U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 87-07

Docket No. 50-293

License No. DPR-35 Category C

Licensee: Boston Edison Company M/C Nuclear
800 Boylston Street
Boston Massachusetts 02199

Facility Name: Pilgrim

Meeting At: NRC, Region I King of Prussia, Pennsylvania

Meeting conducted: On January 20, 1987

Reporting Inspector: A. Krasopoulos 2/9/87
A. Krasopoulos, Reactor Engineer date

Approved by: C. J. Anderson 2/9/87
C. J. Anderson, Chief, Plant Systems date

Meeting Summary: Management Meeting at the NRC Region I office on January 20, 1987 to discuss Fire Protection Program deficiencies identified during eight recent inspections. Also discussed was the status of the 10 CFR 50 Appendix R related modification work.

The licensee addressed the deficiencies and presented their plans to strengthen the Fire Protection Program.

DETAILS

1.0 Participants

1.1 Boston Edison Company(BECO)

J. M. Lydon, Chief Operating Officer
A. L. Oxsen, Vice President Nuclear Operations
R. N. Swanson, Nuclear Engineering Manager
R. Velez, Project Manager
R. Venkataraman, Project Licensing Engineer
F. Wozniak, Fire Protection Group Leader

1.2 U.S. Nuclear Regulatory Commission

C. Anderson, Chief, Plant Systems Section
R. Auluck, Project Manager NRR
A. R. Blough, Chief Engineering Branch
J. Durr, Chief, Engineering Branch
S. Ebneter, Director, Division of Reactor Safety
R. Fuhrmeister, Reactor Engineer
W. V. Johnston, Deputy Director, Division of Reactor Safety
W. F. Kane, Director, Division of Reactor Projects
J. Lyash, Resident Inspector
M. McBride, Senior Resident Inspector
L. Whitney, Reactor Operating Engineer Section 1 ORPB, 01, IE
J. T. Wiggins, Chief, Reactor Project Section 1B

2.0 Purpose and Background

This management meeting was held at the request of NRC Region I to discuss deficiencies in the licensee's Fire Protection Program. These fire protection program deficiencies were identified in eight inspection reports during the last 12 months. These deficiencies appear to be related. The deficiencies include:

- A large backlog of unimplemented maintenance work on fire protection equipment

- A large number of degraded Fire Barriers

- The excessive use of Fire Watches as an interim fire protection compensatory measure

- Inadequate training given to the Fire Brigade

The licensee's presentation material is included as an enclosure.

3.0 Presentation and Discussion

The Director of the Division of Reactor Safety, opened the meeting by stating that the reason for the meeting was the concern that the Fire Protection Program had not received adequate management attention. This was evidenced by the number of findings in this area. The Vice President of Nuclear Operations agreed with this assessment and presented a general response to the concerns. The licensee's staff responsible for the implementation of the Fire Protection Program made a presentation describing the changes in their program to address the deficiencies.

The licensee in response to these recent concerns has designated a corporate based Fire Protection Project manager and hired a site based Fire Protection Group leader who would be responsible for the implementation of the program and assure that Fire Protection commitments are carried out.

The licensee committed to:

- timely implement repairs on fire protection equipment

- timely upgrade the fire barriers to operable status, thus reducing reliance on fire watches

- assure that fire brigade training commitment's are met.

Regarding the above the licensee also committed to:

-- Provide the NRC resident inspector's office with:

  a) weekly reports on the Fire Protection System status

  b) status of the barrier repair program

  c) third party reports (HMM, TERRA etc).

-- Resolve with the NRC/NRR staff the types of fire barriers required ie. barriers required by the Tech Specs, barriers required by Appendix R and barriers required by licensing commitments made during the licensing process.

-- Re-examine the fire watch training philosophy to determine whether fire watches should receive training in the use of hand held extinguishers and the role of the fire watch in reporting and extinguishing fires.

-- Provide an independent third party review of the Fire Protection Program Management to assess its effectiveness.

-- Assure that each fire brigade member prior to being placed on the brigade availability roster has received all requisite training and has met the physical requirements. As an minimum each brigade member should meet the following requirements:

a) A physical examination attesting fitness for strenuous work

b) Initial classroom fire brigade training with plans for retraining at regular intervals

c) Actual hands-on fire fighting practice

d) Classroom training and meetings

e) Practice Fire Drills and

f) A Fire Brigade leadership training (for the brigade leaders only)

-- Seek a method by which to demonstrate that shutdown from outside the control room can be achieved using the equipment and procedures installed to satisfy Appendix R concerns.

BOSTON EDISON COMPANY

PILGRIM NUCLEAR POWER STATION

FIRE PROTECTION PROGRAM STATUS

R. Vélez
Project Manager

January 20, 1987

F. Wozniak
Group Leader

Boston Edison Company
Fire Protection Program Status

January 20, 1987

Agenda

Overview	R. Vélez
Management Improvements	F. Wozniak

- Fire Protection Group Leader Responsibilities
- System Status Board
- Management of System Availability
- Reduction of Compensatory Measures
- Fire Brigade Training

Fire Barrier Walkdown Status	R. Vélez
Appendix R Status	R. Vélez
Discussion	

BOSTON EDISON'S FIRE PROTECTION PROGRAM IS COMMITTED TO ACHIEVING THE FOLLOWING GOALS

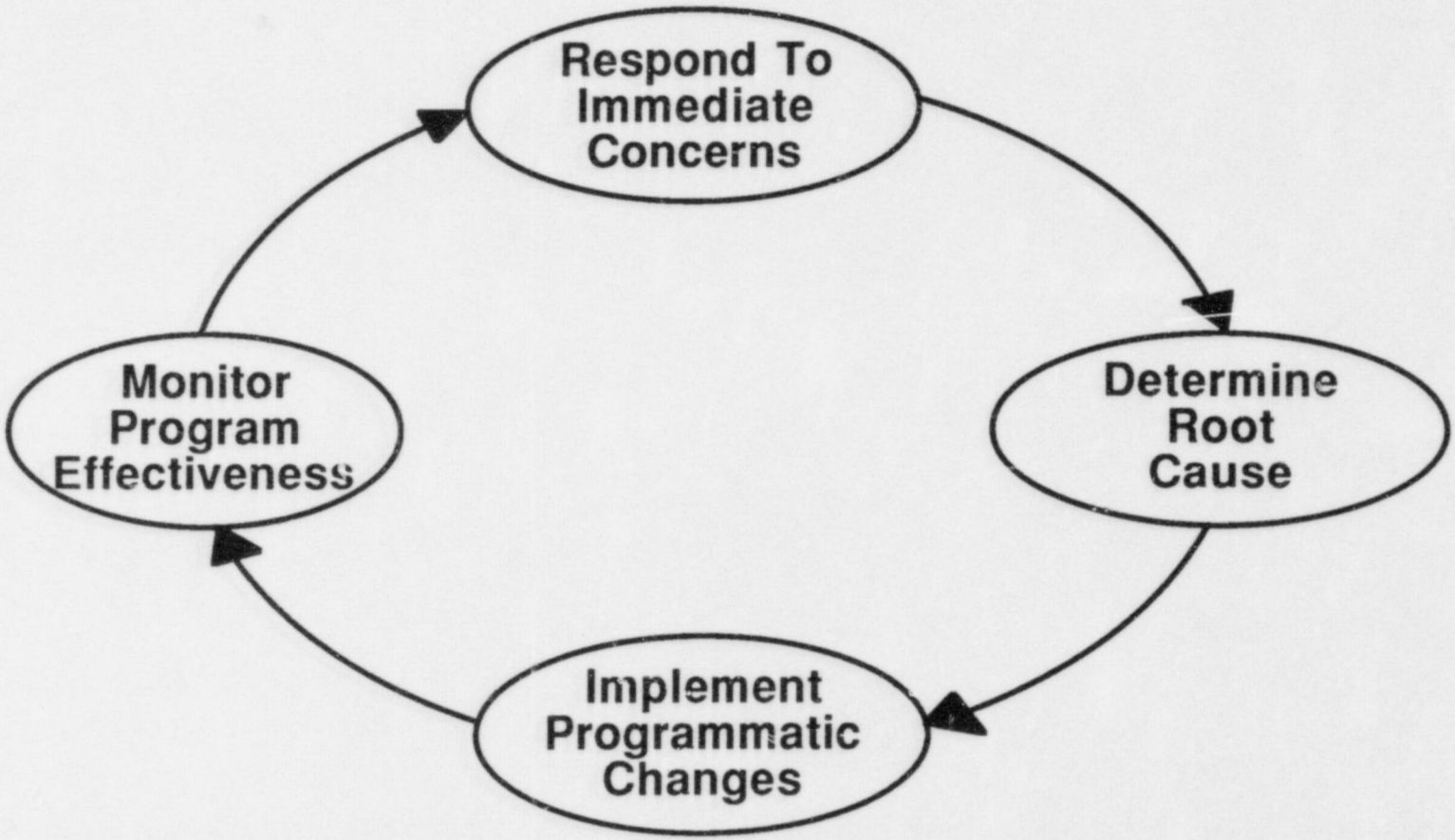
- Improved System Availability
- Strengthened Fire Brigade Training
- Reduced Compensatory Measures
- Centralized Control Of All Fire Protection Activities

FIRE PROTECTION PROGRAM IMPROVEMENTS

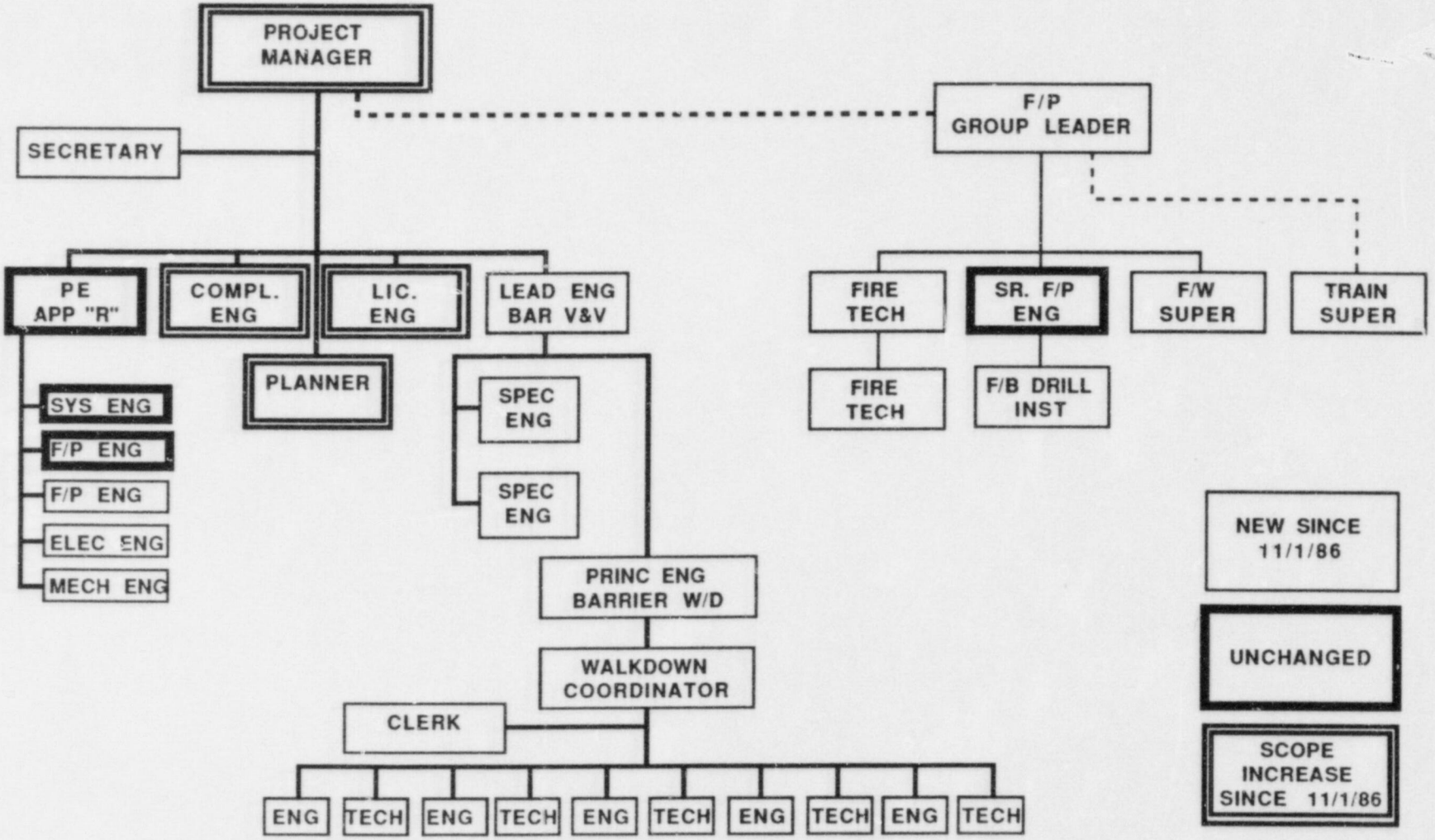
CONCENTRATE ON FOUR AREAS OF CONCERN

- Management
  - Organization
  - Direction
- Administrative Controls
  - Procedures
  - Specifications
  - Data Management
- Material Conditions
  - System Availability
  - Maintenance
  - Procurement
- Resources
  - Personnel
  - Materials

BOSTON EDISON'S APPROACH TO PROGRAMMATIC IMPROVEMENT IS DELIBERATE AND THOROUGH



THE PROJECT ORGANIZATION REFLECTS A COMMITMENT TO EXCELLENCE IN FIRE PROTECTION



"The Fire Protection Group Leader Is Accountable For Providing Management Direction And Control For All Fire Protection Operations At The Site."

Frederick Wozniak
Fire Protection Group Leader
Nuclear Operations Department

MSCE - Northeastern University
BSCE - Worcester Polytechnic Institute

Registered Professional Engineer - Mass., Conn., Alaska

Utility (BECo.) (12/1/86)

- Fire Protection Group Leader

Architect/Engineer (1972-1986)

- Management of New Construction (130 people)
- Management of Field Support
- Supervision of Regulatory Compliance Reviews
- Management of Backfit Design Projects

THE FIRE PROTECTION GROUP LEADER "OWNS" THE FIRE PROTECTION PROGRAM

- Monitors Equipment Readiness
- Prioritizes Fire Protection Maintenance
- Tracks Maintenance Activities
- Monitors/Reviews Surveillance Test Program
- Oversees Fire Protection Mod Implementation
- Directs And Coordinates Fire Protection Training
- Enforces Fire Protection Requirements
- Manages Implementation Of Compensatory Measures

FIRE PROTECTION SYSTEM READINESS NOW

DISPLAYED ON STATUS BOARDS

- Status Boards Now Maintained In Control Room

  And Fire Protection Office

- Sub-System Classification Is The Basis For Improved Management
  - Supports MR Prioritization
  - Enhances Management Of Compensatory Measures
  - Improves Coordination Of Construction Support

IMPROVED SYSTEM AVAILABILITY REQUIRES AGGRESSIVE MANAGEMENT OF SYSTEM TESTING, REPAIRS, AND MAINTENANCE

- System Status Board Provides The Baseline
- System Status Verified Daily By FP Group Leader
  - Watch Engineer Log
  - System Tagout Status
  - Surveillance Test Status
  - Maintenance Requests
- Maintenance And Test Schedules Are Routinely Monitored
- FP Group Leader Has Full Support Of Management
  - Station Manager
  - Director of Outage Management
  - Engineering Manager

RECENT STEPS HAVE BEEN TAKEN TO REDUCE COMPENSATORY MEASURES

- Organized Information
  - Created Fire Watch Management Report
  - Developed Fire Watch Location Maps
- Assigning Problem Ownership For The Cause Of Each Compensatory Measure
- Monitoring Performance Of Assigned Individuals
- Evaluating Program Effectiveness

BOSTON EDISON IS STRENGTHENING

THE FIRE BRIGADE TRAINING PROGRAM

- Dedicated Fire Brigade Instructor Assigned
- Plant Specific Training Modules 50% Complete
  (Finish in March)
- Rigorous Enforcement of Fire Brigade Training
  And Drill Requirements
- Third Party Assessment Of Drill Program Completed 1/16/87

MEASURES TO IMPROVE DRILL EFFECTIVENESS ARE UNDER EVALUATION

- Reduce Impact of "Artificial Environment"
  - Provide More Scenario Detail
  - Improve Equipment Utilization
  - Simulate Drill Conditions More Effectively

- Refine Program Direction
  - Clarify Program Goals
  - Set Scenario-Specific Objectives
  - Proceduralize Difference Between Drill and Practice Drill

- Improve The Content And Execution Of Drills
  - Train Drill Monitors
  - Establish Scenario Library
  - Set and Adhere To Schedule

PENETRATION WALKDOWNS ARE 30% COMPLETE

- Scope Covers Approximately 5000 Penetrations

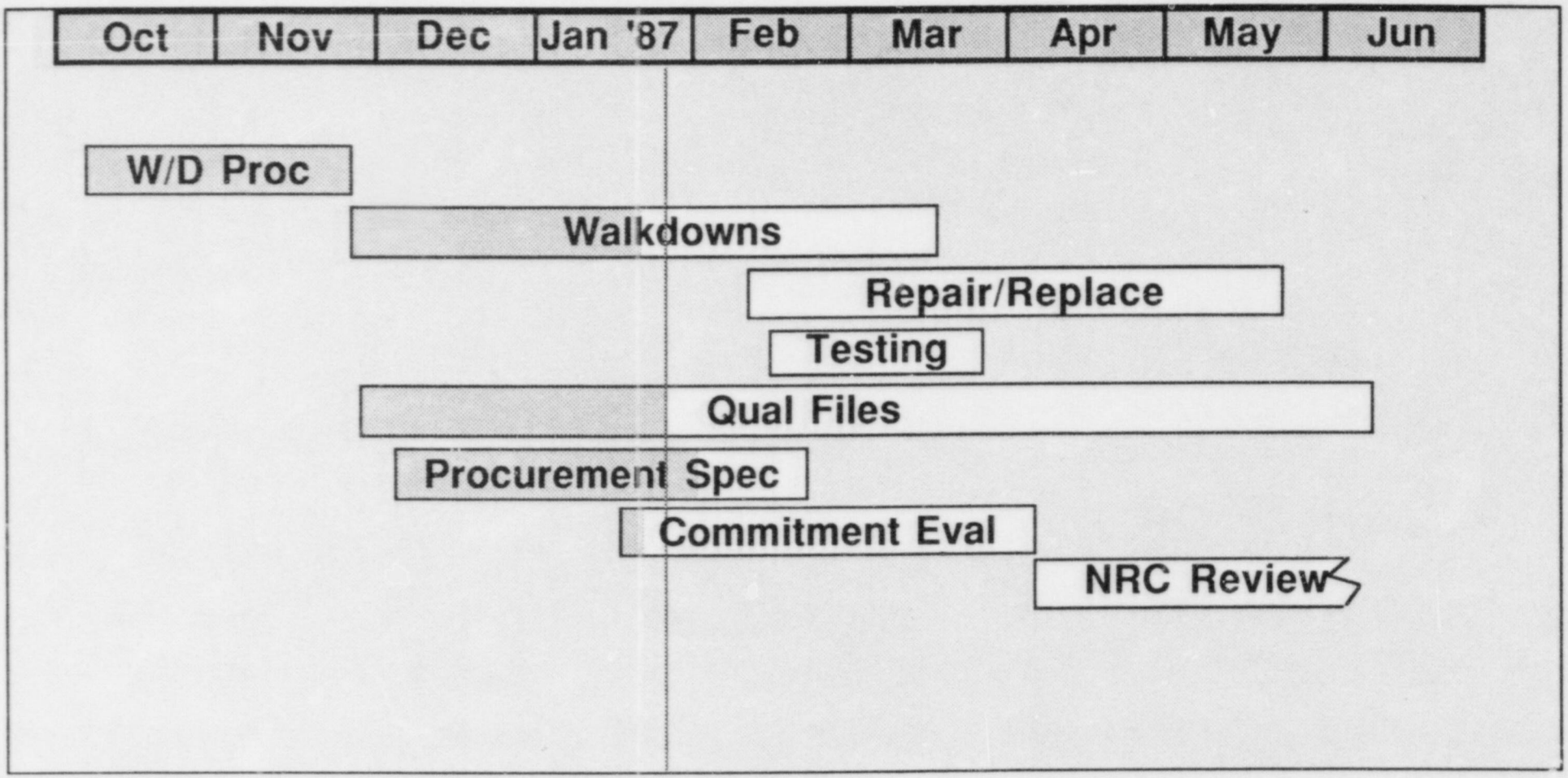
- Of 1475 Inspected To Date:
  - 1325 Are Acceptable
  - 42 Require Evaluation
  - 108 Require Repair

- Completion Is Scheduled For Mid-March

- Walkdown Review Meetings Are Held Weekly
  - Verify Proper Compensatory Measures Are Set
  - Identify Trends/Root Cause/Corrective Action
  - Prioritize Corrective Action
  - Assess Program Effectiveness

FIRE BARRIER VERIFICATION AND VALIDATION (V&V)

CONTINUES TO SUPPORT PLANT STARTUP



APPENDIX R REGULATORY EFFORTS CONTINUE

IN RESPONSE TO NRC GUIDANCE AND INTERNAL REVIEW

- 5 Exemption Requests Granted

- 4 Exemption Requests Under NRR Review
  - #11 Torus/CRD 3-hour Barrier
  - #12 Torus/RHR 3-hour Barrier
  - #13 Torus Beam Coating
  - #14 Steam Tunnel Beam Coating

- 3 Exemption Requests To Be Submitted
  - Emergency Lighting Outside Reactor Building
  - RHR Unit Cooler Fan Control
  - Water Treatment 20-ft Separation

APPENDIX R PROJECT IMPLEMENTATION REMAINS ON SCHEDULE

- Establishing Documentation Files
  - Target Completion Mid-March

- Reviewing Compliance Status
  - Internal Regulatory And QA Audits
  - Documentation Reviewed As Compiled
  - Comparison With Other Units
  - Target Completion One Month Before Startup

- Refining Operating Procedures
  - Alternate Shutdown (Targeted Late March)
  - Fire Barrier Surveillances (Expected Mid-May)

- Implementing Hardware Mods (Change Since 11/24/86)

4	In Design	(-1)
9	Design Complete	(+4)
4	In Construction	(-2)
8	Complete	(+2)
25		(+3)

BOSTON EDISON'S FIRE PROTECTION PROGRAM

GOALS WILL BE REALIZED

- Improved System Availability
- Strengthened Fire Brigade Training
- Reduced Compensatory Measures
- Centralized Control Of All Fire Protection Activities