November 2, 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 - WATTS BAR - PLANT PERFORMANCE AND ON-GOING SITE ACTIVITIES

Dear Mr. Scalice:

This refers to the open meeting that was conducted at your request at NRC Region II Office on October 28, 1998, for you to discuss recent Watts Bar Nuclear Plant and on-going site activities. A list of attendees and a copy of your presentation handout are enclosed.

It is our opinion that this meeting was beneficial in that it provided the NRC staff with a good overview of your perceived strengths, as well as existing challenges and plans for improvement.

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 Harold O. Christensen)

Harold O. Christensen, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Docket Nos. 50-390, 50-391
License No. NPF-90 and Construction Permit No. CPPR-92

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

cc w/encls:
Senior Vice President
Nuclear Operations
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

cc w/encls continued: See page 2

IE45

cc w/encls: Continued

Jack A. Bailey, Vice President
Engineering and Technical Services
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Richard T. Purcell
Site Vice President
Watts Bar Nuclear Plant
Tennessee Valley Authority
P. O. Box 2000
Spring City, TN 37381

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

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

Paul L. Pace, Manager Licensing
Watts Bar Nuclear Plant
Tennessee Valley Authority
P. O. Box 2000
Spring City, TN 37381

William R. Lagergren, Plant Manager
Watts Bar Nuclear Plant
Tennessee Valley Authority
P. O. Box 2000
Spring City, TN 37381

cc w/encls continued: See page 3

cc w/encls: Continued

County Executive
Rhea County Courthouse
Dayton, TN 37321

County Executive
Meigs County Courthouse
Decatur, TN 37322

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

Distribution w/encls:
L. R. Plisco, RII
A. P. Hodgdon, OGC
B. J. Keeling, GPA/CA
M. D. Tschiltz, OEDO
R. E. Martin, NRR
F. J. Hebdon, NRR
C. F. Smith, RII
E. D. Testa, RII
D. H. Thompson, RII
L. S. Mellen, RII
H. L. Whitener, RII
PUBLIC

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

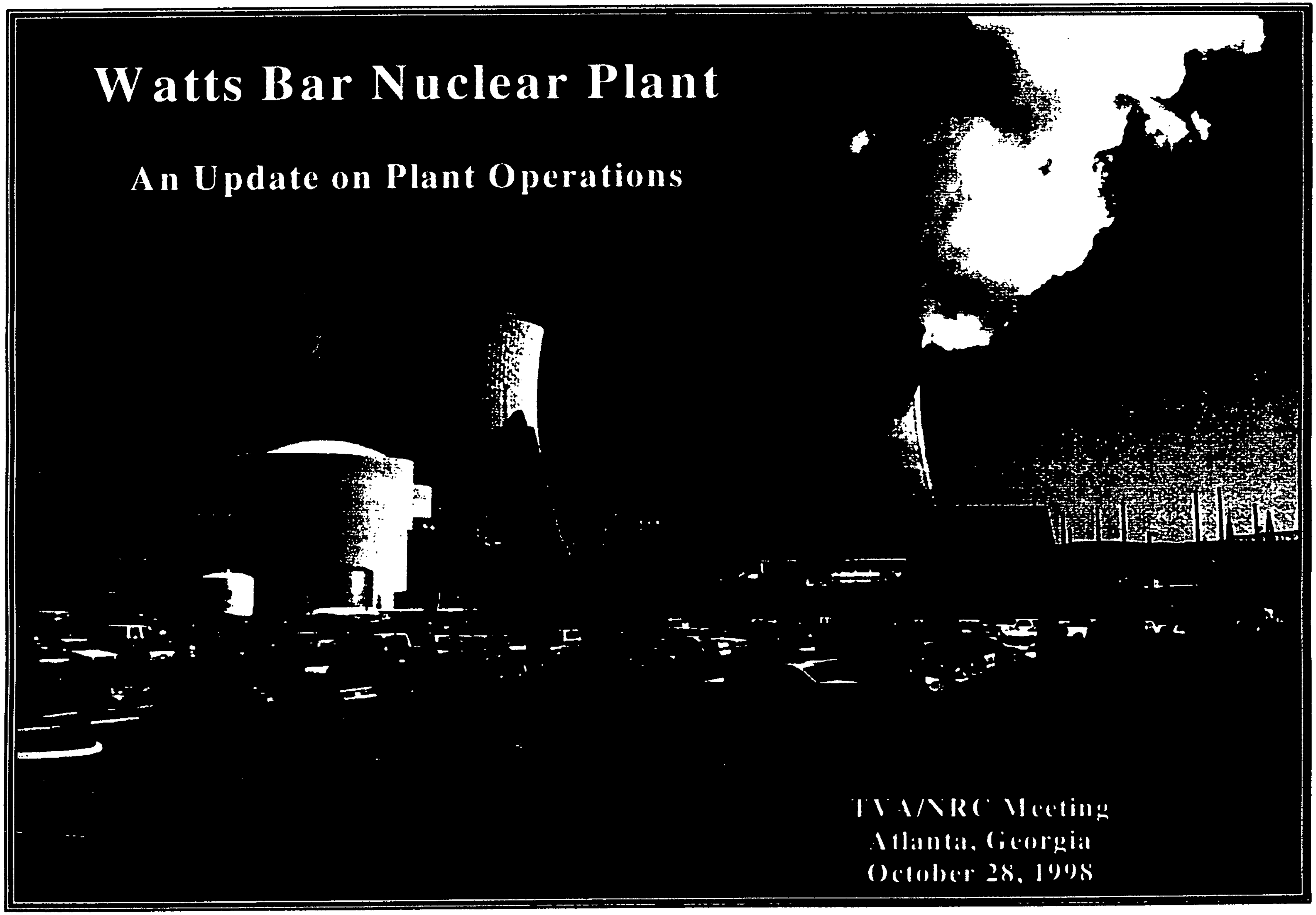
OFFICE	RII:DRP						
SIGNATURE	Pat						
NAME	P Taylor alt						
DATE	10/30/98	10/ /98	10/ /98	10/ /98	10/ /98	10/ /98	10/ /98
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\WB\MEETINGS\WBmtgsum

LIST OF ATTENDEES

Name	Title
NRC Staff	
L. Plisco	Director, Division of Reactor Projects (DRP), Region II (RII)
C. Casto	Deputy Director, DRP, RII
V. McCree	Deputy Director, Division of Reactor Safety, RII
H.Christensen	Branch Chief, Branch 6, DRP, RII
D. Rich	Resident Inspector, Watts Bar, DRP. RII
TVA Staff	
R. Purcell	Site Vice President, Watts Bar
D. Kulisek	Manager, Operations
B. Lagergren	Plant Manager
J. Maddox	Manager, Engineering and Materials
P. Pace	Manager, Site Licensing

Enclosure 1

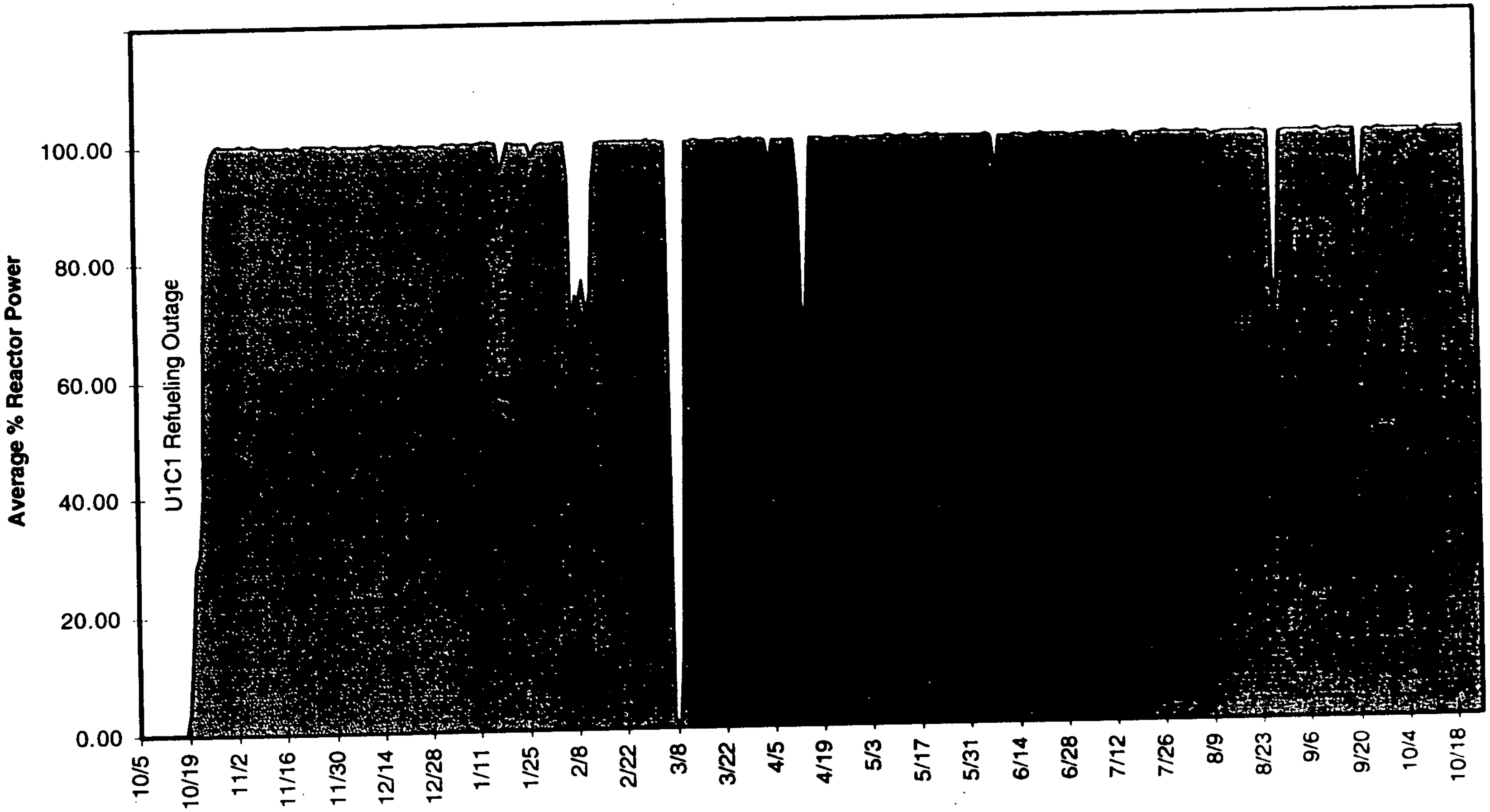

Watts Bar Nuclear Plant
An Update on Plant Operations
TVA/NRC Meeting
Atlanta, Georgia
October 28, 1998

Enclosure 2

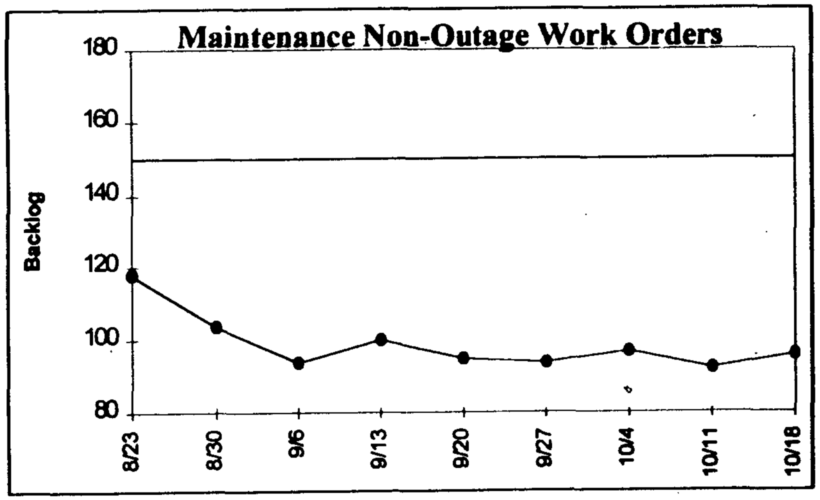
AGENDA

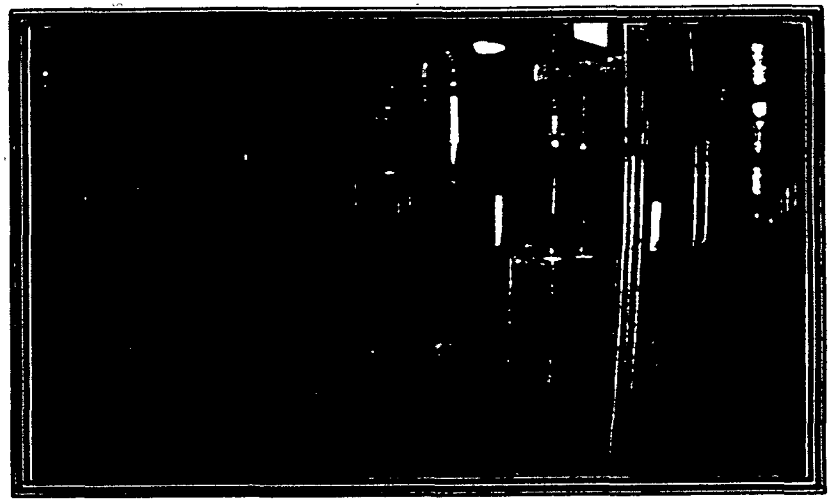
• Introduction	Rick Purcell
• Plant Performance	Bill Lagergren/ Dave Kulisek
• Ice Condenser	Jim Maddox
• Plant Systems	Jim Maddox
• Security	R. Purcell
• Safety Conscious/Work Environment	R. Purcell
• Conclusion	R. Purcell

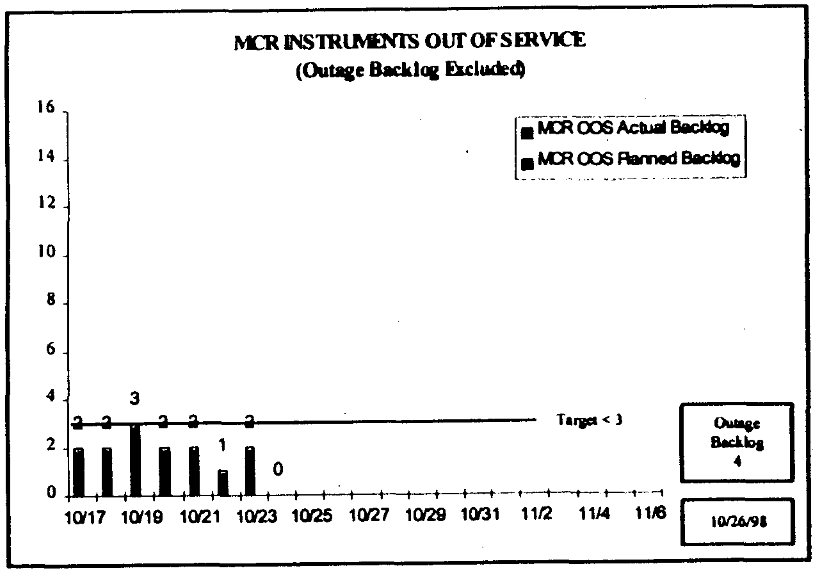
WBN U1C2
AVERAGE % REACTOR POWER

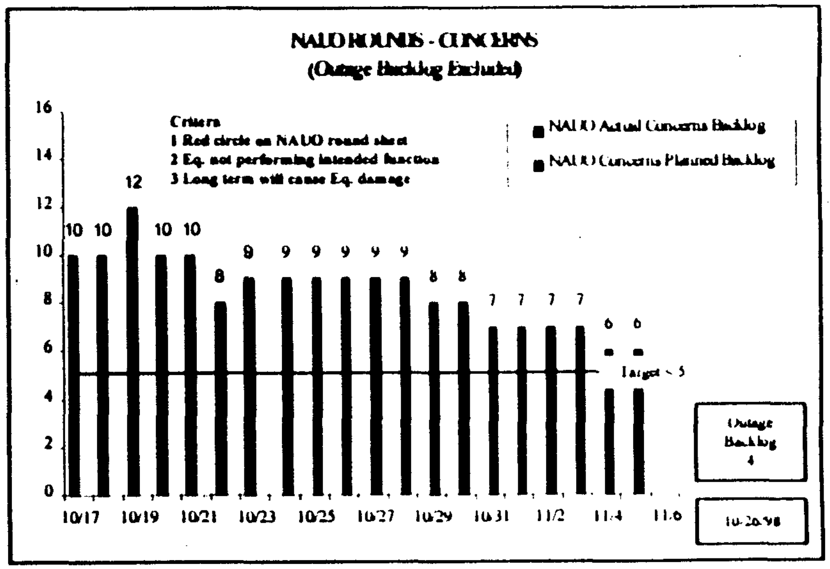


SITE ATTENTION ITEMS



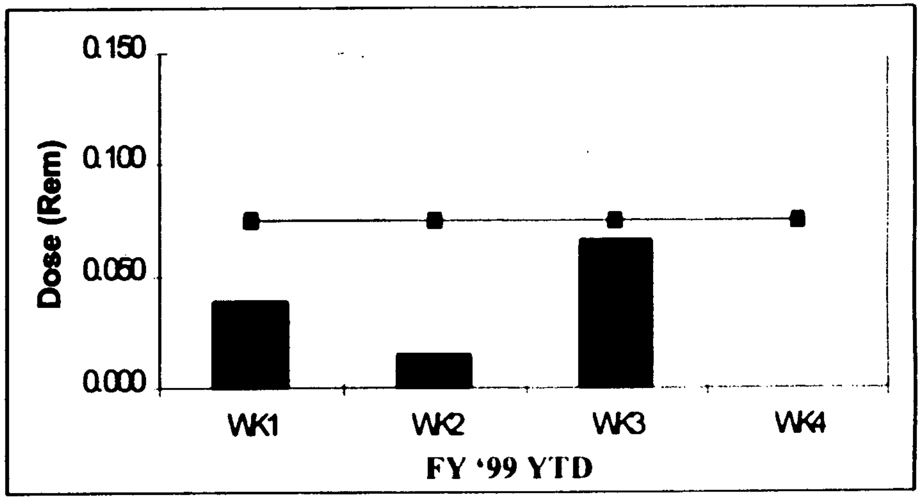


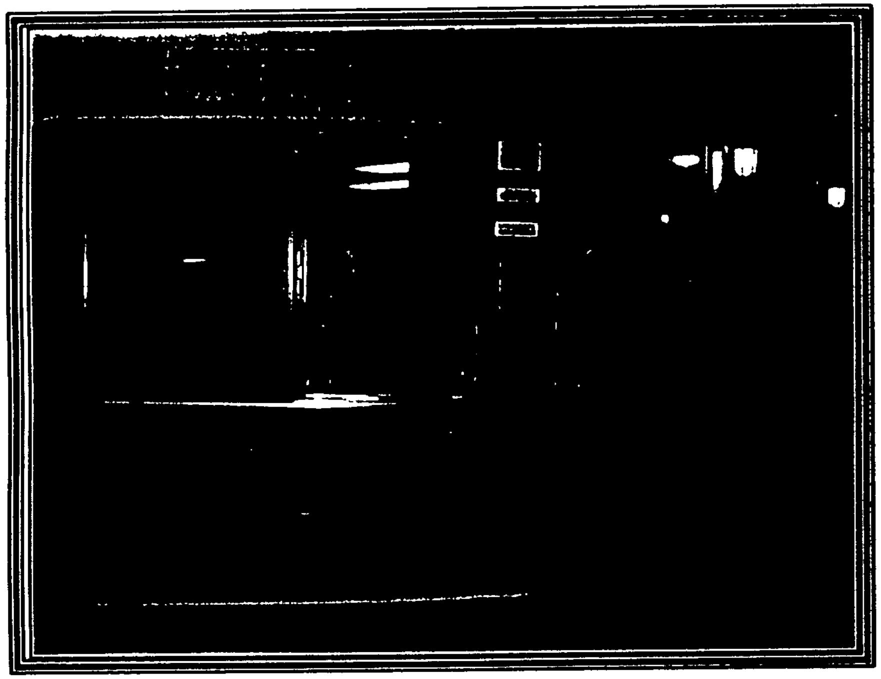


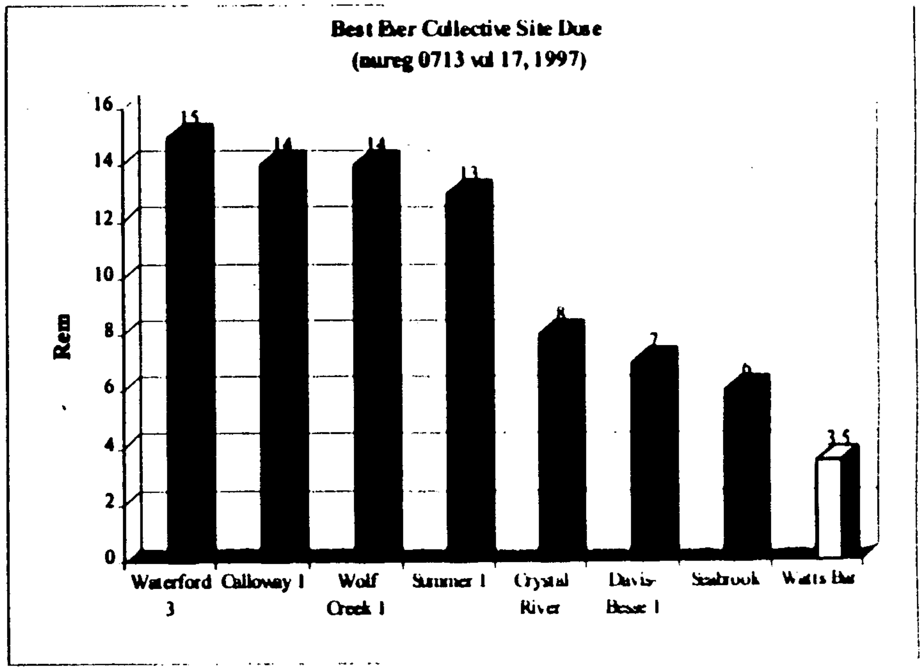


SITE DOSE PERFORMANCE

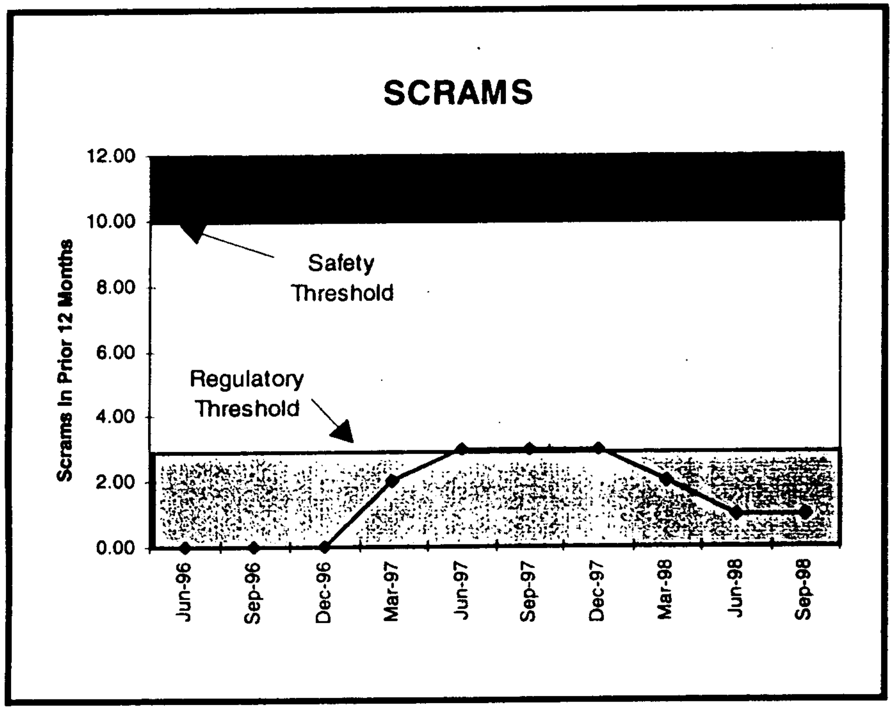
INDUSTRY LEADER

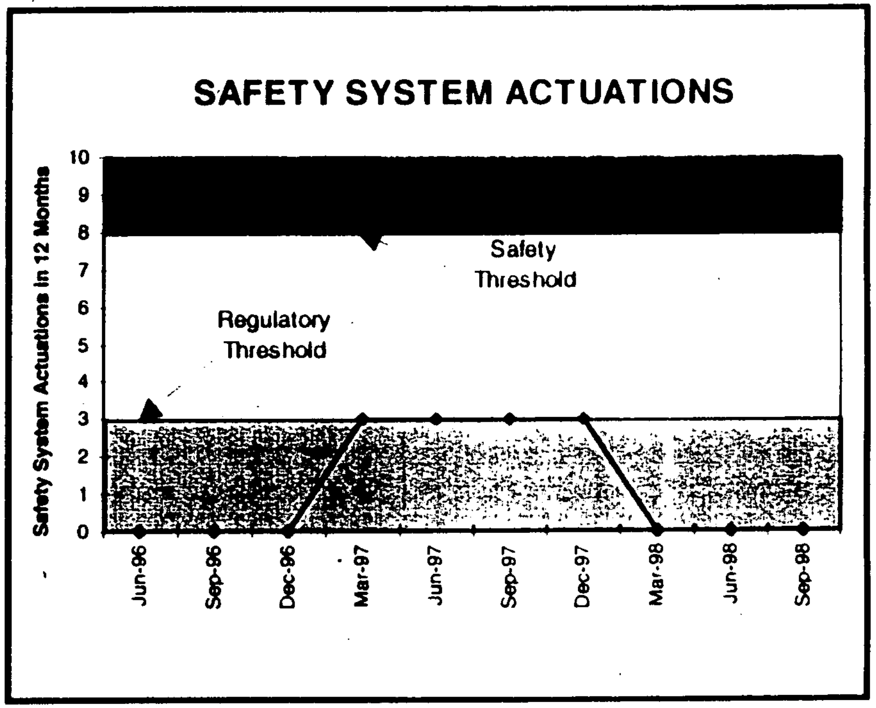






NEI INDICATORS





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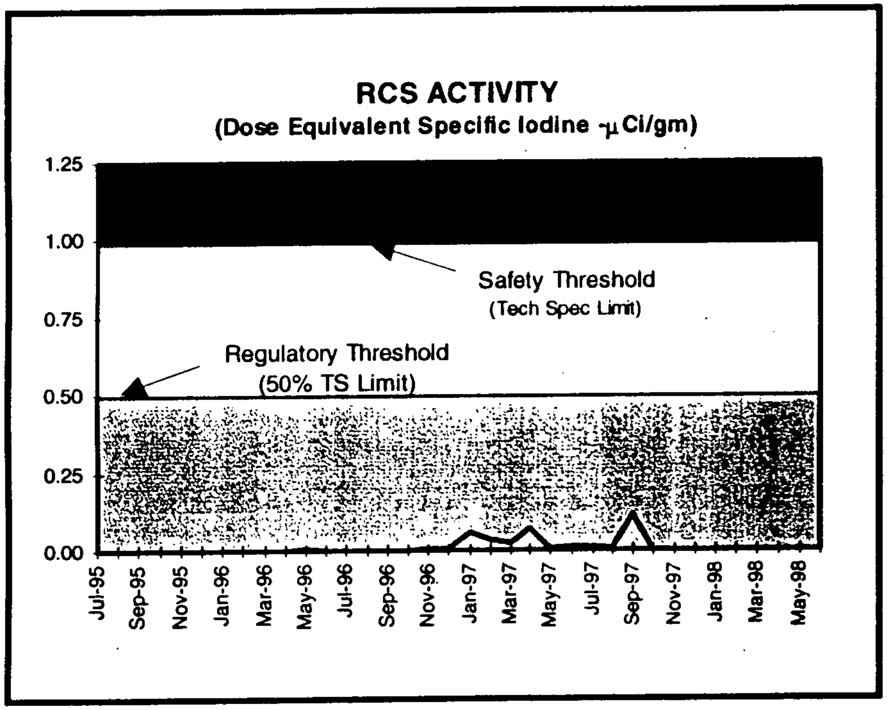

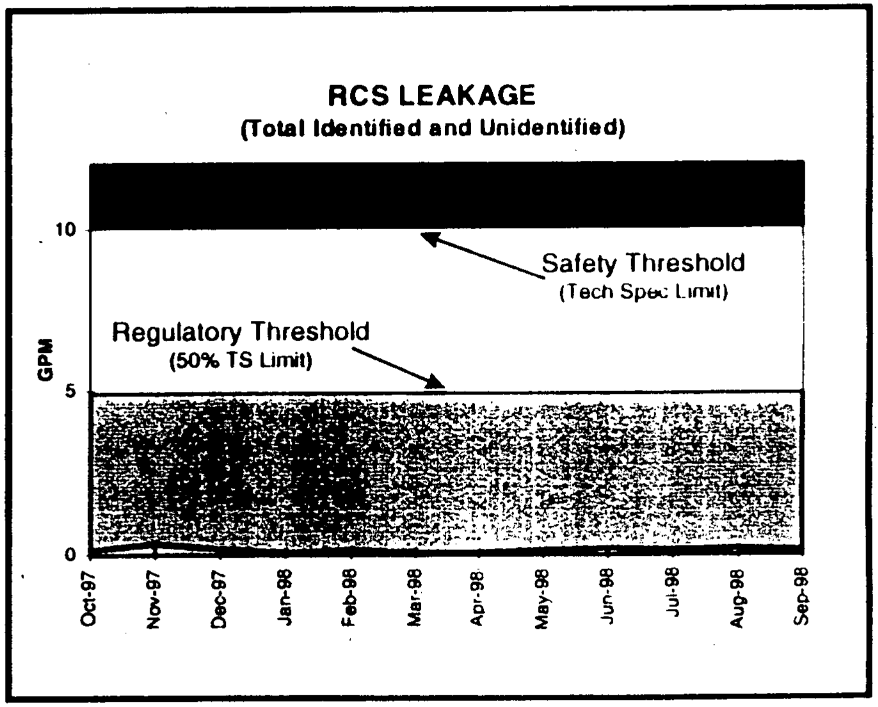

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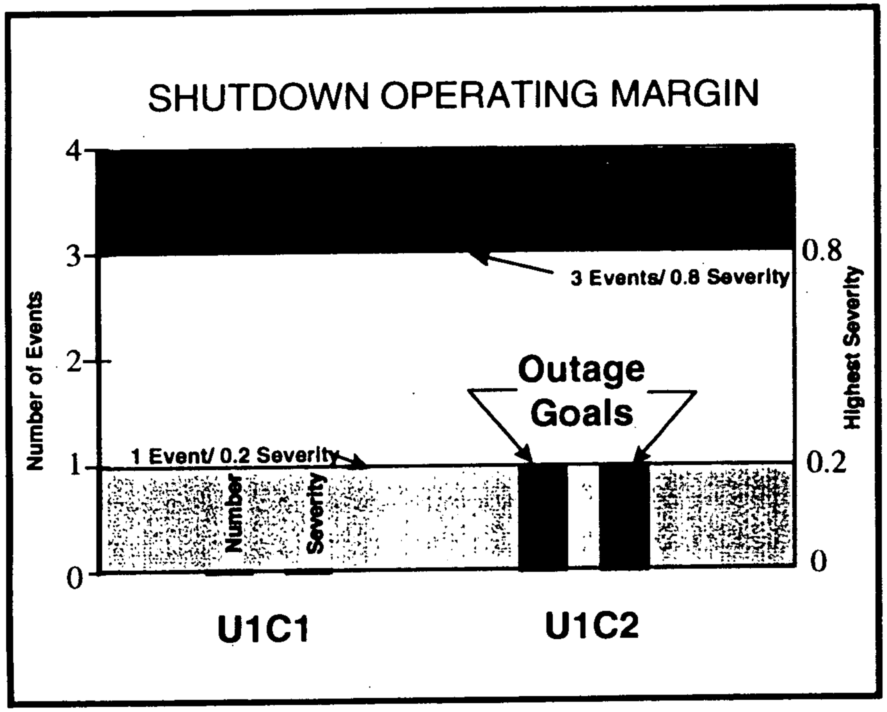
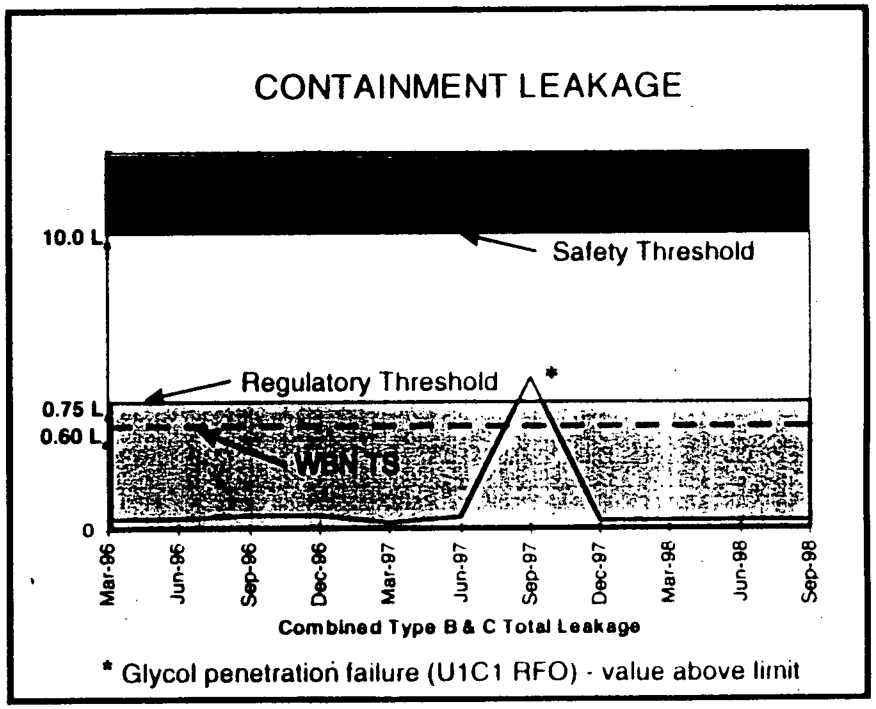




Watts Bar Nuclear Plant

FY99 Report - As of October 11, 1998

Corrective Action Program

TVA GOALS	TVAN OBJ	Performance Indicators	Month			Year To Date				FY 98	FY 99	NOTES
			Target	Month To Date	Trend	Target	Actual	Trend	Change	Goal	Goal	
Continued Sales Growth	Operational Excellence and Regulatory Margin	PERs (Key Program Actions) % On Time/Total	96%	99%	↑	96%	99%	↑		96%	96%	A1
		Schedule Performance	>95%	94.7%	↓	>95%	94.7%	↓		>95%	>95%	A2
		Backlog of PERs(Increasing/Decreasing for Site)	300	373	↓	300	373	↓		300	300	A3
		Human Performance Success Rate(A&B PERs/1000mhrs) *	TBD	0.12								A4
		Human Success Leading Indicator Rate(C&D PERs/1000mhrs)*	0.325	0.38	↑							A5
		Ratio of C+D PERs/ A+B PERs (Site)	>30:1	25:0	↑	>30:1	25:0	↑		15:1	>30:1	A6
		Number of PERs Opened/Closed for Mo(Site)	TBD	25/41		TBD	25/41					A7
		Number of extensions (site wide)	<30	12	↑	<30	12	↑			<30	A8
		Quality of PER packages	>95%	100%	↑	>95%	100%	↑			>95%	A9
		Average age for Level A, B, C PERs (mths)	<4.5	5.254	↑						<4.5	A10
		Cycle time of program (Problem Identification to closure)(mmths)	TBD	2.945							TBD	A11
		Percent of line identified PERs	80%	96%	↑	80%	96%	↑		80%	80%	A12
		Site Identification Index as opposed to identified by NRC, INPO, NSRB	95%	100%	↑	95%	100%	↑		95%	95%	A13
		Self identification index by causing org:**										A14
		Operations	70%	80.8%	↑	70%	80.8%	↑		70%	70%	A15
		MTN and MODS	55%	59.3%	↑	55%	59.3%	↑		55%	55%	A16
		Engineering	60%	76.2%	↑	60%	76.2%	↑		60%	60%	A17
		RADCHEM	75%	100%	↑	75%	100%	↑		75%	75%	A18
		Site Support	65%	53.8%	↓	65%	53.8%	↓		65%	65%	A19

SALP RATINGS VS CULTURE INDEX

- WBN CULTURE INDEX (CI) COMPARED TO AVAILABLE DATA FROM 44 NUCLEAR PLANTS

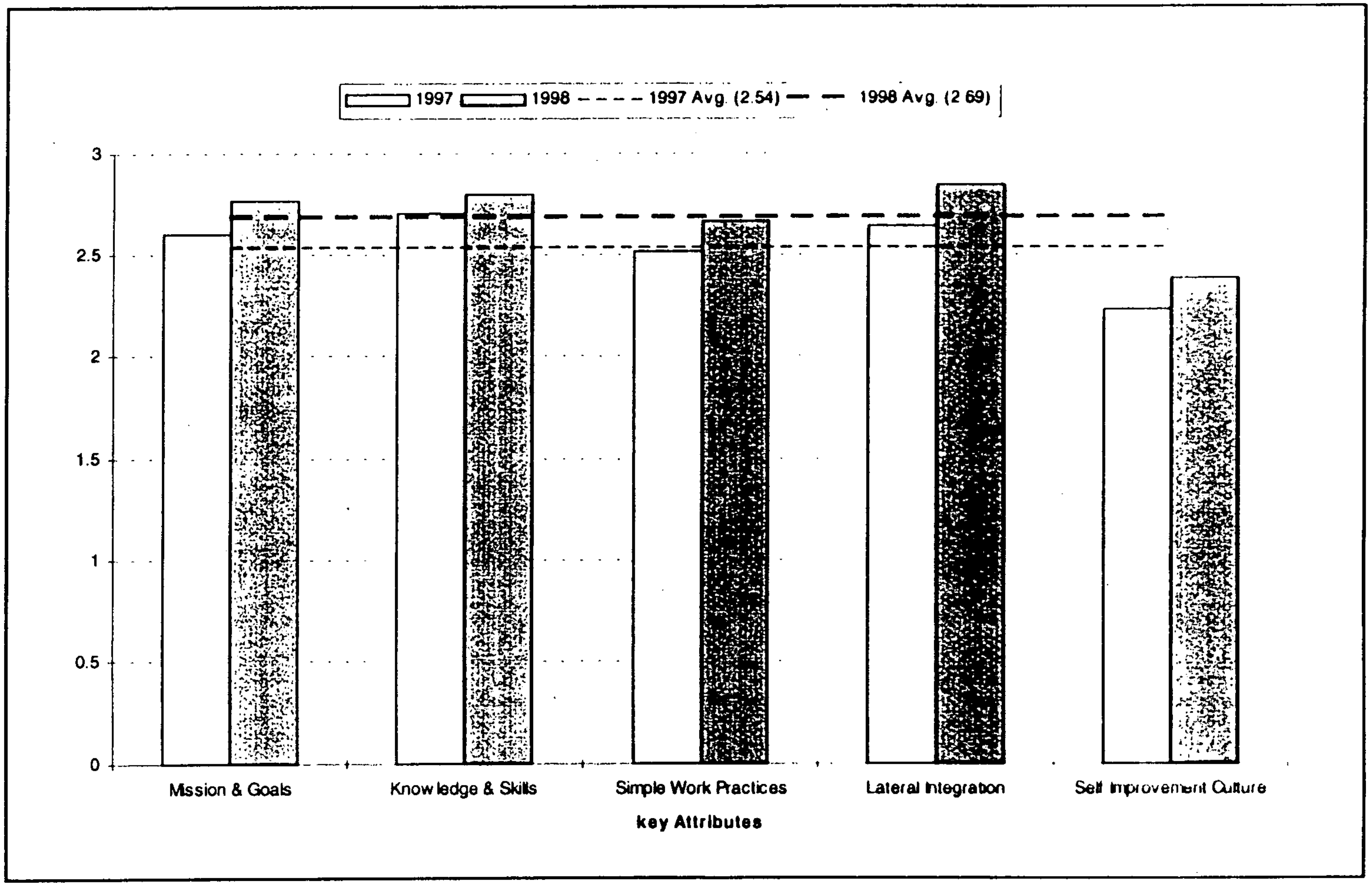
- WBN 1997 CI=12.68
- WBN 1998 CI=13.45

> TYPICAL VALUES FOR AVERAGE SALP 1 PLANTS

- IMPROVEMENT FROM 1997 TO 1998 OF 0.77 - POSITIVE DIRECTION

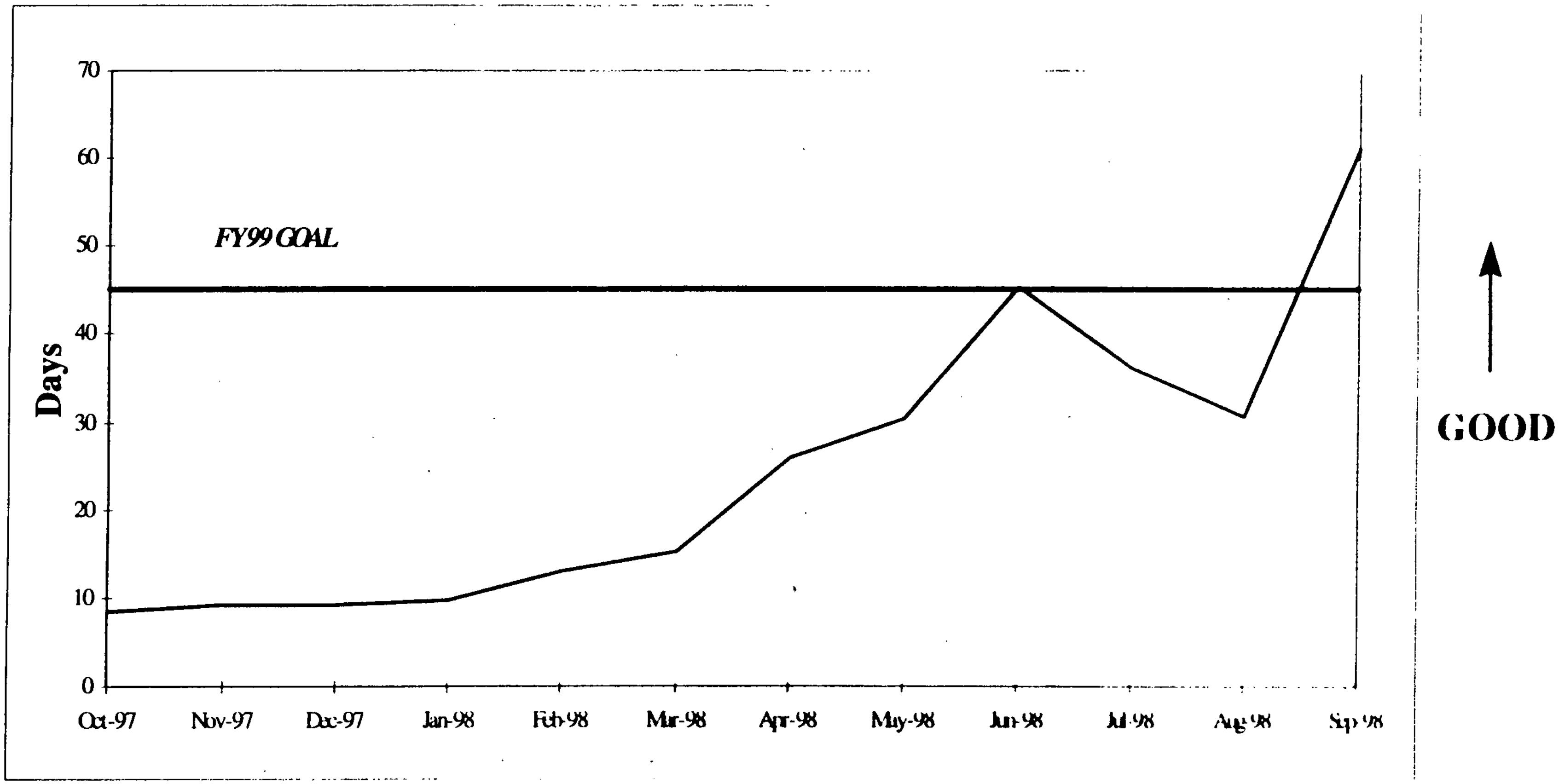
- INDICATES WBN CULTURE COMPARES TO STRONG PLANTS; NOT QUITE AT SELF-SUSTAINING

WBN SITE WIDE
CULTURE KEY ATTRIBUTES

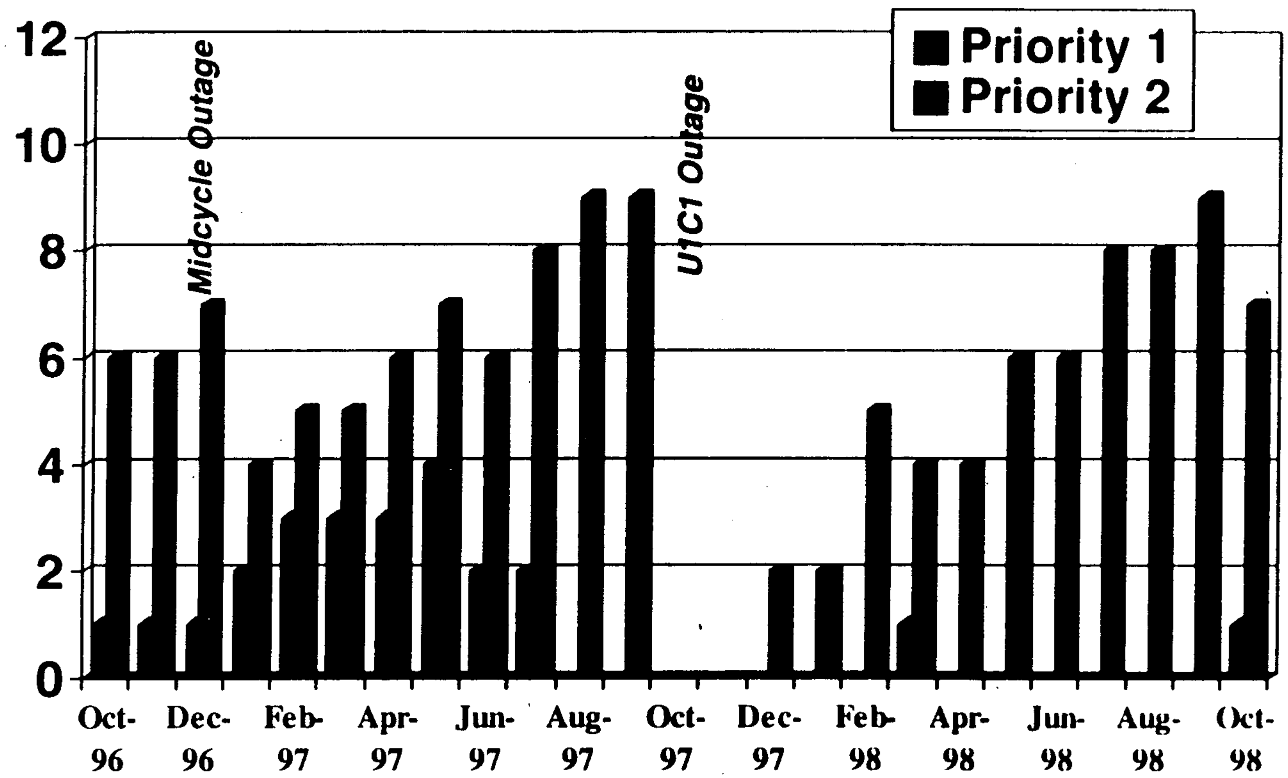


STATUS CONTROL

SIX MONTH ROLLING AVERAGE OF DAYS BETWEEN STATUS CONTROL ERRORS



OPERATOR
WORK AROUND HISTORY



Priority 1: Operator action must be taken during response to an accident or transient.
Priority 2: Operator action must be taken during normal operation as a compensatory measure.

U1C2 REFUELING OUTAGE

- Plant Material Condition Upgrades
  - Main Condenser/Gland Steam Condenser Retube
  - S/G Moisture Carryover Modification
  - Integrated Computer System
  - Piping Upgrades for Flow Accelerated Corrosion

- Material Condition Recovery
  - Clear All Operator Work-Arounds
  - Restore Plant Temporary Repairs (Fumanite, Catch Containments, etc.)
  - Clear Plant Temporary Alterations

- Projected Duration - <45 Days

ICE CONDENSER

- Comprehensive Self-assessment Performed
- Scope
  - Design Basis
  - Design Changes
  - Tech Spec / Surveillances
  - Maintenance Practices /Material Condition
  - Industry Operating Experience
- Team
  - Six member team representing WBN & SQN Engineering, Modifications and Corporate Engineering
  - Independent oversight by WBN & SQN QA

ICE CONDENSER
SELF ASSESSMENT RESULTS

<u>What We Do Well</u>

- Continuity between Design Basis and Operation
- Good material condition of ice condenser
- Effective ice basket servicing plan
  - All baskets weighed at least once
  - Small number (34) of frozen baskets
- Staying current on industry issues
  - Interface with other Ice Condenser Plants
  - Ice Condenser Utility Group

ICE CONDENSER
SELF ASSESSMENT RESULTS

<u>Areas for Additional Focus</u>

- Improve debris logging and tracking
- Improve evaluation criteria for detrimental damage of ice condenser components
- Improve training for ice basket servicing crews
- Improvements for better system operation
  - Top deck blanket tape
  - Top deck vent curtain position
  - Procedural enhancements
- Enhancements to FSAR / Design Basis Documents
- Boron Sampling Methodology

SYSTEM STATUS
WBN

2ND QTR
FY98

SYSTEM COLOR RATING MATRIX

SAFETY — GREEN

$3B_{R/S}$ AFW	(a)(2) WHITE ⇔
$61_{R/S}$ ICE CONDENSER	(a)(2) WHITE ⇔
62_R CVCS & RCP SEALS	(a)(2) WHITE ⇔
$63_{R/S}$ SI	(a)(2) WHITE ⇔
65_{RS} EGT	GREEN ‹ ›
67_R ERCW	(a)(2) WHITE ⇔
68_L RCS	GREEN
70_R CCS	(a)(2) WHITE ⇔
72_L CSS	GREEN ‹ ›
74_L RHR	GREEN ‹ ›
$82_{RS}/18_L$ D/G	GREEN ‹ ›
$83_L/268$ H2 CTRL	GREEN ‹ ›
84_L FLOOD MODE BORA'N	GREEN ‹ ›

INSTRUM'N — WHITE ⇔

55_O MCR ANNUN	GREEN ‹ ›
85_O ROD CTRL	(a)(2) WHITE ⇔
92_O NIS	GREEN ‹ ›
94_{OS} INCORES	(a)(2) WHITE ⇔
99_{RS} RX PROT	(a)(2) WHITE ⇔
261 PROCESS COMPUTER	WHITE ⇔
263/264 TSC COMPUTER	WHITE ⇑
502_O AUX CR INSTRUMENT'N	(a)(2) WHITE ⇔

MWe — WHITE ⇓

1_{OS} MAIN STM	(a)(2) WHITE ⇔
1 MAIN TURBINE	(a)(2) WHITE ⇔
2_O CONDENSATE	(a)(2) WHITE ⇓
$3A_{OS}$ MFW	(a)(2) WHITE ⇔
5_O EXT STEAM	(a)(2) WHITE ⇔
6_O HTR DRAINS	(a)(2) YELLOW ⇔
35_L GEN CLG	GREEN ‹ ›
$46A_O$ MFW CTRL	(a)(2) WHITE ⇑
47_O MAIN TURB CTRL	(a)(2) YELLOW ⇔
$244_O/58_O$ MAIN GEN	(a)(2) WHITE ⇔

ELECT'L — GREEN ‹ ›

$200_O/201_O/202_O/211_L/262_L$ 161/6.9KV	GREEN ‹ ›
$203_O/205_O/212_L$ 480V SWGR	GREEN ‹ ›
204/245/246 SWITCHYARD	GREEN ‹ ›
209/213/214/215/231/232 480V MTR CTRL CNTRS	GREEN ‹ ›
228_L EMERG LIGHTING	GREEN ‹ ›
235_L 120VAC VITAL	GREEN ‹ ›
236_R 125VDC VITAL	(a)(2) WHITE ⇔
237 120VAC INST	GREEN ‹ ›
238 120VAC PREF	GREEN ‹ ›
239_O 250VDC	(a)(2) WHITE ⇔
240 48VDC	GREEN ‹ ›
241 120VAC COMPUTER	GREEN ‹ ›

RAD/CHEM — WHITE ⇓

14_O COND DEMIN	(a)(2) YELLOW ⇓
15_O SGBD	GREEN ‹ ›
43_O SAMPLING	(a)(2) WHITE ⇔
77_O WASTE DISPOSAL	(a)(2) WHITE ⇔
90_O RAD MON	(a)(1) YELLOW ⇓

SUPPORT — WHITE ⇓

20_O LUBE OIL	GREEN ‹ ›
24_O RAW CLG WTR	(a)(2) WHITE ⇔
$13_{N/A}/26_S$ FIRE PROT	(a)(2) WHITE ⇓
27_O CCW	GREEN ‹ ›
30_{OS} VENTILATION	(a)(2) WHITE ⇑
31_{CS} A/C & CREVS	RED ‹ ›
32_{OS} CTRL AIR	(a)(2) WHITE ⇔
39 CO2 FIRE PROT	GREEN ‹ ›
54_O INJ WTR	GREEN ‹ ›
$64_O/88_{R/S}/304_O$ CNTMT INTEG	(a)(1) YELLOW ⇔
78_O SFP CLG	(a)(2) WHITE ⇓
79 FUEL HANDL'G	YELLOW ⇔
81_O PRIM M/U WTR	(a)(2) WHITE ⇔
600_O M RULE STRUCTURES	(a)(2) WHITE ⇔
999_O M RULE MISC 40/250/251/252	(a)(2) WHITE ⇔

PREVIOUS 4 QUARTERS (OLDEST ON LEFT)

ABBREVIATIONS
G: GREEN RATING ▲: UP TREND
W: WHITE RATING ▼: DOWN TREND
Y: YELLOW RATING ◆: NEUTRAL TREND
R: RED RATING
–: BLUE- NO DATA

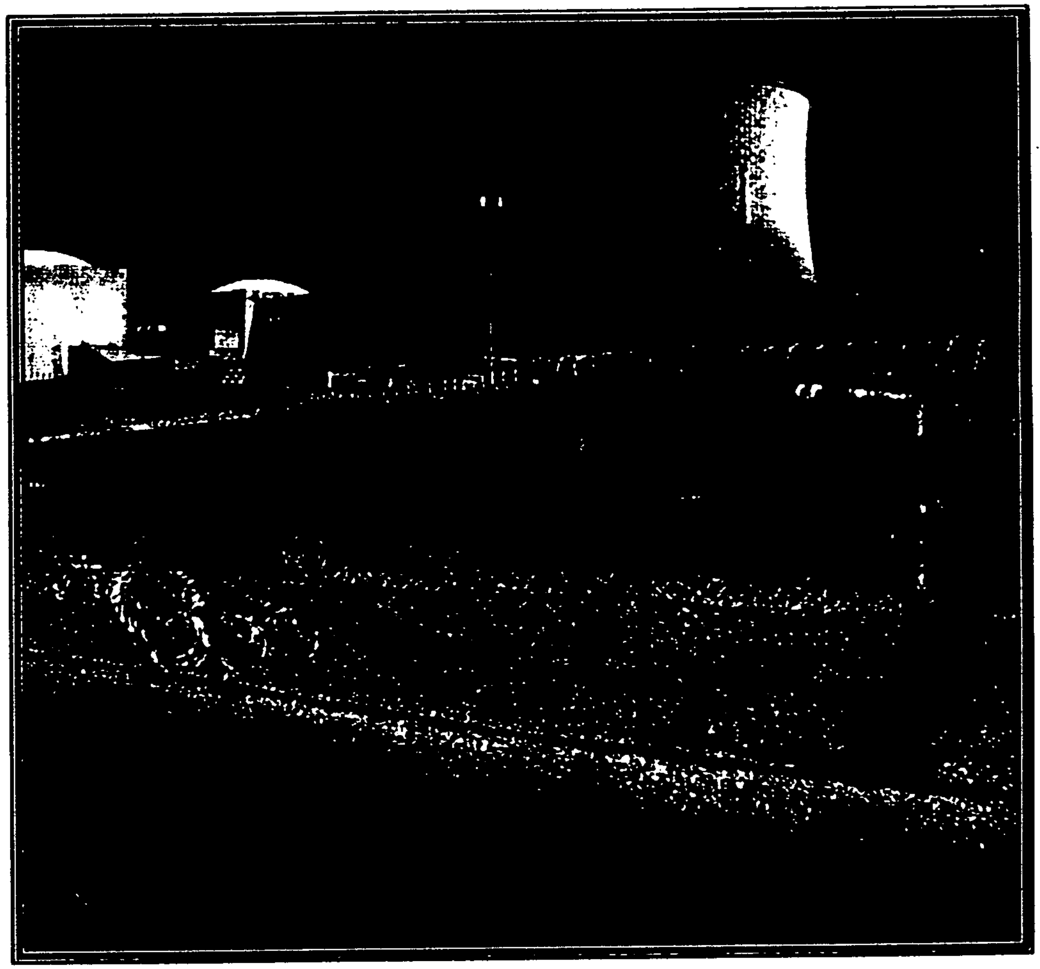
MAINTENANCE RULE (MR)
: NOT IN SCOPE
O: IN SCOPE ONLY
R: RISK SIGNIFICANT
S: SAFETY STANDBY
R/S: RISK SIG & SAFE STDBY
●: SOME SYS FUNCTIONS HAVE DIFF MR SCOPE
2: (a)(2) RATING(GOOD)
1: (a)(1) RATING(BAD)
?: NOT RATED YET

SYS $\#_R$ NAME
M RULE RATING / SYS RATING / SYS TREND

SECURITY IMPROVEMENT AREAS

Hardware Improvements

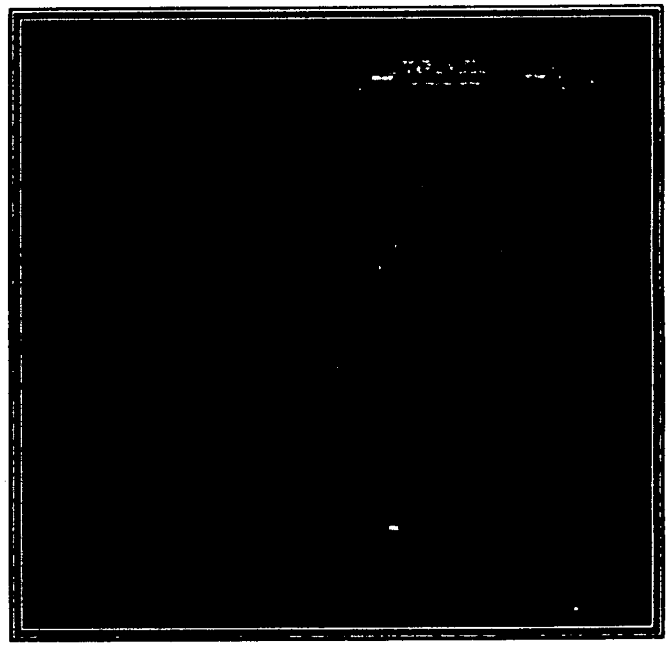
- Metal Detectors
- X-Ray Machines
- Close Circuit Television
  (Cameras and Monitors)
- Microwave Intrusion
  Detection System



SECURITY IMPROVEMENT AREAS

Security Response Strategy Improvements

- Improved Communication System
- Installed Delay/Engagement Fencing
- Hardened Firing Positions
  and Some Security Barriers
- Revised Strategy Timelines
  and Target Sets

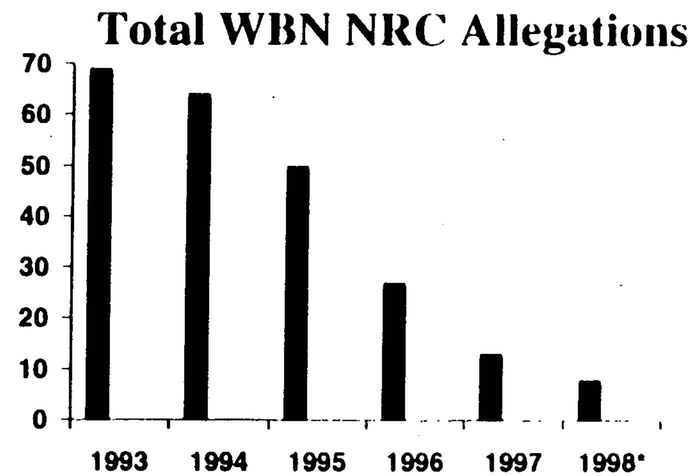


SECURITY PROGRAM IMPROVEMENTS

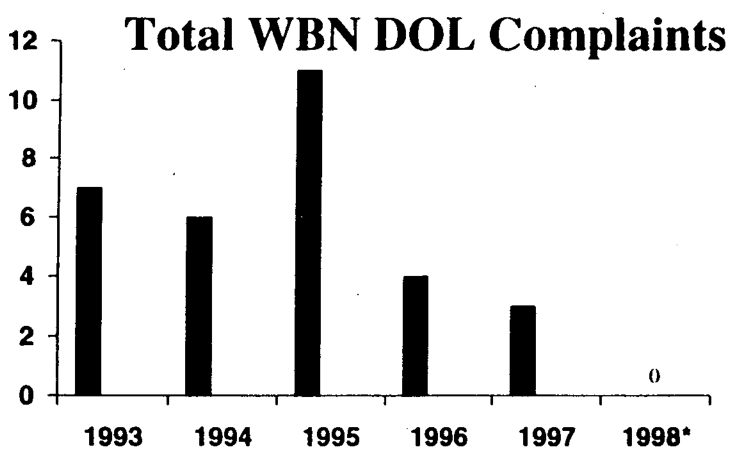
- Site Security Manager Position Established
- Site Security System Engineer Assigned
- Preventative Maintenance Program Enhanced
- Tracking and Trending Program Enhanced

SAFETY CONSCIOUS WORK ENVIRONMENT - INITIATIVES

- Continued emphasis on finding and fixing problems through Corrective Action Program
- "Do What's Right" training for WBN employees
- STAR 7 training for all WBN employees
- Periodic communications by Site Vice President
- Concerns Resolution monthly status reports
- New Posters describing Concerns Resolution Program
- New brochure to assist employees in solving problems
- Safety Conscious Work Environment articles in monthly site newsletter
- Concerns Resolution home page on Watts Bar's web site



* Projected for 1998



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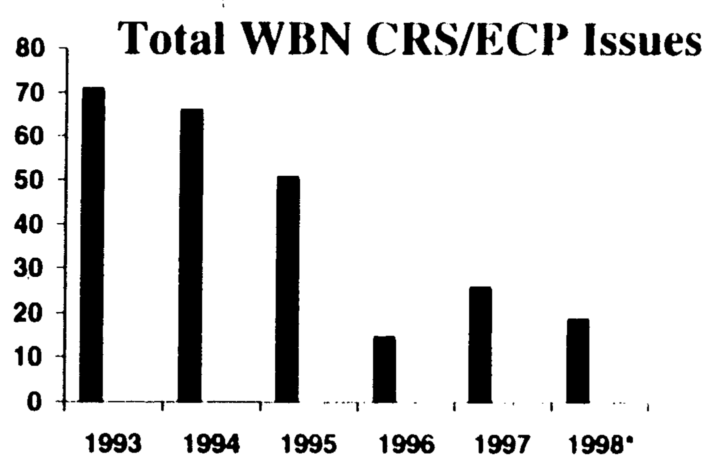

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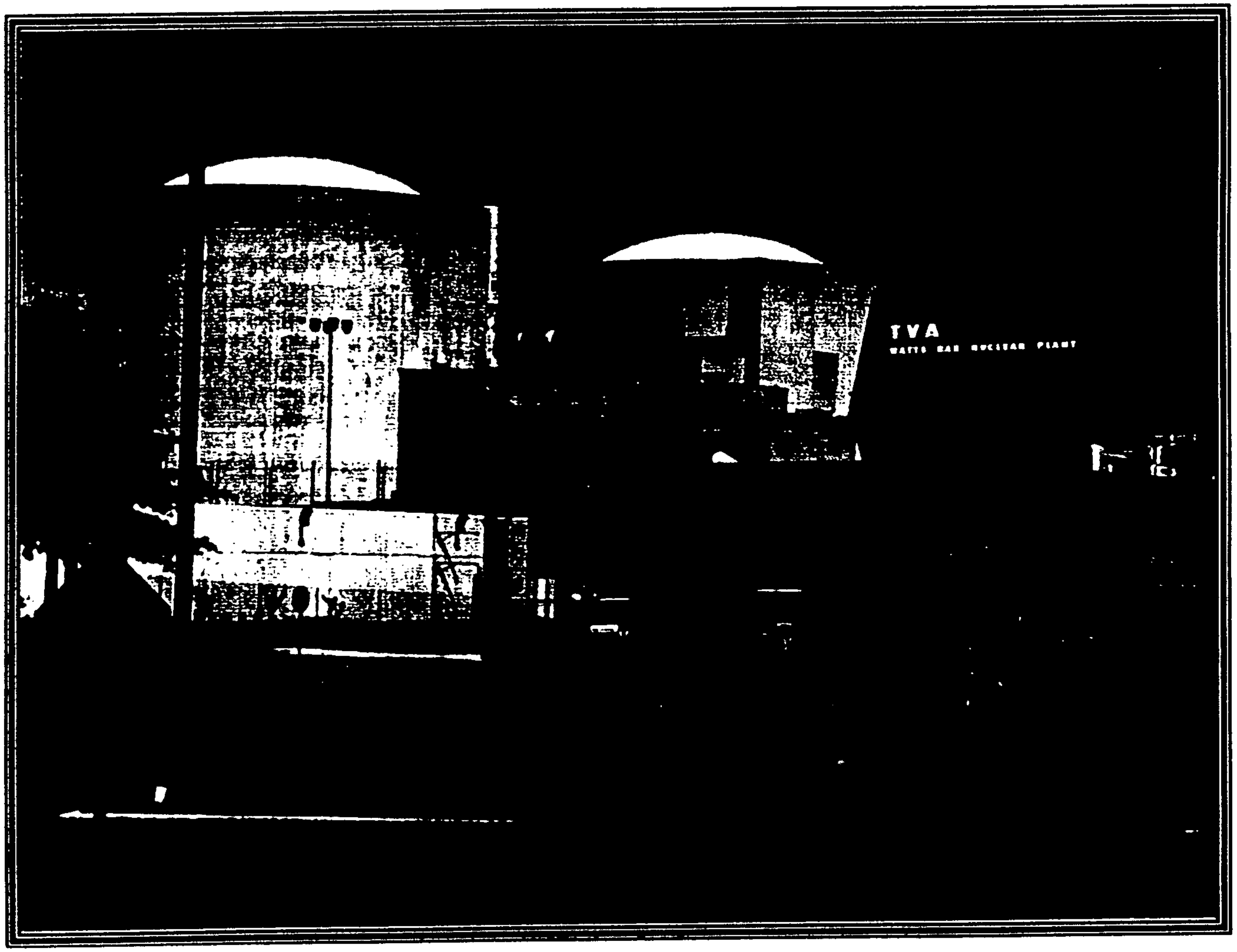
TVA