CORRECTIVE ACTION PROCESS ENHANCEMENTS ARE ACHIEVING THE DESIRED RESULTS.
  - THE SENSITIVITY TO AND THRESHOLD FOR PROBLEM IDENTIFICATION HAS SIGNIFICANTLY IMPROVED
  - LINE ORGANIZATIONS ARE IDENTIFYING APPROXIMATELY 80% OF THE PROBLEM EVALUATION REPORTS (PERs)
  - THE LEAD INVESTIGATOR CONCEPT HAS BEEN IMPLEMENTED AND HAS RESULTED IN IMPROVED INVESTIGATIONS AND ROOT CAUSE ANALYSES
  - ONLY 37 PERs REMAIN OPEN WITH INITIATION DATES PRIOR TO 1995
  - QUALITY OF TREND INFORMATION IS IMPROVING
  - EXTENSIVE CONTINUING EDUCATION IS ON-GOING WITH THE CORRECTIVE ACTION PROGRAM

- SELF ASSESSMENT RESULTS INDICATE CONTINUED SITE IMPROVEMENT

Sequoyah Nuclear Plant
Open PERs By Responsible Organization

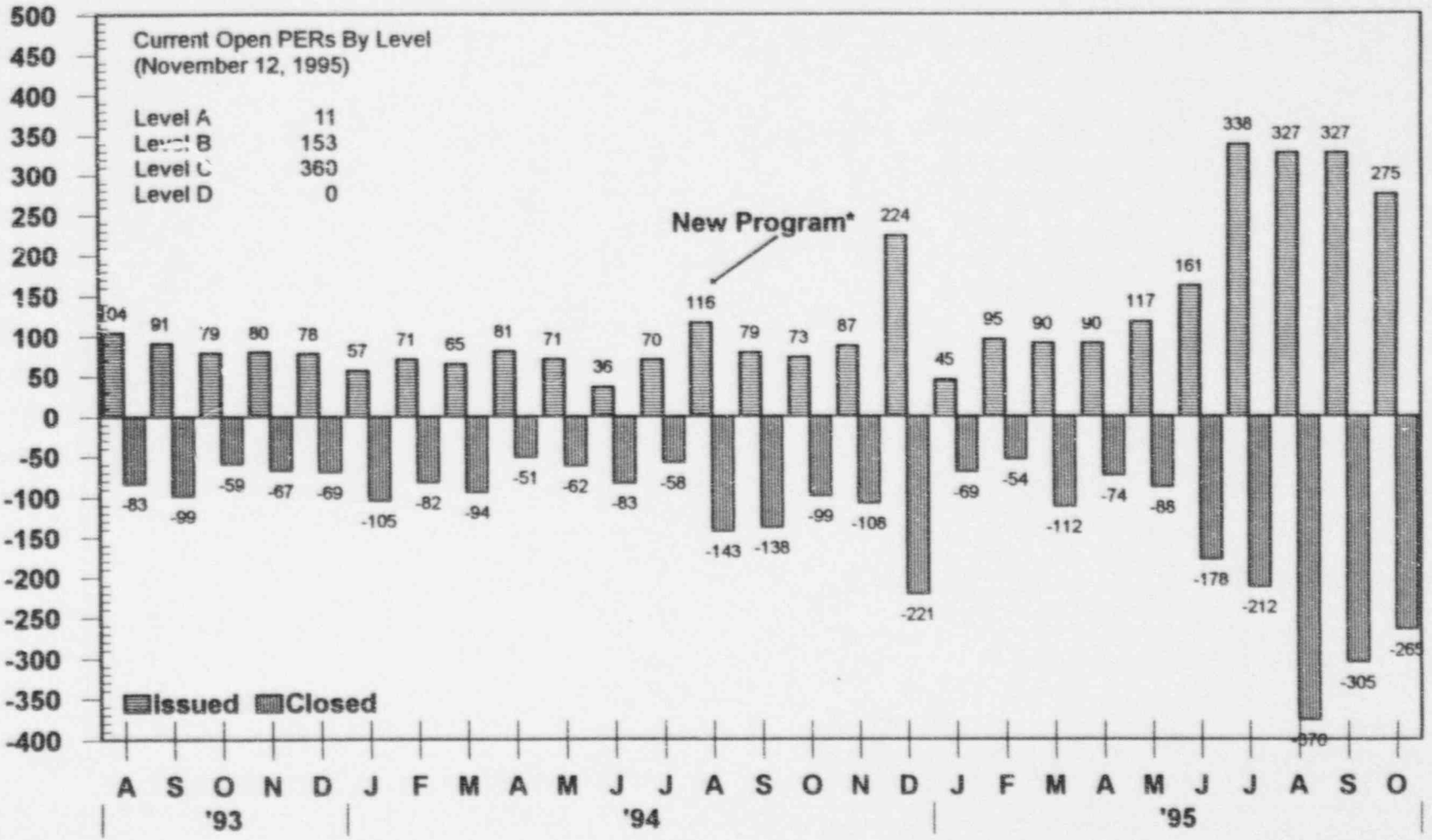


	1987	1983	1989	1990	1991	1992	1993	1994	1995	TOTAL	Avg Age (Mos)
OTHER								3	43	46	4.0
OPS								3	90	93	3.2
MAINT & MODs								1	92	93	1.8
RADCON/CHEM								1	39	40	3.2
TECH SUPP								7	125	132	3.6
PCF								2	3	5	10.4
ENGG & MATLs				1		2	4	13	106	126	6.4
Yearly Total	0	0	0	1	0	2	4	30	498		
Grand Total										535	4.0

Goal ≤ 7 mo

Data: TROI 11/20/95

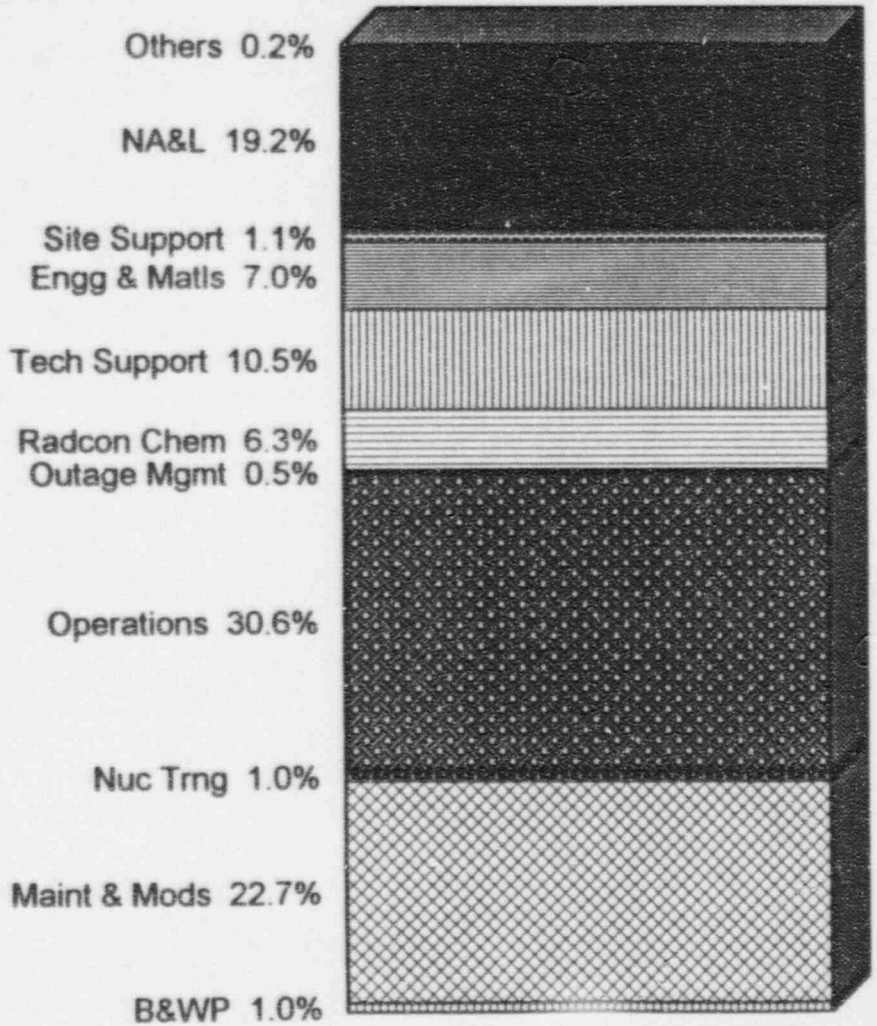
Sequoyah Nuclear Plant
Problem Evaluation Reports - Issued/Closed (Monthly)



* Incorporated the Incident Investigation and Significant Corrective Action Report

Data: TROI as of November 5 1995

Sequoyah Nuclear Plant
PERs Initiated (To Date) In 1995 - By Initiating Organization

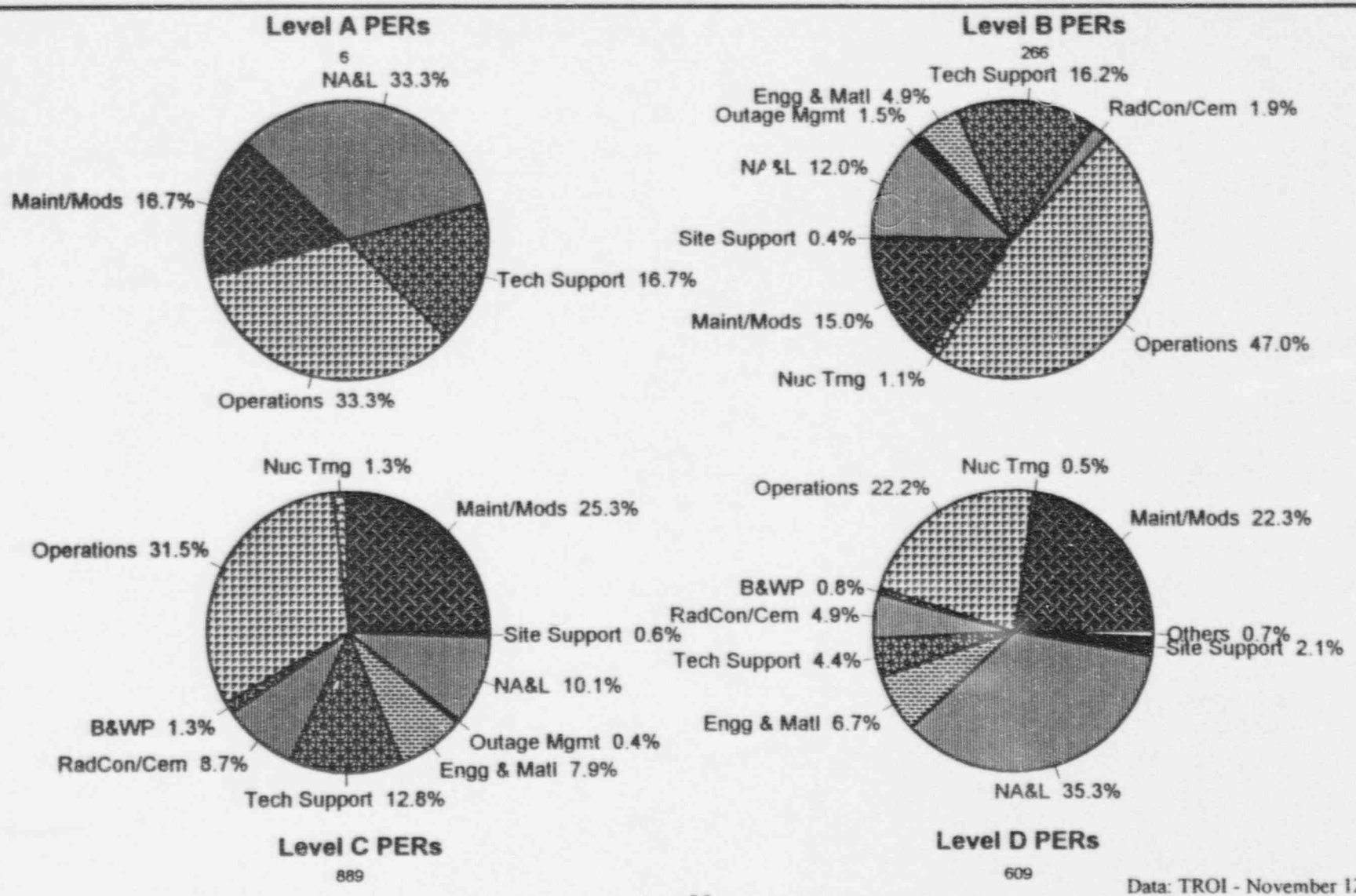


1,770

Data: TROI - November 12, 1995

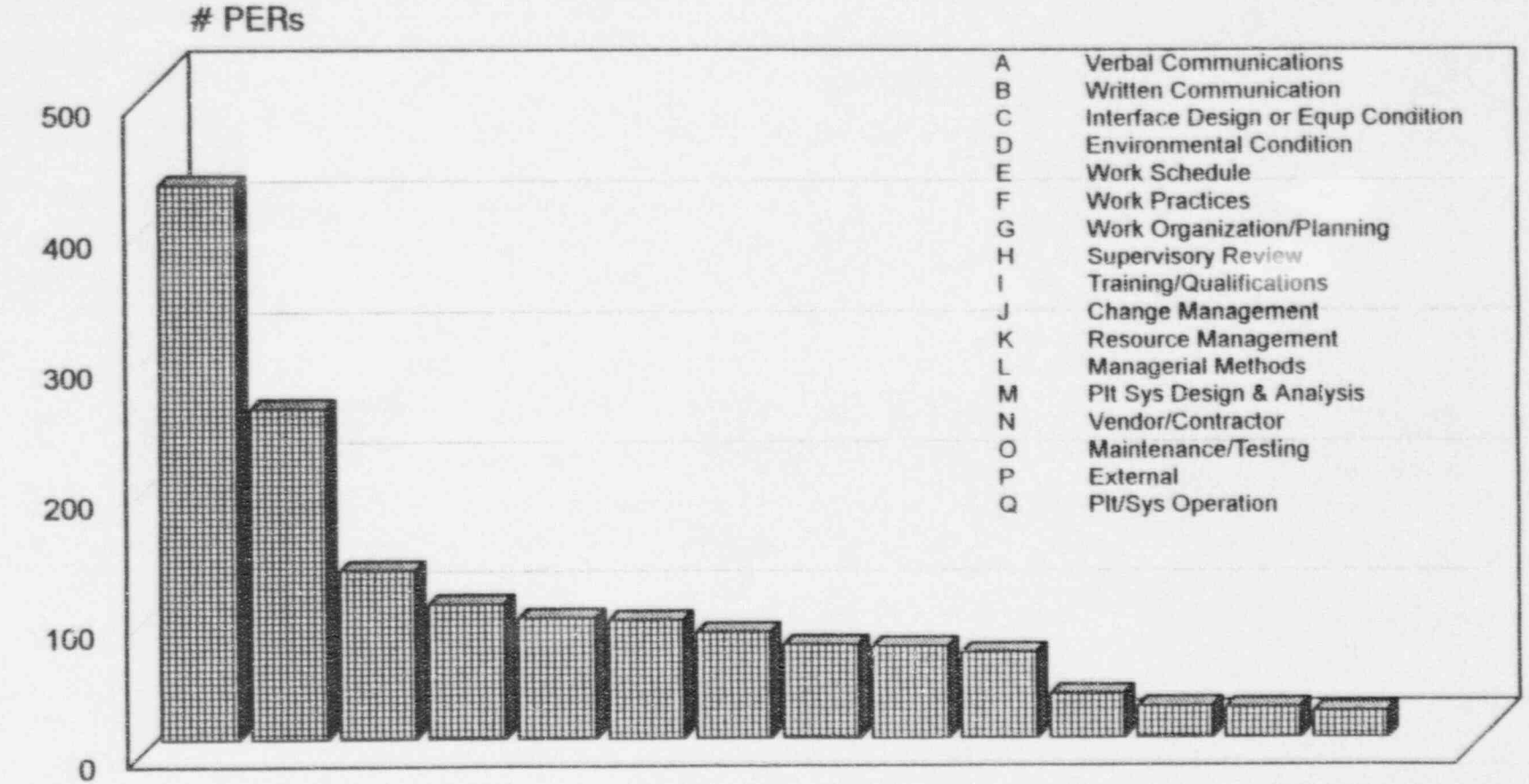
Sequoyah Nuclear Plant

PERs Initiated (To Date) In 1995 - By Initiating Organization



Data: TROI - November 12, 1995

Sequoyah Nuclear Plant
Causal Factors - PERs Issued (To Date) In 1995

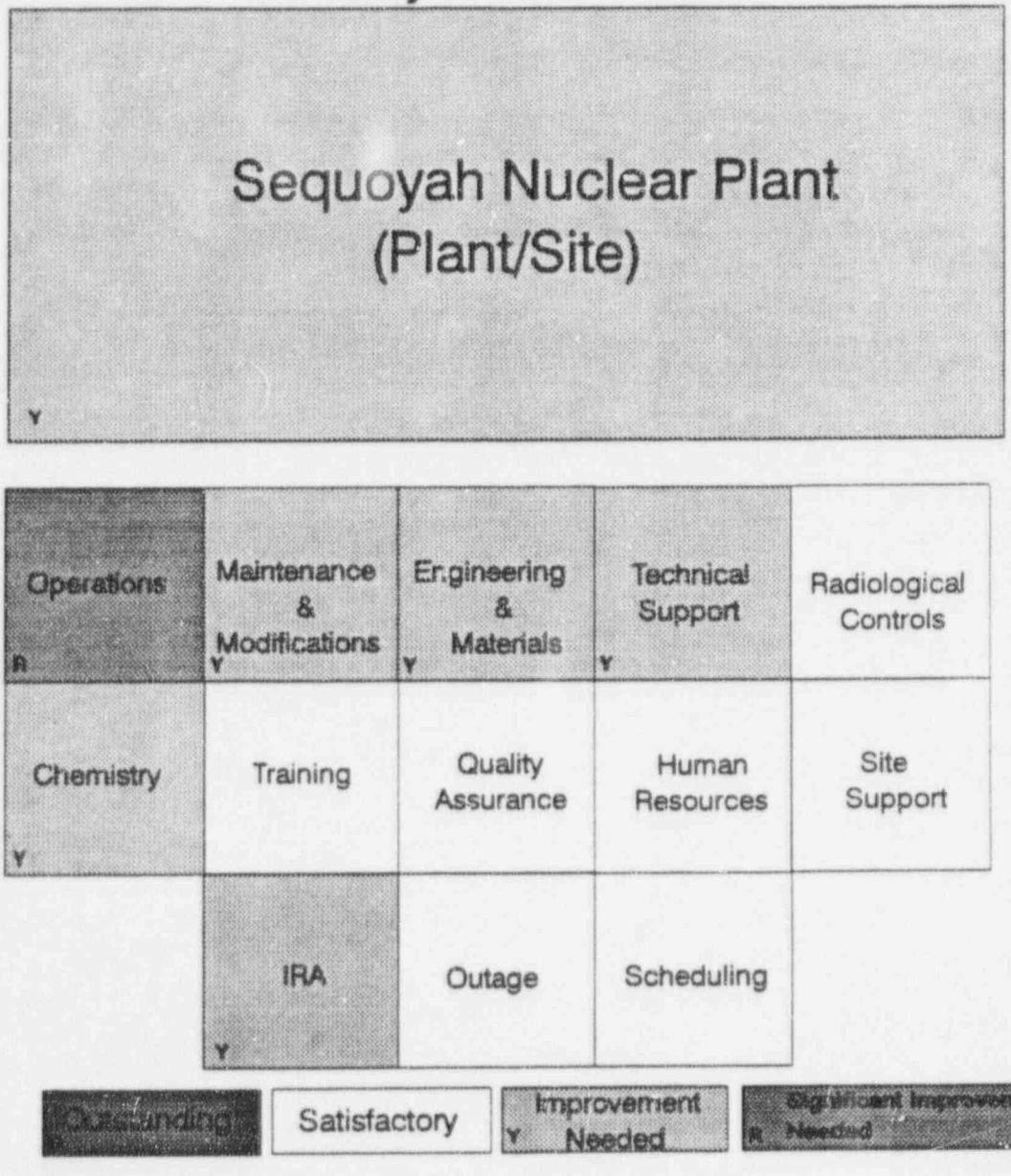


	F	B	Q	M	C	N	L	G	J	A	K	H	I	OTHER
# PERs	425	254	129	103	92	90	81	71	70	65	33	24	23	20
Percent	28.7%	17.2%	8.7%	7.0%	6.2%	6.1%	5.5%	4.8%	4.7%	4.4%	2.2%	1.6%	1.6%	1.4%

Data TROI as November 12, 1995

Sequoyah
Self Assessment Results

January-March 1993



Sequoyah
Self Assessment Results

July-September 1995

4th FY94	1st FY95	2nd FY95	3rd FY95

Sequoyah Nuclear Plant
(Plant/Site)

Operations	Maintenance & Modifications	Engineering & Materials	Technical Support	Radiological Controls
Chemistry	Training	Quality Assurance	Human Resources	Site Support
	IRA	Outage	Scheduling	

Outstanding | Satisfactory | Improvement Needed | Significant Improvement Needed