

February 17, 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: BROWNS FERRY UNIT 3 - MANAGEMENT MEETING SUMMARY

Gentlemen:

On February 10, 1995, the NRC staff met at the Region II offices with representatives of the Tennessee Valley Authority (TVA) management staff to discuss the status and schedule for Browns Ferry Unit 3 restart activities.

Enclosure 1 is a list of the individuals who attended the meeting and Enclosure 2 is the handout material supplied by TVA.

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 J. Johnson)

Jon R. Johnson, Deputy Director
Division of Reactor Projects

Docket No. 50-296
License No. DPR-68

Enclosures: 1. List of Attendees
2. Presentation Notes

cc w/encl's: (See page 2)

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PDR ADOCK 05000296
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cc w/encls:

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Dr. Mark O. Medford, Vice President
Engineering & Technical Services
Tennessee Valley Authority
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Mr. D. E. Nunn, Vice President
New Plant Completion
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Mr. R. D. Machon, Site Vice President
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General Counsel
Tennessee Valley Authority
ET 11H
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Mr. P. P. Carrier, Manager
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Mr. T. D. Shriver, Manager
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Chairman
Limestone County Commission
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434 Monroe Street
Montgomery, AL 36130-1701

Distribution w/encls: (See page 3)



Distribution w/encls:

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 Document Control Desk

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

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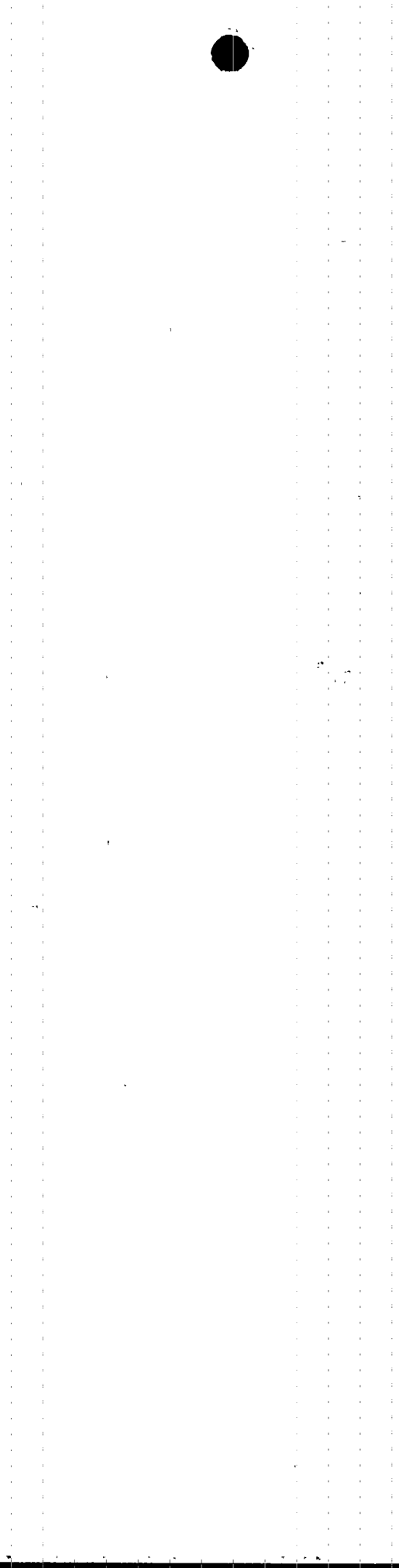
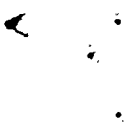
LIST OF ATTENDEES

NRC

S. D. Ebnetter, Regional Administrator, Region II (RII)
J. R. Johnson, Deputy Director, Division of Reactor Projects (DRP), RII
M. S. Lesser, Acting Chief, Branch 4A, DRP, RII
C. A. Casto, Chief, Engineering Branch, Division of Reactor Safety, RII
W. E. Cline, Chief, Radiological Protection and EP Branch, Division of
Radiation Safety and Safeguards, RII
L. D. Wert, Senior Resident Inspector, DRP, RII
R. A. Musser, Resident Inspector, DRP, RII
G. A. Schnebli, Resident Inspector, DRP, RII
F. J. Hebdon, Director Project Directorate II-4, Office of Nuclear
Reactor Regulation (NRR)
J. F. Williams, Project Manager, Project Directorate II-4, NRR
J. W. York, Project Engineer, DRP, RII

TVA

R. Machon, Vice President Browns Ferry
G. Preston, Plant Manager
D. Stinson, Recovery Manager
T. Shriver, Nuclear Assurance and Licensing Manager
C. Crane, Assistant Plant Manager
P. Salas, Licensing Manager
R. Baron, General Manager, Nuclear Assurance and Licensing





Browns Ferry Nuclear Plant - Unit 3

Restart Activities



MADE WITH RECYCLED PAPER

TVA / NRC MEETING
REGION II - ATLANTA, GEORGIA
FEBRUARY 10, 1995

Enclosure 2



AGENDA

- | | |
|---|---|
| I. Introduction | Rick Machon |
| II. Unit 3 Recovery Status | |
| - Restart Schedule | Dave Stinson |
| - Summary of Commodities | Dave Stinson |
| - Completed and Upcoming Milestones | Dave Stinson |
| - Regulatory Issues | Pedro Salas |
| - Operations | Gene Preston |
| III. Unit 3 Operational Readiness | |
| - Unit Separation for Recovery Activities | Gene Preston |
| - Unit 3 Recovery Quality Assurance Plan | Tim Shriver
Raul Baron |
| - Unit 3 Recovery Windows Process | Tim Shriver |
| IV. Closing Remarks | Rick Machon |



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I. INTRODUCTION MEETING OBJECTIVES

- **This Is a Kick-Off for a Monthly Meeting with the NRC Region II Restart Review Board to Address BFN Unit 3 Restart Activities**
- **Discuss Schedule for Unit 3 Restart and Status of Major Activities**
- **Discuss Recent Organizational Changes**
- **Discuss Unit 3 Operational Readiness Activities**



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UNIT SEPARATION PROGRAM (CONT.)

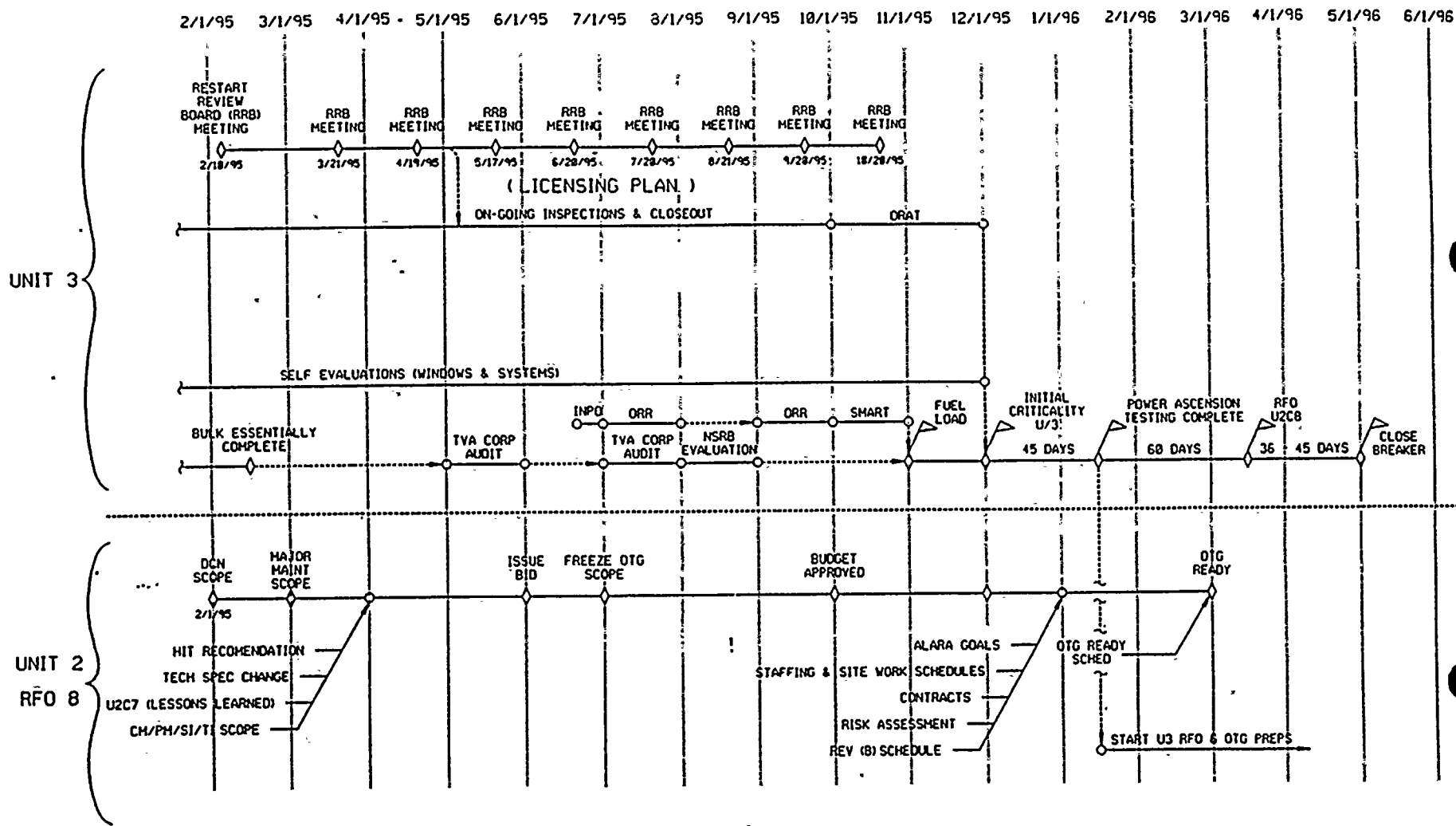
- **Programmatic Overview (Cont.)**

- **Unit Interface Drawings Developed from Markup of System Drawings Which Include Flow Diagrams, Electrical Schematics and Electrical Single-Line Drawings. Legend is as Defined Below:**
 - **Orange Highlight** **Units 1 and 3 Equipment Required for Unit 2 Operations and Boundary Isolation Components**
 - **Perpendicular Red Line** **Unit 1/Unit 2 or Unit 2/Unit 3 Boundary Isolation Point**
 - **Blue Highlight** **Unit 3 Equipment Required to Support Unit 3 in a Defueled Configuration and Potentially Affects Equipment Required to Support Unit 2 Operation**
 - **Green Highlight** **Unit 1 Equipment Required to Support Unit 1 in a Defueled Configuration and Potentially Affects Equipment Required to Support Unit 2 Operation**



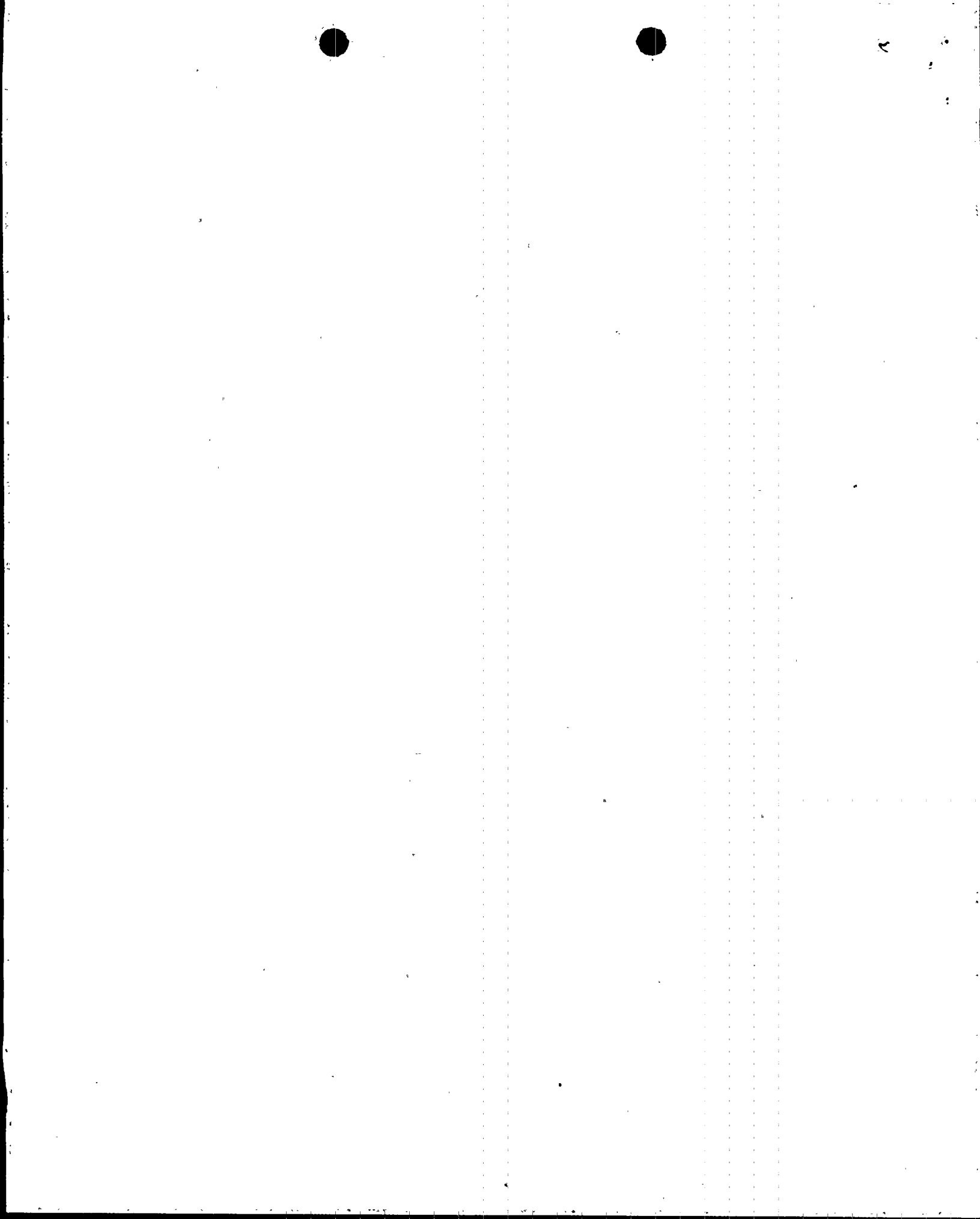
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INTEGRATED SITE SCHEDULE

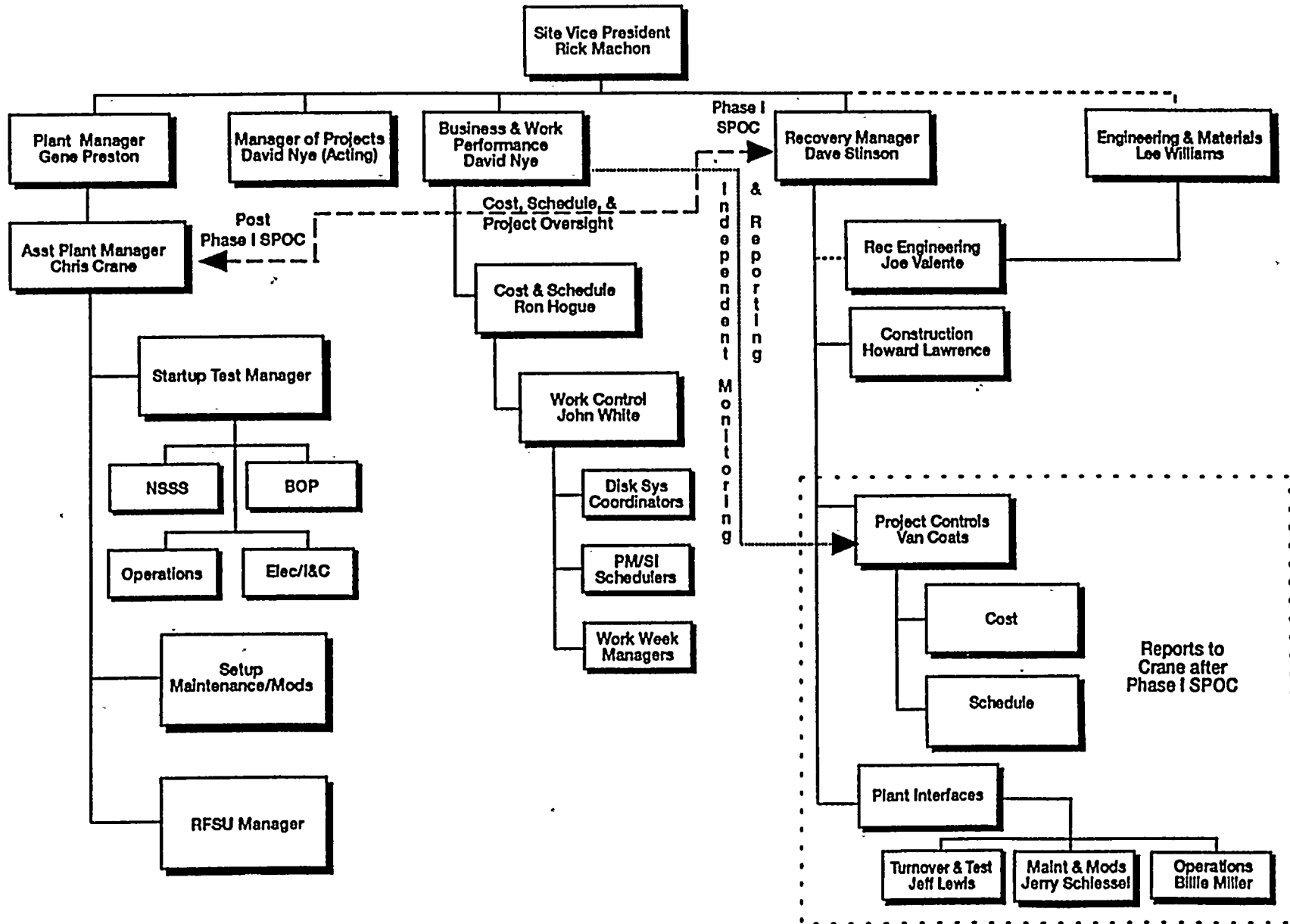


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Browns Ferry Site Organization—Unit 3 Relationship Chart





II. UNIT 3 RECOVERY STATUS

- **Schedule Supports 100% Power Date of February 1996**

- **Summary of commodities**
 - **504 of 546 (92%) [96%] Design Changes Issued**
 - **635 Of 828 (77%) [74%] Design Change Stages Field Complete (Form 83s Issued)**
 - **614 Of 938 (65%) [63%] Design Change Stages Closed, Return to Operation (RTOs) Accepted**

Data Through 1/29/95 - [Status as of 12/01/94]



II. UNIT 3 RECOVERY STATUS (CONT.)

- Summary of Commodities (Cont.)

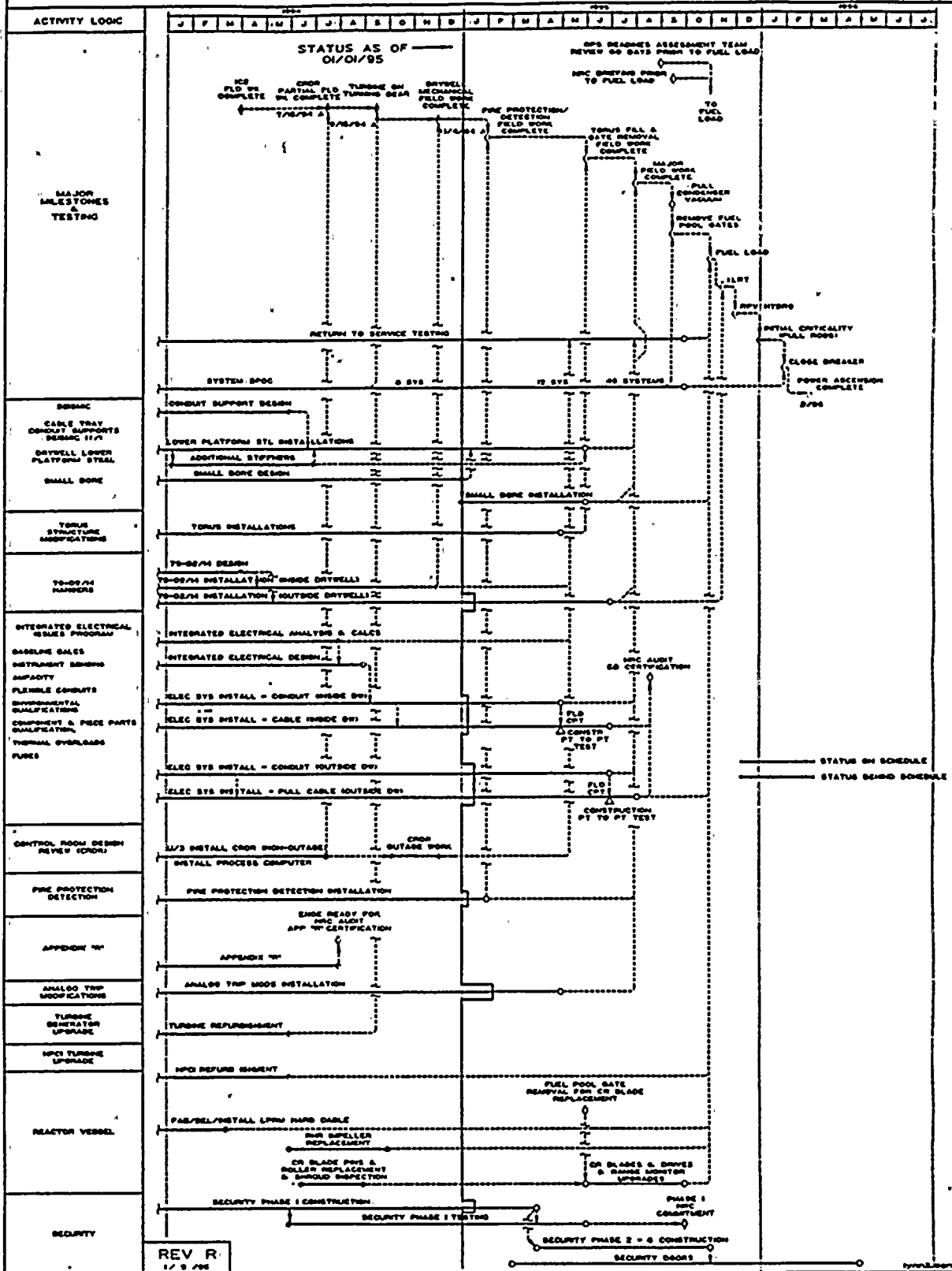
<u>Commodity</u>	<u>Installed</u>	<u>Remaining</u>	<u>90% Complete</u>	<u>Complete</u>
Cable (ft.)	540,822 (81%)[71%]	126,603	April 95 F	July 95 F
Conduit (ft.)	138,204 (89%)[81%]	17,310	March 95 F	July 95 F
Conduit Supports	12,875 (86%)[77%]	2,114	March 95 F	July 95 F
Large Hangers	1,760 (95%)[89%]	96	December 94 A	May 95 F
Small Hangers	4,779 (91%)[88%]	470	January 95 A	June 95 F

Data Through 1/29/95 - [Status as of 12/01/94]



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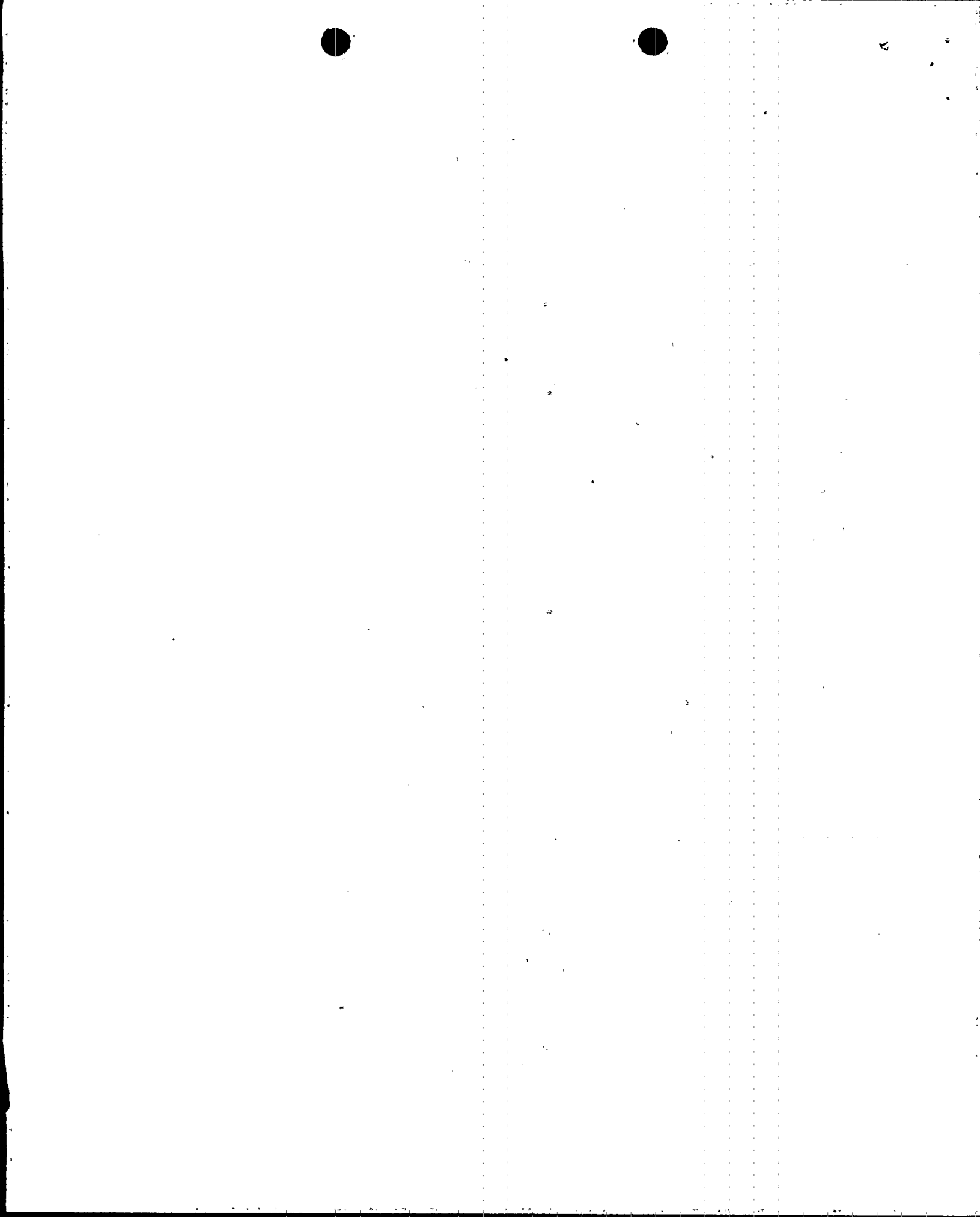
BFN UNIT 3 SUMMARY SCHEDULE





II. UNIT 3 RECOVERY STATUS (CONT.)
COMPLETED AND UPCOMING MILESTONES

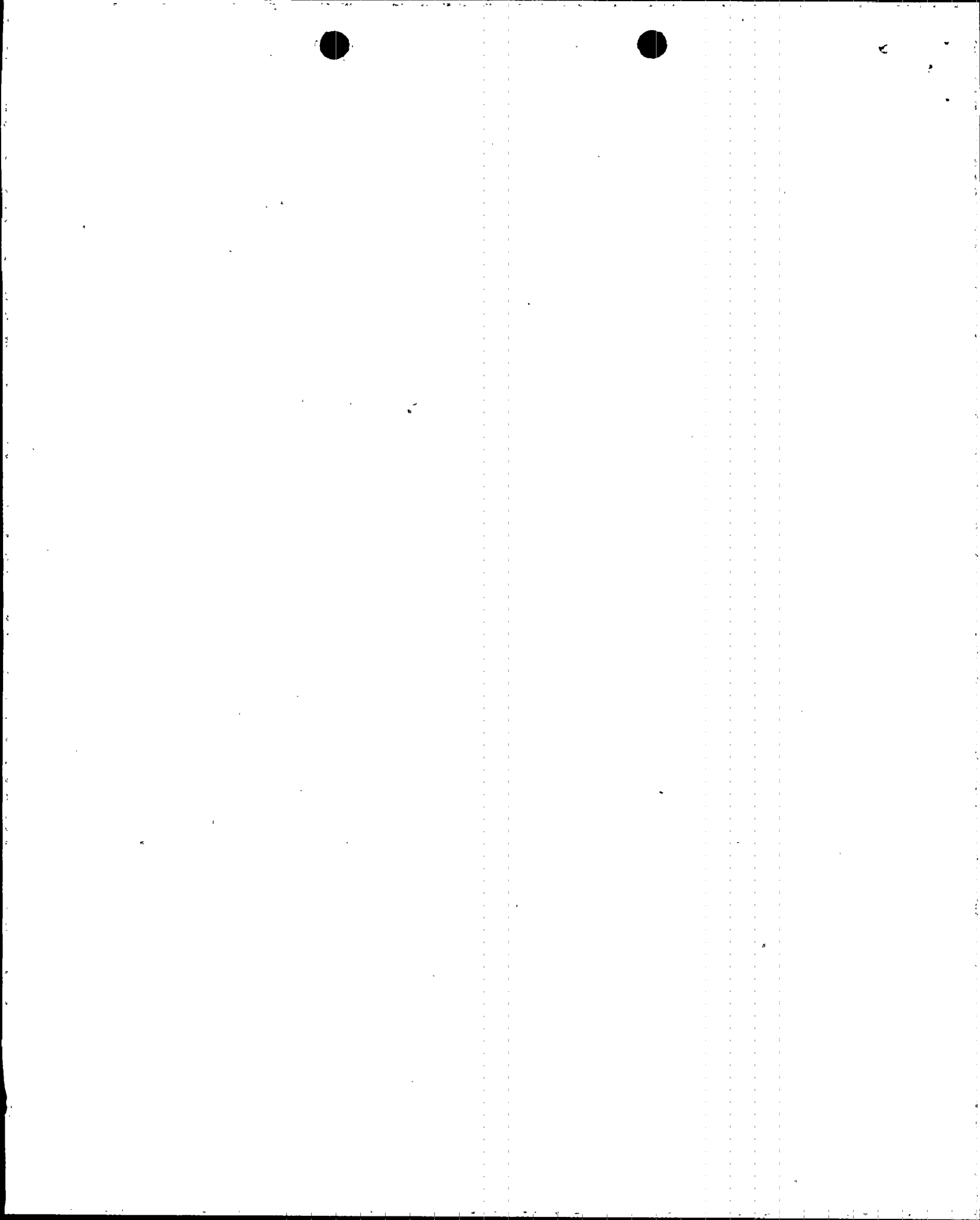
- **Major Milestones**
 - **Transition from Bulk Installation to System Completion Mode (Complete)**
 - **Fire Detection System Upgrades and Fire Protection System Field Work (1/19/ 95 Actual)**
 - **Modifications Associated with the Installation of the Analog Transmitter/Trip System (Complete - ECN P0126)**
 - **Torus Fill/Fuel Pool Gate Removal System Field Work Complete (May 95)**
 - **Pull Condenser Vacuum (September 95)**
 - **Pull Fuel Pool Gates for Fuel Load (September 95)**



II. UNIT 3 RECOVERY STATUS (CONT.) REGULATORY ISSUES

● Technical Specifications	<u>Expected NRC Issue Date</u>	<u>Need Date</u>
- TS-318, Conversion to Analog Transmitter/Trip	TBD	5/26/95
- TS-319 HPCI/RCIC Temperature Switches	2/28/95	5/29/95
- TS-320, RWCU Temperature Switches	2/28/95	5/03/95
- TS-333, SLC Boron Content	2/10/95	9/08/95
- TS-337, Appendix R License Amendment	9/15/95	6/06/95
- TS-339, ELLA, Rod Blocks and COLR	2/15/95	9/01/95
- TS-340, Diesel Generator Load Shed	2/28/95	5/20/95
- TS-349*, RPV Bolt-Up Temperature (PTLR) - [TVA Expected Submittal Date 3/31/95]	TBD	Prior to ILRT (11/95)
- TS-355*, Revise IRM/APRM Surveillance Frequency -	TBD	Restart

* - Not Required but Desired Prior to Unit 3 Restart



II. UNIT 3 RECOVERY STATUS (CONT.) REGULATORY ISSUES (CONT.)

- | ● Submittals | <u>Submittal Date</u> |
|---|------------------------------|
| - Unit 3 RPV Beltline Inspection Report | 3/06/95 F |
| - Response to RAI on TS 318 (ATTS) | 3/09/95 F |
| - Code Relief - Hydrostatic Tests N498.1 and N416.1 | 3/31/95 F |
| - Multi-Unit PRA | 4/14/95 F |
| - Containment Isolation (Follow-up) | 180 Days Prior to Restart |
| - Unit 3 Issues Closeout Letter | 30 Days Prior to Restart |
| - EQ Certification | Prior To Restart |
-
- | | |
|---------------------------------------|--|
| ● SERs | |
| - Appendix R | |
| - Containment Isolation Dependability | |



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II. UNIT 3 RECOVERY STATUS (CONT.) REGULATORY ISSUES (CONT.)

- **CATDs**
 - **513 CATDs Issued Against BFN Units 1, 2, or 3**
 - **359 BFN Specific**
 - **154 Non-Plant Specific**

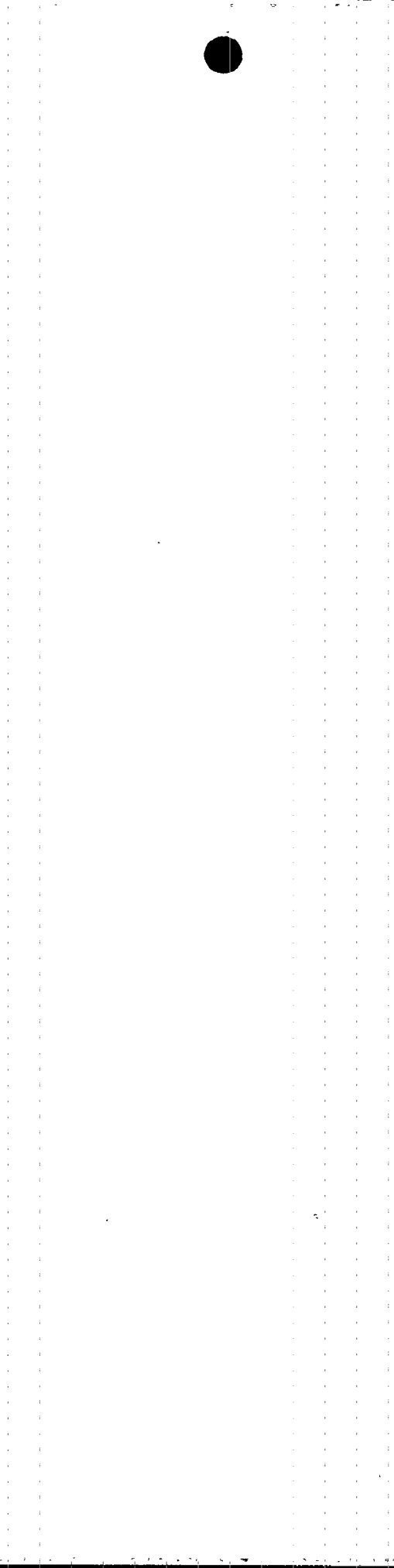
- **All 513 CATDs Apply to Unit 3**

- **92 [107] of the 513 CATDs Are Open for Unit 3**

- **Intend to Close the 92 Open CATDs Prior to Unit 3 Restart**

- **Exceptions Will Be Addressed on Case-By-Case Basis**

Data Through 1/30/95 - [Status as of 12/01/94]



II. UNIT 3 RECOVERY STATUS (CONT.) REGULATORY ISSUES (CONT.)

- **Major Inspections**
 - **Operational Readiness Assessment Team**
 - **Appendix R**
 - **EQ**

- **Close 208 [218] NRC Commitments (NPP, Generic Letters, NUREG-0737, Bulletins, etc.)**

- **Close 56 [63] Regional Inspection Items (Violations, URIs, IFIs, LERs, Deviations)**

- **Unit 3 Restart and Unit 2 Cycle 8 Outage Schedules Coordinated**

Data Through 1/30/95 - [Status as of 12/01/94]



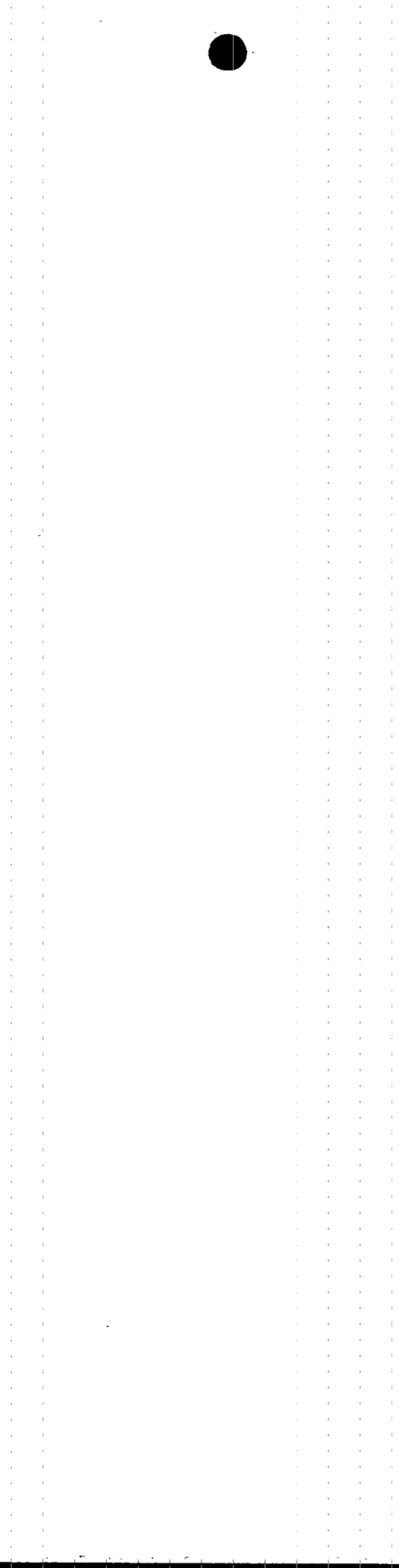
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II. UNIT 3 RECOVERY STATUS (CONT.) OPERATIONS

- Status of Unit 3 Operations

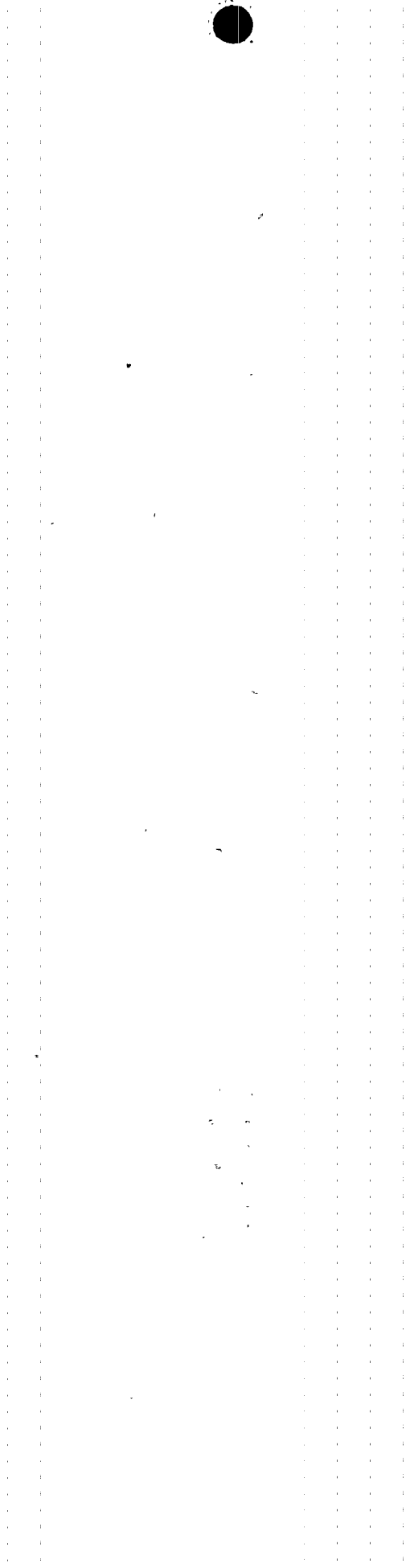
<u>Activity</u>	<u>Completed</u>	<u>Projected Total</u>	<u>Percent Complete</u>
Post-Mod Test Procedures	299	412	73%
System Test Complete	5	64	8%
SPOC Walkdown	17	62	27%
SPOC Phase I	17	63	27%
SPOC Phase II	10	63	16%
Ops Procedure Revisions	146	153	95%
Ops Label Upgrade	28	35	80%

Data Through 1/24/95



III. UNIT 3 OPERATIONAL READINESS UNIT SEPARATION FOR RECOVERY ACTIVITIES

- **Programmatic Overview**
 - **Purpose Is to Assure Technical Specification Equipment Operability and Limit Engineered Safeguards Feature (ESF) Actuations**
 - **BFN Units Have Been Operationally and Physically Separated to the Extent Practical**
 - **Color Coding Drawings Define Operational and Physical Boundaries**
 - **When Areas Cannot Be Operationally Separated, Access Requirements, Tagging and Labeling Is Used**
 - **Separation Between Unit 1 and Unit 2 is and will be maintained during Unit 3 Recovery Activities**
 - **Controlled by Site Standard Practice (SSP) 12.50, Unit Separation and Recovery Activities**



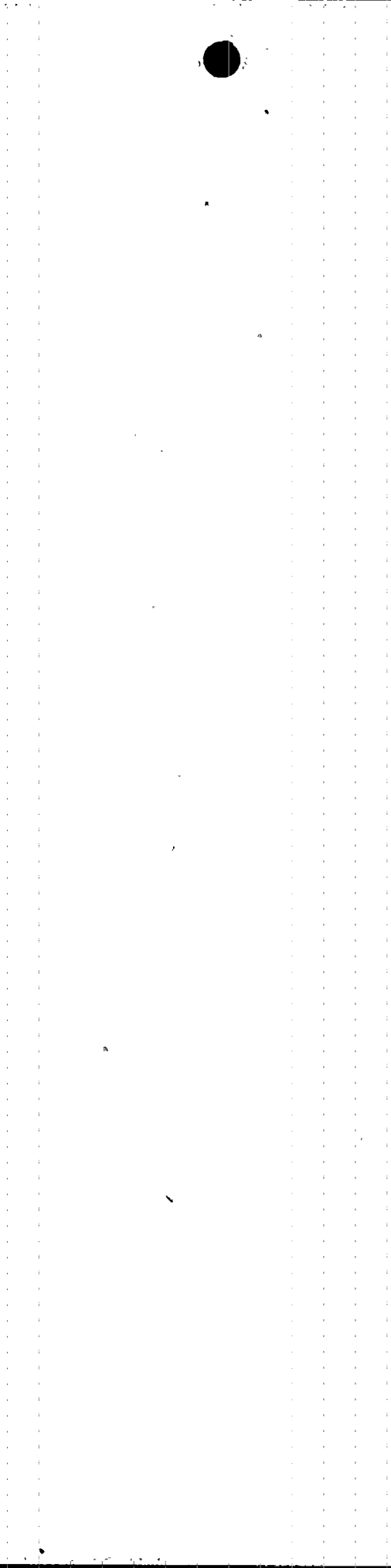
III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT SEPARATION FOR RECOVERY ACTIVITIES (CONT.)

- **Transition to Unit 3 Operation**
 - **Unit 2/Unit 3 System and Equipment Separation Boundaries Can Be Removed at the Discretion of Operations After:**
 - **Component Testing**
 - **System Performance Acceptance Evaluation (SPAE) [Engineering]**
 - **System Pre-Operability Checklist (SPOC) Phase I**
 - **System Engineer Then Notifies Engineering to Update Color Coded Drawings**
 - **Engineering Reviews Changes. Drawings Updated Within 10 Working Days After Approval**
 - **Operations Removes Hold Orders, Equipment Tags, Signs, and Orange Tape**

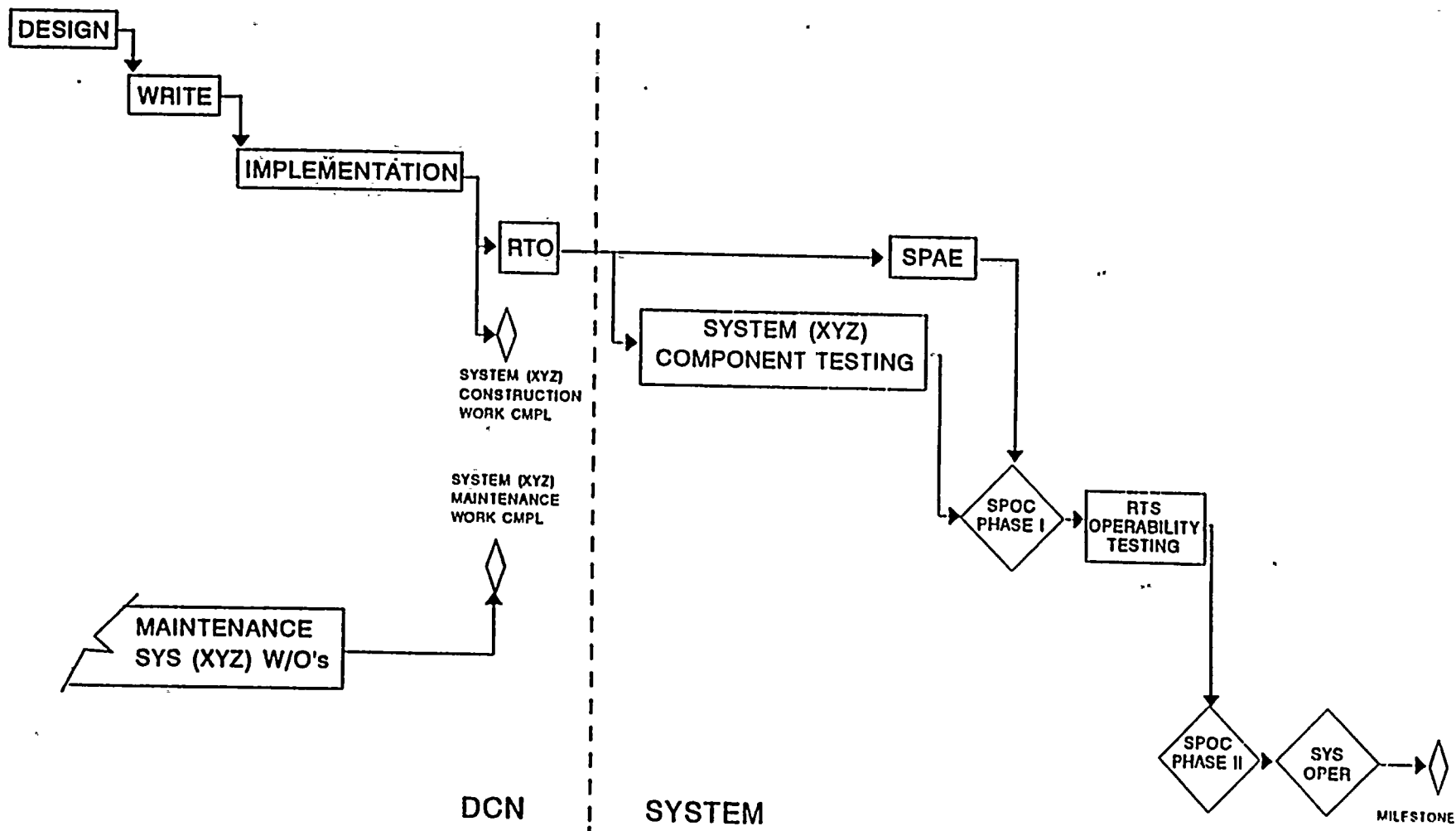


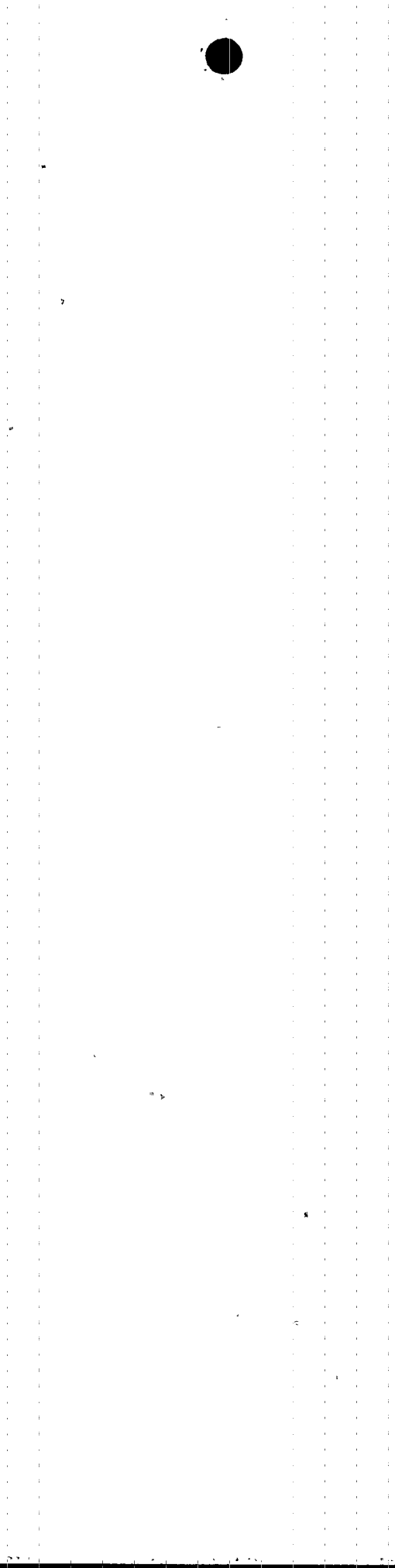
III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT SEPARATION FOR RECOVERY ACTIVITIES (CONT.)

- **Transition to Unit 3 Operation (Cont.)**
 - **System Declared Operable After:**
 - **System Pre-Operability Checklist (SPOC) Phase II**
 - **System Operability Testing**



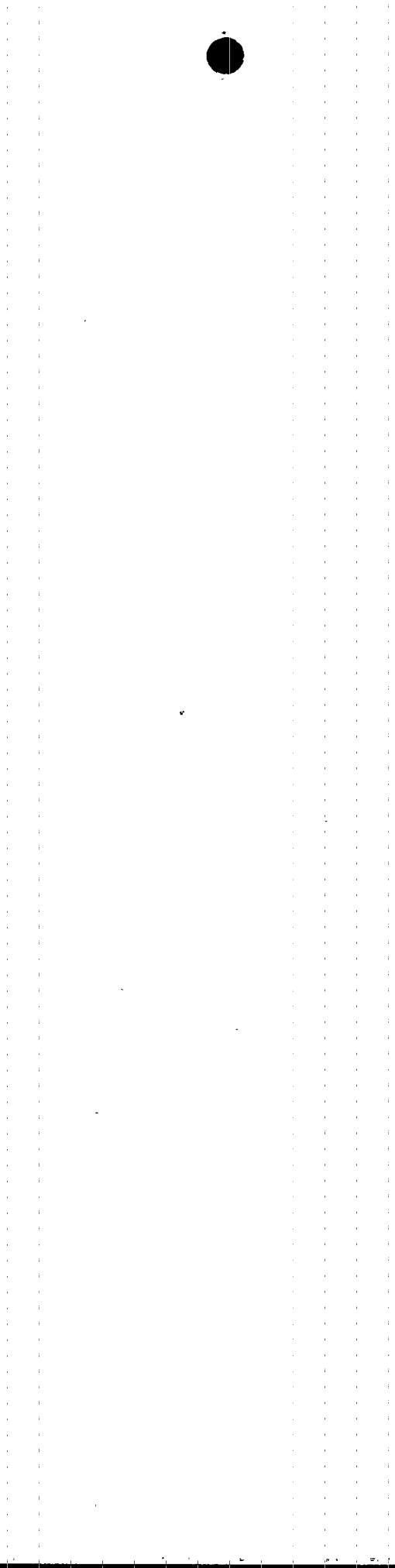
III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT SEPARATION FOR RECOVERY ACTIVITIES (CONT.) TYPICAL LOGIC





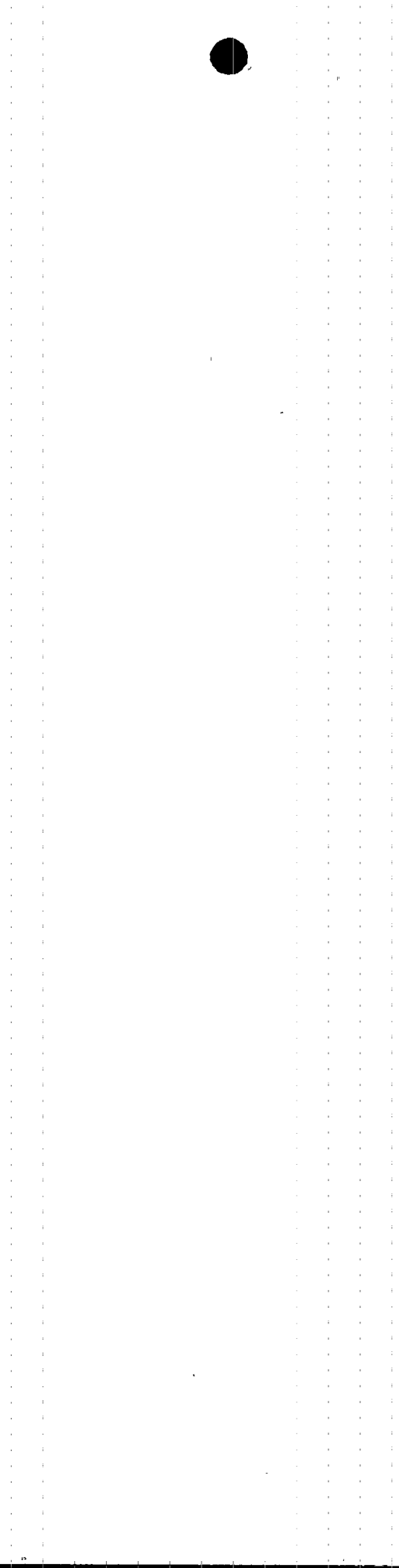
III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT SEPARATION FOR RECOVERY ACTIVITIES (CONT.)

- **Transition to Unit 3 Operation (Cont.)**
 - **Current Status**
 - **Approximately Half of the Operational Equipment Clearance Tags for Unit 2/Unit 3 Separation Removed**
 - **Approximately 400 Mechanical and 900 Electrical Equipment Clearance Tags Remain**



III. UNIT 3 OPERATIONAL READINESS (CONT.)
UNIT SEPARATION FOR RECOVERY ACTIVITIES (CONT.)

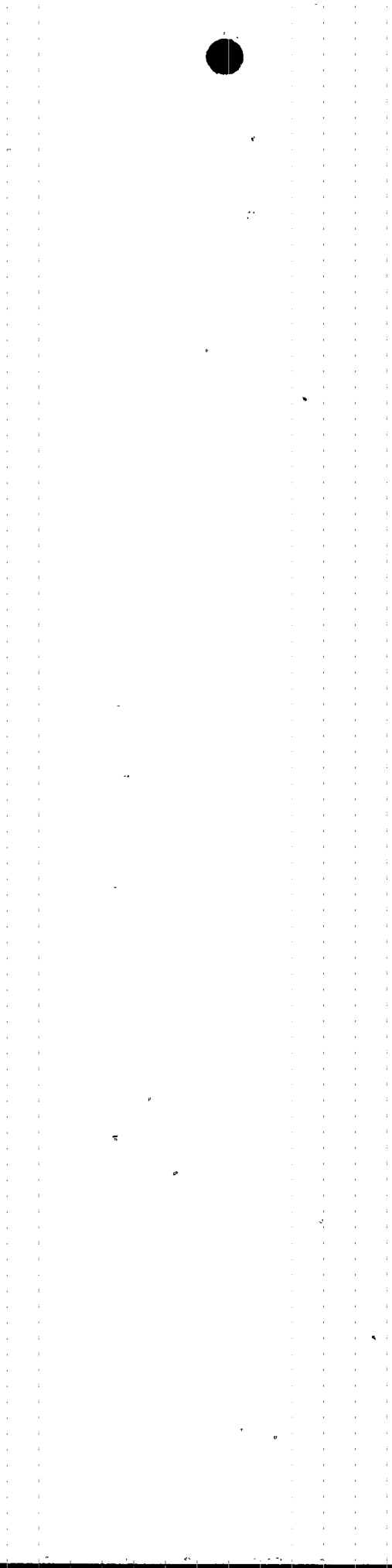
- **Transition to Unit 3 Operation (Cont.)**
 - **Area Turnover**
 - **Systematic Turnover of Plant Areas from Recovery Organization to Maintenance or Operations**
 - **Outstanding Modifications and Maintenance Reviewed for Material Impact on Area**
 - **Walkdowns Performed to Each Area**
 - **All Deficiencies Punchlisted. Responsible Individuals and Resolution Dates Assigned**



III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT 3 RECOVERY QUALITY ASSURANCE PLAN

- **Purpose - Establish Effective Strategy to Assess and Verify Quality Aspects of Activities Performed During Unit 3 Recovery**

- **Four-Part Methodology**
 - **Part I - Scheduled QA Oversight/Observations**
 - **Part II - Identification/Evaluation of Specific Recovery Activities**
 - **Part III - Review and Assess TVA Construction Deficiencies for Unit 3 Impact**
 - **Part IV - Validation of Plan Effectiveness**

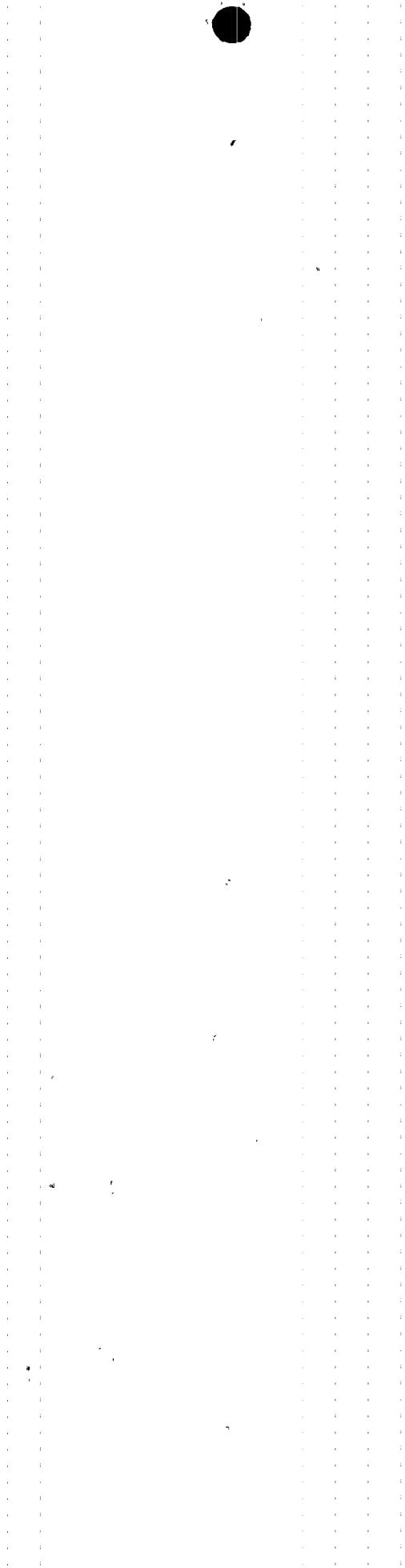


III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT 3 RECOVERY QUALITY ASSURANCE PLAN (CONT.)

Part I - Scheduled QA Oversight/Observations

- **Objective - Provide Ongoing QA Oversight to Ensure Activities Associated with Power Operations Are Conducted Properly and Meet Quality Requirements**

- **Activities**
 - **Scheduled Performance Evaluation Program Followup**
 - **Corrective Action Reviews**
 - **Routine Audits**
 - **Scheduled Assessments**
 - **Document Closure Verification**
 - **Oversight Of Plant Activities**
 - **Level I (Windows) Trend Evaluation**



III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT 3 RECOVERY QUALITY ASSURANCE PLAN (CONT.)

Part II - Identification/Evaluation of Specific Recovery Activities

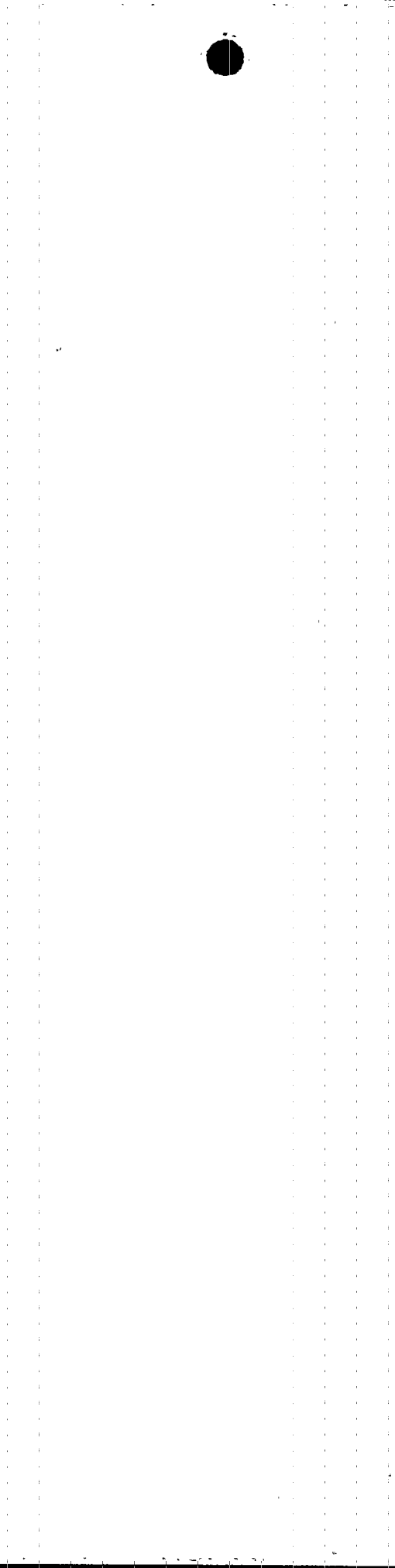
- **Objective - Identify Unit 3 Recovery-Specific Issues and Evaluate Using Dedicated Resources**

- **Summary of Activities**
 - **Performed Analysis of BFN Unit 3 Recovery Activities to Identify Potential Exposure Areas**

 - **Assembled a Dedicated Team Within Nuclear Assurance to Perform Unit 3 Recovery Specific Assessments**

 - **Established a Schedule and Developed Scopes and Plans for the Specific Recovery Activities**

 - **Two Evaluations Are Complete and One Is in Progress. No Items Identified Which Would Adversely Impact the Restart of Unit 3 or Two-Unit Operation**



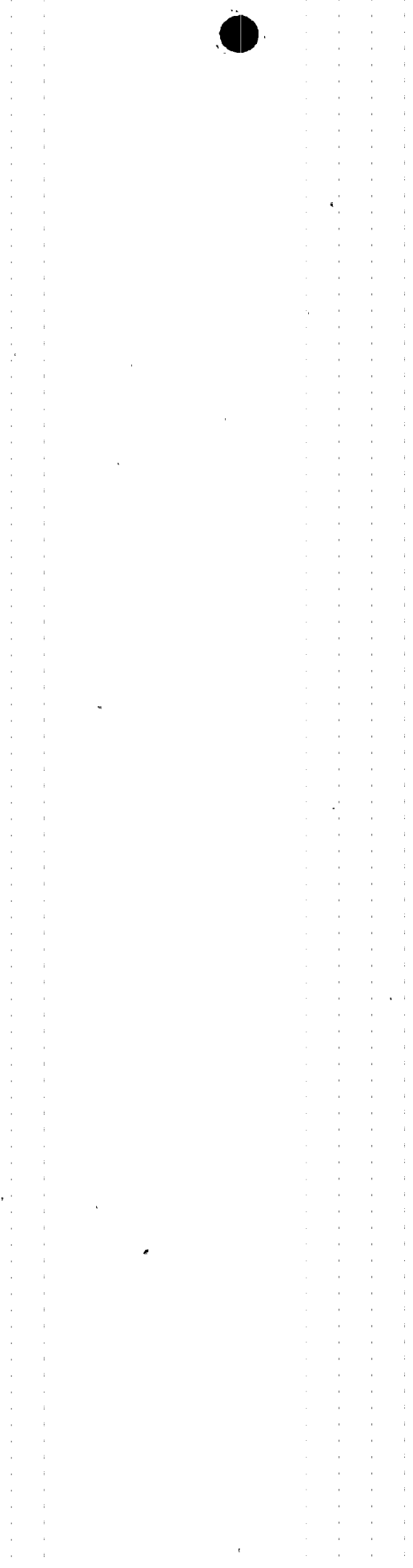
**III. UNIT 3 OPERATIONAL READINESS (CONT.)
UNIT 3 RECOVERY QUALITY ASSURANCE PLAN (CONT.)**

● Part II Specific Oversight Activities	<u>Schedule</u>
- Motor Operated Valve Program for GL 89-10	Complete
- Design Change Work Document Closure	Complete
- Vertical Slice (With Two Systems): Engineering Design and Construction (In Progress)	In-Progress
- Technical Support Issues	February 1995
- Environmental Qualification	April 1995
- SPOC	Phase I - May 1995 Phase II - September 1995
- Restart Test Program	June 1995
- Erosion/Corrosion Program	June 1995
- Maintenance Activities/Support	June 1995



**III. UNIT 3 OPERATIONAL READINESS (CONT.)
UNIT 3 RECOVERY QUALITY ASSURANCE PLAN (CONT.)**

- | ● Part II Specific Oversight Activities (Cont.) | <u>Schedule</u> |
|---|---|
| - Surveillance Instruction and Abnormal/Emergency Operating Instruction Procedure Upgrades | July 1995 |
| - Appendix R | July 1995 |
| - Procurement/Material Control | July 1995 |
| - Vertical Slice (2 Systems) - Operations, Maintenance, and Testing | August 1995 |
| - Unit 3 and Multi-Unit Operational Readiness | August 1995 |
| - Power Ascension Test Monitoring | Phase I - August 1995
Phase II - December 1995 |



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III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT 3 RECOVERY QUALITY ASSURANCE PLAN (CONT.)

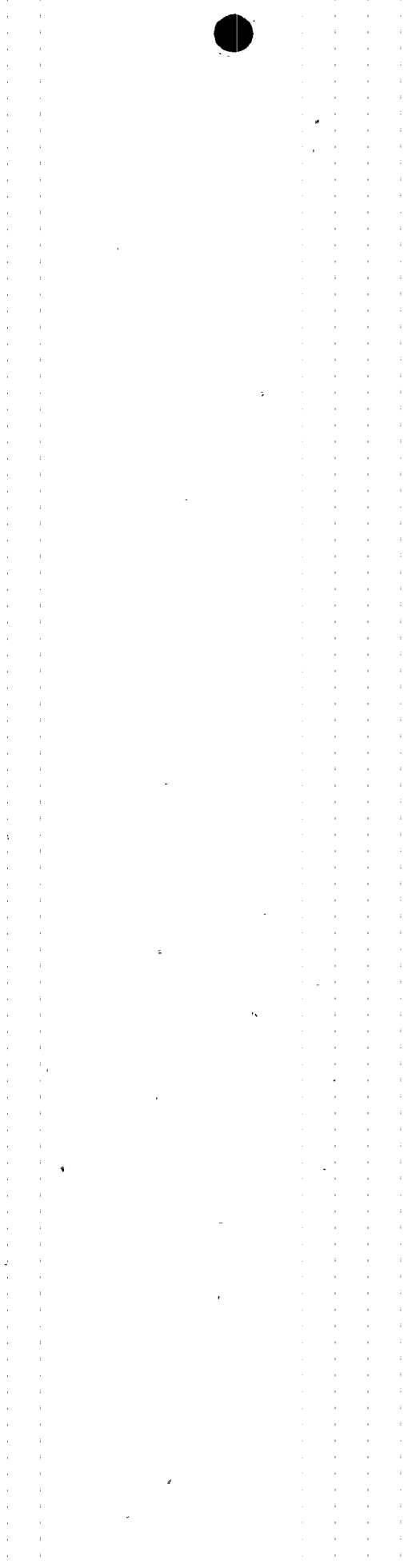
Part III - Review And Assess TVA Construction Deficiencies For Unit 3 Impact

- **Objective - In Order Not to Dilute the Operational Focus of the Ongoing Nuclear Experience Review Generic Review Process, a Separate Effort Has Been Commissioned to Ensure That Modification Issues Identified at the Watts Bar Nuclear Plant (WBN) Are Evaluated for Transportability to BFN**

- **Key Elements are:**
 - **Review Watts Bar Problem Event Reports (In Progress), Significant Corrective Action Reports (In Progress), NRC Inspection Reports (Complete), and Notice of Violations (Complete)**

 - **Evaluate Those Areas to Determine If They Are Applicable to BFN Unit 3**

 - **Schedule, Develop Scopes and Plans, and Perform Observations of Those Areas**



III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT 3 RECOVERY QUALITY ASSURANCE PLAN (CONT.)

Part IV - Validation of Plan Effectiveness

- **Objective - To Conduct a Broad-Based, Senior TVA Management Level Review of Programs, Procedures, and Controls to Determine if Managements Expectations Will Be Met for the Safe and Reliable Dual Unit Operation of BFN Units 2 and 3**

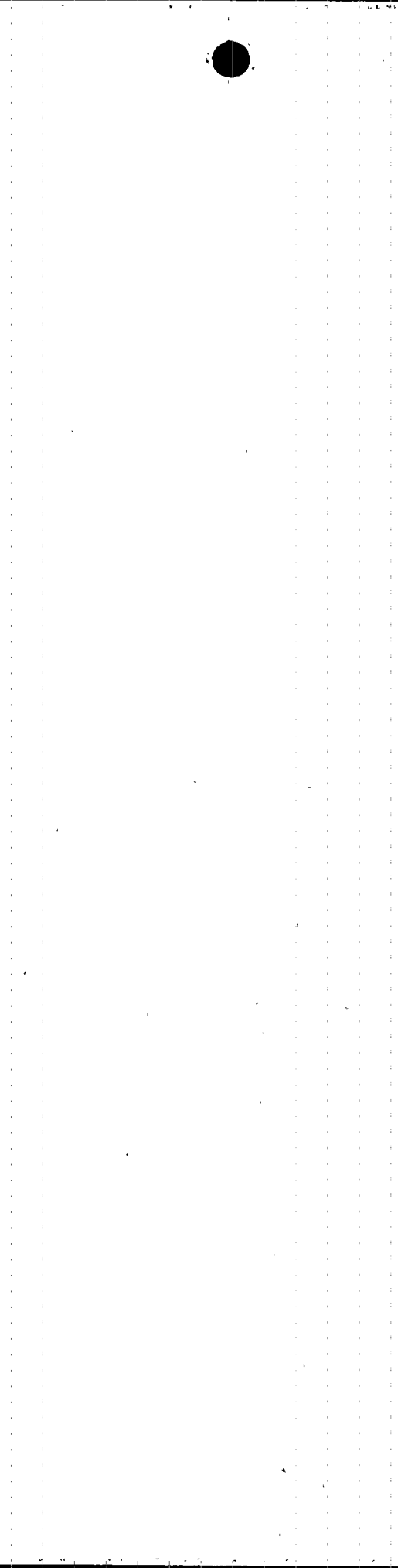
- **Scope**
 - **Closure Of Unit 3 Restart Programs and Commitments**
 - **Application of BFN Unit 2 Lessons Learned**
 - **Application of Lessons Learned from Sequoyah Restart**
 - **Preparations for Unit 3 Restart and Overall Readiness for Two-Unit Operation**
 - **Effectiveness of Site Nuclear Assurance Overview**



III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT 3 RECOVERY QUALITY ASSURANCE PLAN (CONT.)

Key Elements are:

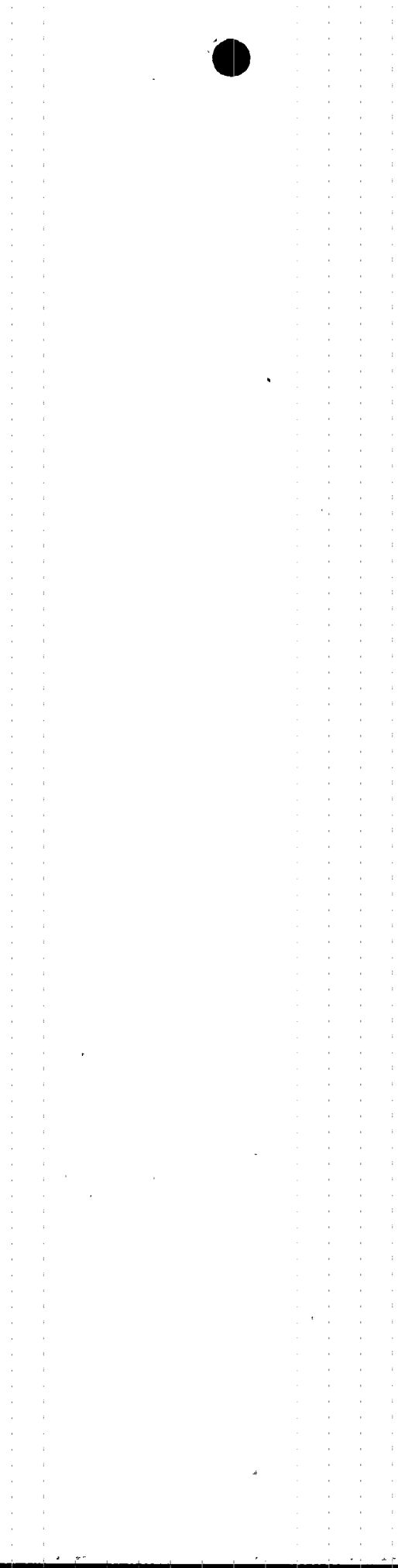
- | | <u>Schedule</u> |
|---|-------------------------|
| ● Two-Phase Corporate Audit | |
| - Phase I - Assess the Effectiveness of the Nuclear Assurance and Licensing Recovery with Particular Emphasis on Dual Unit Operation | May 1995 |
| - Phase II - Evaluation of Corrective Actions | Prior to Restart |
| ○ Perform Just Prior to Restart | |
| ○ Review Corrective Actions from Phase I | |
| ○ Review Corrective Actions from Other Assessments (e.g., ORAT, ORR, NSRB, etc.) | |
| ● Nuclear Safety Review Board (NSRB) Evaluation of Plan Implementation and Assessment of Preparations for Multi-Unit Operation | Prior to Restart |



III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT 3 RECOVERY QUALITY ASSURANCE PLAN (CONT.)

Elements of Plan

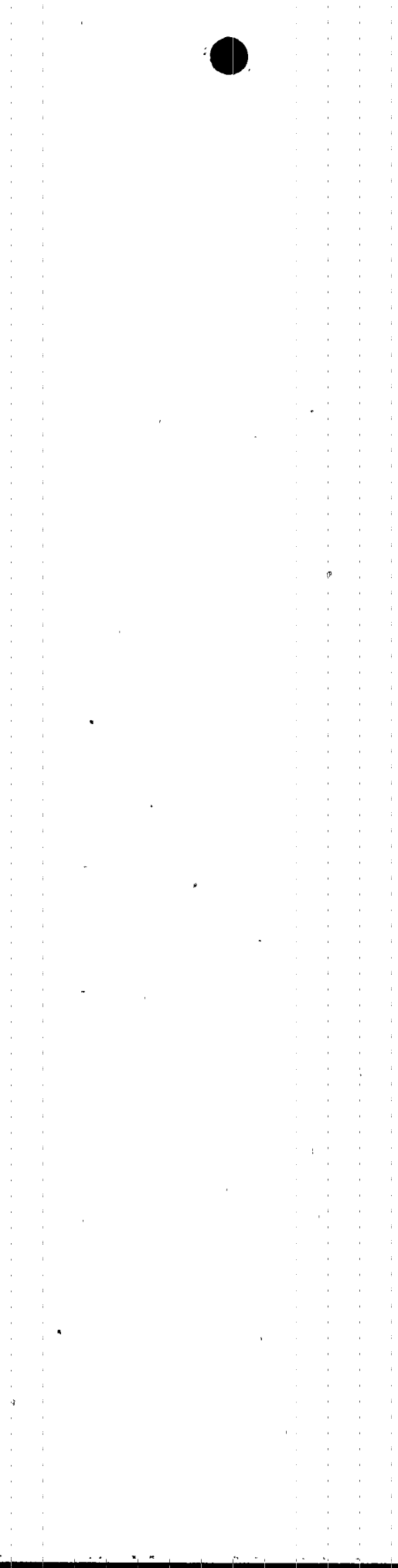
- **Evaluate Each Element Against the Guidance Contained With the Scope of the Assessment**
 - **Main Control Room Evaluation**
 - **Field Evaluations**
 - **System Readiness Assessment**
 - **Review of Restart Activities**
 - **Accurate Accounting of Open Corrective Action Documents**
 - **Assessment of Closure Documentation Adequacy**



III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT 3 RECOVERY QUALITY ASSURANCE PLAN (CONT.)

Elements of Plan (Cont.)

- **Evaluate Each Element Against the Guidance Contained With the Scope of the Assessment (Cont.)**
 - **Assessment of Readiness for Two-Unit Operation**
 - **Pre-RTO Construction/Installation Control (Two Unit) Differences**
 - **Scheduling and Coordination of Work**
 - **Command and Control Functions with Separate Control Rooms**
 - **Coordination of Common Items**
 - **Application of Lessons Learned**



ACTIVITY ID	EARLY START	EARLY FINISH	REM DUR	1994												1995						
				N		DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR
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				<input type="checkbox"/>	QA PROG REVIEW - POWER ASCENSION (PHASE I) (181)																	
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P148 Date 07/1995
 Date Date 08/1995
 Project Start 08/1995
 Project Finish 12/2007

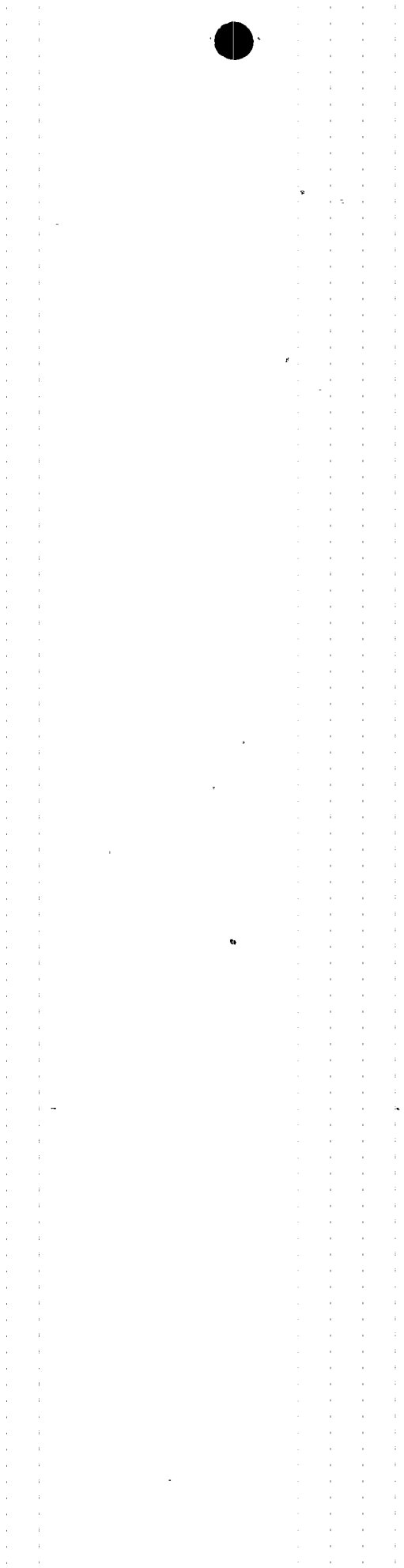
Activity Starts/Ends When
 Activity Starts/Ends When
 Activity Starts/Ends When

INTEGRATED PROJECT SCHEDULE
 BFM UNIT 3 RECOVERY SCHEDULE
 QA PROGRAM REVIEW ACTIVITIES

TVA

DATE	INITIALS	CHECKED	DATE

B7 Engineering Systems, Inc.



III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT 3 RECOVERY "WINDOWS PROCESS"

- **Objective - To Provide a Systematic and Effective Management Monitoring and Assessment Tool for the Specific Activities Associated with the Recovery and Restart of BFN Unit 3**

- **Basis for Criteria**
 - **INPO 90-015, Performance Objectives and Criteria for Operating and Near-Term Operating License Plants, with Emphasis on Near-Term Operating License Guidelines**

 - **NRC Inspection Manual 0350, Staff Guidelines for Restart Approval**

 - **NRC Inspection and Enforcement Startup and Preoperational Chapters**

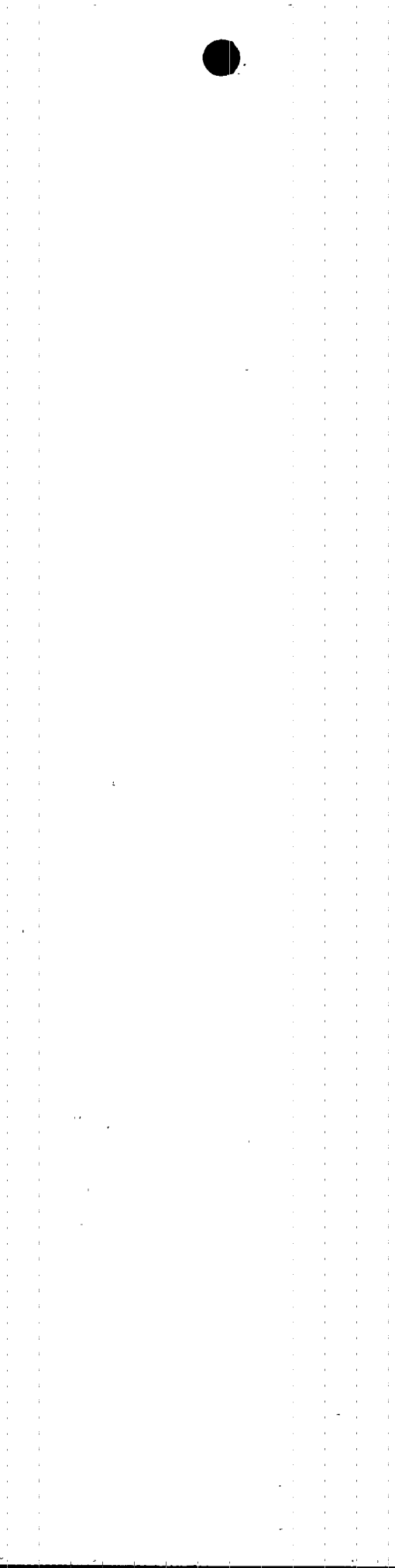
 - **Site Management Expectations**



III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT 3 RECOVERY "WINDOWS PROCESS" (CONT.)

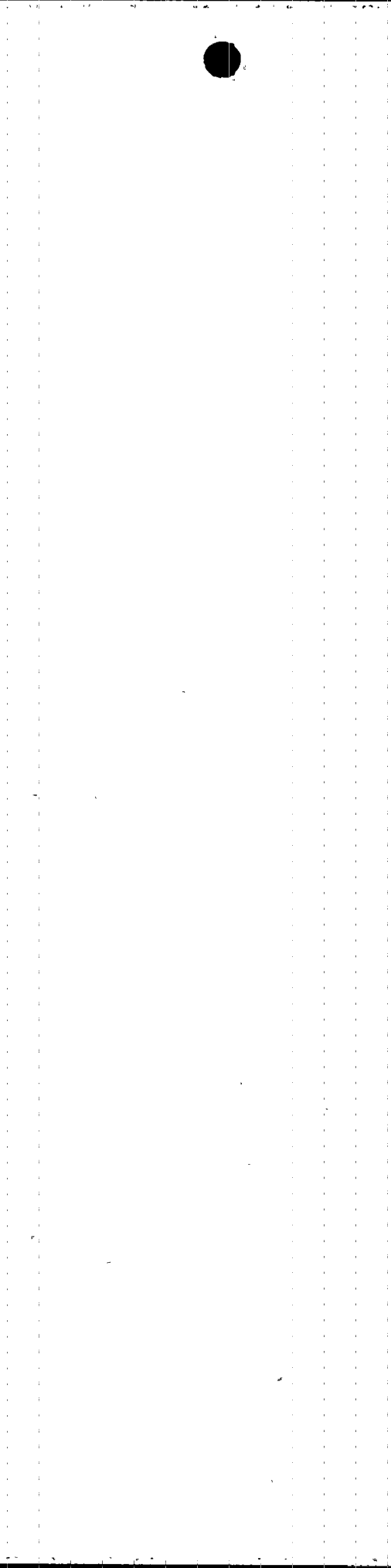
- **Activities**

- **Developed Specific Windows Based on Activities Essential to Unit 3 Restart**
- **Assign Owner for Each Process Area**
- **In Conjunction with Line Management, Develop Specific Unit 3 Performance Criteria for Their Windows**
- **Monthly Meetings Will Be Held to Status Progress and Evaluate Performance**



III. UNIT 3 OPERATIONAL READINESS (CONT.) UNIT 3 RECOVERY "WINDOWS PROCESS" (CONT.)

- **Colors Used to Convey Rating**
 - **Green Signifies Significant Strength**
 - **White Signifies Satisfactory Performance**
 - **Signifies Improvement Needed**
 - **Red Signifies Significant Weakness**



**BROWNS FERRY
UNIT 3
OPERATIONAL READINESS**

PROCESSES

Recovery Organization
and Administration

OVERALL
MANPOWER

KNOWLEDGE &
PERFORMANCE

CONTRACTOR
CONTROL

WORK
CONTROL

QUALITY

SCHEDULING

CONDUCT OF
RECOVERY

Engineering

PROCEDURES AND
DOCUMENTATION

CONFIGURATION
MANAGEMENT

DCNs
ISSUED

TACF's

APPENDIX R

SPAE

EQ PROGRAM

SEISMIC

MATERIAL
INVENTORY

STAFFING

BTRD

Construction

PROCEDURES AND
DOCUMENTATION

DCN's
IMPLEMENTED

HOUSEKEEPING

CONDUCT OF
CONSTRUCTION

PLANT MATERIEL
CONDITION

MATERIAL
MANAGEMENT

STAFFING

Maintenance

PROCEDURES AND
DOCUMENTATION

PLANT MATERIEL
CONDITION

HOUSEKEEPING

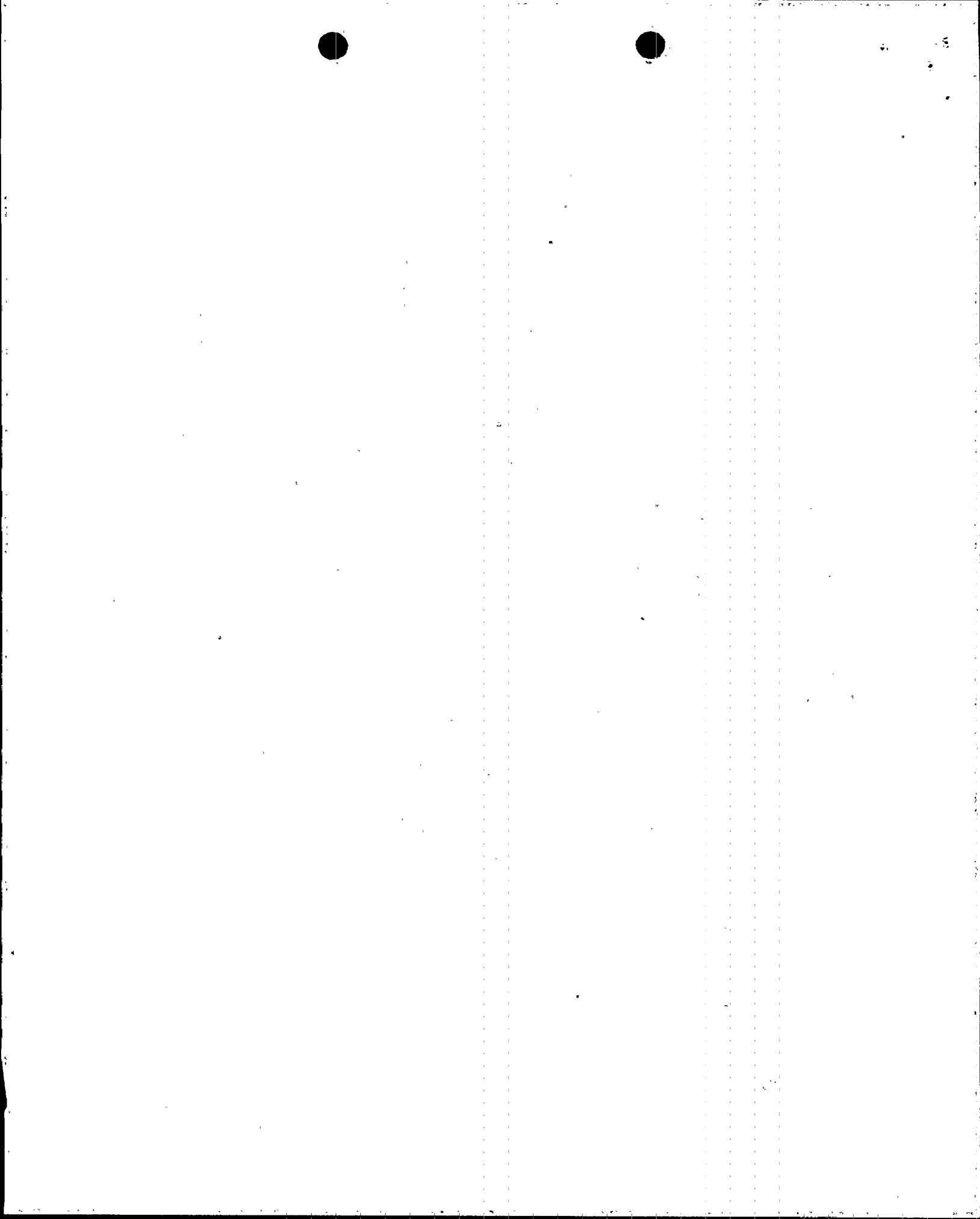
MATERIALS
MANAGEMENT

PREVENTIVE
MAINTENANCE

STAFFING

CORRECTIVE
MAINTENANCE

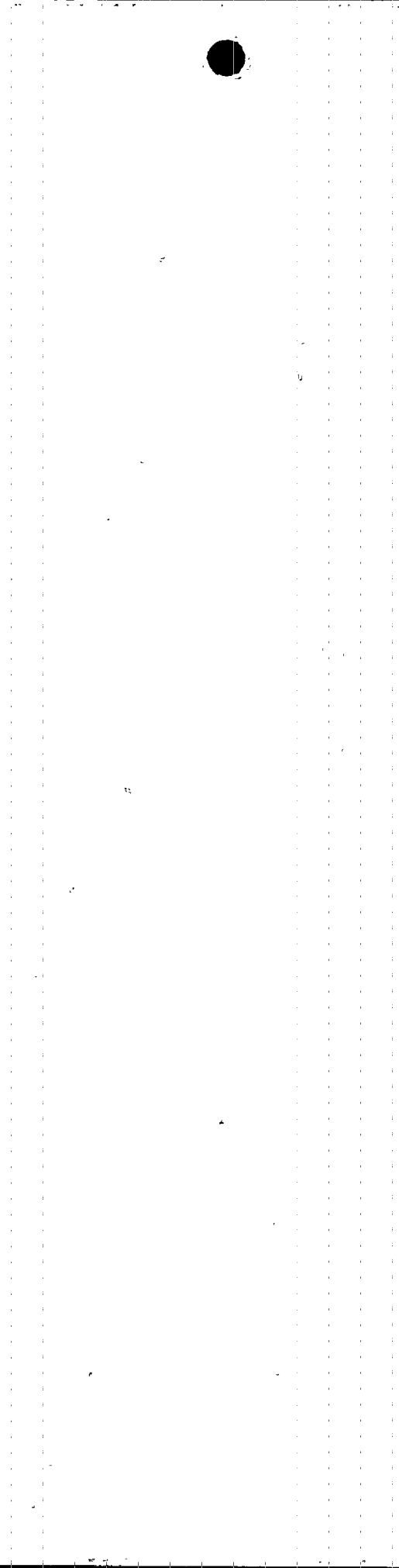
MAINTENANCE
BACKLOG



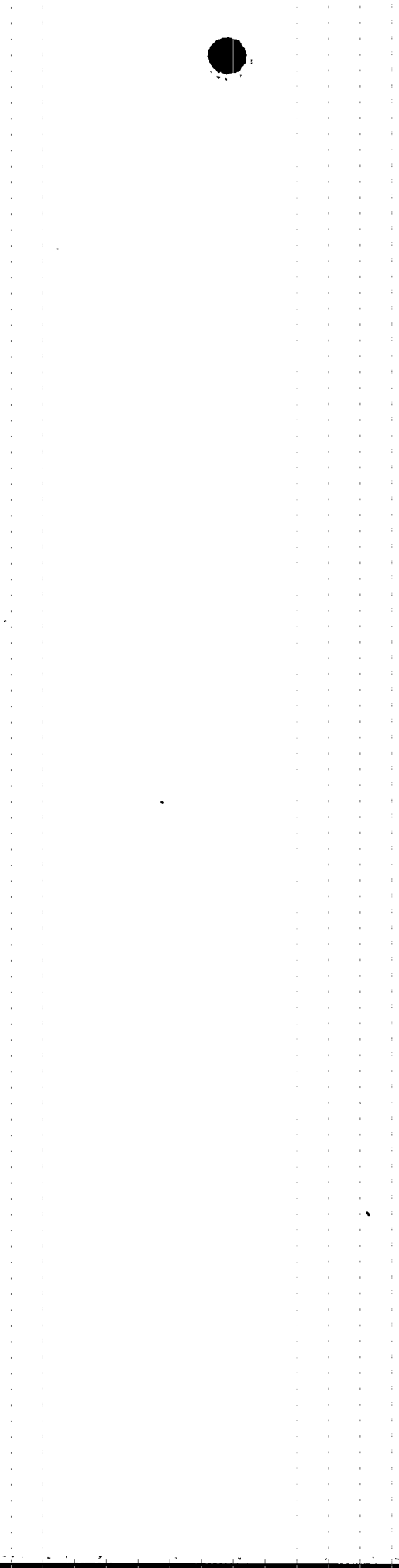
**BROWNS FERRY
UNIT 3
OPERATIONAL READINESS**

PROCESSES

Startup and Testing	PROCEDURES AND DOCUMENTATION	COMPONENT TESTING	SYSTEM TESTING (PRE-OP)	POWER ASCENSION TESTING
	CONDUCT OF TESTING	SPOC		
<hr/>				
Operations	PROCEDURES AND DOCUMENTATION	LABELING	STAFFING	PLANT STATUS CONTROL
<hr/>				
Regulatory and Compliance	TECH SPEC CHANGES	SER'S	NRC OPEN ITEMS	PER ISSUES
	QA EVALUATIONS ISSUES	COMMITMENTS/ CATDS		
<hr/>				
Overall Department Readiness	SITE ENGINEERING	NA&L	OPERATIONS	TECHNICAL SUPPORT
	RAD. PROT./ CHEMISTRY	SITE SUPPORT	MAINTENANCE	B&WP



IV. CLOSING REMARKS



Browns Ferry Nuclear Plant - Unit 3

Restart Activities -

Unit Separation Program



TVA / NRC MEETING
REGION II - ATLANTA, GEORGIA
FEBRUARY 10, 1995

Enclosure 2

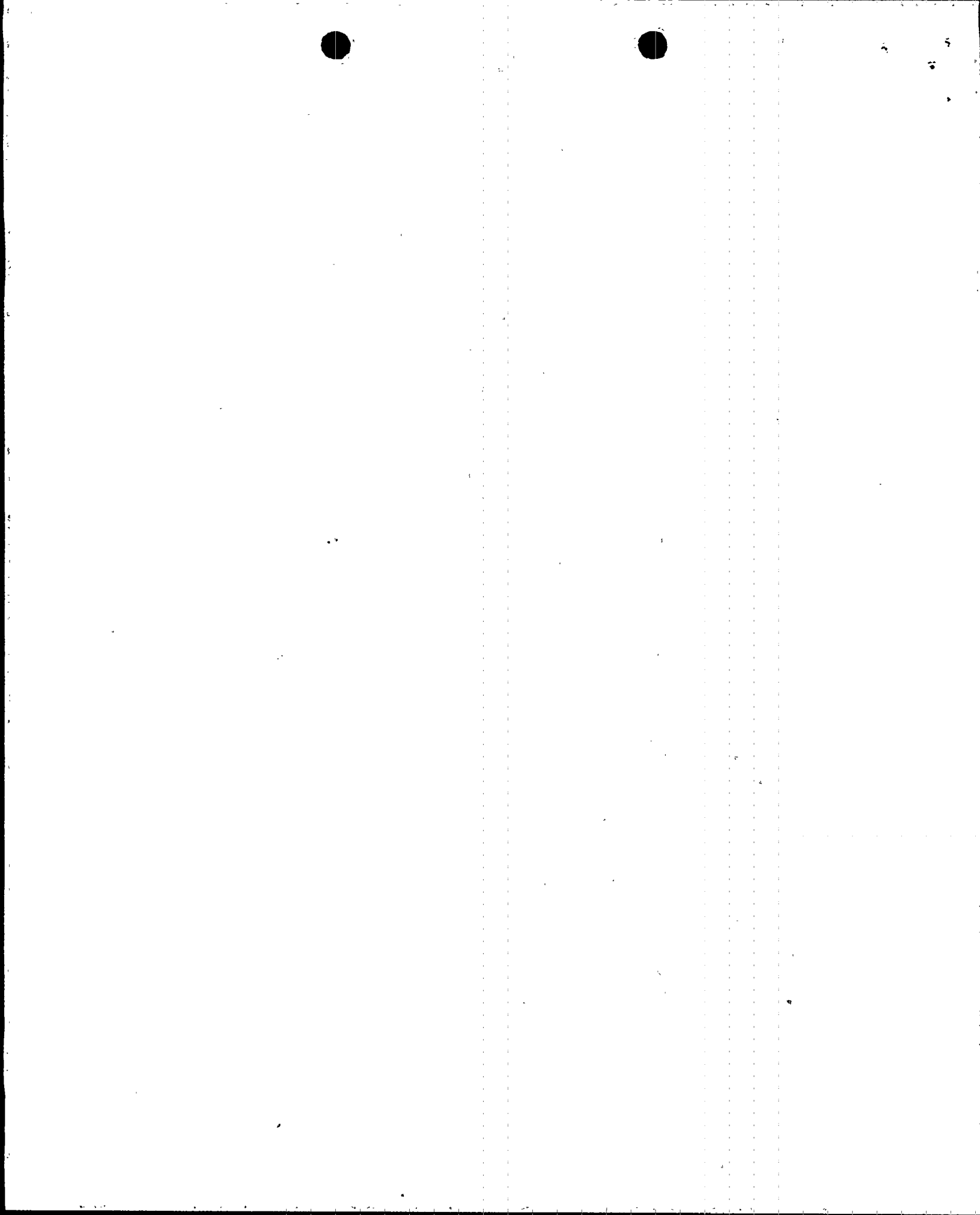


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UNIT SEPARATION PROGRAM

- **Programmatic Overview**

- **Purpose Is to Assure Technical Specification Equipment Operability and Limit Engineered Safeguards Feature (ESF) Actuations**
- **BFN Units Have Been Operationally and Physically Separated to the Extent Practical**
- **Color Coding Drawings Define Operational and Physical Boundaries**
- **When Areas Cannot Be Operationally Separated, Access Requirements, Tagging and Labeling Is Used**
- **Controlled by Site Standard Practice (SSP) 12.50, Unit Separation and Recovery Activities**



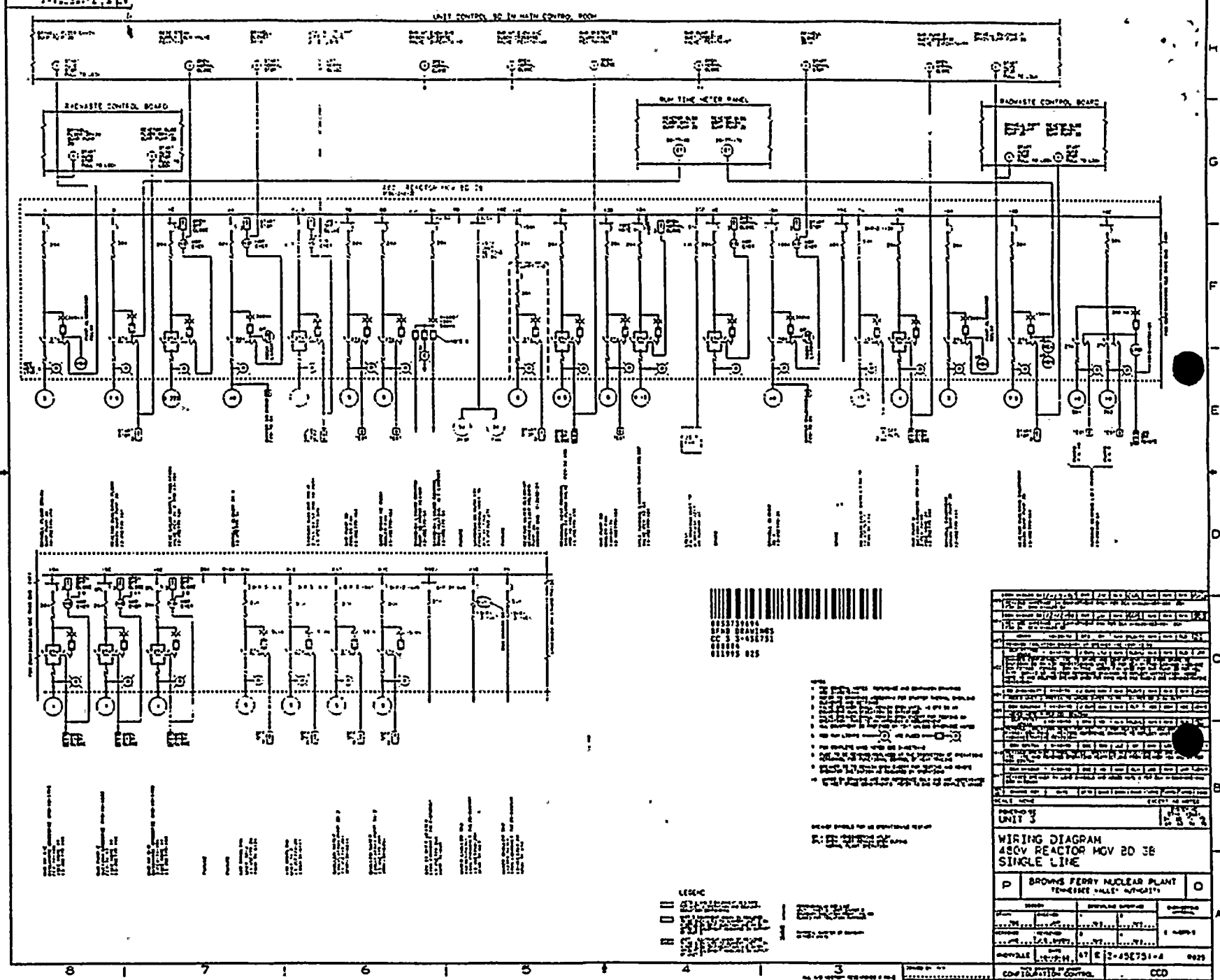
UNCLASSIFIED // FOR OFFICIAL USE ONLY
DATE 12/22/2009 BY 60486/AFM/MS/K
CLASSIFICATION AUTHORITY 24 CFR 1.112(b)
REVISIONS
REVISION NO. DESCRIPTION
1 Initial Issue
2
3
4
5
6
7
8

0000

ORIGINATOR'S REPORT NUMBER
2471-1-1

DATE
11/13/91

CONTROL PANEL CONTROL
CCD



REACTOR CONTROL BOARD

- 1. 480V REACTOR MOTOR
- 2. 480V REACTOR MOTOR
- 3. 480V REACTOR MOTOR
- 4. 480V REACTOR MOTOR
- 5. 480V REACTOR MOTOR
- 6. 480V REACTOR MOTOR
- 7. 480V REACTOR MOTOR
- 8. 480V REACTOR MOTOR

REACTOR CONTROL BOARD

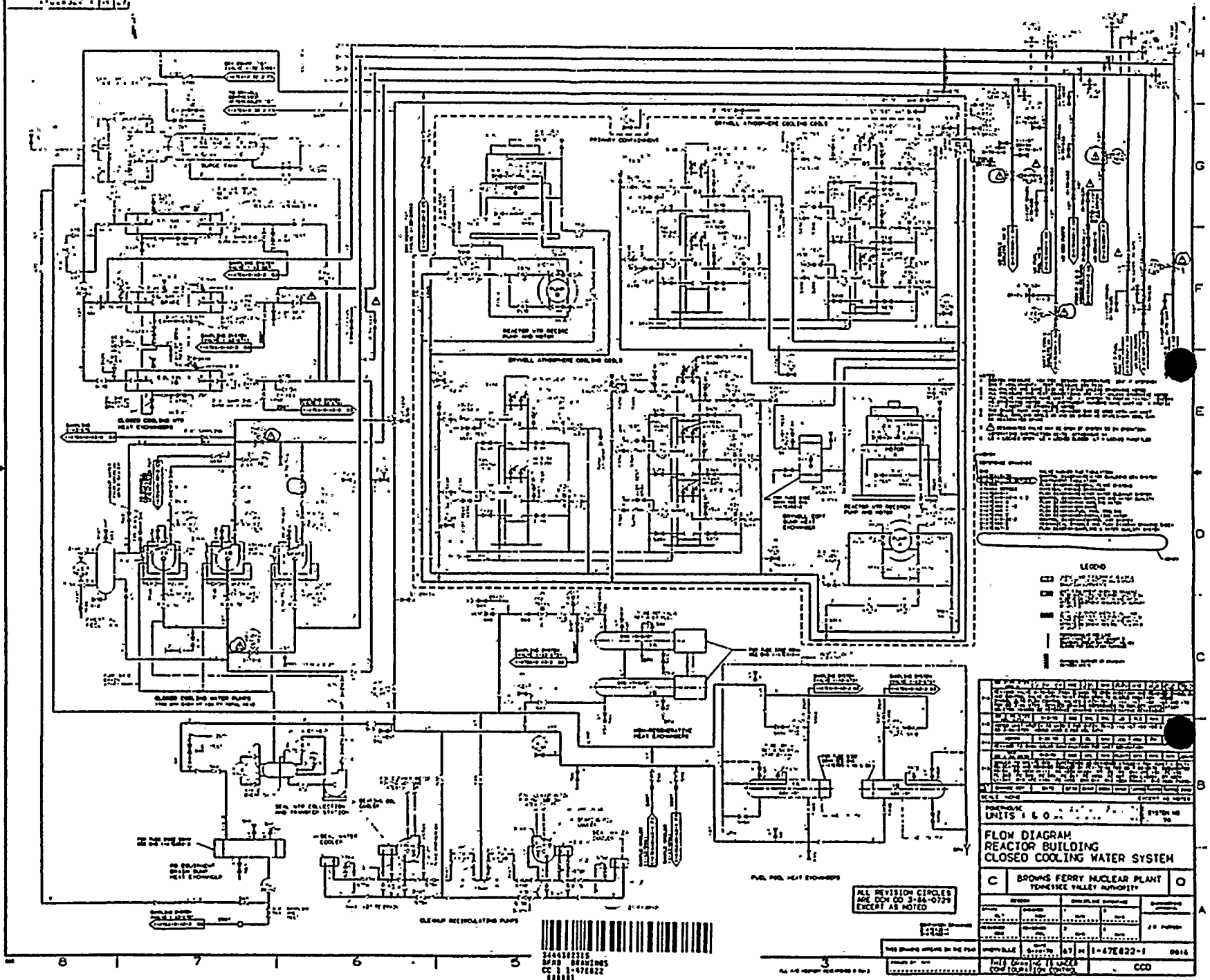
LEGEND
1. 480V REACTOR MOTOR

UNCLASSIFIED // FOR OFFICIAL USE ONLY		DATE 12/22/2009 BY 60486/AFM/MS/K	
CLASSIFICATION AUTHORITY 24 CFR 1.112(b)			
REVISIONS REVISION NO. DESCRIPTION 1 Initial Issue 2 3 4 5 6 7 8			
ORIGINATOR'S REPORT NUMBER 2471-1-1		DATE 11/13/91	
CONTROL PANEL CONTROL CCD			
UNIT 3			
WIRING DIAGRAM 480V REACTOR MOV RD 3B SINGLE LINE			
P	BROWNS FERRY NUCLEAR PLANT 'TEMPERATURE VALVE' 447-0311		D
REV. NO.		DESCRIPTION	DATE
1	INITIAL ISSUE		11/13/91
2			
3			
4			
5			
6			
7			
8			
REVISED BY		DATE	
11/13/91		11/13/91	
DRAWN BY		DATE	
11/13/91		11/13/91	
CHECKED BY		DATE	
11/13/91		11/13/91	
APPROVED BY		DATE	
11/13/91		11/13/91	
DESIGNED BY		DATE	
11/13/91		11/13/91	
ELECTRICAL ENGINEER		DATE	
11/13/91		11/13/91	
SUPERVISOR		DATE	
11/13/91		11/13/91	
MANAGER		DATE	
11/13/91		11/13/91	
DIRECTOR		DATE	
11/13/91		11/13/91	
SUPERVISOR		DATE	
11/13/91		11/13/91	
MANAGER		DATE	
11/13/91		11/13/91	
DIRECTOR		DATE	
11/13/91		11/13/91	



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3
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COMMENTS: SUBMITTER'S SCALE: 0.5000 DRAWING NUMBER: 01041
 DATE: 7/15/68 TIME: 11 32 ACCESS: NONE
 LOCATION: 01041



ALL REVISION CIRCLES
 ARE CON DO 3-84-0729
 EXCEPT AS NOTED

LEGEND
 PUMP
 HEAT EXCHANGER
 VALVE
 PIPE
 AIR PURGE COILING COILS

NO.	DATE	BY	DESCRIPTION
1	7/15/68
2
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9
10

FLOW DIAGRAM
 REACTOR BUILDING
 CLOSED COOLING WATER SYSTEM

C		BROWNS FERRY NUCLEAR PLANT		O	
UNITS 1 & 2		TENNESSEE VALLEY AUTHORITY			
NO.	DATE	BY	DESCRIPTION	NO.	DATE
1	7/15/68	1	7/15/68
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3	3	...
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10	10	...

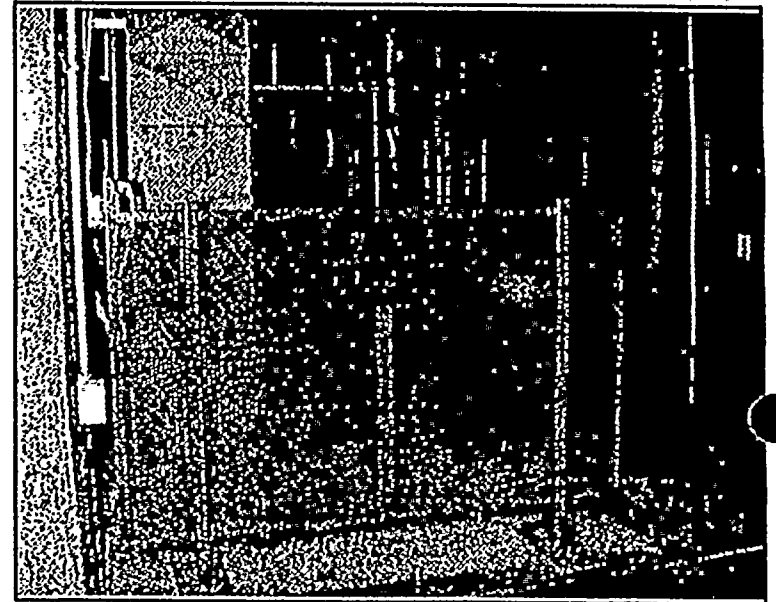
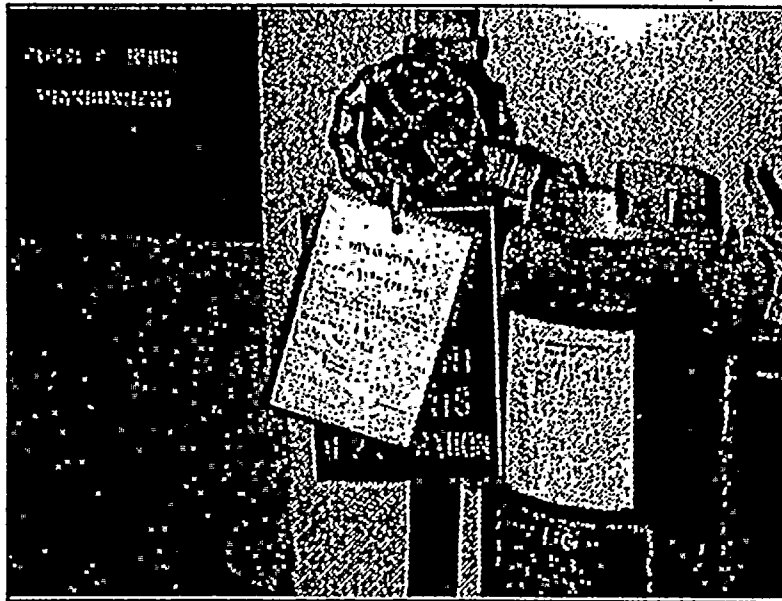
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UNIT SEPARATION PROGRAM (CONT.)

- Programmatic Overview (Cont..)
 - System Operational Interface Control
 - Areas of Operational Interface Identified by Colored Tape, Signs and Equipment Tags

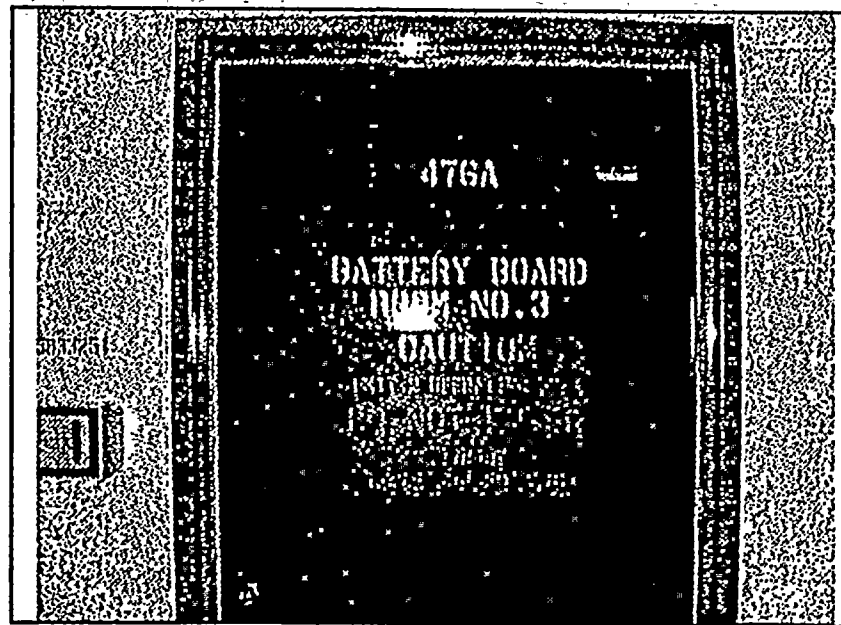




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UNIT SEPARATION PROGRAM (CONT.)

- **Programmatic Overview (Cont.)**
 - **System Operational Interface Control (Cont.)**
 - **Areas of Operational Interface Identified by Colored Tape, Signs and Equipment Tags (Cont.)**

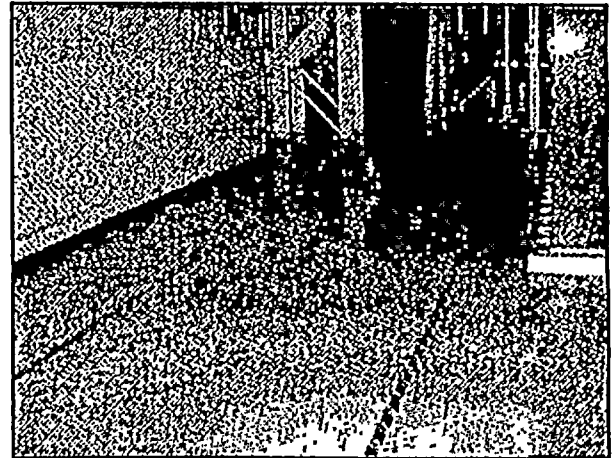




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UNIT SEPARATION PROGRAM (CONT.)

- **Programmatic Overview (Cont.)**
 - **System Operational Interface Control (Cont.)**
 - **Operations Performs Quarterly Review of All Interface Boundary Areas**
 - **Conventional Equipment Clearance Methods Used for Control of Interface Boundaries**
 - **SSP 12.50, Form 208, Used to Control and Track Temporary Changes of Unit Separation Boundaries**
 - **Walkways Delineated**

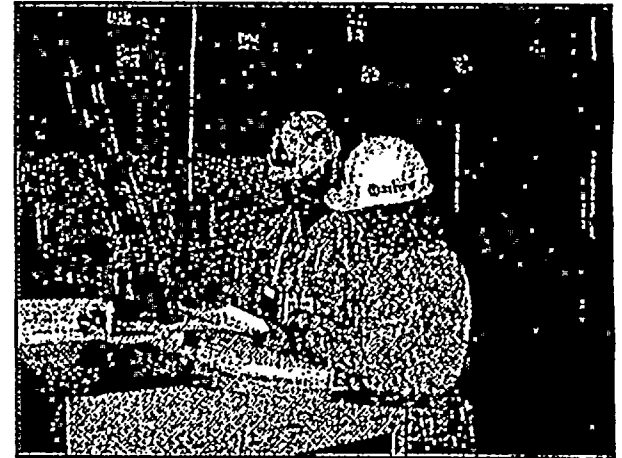




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UNIT SEPARATION PROGRAM (CONT.)

- **Programmatic Overview (Continued)**
 - **Personnel Access Control**
 - **Personnel Wearing Blue Hardhats Require Authorization to Enter Unit 2 Operating Spaces**
 - **Color Coded Hardhats, Training, and Signs Are Used to Control Access into Unit 2 Operating Spaces by Recovery Personnel**
 - **Operating Space Sensitivity Training Included as Part of General Employee Training (GET)**





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UNIT SEPARATION PROGRAM (CONT.)

- **Results**

- **Recovery Personnel Have Not Affected Technical Specification Equipment Operability since the Unit Separation Program Was Implemented**
- **There Have Been No Engineered Safeguards Feature (ESF) Actuations Caused by Recovery Personnel**
- **Incident of Recovery Personnel Violating Unit 2 Operating Space Entry Restrictions Has Significantly Decreased**
- **Recovery Personnel Have Gained Experience in Working in a Nuclear Power Plant Environment**



11
21
31