

September 14, 1998

PDR

LICENSEE: Northeast Nuclear Energy Company (NNECO)
 FACILITY: Millstone Nuclear Power Station, Units 1, 2, and 3
 SUBJECT: SUMMARY OF AUGUST 18, 1998, MEETING WITH NNECO TO DISCUSS THE STATUS OF MILLSTONE UNITS 1, 2, AND 3

On August 18, 1998, the Acting Director of the Special Projects Office and his staff met with NNECO representatives in a publicly observed meeting. The meeting was held to allow NNECO to inform the NRC staff of the status of the recovery of NNECO's three Millstone units. A list of meeting participants is enclosed (Enclosure 1).

NNECO's President and CEO of Northeast Nuclear began NNECO's presentation with a discussion on management's focus on a safe, event free operation of Millstone Unit No. 3. It was noted that dedicated resources had not been reduced for Unit No. 3 and that site support services have increased to support the restart of Unit No. 2. This discussion was followed by detailed updates of the Millstone Units 2 and 3 activities, including Nuclear Oversight's assessment, with a brief discussion on Unit No. 1. It was noted that NNECO is factoring in lessons learned during the restart of Unit No. 3 to enhance its effort in restarting Unit No. 2. The restart of Unit No. 2 is targeted for the end of the year; however, NNECO indicated that it cannot determine the actual date until it has completed assessing all of the restart issues and necessary corrective actions. NNECO's presentation slides are enclosed (Enclosure 2).

NNECO also discussed background material on Key Performance Indicators, Significant Items List Status, and a License Amendment Schedule.

Original signed by:

Donald G. McDonald, Jr., Senior Project Manager
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 Division of Reactor Projects - I/II
 Office of Nuclear Reactor Regulation

Docket Nos. 50-245, 50-336,
 and 50-423

Enclosures: As stated (2)

cc w/encl: See next page

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

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A handwritten signature in dark ink, appearing to read "Donald G. McDonald, Jr.", is positioned above the typed name.

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Millstone Project Directorate
Division of Reactor Projects - I/II
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cc w/encl: See next page

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Units 1, 2, and 3

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Units 1, 2, and 3

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August 18, 1998

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W. Lanning
J. Durr
D. Beaulieu
T. Easlick
et al.

NNECO

B. Kenyon
D. Amerine
M. Brothers
M. Bowling
J. McElwain
J. Streeter
et al.

**Northeast Utilities Briefing
for the NRC
Restart Assessment Panel**

***Millstone Station
August 18, 1998***

Opening Remarks

Bruce Kenyon
President and CEO
Northeast Nuclear

Management is Focused on the Safe Event-Free Operation of Unit 3

- ◆ **Unit 3 dedicated resources have not been reduced**
- ◆ **Site Support Services have increased their support of Unit 2 recovery**
 - ICAVP response
 - Engineering Programs (MEPL, Fire Protection)
 - Nuclear Engineering (Chapter 14 safety and radiological analyses)
 - Nuclear Oversight
 - Regulatory Affairs

Northeast Utilities Agenda

- ◆ **Unit 3 Update**
- ◆ **Unit 2 Update**
- ◆ **Nuclear Oversight Assessment**
- ◆ **Closing Remarks**

Unit 3 Update

Mike Brothers
Vice President - Operations

Millstone Unit 3 Operational Status

- ◆ **Completed seven day outage to repair leak on 3FWA*MOV35D**
- ◆ **Prior to shutdown operated for 37 days**
- ◆ **Current 100% critical boron concentration is ~940 ppm**
- ◆ **Completed INPO E&A**

Millstone Unit 3 Startup & Power Ascension

◆ First Mode 4	4/07/98
◆ First Mode 3	4/10/98
◆ First Reactor Critical	6/30/98
◆ Mode 1	7/02/98
◆ Turbine On Line	7/04/98
◆ 100% Power	7/14/98

Major Issues During Power Ascension

- ◆ **Motor Driven FWP Problems**
- ◆ **3RCS*V132**
- ◆ **Intermediate Range Noise Problem**
- ◆ **3FWA*MOV35A/D Leakage**

Millstone 3 Power Ascension Lessons Learned

- ◆ **Use of simulator for key evolutions**
- ◆ **Review procedures for 1st time evolutions**
- ◆ **Clearly define management rep role(s)**
- ◆ **Utilize self-assessments following major assessments**

Summary of Deferred Work Commitments

- ◆ **Backlog of deferred work will be dispositioned six months following completion of RFO 6 except for ICAVP DRs and UIRs/OIRs.**
- ◆ **ICAVP DRs and UIRs/OIRs dispositioned prior to entry into Mode 2 following RFO6**

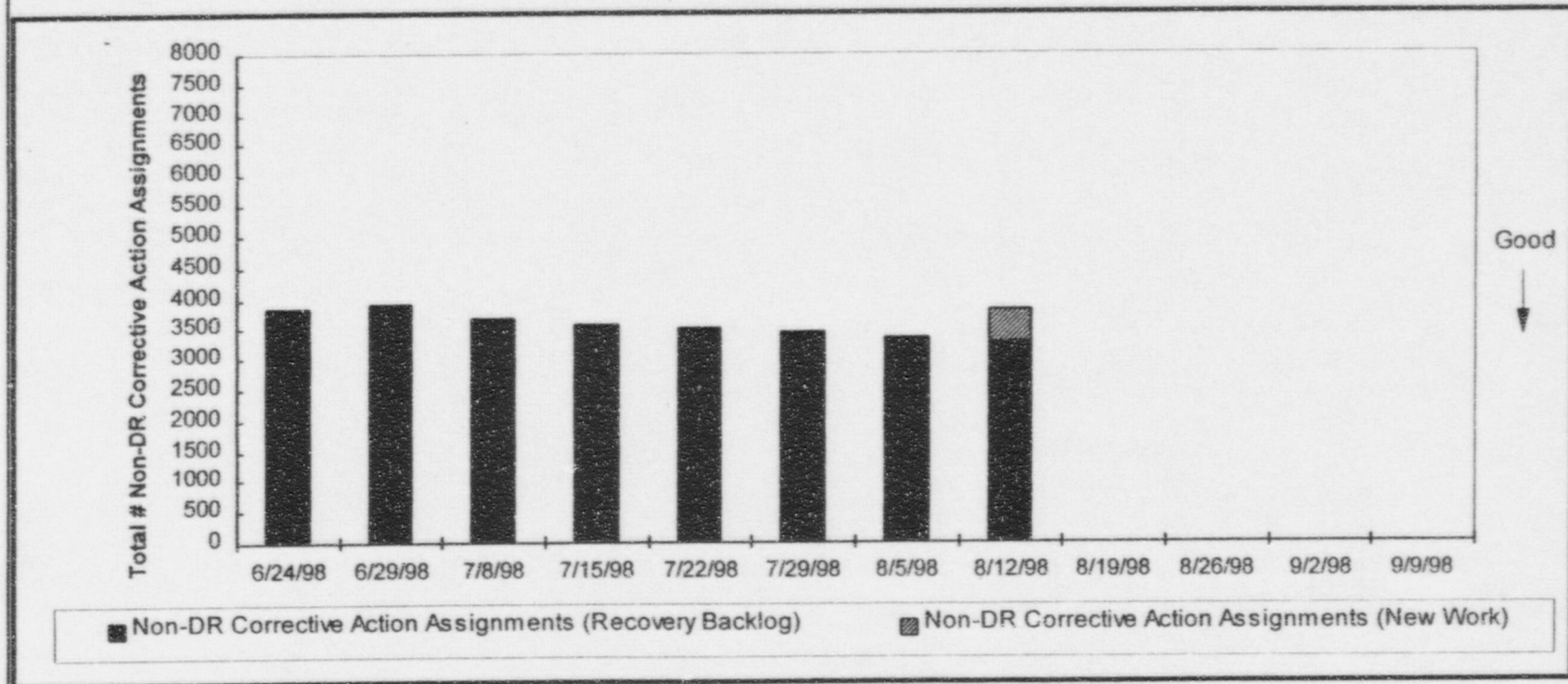
Remaining Deferrable Items

♦ Corrective Action Assignments	3,272 of 3,915
♦ Corrective Maintenance	521 of 583
♦ Configuration Mgmt. Discovery	838 of 864
♦ Non-Conformance Reports	48 of 57
♦ Operator Work Arounds	14 of 15
♦ Control Room Deficiencies	2 of 5
♦ Temporary Modifications	15 of 15
♦ Engineering Backlog	667 of 587
♦ DR Corrective Action Assignments	886 of 838
♦ Operability Determinations	<u>26 of 28</u>

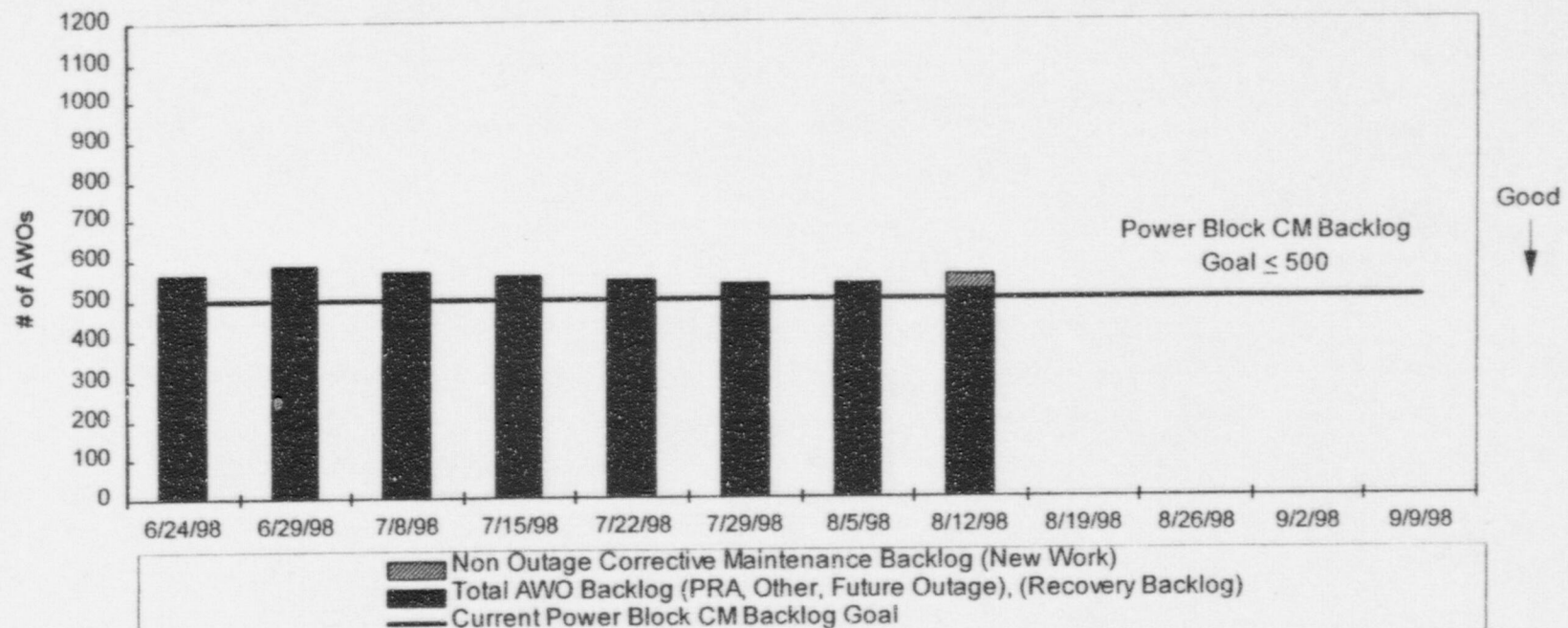
Total Deferrable Items

6,289 of 6,907

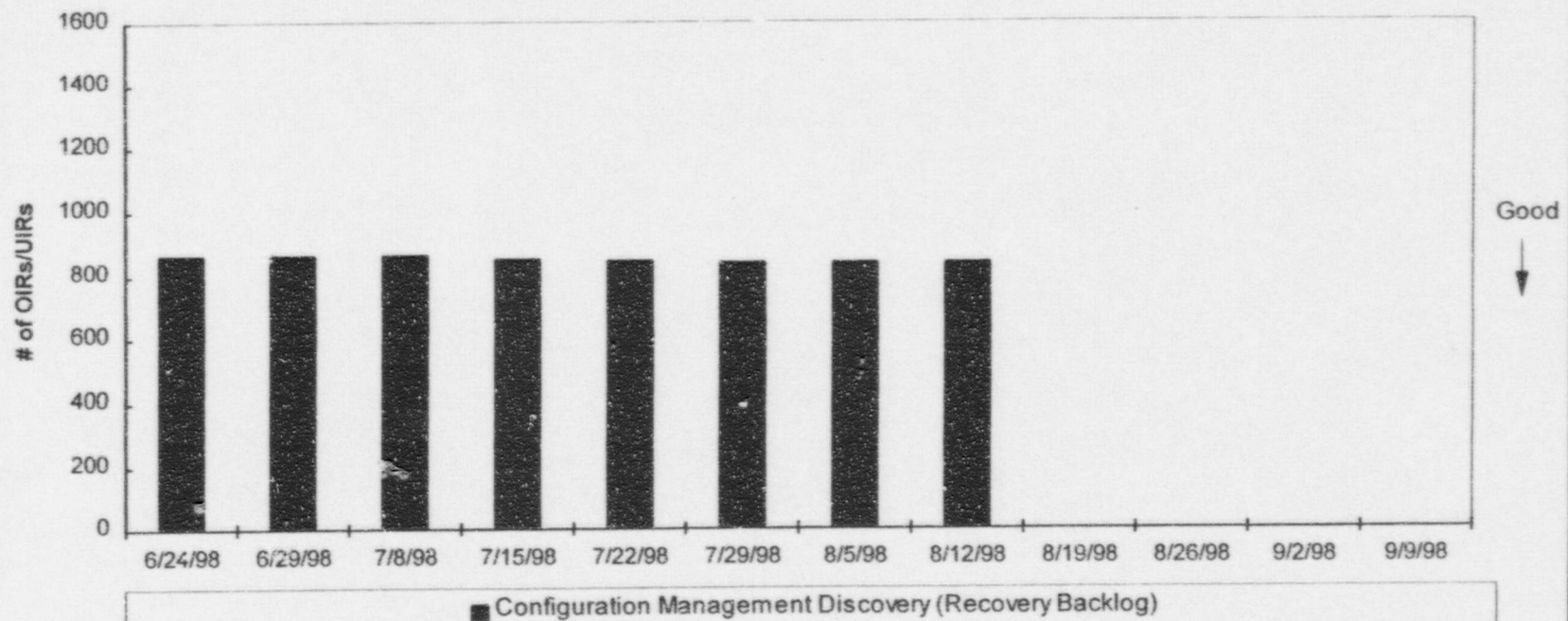
Corrective Action Assignments



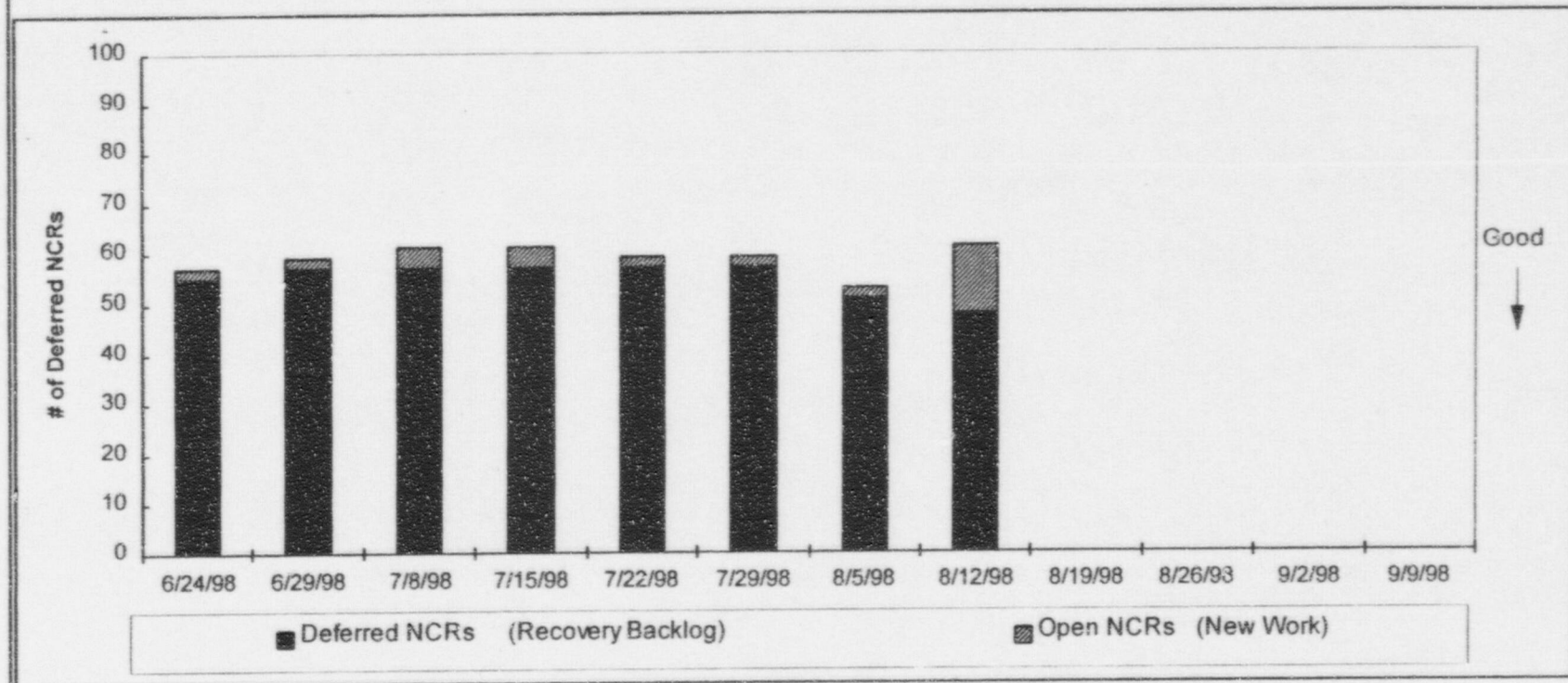
Corrective Maintenance



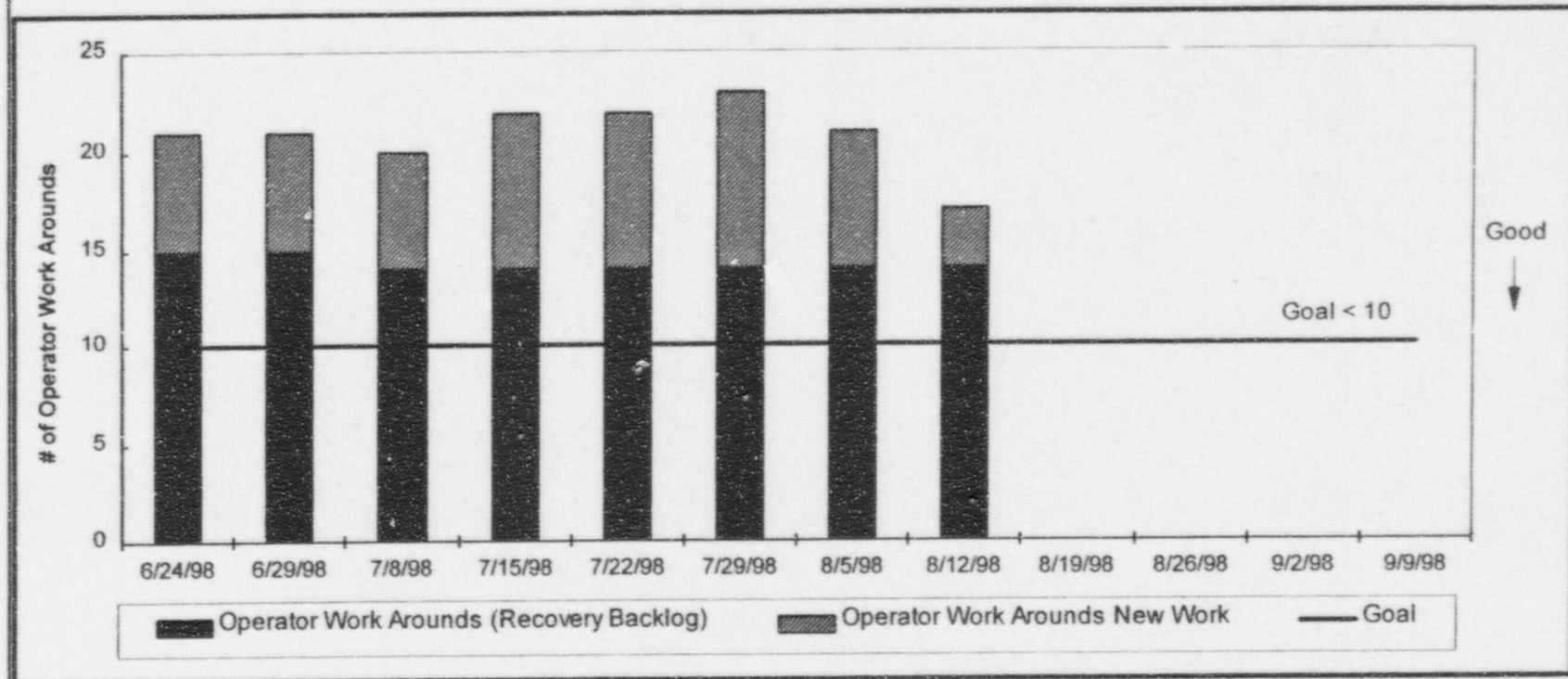
Configuration Management Discovery



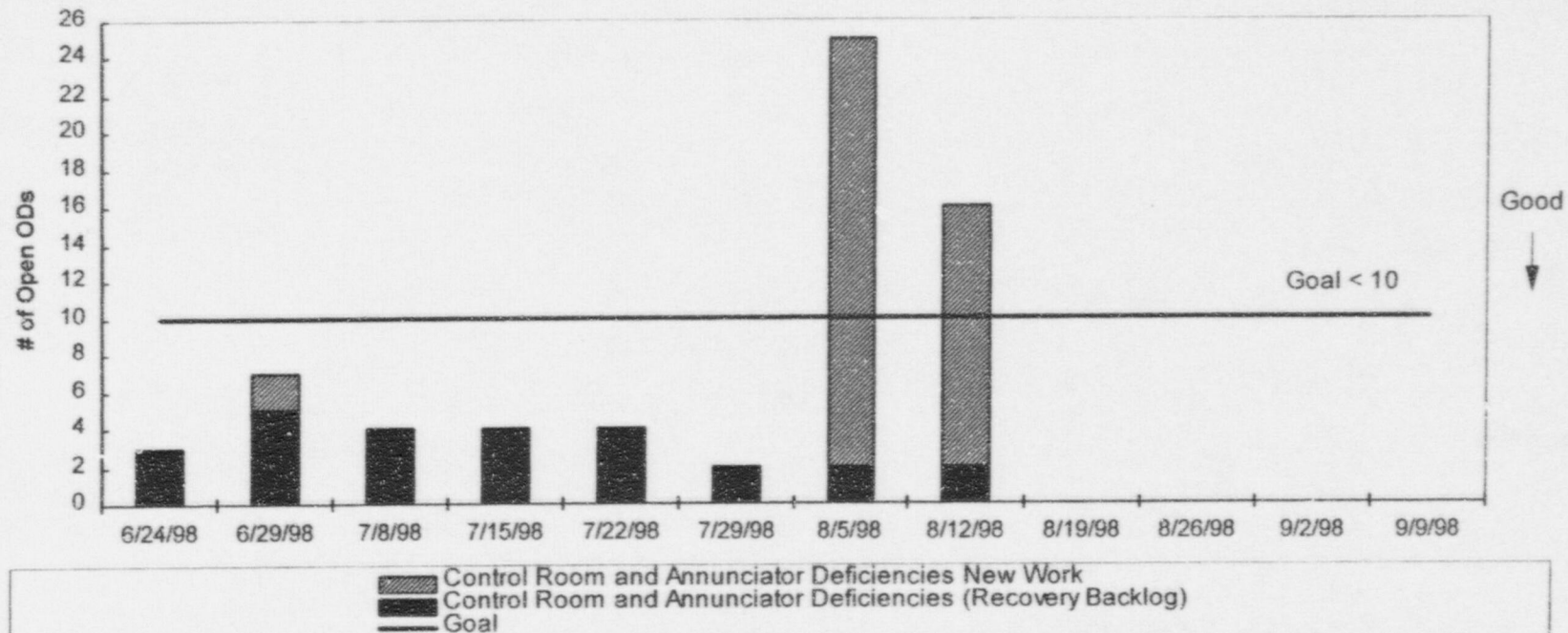
Non-Conformance Reports



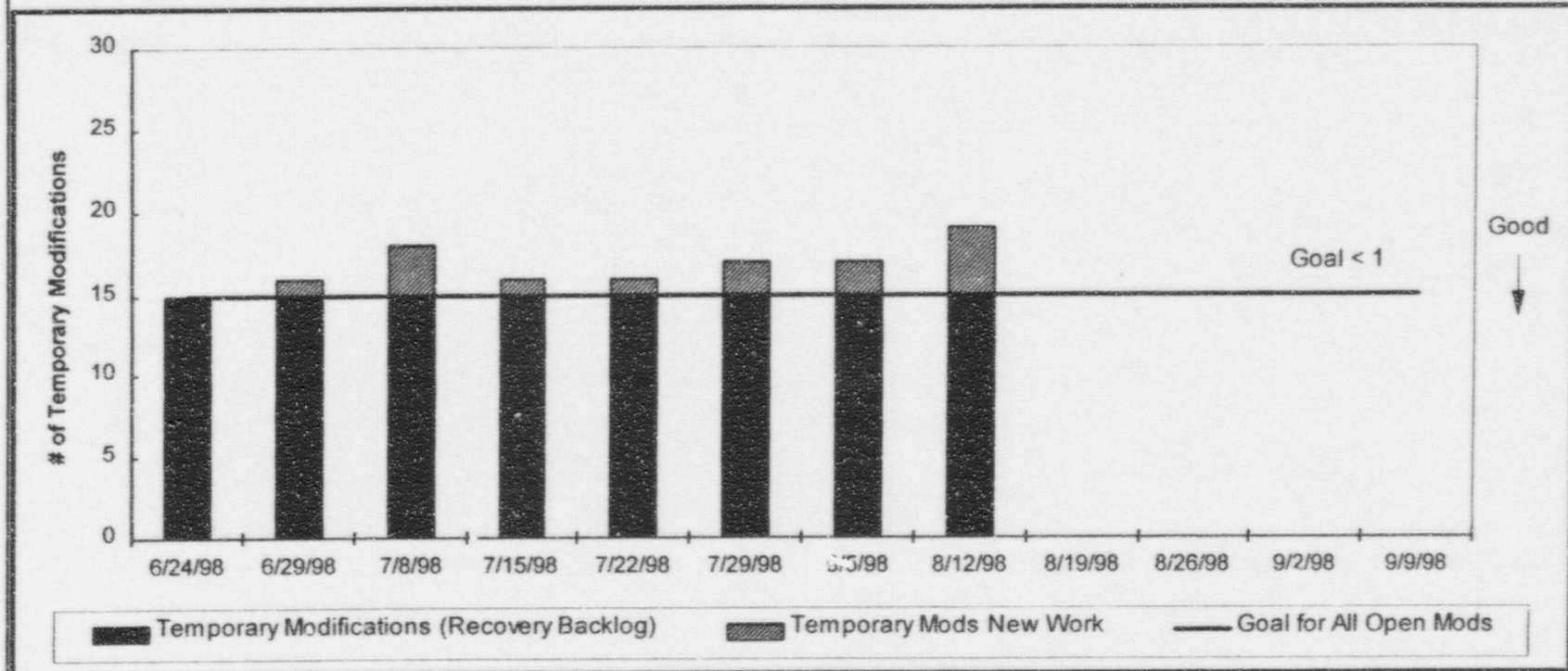
Operator Work Arounds



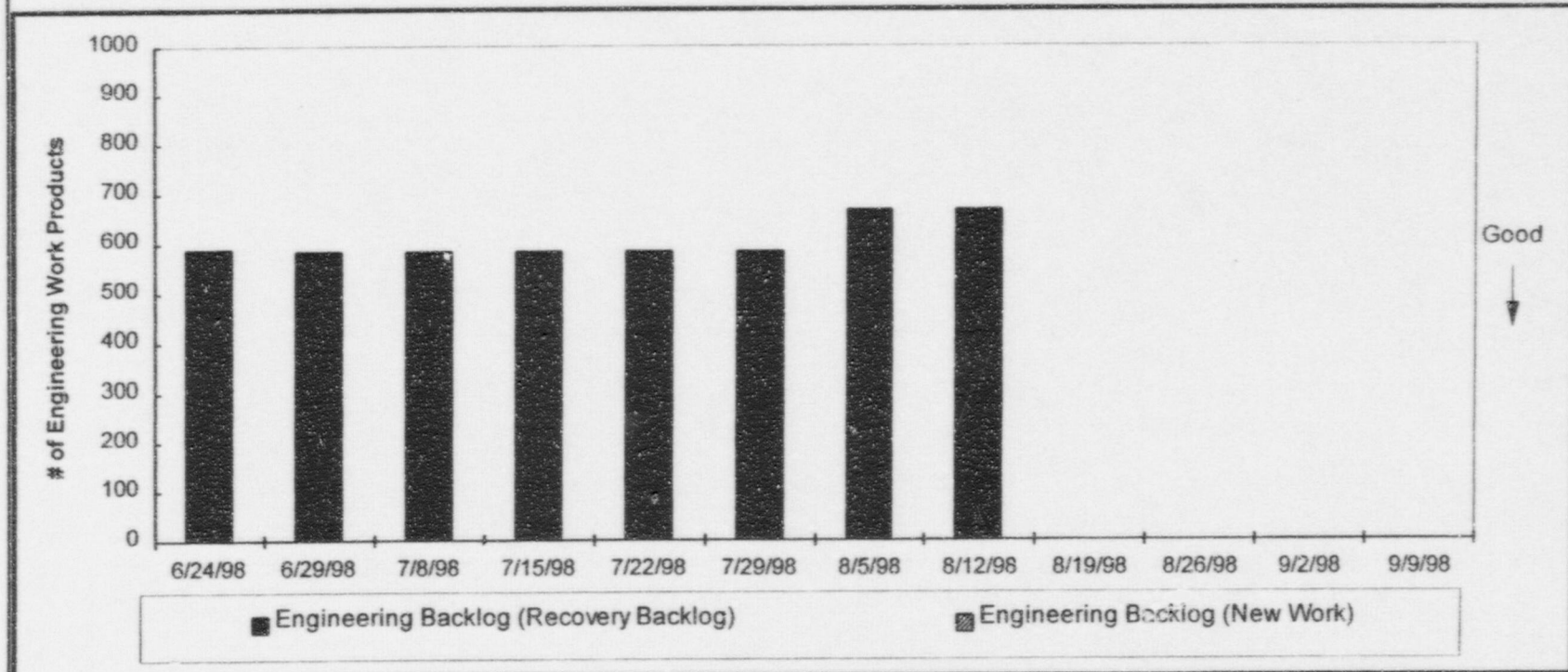
Control Room Deficiencies



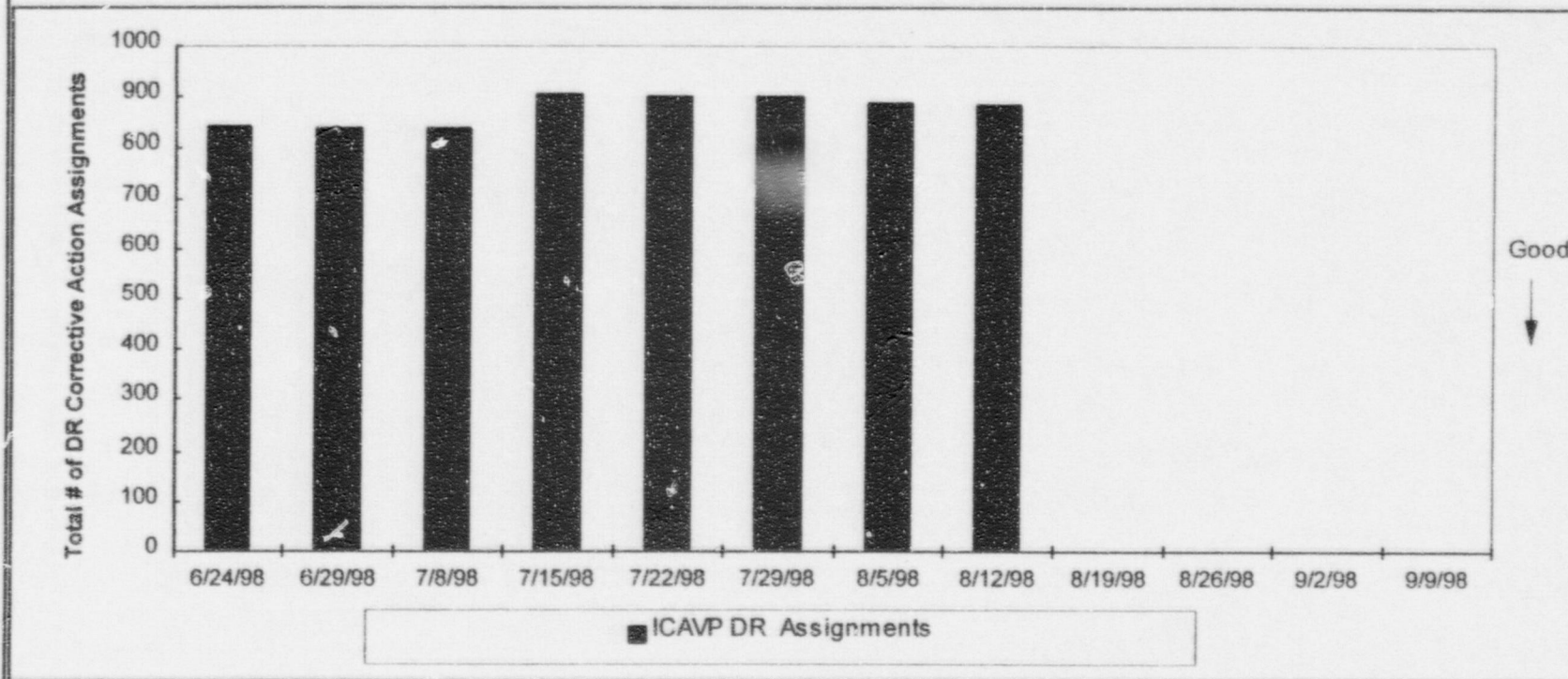
Temporary Modifications



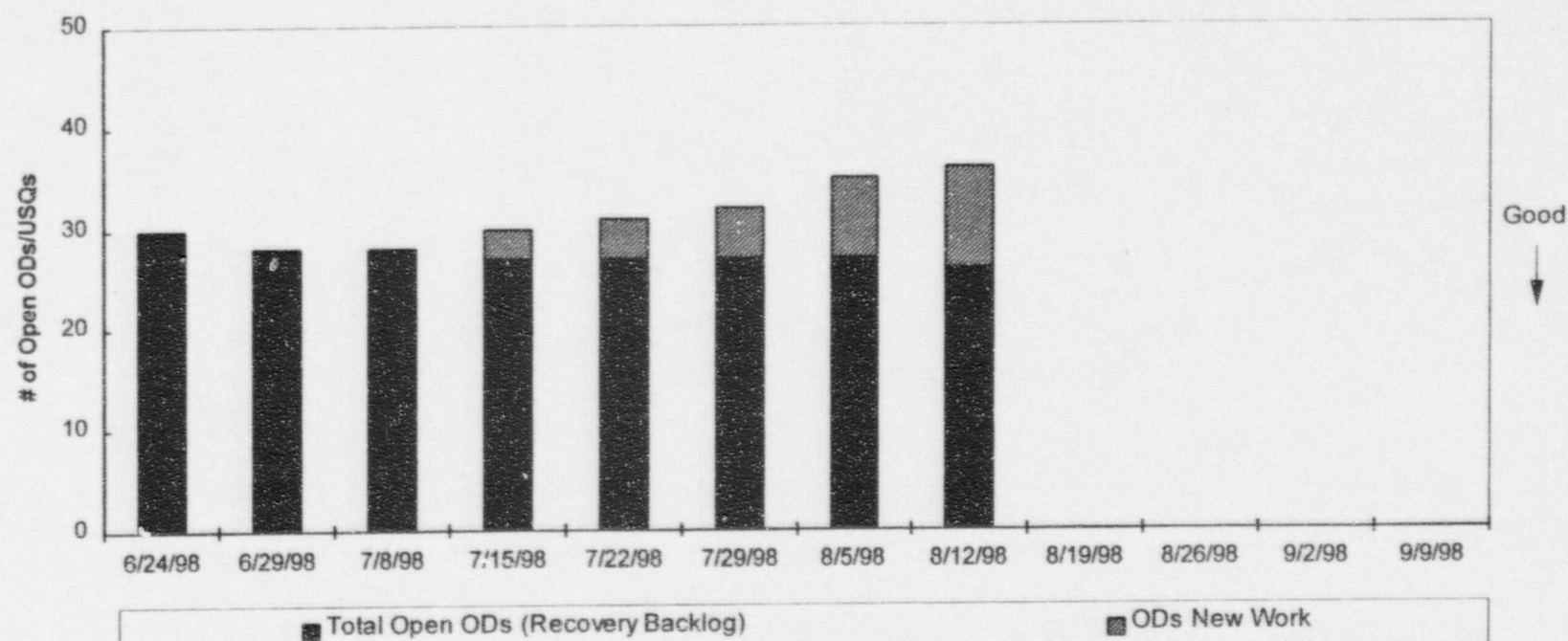
Engineering Backlog



Discrepancy Report Corrective Action Assignments



Operability Determinations



Unit 3 Engineering Deferred Items are Being Planned and Resource Loaded

- ◆ **Process for dispositioning deferred items has been implemented**
- ◆ **Management criteria for priority includes:**
 - reduction of Operator burdens
 - Level 1 Condition Reports
 - ICAVP Discrepancy Reports
 - RFO 6

Millstone Unit 3 Priorities

- ◆ **Safe Event-Free Operations**
 - questioning attitude
 - conservative response to questioning attitude
 - aggressive/intrusive Oversight
- ◆ **Backlog Management**
- ◆ **RFO6 Preparation & Conduct**

Unit 2 Update

Jack McElwain
Recovery Officer - MP 2

Unit 2 Update Agenda

- ◆ **Physical Readiness** *Jack McElwain*
- ◆ **Corrective Action Status** *Marty Bowling*
Steve Brinkman
- ◆ **Operational Readiness** *Alan Price*

Recovery Schedule Flowchart

Millstone 2 Physical Readiness Actions

- ◆ Restart Mods *141 required by Mode 2
(51% complete)*
- ◆ Restart
Assignments *14,802 to be completed
by Mode 2 (85% comp.)*
- ◆ Temporary Mods *16 non-outage support
TMs installed*

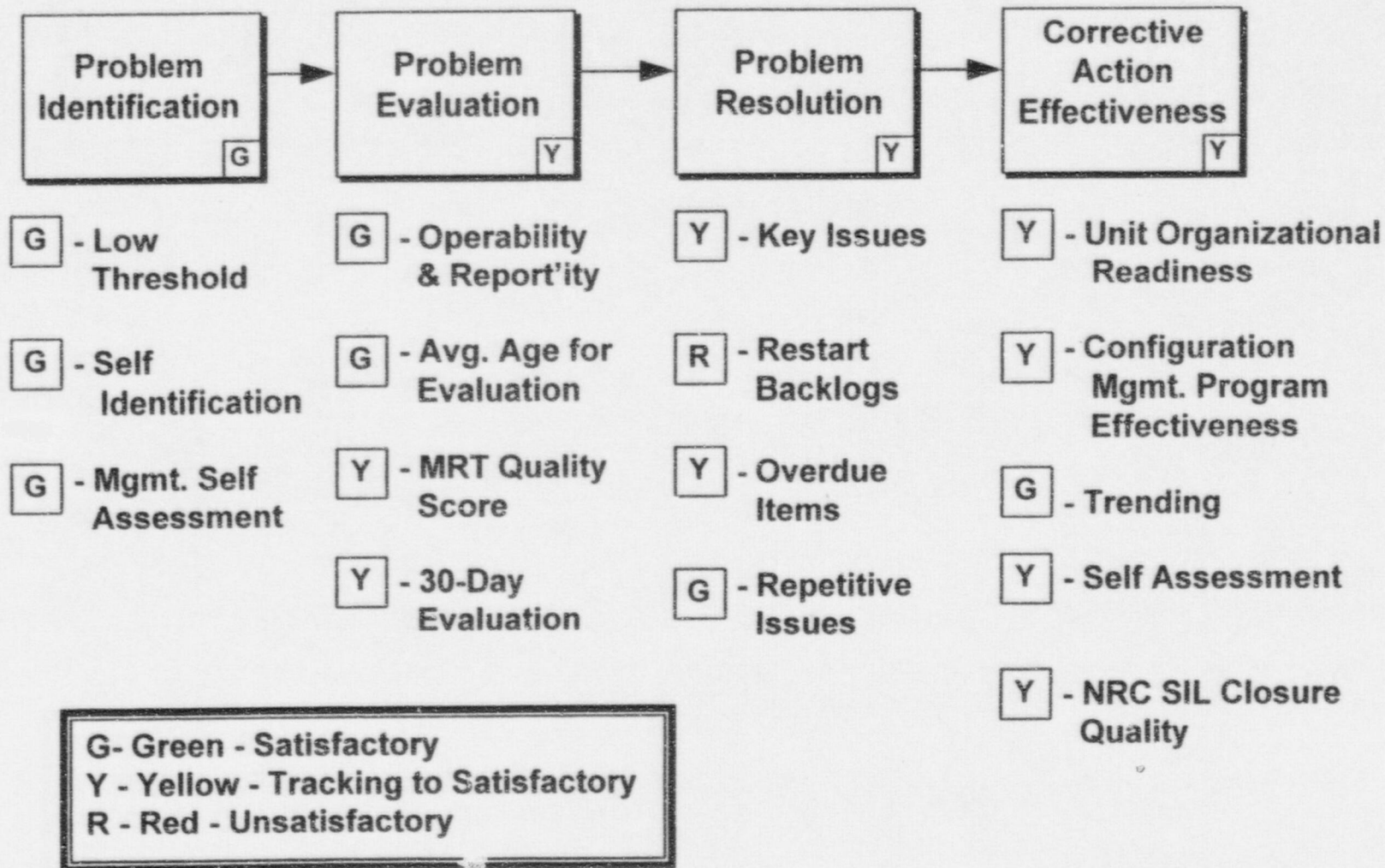
Millstone 2 Physical Readiness Actions

- | | |
|----------------------------------|---|
| ◆ Control Room
Deficiencies | <i>36 remain and are part of
the integrated work
schedule</i> |
| ◆ Restart Procedure
Revisions | <i>1624 of 2334 completed
(70% completed)</i> |
| ◆ PUP | <i>35 of 1258 remain</i> |
| ◆ AWOs | <i>966 of 5040 remain</i> |

Corrective Action Status

Marty Bowling
Steve Brinkman

MP2 Corrective Actions are Tracking to Satisfactory



MP2 Readiness for Restart

Key Issues

Satisfactory

- ◆ **SCWE**
- ◆ **Leadership, Security, Emergency Plan, Environmental, Training, Radiation Protection, Configuration Management, and Regulatory Compliance**

MP2 Readiness for Restart

Key Issues *(continued)*

Under Assessment

- ◆ **Self Assessment**
- ◆ **Corrective Action**
- ◆ **Operational Readiness**
- ◆ **Work Control & Planning**
- ◆ **Procedure Quality & Adherence**
- ◆ **Engineering Quality**

Key Issue of “Attention to Engineering Quality” is Receiving Management Focus

- ◆ **Management coaching being used to raise standards for accuracy and procedure compliance**
- ◆ **Key Issue for Unit 2 restart readiness**
- ◆ **Station Engineering Quality Review Board implemented**
- ◆ **Unit Engineering Quality Review Boards implemented**

Station Engineering Quality Review Board

- ◆ Membership

Engineering Directors with executive sponsorship

- ◆ Charter

Management focus on raising standards and quality of engineering products

- ◆ Process

Reviews self assessments, internal and external reports, and KPIs to identify trends needing focus or assessment

Unit Engineering Quality Review Boards

◆ Members

Experienced, multi-discipline management team

◆ Scope

Pre-implementation review of primary change documents (e.g., DCRs, MMODs, TMODs), safety evaluations/screens, and selected secondary change documents (e.g., test procedures, DCNs, etc.)

Remaining Regulatory Readiness Restart Corrective Action Items

◆ 10CFR50.54(f)	<i>600 of 3,918</i>
◆ NRC Commitments	<i>103 remaining</i>
◆ Level 3 DR Assignments	<i>108 of 350</i>
◆ License Amendments	<i>7 of 25</i>
◆ SIL	<i>39 of 76</i>

Key Technical Issues

Steve Brinkman

Progress is Being Made to Address Key Technical Issues

- ◆ **SPEC 200 (Effects on Response Time Testing)**
 - all testing complete; awaiting Mode 4 plant conditions
- ◆ **ESAS (Safeguards Actuation Power Supply and Associated Fuse Deficiencies)**
 - adequacy of fuses and power supplies confirmed
- ◆ **ECCS (Single Failure Boron Precipitation/ Long-term Cooling)**
 - conceptual design developed for redundant power

Progress is Being Made to Address Key Technical Issues *(continued)*

- ◆ **MEPL (Safety Classification)**
 - historical review complete
- ◆ **HELB**
 - progress being made, completion mid-September
- ◆ **Appendix R/Fire Protection**
 - fire hazards analysis and compliance report 50 percent complete
- ◆ **EEQ**
 - progress being made, completion late September

Operational Readiness

Alan Price
Unit Director - MP2

Millstone 2 Operational Readiness

♦ Human Performance

Satisfactory

- *few errors*
- *grassroots initiatives*
- *procedure use/adherence*

♦ Operators

Tracking to Satisfactory

- *staffing*
- *training*
- *performance*

♦ STAs

Satisfactory

- *staffing*
- *training*
- *performance*

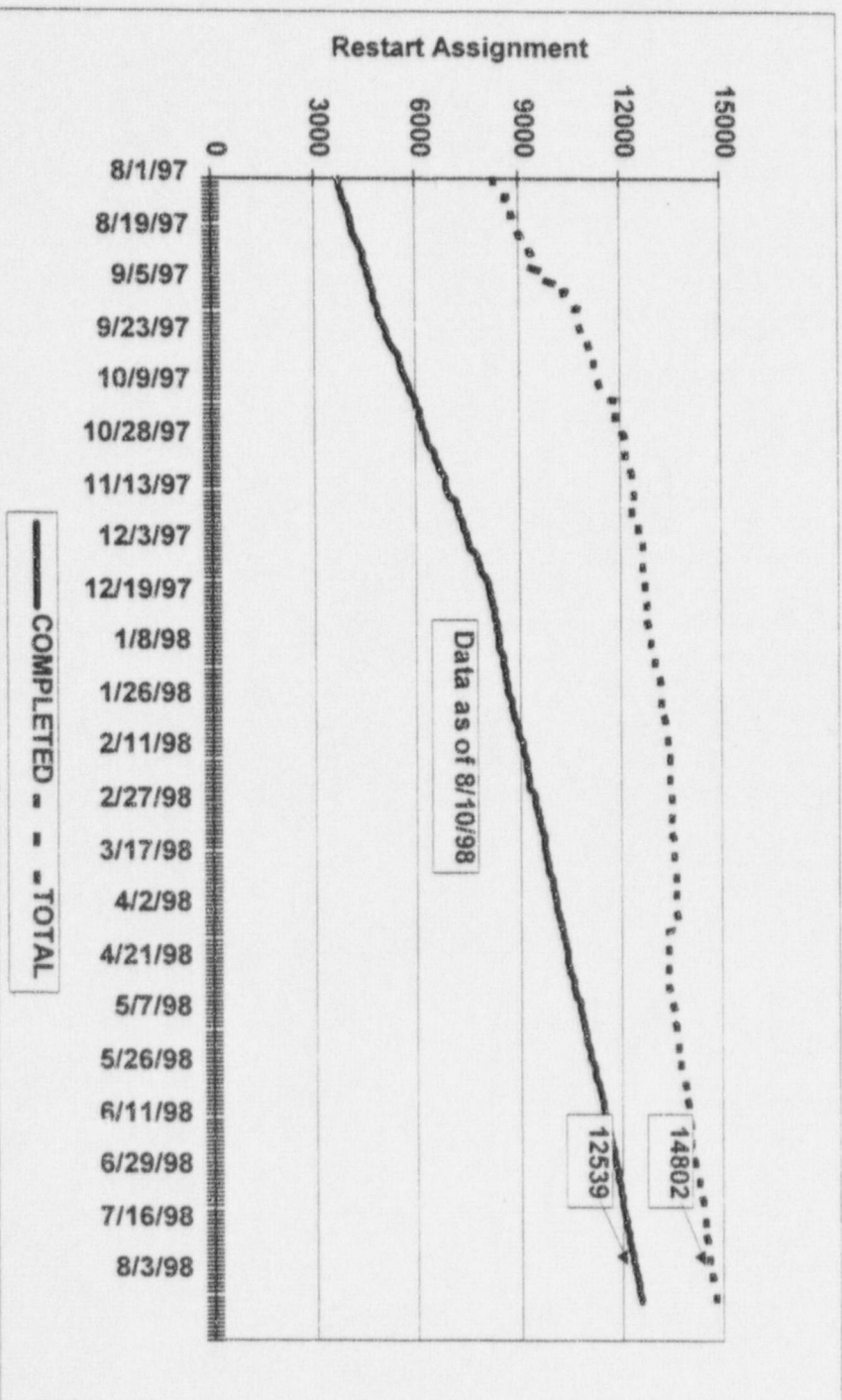
We Have Completed Significant Activities for MP2 Operational Readiness

- ◆ Boric Acid/primary water makeup
- ◆ EDG slow start
- ◆ Fire water crosstie to EDG cooling
- ◆ AFW cavitating venturis
- ◆ RCP seal package change out to support HU/CD
- ◆ 100% Rx head penetration inspection
- ◆ A & B SW header inspection & repair

We Have Completed Physical Work Activities for MP2 Operational Readiness

- ◆ A & D RCP motor overhauls
- ◆ A & B LPSI pump/motor overhaul
- ◆ A, B, & C HPSI pump overhauls
- ◆ A & B SGFP front standard overhaul
- ◆ A containment spray pump overhaul
- ◆ A & B EDG piping repairs
 - (>100 welded connections)

Unit 2 Restart Assignments Are Being Completed



We are Making Progress on Millstone 2 Operational Readiness Actions

◆ Operator Workarounds

Tracking to Satisfactory
- 18 currently on list
- reviewed for aggregate
impact on operators

◆ Operability Determinations

Tracking to Satisfactory
- 40 currently on list
- reviewed for aggregate
impact on operators

Millstone 2 Operational Readiness Actions *(continued)*

♦ Temporary Modifications

Tracking to Satisfactory

- 25 currently on list
- 9 out of the 25 are
outage support
- reviewed for aggregate
impact on Operators

Millstone 2 Performance Annunciator Panel 2nd Quarter Results

☐ Y - Operations

☐ Y - Work Planning/
Outage Management

☐ Y - Procedures

☐ R - Engineering

☐ G - Instrument and
Control

☐ Y - Radiation
Protection

☐ Y - Corrective
Actions

☐ Y - Chemistry

☐ G - Training

☐ Y - Maintenance

☐ Y - Materials

☐ Y - Licensing

☐ G - Management

G- Green - Satisfactory
Y - Yellow - Tracking to Satisfactory
R - Red - Unsatisfactory

Nuclear Oversight Assessment

John Streeter
*Recovery Officer - Nuclear
Oversight*

Nuclear Oversight Agenda

- ◆ **Transition of NORVP to NOVP**
- ◆ **Unit 3 Assessment**
- ◆ **Unit 2 Assessment**

Transition of Nuclear Oversight Restart Verification Plan (NORVP) to Nuclear Oversight Verification Plan (NOVP)

- ◆ **NORVP was used to verify Unit 3 restart readiness**
- ◆ **NORVP experience indicated a need to improve the process**
- ◆ **Transition has been made to the NOVP**
- ◆ **NOVP is an improved process**

Assessment of NORVP Experience Revealed Areas for Improvement

- ◆ **Number of administrative efficiencies**
- ◆ **Evaluated issues**
- ◆ **Observation depth**

Transition of NORVP to NOVVP

NORVP Issues

NSAB/Oversight
SCWE

Leadership
Self-Assessment
Corrective Action
Procedure Adherence
Regulatory Compliance

Security
Fire Protection
Environmental Monitoring
Emergency Plan
Training

NOVP Issues

No longer evaluated

*Attributes embodied in other
evaluated areas.*

Evaluated periodically

Transition of NORVP to NOVP

(continued)

NORVP Issues

Operations
Maintenance
Work Control
Materials
Engineering
Configuration Management
Chemistry
Radiation Protection
Startup and
Power Ascension

NOVP Issues

Evaluated in all phases of operations, recovery and maintenance. Work Control and parts use (Materials) folded into Maintenance window. MEPL evaluation aspects (Materials) and CMP folded into Engineering. Chemistry and Radiation Protection (Health Physics).

NOVP Provides Improved Assessment of Performance

- ◆ **SALP approach for core areas**
- ◆ **Administratively more efficient**
- ◆ **Observations more substantive**
- ◆ **Enhanced assessment reports for continued improvement**

Unit 3 Startup Was Safe and Conservative

- ◆ **Event free**
- ◆ **Improved communications**
- ◆ **Improved adherence to procedures**
- ◆ **Conservative and effective engineering**
- ◆ **Responsive and effective maintenance**
- ◆ **Thorough radiation controls**
- ◆ **Progressively improved performance**

Current Unit 3 NOVP Assessment

- ◆ **Operations**
 - needs improvement
- ◆ **Engineering**
 - needs improvement
- ◆ **Maintenance**
 - needs improvement
- ◆ **Chemistry/Health Physics**
 - satisfactory

Nuclear Oversight Focus is Continuous Improvement

- ◆ **Assessors dedicated to Operations, Engineering, Maintenance/Work Planning and Plant Support**
- ◆ **Continued use of operationally focused assessment criteria**

Restart Assessment of Unit 2 CMP Process Similar to Unit 3

- ◆ **Implement lessons learned from U3
CMP Oversight assessments**
- ◆ **Assess design control process**
- ◆ **Perform system functional reviews**
- ◆ **Review engineering programs**

Enhancements to Unit 2 Restart Assessment Process

- ◆ **Recovery Oversight to focus on all engineering activities**
- ◆ **Integrate Oversight assessments**
- ◆ **Continue GAP analysis / NOVP**
- ◆ **Increase frequency of Director level status meetings**

Current Unit 2 NOVP Assessment

- ◆ Operations
 - satisfactory
- ◆ Engineering
 - needs improvement
- ◆ Maintenance
 - needs improvement
- ◆ Chemistry/Health Physics
 - needs improvement SATISFACTORY

Closing Remarks

Bruce Kenyon