

**Progress Toward
Restart Readiness
at
Millstone Station**

**Northeast Utilities Briefing
for the
U.S. Nuclear Regulatory Commission**

May 30, 1997

I. EXECUTIVE SUMMARY

Purpose

This Briefing summarizes Northeast Utilities' (NU) progress towards achieving restart readiness as of May 30, 1997 including performance indicator data. It has also been designed for use as a proposed template for future Commission Briefings. The following paragraphs highlight NU's progress in several areas vital to Millstone recovery.

Board Support and Oversight

The NU Board of Trustees continues to support the nuclear option as viable in the face of continued competitive pressures and industry deregulation in New England. Appropriate resources are being provided to achieve recovery of each of the three Millstone units. The Nuclear Group continues to receive strong oversight from the Board's Nuclear Committee and the Nuclear Committee Advisory Team (NCAT).

Safety-Conscious Work Environment

The NU leadership team fully understands and is committed to create and sustain a safety-conscious work environment. It is recognized that creating a work environment where workers feel free to raise concerns, and to have confidence those concerns will be addressed in a responsible and timely way, is an absolute necessity in the recovery of the Millstone Station. Throughout this process, nuclear safety, regulatory compliance, and conservative decision making are the foundation of NU's efforts to set high standards and to do what is right.

Restart Strategy and Schedule

Millstone 3 continues to be the lead plant for restart readiness with NU readiness currently targeted for late 1997. Millstone 2 remains a close second with NU readiness currently targeted for early 1998. The pace of the restart effort for Millstone 1 has been slowed although efforts to restore the design and licensing bases (Configuration Management Project) are continuing. NU's Unit 1 restart readiness is currently targeted for mid-year 1998.

Station-Level Management of Issues

Increased emphasis is being placed by management on eleven issues vital to Millstone recovery. Section IV of this Brief has been structured to provide success criteria, progress (including reference to Key Performance Indicators (KPIs) which may be found in Appendix 3, where appropriate), and work remaining for these issues in a concise yet comprehensive way. The work remaining includes programs for startup and power ascension and continuous performance improvement.

In many cases, the issues are long-standing areas of weakness identified through self and independent assessments and NRC inspections. Others involve more recently identified issues such as operator training. Additional issues or sub-issues may be added in the future such as plant support programs (e.g., security and safeguards) and operator qualification.

NU acknowledges the inter-relationship of the solutions to address these vital issues. For example, effective Corrective Action and management Leadership are critical to address Employee Concerns. The linkages between these vital issues will be finalized and included in future NRC Briefings.

Key Performance Indicators

NU has developed and implemented a standard set of KPIs for all three Units and for the Nuclear Oversight organization. The standardized KPIs have been applied as one means of monitoring progress toward achieving defined success criteria. These KPIs reflect the unique circumstances at Millstone.

The presentation format for the KPIs previously presented to the NRC Staff has been enhanced to provide a more clear and understandable message regarding progress achieved, challenges remaining and analyses results which suggest areas for additional management attention. The fundamental content of the KPI's has not been altered. As NU progresses through the restart process, existing KPIs may be modified or new ones added to increase focus on progress toward achieving restart success criteria. These changes will continue to be communicated to the NRC as part of on-going Briefings.

Configuration Management

Measurable progress in restoring and subsequently maintaining the design and licensing bases and plant configuration for each unit has been demonstrated by the results of the Unit 1 Challenge Board (industry experts) and by recently meeting a major Configuration Management Project milestone, Readiness for Independent Corrective Action Verification Program (ICAVP) initiation on

Millstone 3. A substantial quantity of work by the line organization and Nuclear Oversight was necessary to achieve ICAVP readiness. This milestone was achieved on-schedule and communicated to the NRC Staff on May 27, 1997. We recognize that effectiveness will ultimately be determined through our internal restart readiness assessments and independently verified through the ICAVP process and NRC inspections. Through these activities, NU will have numerous opportunities to demonstrate that NU's high standards are being met.

Work Prioritization and Planning

NU has made progress in improving work prioritization and planning across the site. This is evident in the following areas:

- sequencing of unit readiness for restart (rather than driving all three units in parallel),
- implementation of a Site Integrated Schedule, and
- increased commonality in programs and processes (e.g., corrective action).

Community Outreach

NU has accepted responsibility for loss of public trust and confidence stemming from past Millstone Station performance. NU has acknowledged that improvement in public confidence must be earned through a combination of several factors including improved operations, strong internal oversight, and favorable evaluations from NU's regulators.

In order to enhance general public awareness of Millstone's progress, NU has implemented a number of community outreach activities whose foundations are based on complete openness and a willingness to share information about our recovery and operations -- both the successes and the setbacks. Some of these activities include community discussions at the Waterford Town Hall, NU leadership team breakfasts with community leaders, public observation of NU Nuclear leadership team staff meetings, the Millstone Advisory Council, participation in the Connecticut Nuclear Energy Advisory Council, and the Nuclear Speakers Bureau made up of NU employee volunteers.

II. Restart Strategy

On May 5, 1997, NU announced a restart strategy refinement involving the adoption of a "lead plant" model. Unit 3 continues as the lead plant, with Unit 2 as a close backup. The pace of restart efforts at Unit 1 is being scaled back to allow focus of critical leadership skills and talents. Likewise organizational and financial resources are being directed to improve the probability of a Unit 3 restart by the end of 1997 while continuing to preserve safety and high quality standards. Mr. Michael Brothers (Unit 3 Officer) is responsible for overall Unit 3 readiness. Mr. Martin Bowling (Unit 2 Officer) and Mr. Jack McElwain (Unit 1 Officer) are contributing regulatory and physical plant readiness management, respectively for Unit 3. Appendix 1 provides the organization chart for the Millstone leadership team. (See Figure 1)

Identifying Unit 3 as the lead in the restart effort accelerates the adoption of uniform approaches and management standards across the Millstone Station. Examples of current activities where a consistent station-wide approach is being applied include:

- Site Integrated Schedule -- to establish a clear picture of the restart process and accountabilities (See Section III. and Appendix 5);
- Common Key Performance Indicators -- to report restart progress to the NRC and other external stakeholders (See Appendix 3);
- Increased commonality on programs or processes -- for example, leadership development and corrective action.

III. Site Integrated Schedule

A. Integrated Schedule - Sequence of Events

The activities necessary to support safe restart of the Millstone Nuclear Units are numerous and inter-related. Consistent with the April 23, 1997 commitment to the Commission, a Millstone Site Integrated Schedule (SIS) has been included for the major activities affecting Millstone station. An activity is being included on the SIS if the activity affects the critical path for restart of any unit, impacts multiple units, or significantly affects external commitments. Revision 0 of the SIS was issued on May 30th, following station wide management review. It is provided in Appendix 5.

The SIS is the central repository of the planning efforts to accomplish activities, tasks, programs, projects and key milestones. As such, the SIS lays out the collective plans for sequencing of activities, the anticipated level of effort, and the expected task durations. Additionally, the SIS reflects the responsible station, department, manager or individual for assigned activities. The SIS is an important communications tool across the site between NU and the NRC.

B. NU Restart Definitions

A set of restart definitions have been developed which are linked to the key milestones described in this section. These definitions were previously provided to the NRC Staff during the May 21, 1997 Restart Assessment Panel Briefing at Millstone, and are presented in Appendix 4.

Table 1 below provides key restart milestones and current NU target dates which reflect the recently announced lead plant strategy. Unit 1 plans and schedules are currently under evaluation and will be revised by the end of June, 1997. Periodic revisions to the SIS are anticipated and will routinely be communicated to the NRC.

Table 1

KEY NU RESTART MILESTONES SUMMARY

	<i>Unit 3 <u>Target</u></i>	<i>Unit 2 <u>Target</u></i>	<i>Unit 1 <u>Target</u></i>
ICAVP Readiness	5/27/97	6/30/97	*
OSTI Readiness	9/30/97	9/30/97	*
Physical Plant Readiness	9/30/97	11/25/97	*
Ready for Restart (Regulatory)	11/22/97	12/16/97	*

* To be determined by June 30, 1997

C. Progress on Restart Milestones*Background*

The three Millstone units were shut down by NU management decision in order to formulate and implement corrective actions that would address a series of technical, management, and regulatory compliance issues. Table 2 below provides the month and year each Millstone Unit was shut down.

Table 2

MILLSTONE UNIT SHUTDOWN DATES

- Unit 1 November 4, 1995
- Unit 2 February 20, 1996
- Unit 3 March 30, 1996

Subsequently, the NRC sent a series of confirmatory letters to NU pursuant to 10 CFR 50.54(f) requiring NU to affirm compliance with the conditions of each unit's license and regulations before restarting the unit.

As NU implements the numerous corrective actions required to address the 10 CFR 50.54(f) concerns -- and on the many broader performance issues (including other confirmatory letters) -- a series of information exchanges, letters, submittals, and meetings are being held with the NRC Staff.

An important part of these information exchanges is to provide and discuss progress (detailed in Section III.C below and Section IV.) on Millstone Restart Readiness. This discussion includes a comparison of actual or reported unit progress to scheduled progress using the Site Integrated Schedule (SIS) for selected Restart Milestones of interest.

As Unit 3 was designated the lead unit on May 5, 1997, this update discussion will primarily be directed to Unit 3, and correspondingly less for the other units.

Unit 3

Millstone Unit 3 was shut down in March, 1996, due to a design deficiency in Auxiliary Feedwater System Containment isolation valves. Subsequently, the NRC requested information on configuration management under 10 CFR 50.54(f). The following key milestones towards restart readiness were established:

May 27, 1997	Start of ICAVP
July 14, 1997	Complete the Configuration Management Program (i.e. complete discovery on 100% of the Unit 3 risk significant and/or safety significant systems)
September 30, 1997	Physical Plant Readiness Ready for the NRC Operational Safety Team Inspection (OSTI)
November 22, 1997	Ready for Restart (Regulatory)

Millstone 3 has met the May 27th milestone for ICAVP readiness. Discovery of discrepancies on 50% of our risk-significant and safety-significant systems and associated engineering programs was completed. Independent assessments by both the Millstone Unit 2 CMP and Nuclear Oversight resulted in favorable recommendations to proceed. In addition, the ICAVP contractor and NRC inspection support are in place.

With ICAVP underway, the focus has shifted to completing the Configuration Management Program discovery of discrepancies by July 14th. Efforts are currently slightly behind schedule due to a shift in resources in late April and early May to support preparations for start of ICAVP. With resources being re-focused on this effort, this slippage is expected to be recovered. Unit 3 is on track to have all Condition Reports evaluations which are more than 30 days old completed by July 5th.

Work toward achieving physical readiness for restart is continuing. Currently, the Motor Operated Valve (MOV) repair program has become critical path among the activities needed to achieve physical plant readiness. Physical readiness for restart is also being challenged by required modifications -- particularly, issues regarding the operability of the Recirculating Spray System (RSS).

Major elements of this September 30th OSTI readiness date include completion of the 10 CFR 50.54(f) effort, the NRC Significant Items List, elements of the NRC Manual Chapter (MC) 0350, performance indicators at goal or on the work-off curve, and assurances that an improved, healthy environment exists for receiving and resolving employee concerns. Delivery of SIL packages is proceeding generally on schedule.

Efforts are currently underway to rewrite the Unit 3 Operational Readiness Plan to define actions required to meet the restart criteria defined in MC 0350.

The attached Unit 3 Performance Indicators (Appendix 3) indicate that 50.54(f), corrective action evaluations, NRC Significant Items List, temporary modifications and procedure review backlogs are on track to meet established schedules. The current challenges are completion of modifications required for startup, License Amendment Requests and total corrective actions required for startup. The management organizational changes discussed above are focusing on completing the submittal of all License Amendment Request submittals by June 30, 1997, completing all modifications by September 30, 1997 and completing the CMP by July 14, 1997 to allow completion of required corrective actions by September 30, 1997.

Execution of the recovery plan has generally been satisfactory, but has highlighted continuing problems with both unit and site-wide programs and processes. Worker frustration with being able to efficiently accomplish work continues to be high. Schedule adherence continues to be challenged.

Several management actions have been taken to address the above challenges at Unit 3:

- Line responsibility for the Configuration Management Program (CMP), as well as Regulatory readiness, has been transferred to Unit 2 Recovery Officer Marty Bowling. Changes to the CMP to incorporate lessons learned at Unit 2 are expected to improve efficiency.
- Line responsibility for achieving physical readiness for restart has been assigned to Unit 1 Recovery Officer Jack McElwain. In that capacity, he will have authority over, and responsibility for all aspects of work planning and outage management, maintenance, and modification engineering. This is expected to enhance the efficiency of the work and modification processes.
- Engineering of restart-required modifications is being outsourced to other engineering departments within NU, Stone & Webster, and Southern Company.
- Focus areas are being established to facilitate and promote teamwork, accountability, and determination of progress.
- Experience gained at Units 1 and 2 in the area of leadership development training is being applied at Unit 3.

Unit 2

Millstone Unit 2 was shut down to inspect the adequacy of the Recirculation Spray Sump Screens. Subsequently, the NRC requested information on configuration management under 10 CFR 50.54(f) for Units 2 and 3.

Unit 3 had been designated as the lead unit for restart until October 1996. From October 1996 until May 5, 1997, Unit 2 was worked in parallel with Unit 3.

During this time, the following major activities were completed:

- Establishment and implementation of a configuration management process which would meet the NRC ICAVP order.
- Standards raised for the leadership team (on-going activity).
- Effectiveness of the corrective actions process was improved.

In February 1997, Unit 2 unloaded the reactor core to the spent fuel pool and initiated the Unit 2 Recovery Plan. The plan was based on addressing and fixing systems and issues in order of safety significance.

Execution of the plan has been generally good, but has highlighted weaknesses in both Unit 2 and site-wide programs and processes. The 1996 work effort was not sufficiently effective to reduce the large amount of open work items still required for startup. This combination has provided both leadership and schedule adherence challenges.

Unit 2 organizational readiness and leadership standards continue to improve. Overall morale is good and should continue to improve as the backlog of corrective actions are worked off. The Nuclear Safety culture, including addressing employees concerns, is improving.

Currently, the projected Key Unit 2 Milestone dates are:

• Ready for ICAVP	June 30, 1997
• Core On Load	August 6, 1997
• Mode 5	August 20, 1997
• Ready for OSTI	September 30, 1997
• Physical Plant Readiness	November 25, 1997
• Ready for Restart (Regulatory)	December 16, 1997

Key Performance Indicators indicate three of the above Key Milestone dates are challenged. They are:

1. **Ready for ICAVP** - The projected date for this Key Site Milestone had been adjusted from May 5, 1997 to June 23, 1997, and now to June 30, 1997. The process implementation has been effective, but the scope of the required review is very large and efforts to resolve issues (many of which have been backlogged since 1996) are resource intensive and more difficult than originally anticipated.

2. Physical Plant Readiness - due to the large number (~100) of physical modifications required for restart, and licensed operator restart qualifications activities, this Key Site Milestone is challenged. The work-off rate must be improved. This milestone is under review to determine what further actions/resources are required.
3. Ready for Restart (Regulatory) - based on the number of license amendments required for restart and the current work off rate, this Key Site Milestone is challenged. The target date for the last submittal to NRC is July 31, 1997.

Several management actions are being taken to address the above challenges. Some of these include:

- Establishing weekly, monthly, and quarterly focus items and goals to facilitate and promote teamwork, accountability, and the determination of progress.
- Outsourcing the engineering of major modifications to a qualified and experienced A/E.
- Increased focus on the need to complete corrective actions as well as identifying the need for corrective action.
- Strengthening the role of the Nuclear Oversight organization in the assessment of Unit 2 work activities.
- Efficiency enhancements to the work control and modification process.
- Improvements in the quality of safety evaluations performed and license amendment packages prepared.
- Developed plans for ensuring operator qualifications are at the highest standard for restart.

Unit 1

With the naming of Unit 3 as the lead unit, Unit 1 resources have been reduced. While reduced in amount, the work effort on Unit 1 continues to be directed towards safe, shutdown operations. As before, shutdown risk management is an area of prime focus.

Plant physical work is being performed primarily through the use of NU personnel. Emphasis has been placed on correcting plant material condition items from the existing work backlog. Unit 1 continues to evaluate the full effect of naming Unit 3 the lead unit. Key NU Restart Milestone dates for Unit 1 will be published with the next revision to the Unit 1, Level 1 schedule (to be issued by June 30, 1997).

Unit 1 actions in support of correcting 10 CFR 50.54(f) issues continue. This activity is staffed utilizing a combination of both NU and outside contractor engineering, and engineering support personnel.

IV. Progress on Key Issues

A. Issues Management Introduction

From the following sources, Millstone Station performance issues have been identified:

- Self and independent assessments including: the Fundamental Cause Assessment Team Report, Joint Utilities Management Assessment, and ACR 7007;
- Quality Assurance audits;
- Special NRC inspections, e.g. Millstone Independent Review Group, Inspection Report 96-201, etc.;
- Routine NRC inspections; and
- INPO evaluations.

B. Issues and Progress Reports

The Nuclear organization has identified eleven key site-wide issues as requiring additional management focus and resolution. These issues represent a combination of root causes from previously conducted self-assessments (e.g., leadership and standards), and issues where on-going action plans include completion of a formal root cause (e.g., plant support areas).

Issue Progress Reports on the eleven areas are contained in the pages that follow.

LEADERSHIP

ISSUE

Lack of leadership resulting in the setting and toleration of low standards.

PROBLEM STATEMENT

The lack of leadership has resulted in numerous examples of:

- Weak implementation of conservative decision making;
- Loss of trust and credibility of management with employees, regulators, and the general public;
- Loss of configuration management;
- Regulatory noncompliance;
- Ineffective corrective actions;
- Ineffective self-assessment and oversight.

SUCCESS CRITERIA

- Meet the Seven Success Objectives described in Appendix 2.
- Achieve a 15% improvement in the average Leadership Assessment score from the baseline measurement in November 1996.

PROGRESS

A senior management leadership team that understands and sets high standards is in place. First-line supervisors and above are receiving leadership development training with specific emphasis on the basic values: 1) Do the right thing 2) Treat people with respect and, 3) Promote teamwork. Senior management is also championing and supporting the oversight role (i.e. self-assessment, Nuclear Oversight, Nuclear Safety Assessment Board). Finally, line management is assuming responsibility and ownership of key support activities (i.e. Training, Security, Emergency Preparedness).

Examples include:

- Senior management now fills key positions in the Emergency Response Organization;
- Unit and senior line management have established Curricular Advisory Councils and an Executive Training Council to provide the necessary line ownership for training. The expectation of 100% training attendance accountability has been established;
- Unit 1 has completed its *Forum for Leadership Excellence* for first-line supervisors and above;
- Unit 2 has completed its *Enlightened Leadership* for first-line supervisors and above; and
- Standards and Expectations for Nuclear Safety and the Employee Concerns Program have been issued.

REMAINING ACTIONS

- Solidify the establishment of a healthy, safety-conscious work environment based on raising standards in the nuclear safety area and providing an Employee Concerns Program and working environment that employees find credible. To facilitate this, senior management will complete the Managing Nuclear Safety course and champion the internalization of the Nuclear Safety Standards and Expectations (See Appendix 8).

- Further improve Unit 3 leadership capability. Unit 3 management from first-line supervisor up will be attending the two week long *Forum for Leadership Excellence* (FLE), implemented at Unit 1. In advance, and following that participation, this same group will be engaged in periodic sessions aimed at improving leadership focus and communications patterned after the *Enlightened Leadership Program* at Unit 2. Refresher/reinforcement sessions are being planned to optimize immediate application of the enhanced leadership skills.
- Continue to improve the self-assessment capability such that significant program and process issues are identified first by the line management rather than by Nuclear oversight, the regulator, or by an actual event. (See Issue Section #2 - Line Management Self-Assessment)
- Improve adherence to established schedules by focusing the organization on completing corrective actions.
- Provide more management visibility and access to workers throughout the station.
- Ensure no significant operating events occur that would challenge safety limits by applying the philosophies of conservative decision making and defense-in-depth.
- Complete periodic Leadership Assessments and the FPI culture survey to provide management effectiveness feedback.
- Individual action plans will be implemented for those with Leadership Assessment Scores in the bottom 15% for Millstone.
- Implement individual action plans for those supervisors with leadership scores in the bottom 15% for Millstone.

LINE MANAGEMENT SELF-ASSESSMENT

ISSUE

Ineffective self-assessment

PROBLEM STATEMENT

A culture has existed that emphasized justification of performance inadequacies and acceptance of low performance standards.

SUCCESS CRITERIA

Nuclear Oversight confirms that an effective management self assessment program (including human error performance reduction) is functioning in the units and appropriate support organizations.

PROGRESS

The Root Causes of this issue were:

- Failure of management to establish appropriate standards for self-evaluation; and
- Tolerance by management of substandard performance.

Completed Items

1. Management expectations of the necessity for a robust self-assessment program have been communicated to station personnel. A recent self-assessment of the station's self-assessment program indicates general understanding of management's expectations.
2. In general, station personnel understand that utilization of self-assessment will improve site performance.

3. Procedures have been implemented within Units 2 and 3 that establish formal self-assessment programs. The Design Change Manual contains formal guidance for conducting self-assessments within the engineering organizations.
4. Units 2 and 3 have developed annual self-assessment plans which include 85 and 81 formal self-assessments, respectively. Engineering Assurance has completed 29 assessments and is currently updating the annual plan for the remainder of the year.
5. Formal training has been established to provide station personnel with an understanding of the importance of self-assessment and the tools to perform self-assessments. To date more than 450 people have attended this training.
6. Units 2 and 3 have established common performance indicators which measure aspects of performance within each line organization (See Appendix 3). In addition, Unit 2 has established an annunciator window process which displays performance in relation to established standards. This methodology is based on industry good practices.
7. Self-assessments have been conducted by various organizations across the site. Some examples include self-assessments of the Configuration Management Plan, design activities related to configuration control, the Unit 2 Corrective Action Program, and the Unit 3 Self-Assessment Program. All of the self-assessments have been valuable in identifying areas for improvement in the areas evaluated.

Work In Progress:

Management is continuing to promote the value of formal and individual self-assessment for continuous improvement of site performance. Training on self-assessment is continuing. Indicators are being developed to measure performance against established standards using the annunciator window process. Self-assessments continue to be conducted in accordance with the annual plans to establish baseline performance.

REMAINING ACTIONS

- Integrate the results from completed self-assessments to identify common causes, to focus corrective actions, and communicate the state of readiness for restart.
- Perform self-assessments of relevant NRC Manual Chapter 0350 inspection areas to determine readiness for OSTI. Compare the results with Nuclear Oversight independent assessments in the same functional areas.
- Compare the results of the self-assessment of the Configuration Management Plan with the results reported by Nuclear Oversight.
- Perform a follow-up self-assessment of the Self-Assessment program to verify effectiveness.
- Perform a self-assessment of completed Level 1 Condition Reports to determine effectiveness of the corrective actions.
- Implement the industry HPES program.
- Develop Performance Indicators for human performance.

Corrective Action Program

ISSUE

Millstone has a weak corrective action program

PROBLEM STATEMENT

The Corrective Action program has been weak in ensuring comprehensive, timely, and effective corrective actions.

SUCCESS CRITERIA

Nuclear Oversight confirms that an effective Corrective Action Program is implemented for the unit and appropriate support organizations which:

1. Demonstrates that conditions adverse to quality are identified in a timely manner;
2. Demonstrates that conditions adverse to quality are evaluated for operability and reportability in a timely manner (i.e. 24-72 hours);
3. Demonstrates that action plans to resolve identified conditions adverse to quality are provided within 30 days (KPI developed);
4. Completes corrective actions required for restart; and
5. Establishes a trending program that will identify recurring conditions adverse to quality and common causes of problems.

PROGRESS

The Root Causes of this issue were:

- Failure of management to establish appropriate standards for timely and effective resolution of conditions adverse to quality.

- Failure of management to aggressively pursue identified conditions adverse to quality.
- An atmosphere established by management which discouraged timely identification of conditions adverse to quality.

Completed Items:

1. Management expectations have been communicated regarding the critical nature of an effective corrective action program. A process has been implemented which supports the expectations of timely identification, timely and comprehensive action plan development, and timely and effective corrective actions. Standards and performance indicators have been established to measure performance.
2. Units 2 and 3 have submitted comprehensive closure packages on schedule for Significant Issues List items related to Condition Reports and regulatory issues. The NRC inspectors have indicated satisfaction with the quality of the packages.
3. Units 2 and 3 have published quarterly trend reports which have been identified areas for improvement.

Work In Progress:

1. Management expectations continue to be reinforced regarding the corrective action program.
2. Management continues to reinforce the need for timely reporting of real or perceived conditions adverse to quality. Less than one percent of Condition Reports evaluated have discovery dates earlier than the reporting dates. This indicates that employees are promptly reporting deficiencies as they are discovered.
3. The timeliness of investigations and action plan development is monitored and displayed through performance indicators. The backlog of unevaluated Condition Reports continues to be reduced. At the beginning of February, unevaluated Condition Reports for Unit 2 and Unit 3 stood at 812 (781 > 30 days old) and 1229 (764 > 30 days old) respectively. By May 23, these numbers had been reduced to 335 (224 > 30 days old) and 674 (233 > 30 days old). In February only 17% and 22% of new Condition Reports were investigated within 30 days for Units 2 and 3 respectively. By April, those percentages had risen to 24% and 52%. (See Appendix 3) The quality of the investigations and resultant corrective actions are monitored by multi-discipline teams.

4. The timeliness of completing corrective actions is monitored and displayed through performance indicators. The number of open actions for Unit 3 continues to grow as the backlog of unevaluated Condition Reports is investigated and actions plans are developed. (See Appendix 3) Units 2 and 3 have developed weekly work off goals which are discussed daily. The NRC Significant Issues List items related to Condition Reports are being completed and provided to the NRC on schedule.
5. Units 2 and 3 will continue to access corrective action trends on a quarterly basis.

REMAINING ACTIONS

- The existing backlog of unevaluated Condition Reports must be eliminated and consistency established in meeting the standards for investigating and developing actions plans to resolve conditions adverse to quality.
- Actions identified for completion prior to restart which are delineated in the response to request #1 from the April 16, 1997 NRC 50.54(f) letter must be completed.
- The completion of the NRC Significant Issues List items related to Condition Reports to meet the Millstone pre-requisites for "Ready for OSTI."
- Continue completion of quarterly trend reports to determine the need for further self-assessment and corrective actions.
- Conduct a self-assessment of each Unit's Corrective Action Program.
- Develop or refine performance indicators to ensure that the effectiveness of the corrective action program is being measured.

EMPLOYEE CONCERNS

ISSUE

Need for a Safety-Conscious Work Environment at Millstone Station

PROBLEM STATEMENT

Millstone Station has not maintained a safety-conscious work environment in which employees feel free to raise concerns both to their own management and the NRC without fear of retaliation. In addition, the Employee Concerns Program has not been effective in assisting concerned individuals who were unable or unwilling to have their concern(s) resolved by their management.

SUCCESS CRITERIA

- Employee Concerns Oversight Panel confirms sufficient progress toward achieving a safety conscious work environment at Millstone. (Evaluation criteria is under development)
- Little Harbor Consultants confirms that a sufficiently safety-conscious work environment has been reestablished at Millstone.

PROGRESS

The Root Causes for the failure to maintain a safety-conscious work environment are contained within the:

1. Fundamental Cause Assessment Team (FCAT) Report dated July 12, 1996; and
2. NRC Millstone Independent Review Group (Hannon Report) of October 1996.

Actions In Place to resolve this issue include:

1. Re-establishment of configuration management for each of the units;
2. Development and demonstration of an effective corrective action program;

3. Significantly improving the leadership performance of line management; and
4. Implementation of those portions of *Northeast Utilities Plan for Addressing Employee Concerns* (Comprehensive Plan) which address the restoration of a safety-conscious work environment.

Note: Items (1.), (2.) and (3.) are the subject of issue #1, #3 and #6 and will not be further discussed in this Progress Report.

Actions Completed include:

1. All senior leaders (President, Vice-Presidents, and Unit Officers) have been changed from those existing at the time the safety-conscious environment degraded;
2. Seventy-five percent of the Directors have also been changed, or are in different positions; and
3. Of the 155 action items contained in the Comprehensive Plan, 88 have been completed. Key items completed include:
 - Selection of the Employee Concerns Oversight Panel,
 - Development of an new employee concerns resolution and closure process,
 - Communication of expectations to all employees, and
 - Establishment of an effective self-assessment process which has already identified areas for further improvement.

The NRC Staff was given an extensive and detailed briefing on the Employee Concerns Program, the Employee Concerns Oversight Panel, and line management initiatives to foster a safety-conscious work environment on May 13, 1997 in a public forum. In addition, Little Harbor Consultants presented their comments on our Comprehensive Plan at a meeting later on the same day (Refer to Appendix 7).

The effectiveness of the actions taken to date are illustrated by the key performance indicators in Appendix 3 which indicate favorable trends for:

1. The relative rate at which the ECP receives concerns vs the rate the NRC receives allegations concerning Millstone Station;
2. The percentage of employees who come to the ECP requesting confidentiality;
3. The length of time it takes to resolve a specific concern submitted to the ECP; and
4. The resolution of long standing concerns submitted to the ECP.

The key differences in the new ECP are:

1. Establishment of a partnership with line management to facilitate the resolution of concerns;
2. Increased ECP staffing and training;
3. Concerns tracked through implementation of corrective action; and
4. Independent employee oversight.

REMAINING ACTIONS

- Completion of the remaining Comprehensive Plan key action items directed at re-establishing a safety-conscious work environment. Appendix 3 shows the status of comprehensive plan action item implementation;
- Assessment of the effectiveness of the action items in restoring a safety-conscious work environment through interviews and surveys. Improvement indicators, as applicable, will be developed;
- Complete leadership development and training; and
- Conduct FPI Culture Survey to provide feedback to management.

OVERSIGHT

ISSUE

Ineffective oversight of nuclear activities.

PROBLEM STATEMENT

Assessments performed over the past several years have identified weaknesses in the identification and resolution of Oversight identified problems. The Oversight organization was not viewed as a value-added organization by the line.

SUCCESS CRITERIA

- The Millstone Nuclear Safety Assessment Board (NSAB) confirms that Nuclear Oversight is providing effective audits, reviews, and assessments of unit and support organization programs, processes, and activities.
- The Millstone Nuclear Safety Assessment Board (NSAB) confirms that unit and support organizations effectively address Nuclear Oversight findings in a timely manner.

PROGRESS

The Root Cause of this issue was identified by:

- Adverse Condition Report (ACR) 7007 Event Response Team Report -- 2/22/96;
- Report of the Fundamental Cause Assessment Team -- 7/12/96;
- Report of the Management Review of the Adequacy of the Northeast Utilities Quality Assurance Program ("JUMA") -- 7/17/96;
- Effectiveness of the Oversight Organization, Root Cause Evaluation Report -- 9/10/96; and
- NRC (W. Travers) letter to B. Kenyon, Restart Assessment Plan -- 3/24/97.

Completed Actions:

In general, the Recovery Plan for Nuclear Oversight programmatic and organizational improvements has been completed. Highlights include:

- Published CEO Expectations for Nuclear Oversight;
- Executed Interface Agreement on Mutual Expectations for Nuclear Oversight between Nuclear Oversight and the Recovery organizations;
- Completed Reorganization, increased staffing numbers by almost one hundred percent, and developed or revised procedures to reflect new processes;
- Developed KPIs and reports to measure and communicate the health of Oversight programs (see Appendix 3);
- Formalized audit and surveillance/field observation programs and schedules;
- Integrated audit, surveillance, operating experience and Independent Review Team (IRT) activities;
- Implemented an Oversight Self-Assessment procedure and developed an annual schedule;
- Developed workoff curves and assignments to identify outstanding issues; and
- Developed a monthly report to send to the President and CEO of NNECO.

The Millstone NSAB has been reconstituted with senior management, additional external membership, and a strengthened subcommittee structure. The Millstone NSAB reports directly to the President and CEO of NNECO.

Work in Progress:

- Implementation of new "hold point" procedures;
- Implementation of new training program;
- Upgrade of the ISEG/Operating Experience organization;
- Completion of NRC commitment and JUMA (external assessment) open items;
- Independent Assessment of Nuclear Oversight (verify Oversight readiness for restart); and
- Implement Restart Verification Program (Oversight criteria and plans to assess readiness for key milestones, such as ICAVP and OSTI).

REMAINING ACTIONS

- Complete the implementation of the Recovery Plan for Nuclear Oversight items to support unit restart. A continuous improvement process is outlined under Objective 7 of the Recovery Plan.
- An Oversight Strategic Plan is being developed to help identify and begin to facilitate Oversight long-term improvement initiatives.
- Implementation of a continuous improvement process which will transition quality functions, analysis and assessment activities and staff into the line organization and position Nuclear Oversight in the role of evaluator of the line's self assessment capability.
- Complete NSAB assessments of Nuclear Oversight effectiveness and unit readiness for restart.

CONFIGURATION MANAGEMENT

ISSUE

The issue is the loss of configuration control of licensing and design bases information for the Millstone Nuclear Power Station, Units 1, 2 and 3.

PROBLEM STATEMENT

Previous configuration control processes and practices did not consistently maintain the relevant documentation for the licensing and design bases of the Millstone Station units. Unit operation in conformance with its operating license, Nuclear Regulatory Commission (NRC) regulations and the units' Final Safety Analysis Report (FSAR) was not always met.

SUCCESS CRITERIA

- Nuclear Oversight determines with reasonable assurance that:
 - The licensing and design bases requirements have been documented, validated, and verified to accurately reflect unit configuration and operation.
 - Adequate programs and processes have been verified to maintain configuration control.
- Response to the NRC 10 CFR 50.54(f) letter is completed.
- Reviews by the ICAVP Contractor and NRC inspections confirm the above actions.

PROGRESS

The Root Causes of this issue are identified by:

- Adverse Condition Report (ACR) 7007, "Millstone Unit 1 UFSAR Inaccuracies" Event Response Team Report, February 22, 1996;
- Letter from William T. Russell, USNRC, to T. C. Feigenbaum, Subject: "Confirmatory Order Establishing Independent Corrective Action Verification Program", August 14, 1996; and
- US NRC Inspection Report 50-336/96-201 and 50-423/96-201 dated September, 1996.

Completed Actions:

- Development of the Configuration Management Plan which provides for the restoration of the design and license bases and for the long-term maintenance of plant configuration.
- Establishment of dedicated unit CMP project teams for each unit. Project teams of up to 200, 150, and 250 personnel have been used for UNIT 1, UNIT 2 and UNIT 3, respectively.
- Development of CMP implementing Project Instructions to identify and document license commitments, license and design bases, and technical programs. These procedures also provide directions for detailed reviews of technical programs and for physical plant walkdowns.
- Systems and programs were identified for each unit. This includes 65 systems for UNIT 1, 63 systems for UNIT 2 and 88 systems for UNIT 3. Program topical areas reviewed included 19 areas for UNIT 1, 51 for UNIT 2 and 51 for UNIT 3.
- Reviews to document the licensing basis and design bases are ongoing. They have identified 2,757 issues for Unit 2 and 3,167 issues for Unit 3. This resulted in 7 LERs for Unit 2 and 5 LERs for Unit 3. There are also 83 Unit 2 and 103 Unit 3 modifications resulting from these items.
- A team has been formed to support the ICAVP response activities and to be the focal point for the ICAVP contractor.
- Millstone 3 completed discovery on 50% of risk-and-safety-related systems and 19 topical programs and the ICAVP Readiness has been achieved.
- Completion of UNIT 1 CMP Challenge Board:
 - Charter: The Board was chartered to perform a challenging, critical assessment of all UNIT 1 CMP processes and procedures. Reviews included detailed evaluations of the adequacy and proper implementation of Configuration Management Plan Project Instructions (PIs).
 - Conclusions: The Board concluded that the Unit 1 CMP, when properly implemented, including the recommendations from the Challenge Board, will provide reasonable assurance that plant configuration can be maintained as specified in the terms and conditions of the unit's operating license, NRC regulations (including 10CFR50.59) and the unit's FSAR.
- Key procedures and processes were reviewed, with changes made in the following processes to strengthen configuration control sufficiently to support plant restart:
 - Safety Evaluation Process,
 - FSAR Change Process,
 - Design Control Manual, and
 - Document Control.

Work in Progress:

- Completing the licensing basis re-establishment activity for the 65 UNIT 1 systems, 63 UNIT 2 systems and 88 UNIT 3 systems.
- Submitting periodic updates to the 10CFR50.54(f) letter for each unit to provide an ongoing status of each unit's progress.
- Completing the in-progress Engineering Reviews for 31 of 51 Millstone 2 programs and for 32 of 51 Millstone 3 programs.
- Implementing Millstone 1 Challenge Board findings and recommendations.
- Completing revision of Nuclear Group Policy 3.2, "Configuration Management", and Nuclear Group Procedure (NGP) 2.37, "Configuration Management Program". These documents define configuration control requirements and standards.
- Training of personnel in long-term configuration control standards and expectations.
- Completing corrective actions which have been identified to date by the procedure reviews, self-assessments, topical area reviews and audits.
- Implementing the procedures which control vendor technical information.
- Implementing a process for the maintenance of Design Basis Summaries.
- Completing resolution of ACR 7007, "Millstone Unit 1 FSAR Inaccuracies" issues. These issues are generally applicable to Millstone Units 2 and 3 also.
- Completing full implementation of the Engineering Assurance Program to include integration and trending of key internal and external engineering performance assessment information.
- Developing indicators to measure the effectiveness of the corrective actions on configuration control. (Currently, Condition Reports [CRs] are reviewed to assess configuration control performance.)
- Conducting periodic self-assessments and oversight of the configuration control activities and technical products:
 - Line to conduct self-assessments that include evaluation of configuration control effectiveness,
 - Engineering Assurance group to conduct evaluations of engineering operations, and maintenance activities as they relate to configuration control, and
 - Nuclear Oversight to conduct audits and surveillances of programs and processes impacting configuration management.

REMAINING ACTIONS

- Complete the implementation of the CMP items to support unit restart.
- Implement NGP 2.37, Configuration Management Program, which will establish the objectives of integrated configuration documents, streamlined change control processes and improved data and document management tools.
- Submit the final 10CFR50.54(f) letter which confirms that all CMP activities are complete, including the Configuration Management Process which will ensure that all future operational, maintenance and design activities are performed in accordance with the CMP.

REGULATORY PERFORMANCE

ISSUE

Need to improve regulatory performance at Millstone Station

PROBLEM STATEMENT

Declining performance trends in several areas including the following:

- Reportability determination backlogs,
- LER commitment management,
- NOV corrective action effectiveness, and
- UFSAR accuracy and completeness.

SUCCESS CRITERIA

- License Amendment Requests for restart approved and implemented (KPI developed)
- NRC Significant Items List closed (KPI developed)
- No open NRC commitments for restart (KPI developed)

PROGRESS

1. Confirmatory Order - Independent Corrective Action Verification Program

NU formally notified the NRC of Unit 3 readiness for ICAVP on May 27, 1997 (on schedule). Unit 2 readiness for ICAVP is progressing; however, the target completion date of June 30, 1997 remains challenging. Parsons Power has been conditionally approved as the ICAVP contractor for Unit 2. (See Appendix 3 for performance indicator information.)

2. Confirmatory Order - Independent Third-Party Oversight Program

The Independent Third-Party Oversight Team (ITPOP), Little Harbor Consultants, Inc. (LHC) was conditionally approved by the NRC on April 7, 1997. LHC submitted their Oversight Plan to the NRC on May 2, 1997.

LHC provided initial results of the ITPOP review of NU's Employee Concerns Comprehensive Plan on May 13, 1997.

LHC conclusions are summarized below. Appendix 7 provides LHC's complete May 13, 1997 presentation, which concluded that:

- The Comprehensive Plan provides an adequate approach for upgrading the Millstone Employee Concerns Program;
- The creation of an Independent Concerns Oversight Panel has the potential to accelerate progress toward achieving the Comprehensive Plan Goal;
- The Comprehensive Plan does not address the full scope of the 10/24/96 NRC Order;
- The Comprehensive Plan does not sufficiently address the normal programs for problem identification and resolution; and
- The Comprehensive Plan does not clearly identify criteria for success or measurement techniques.

3. Confirmatory Action Letter - Operator Training

The status of corrective actions to address Operator Training is provided in Issues Section #8.

4. Reportability Determination Backlog

Reportability determination backlogs have been eliminated on all Units.

5. License Amendment Requests

License amendment request submittal quality is generally satisfactory. Schedule predictability continues to be a challenge as known submittal dates now extend through June on Unit 3 and July for Unit 2. (See Appendix 3 for performance indicator information). No proposed significant hazards considerations have been identified to date.

The table below provides the status as of May 21, 1997.

	<u>Unit 3</u>	<u>Unit 2</u>
Total License Amendments Required for Restart	24	16
Number Submitted to the NRC	13	6

6. Response to April 16, 1997 10 CFR 50.54(f) Request

The initial 10 CFR 50.54(f) 45 day response for Units 2 and 3, and a partial response for Unit 1, are on schedule to be submitted by June 2, 1997.

7. Restart Assessment Plan Significant Items List

Significant Items List (SIL) closure package schedule predictability and quality is consistently satisfactory. (See Appendix 3 for performance indicator information.)

The table below provides the status as of May 21, 1997.

	<u>Unit 3</u>	<u>Unit 2</u>
Total Number SIL Closure Packages	205	41
Packages provided for NRC Review	19	11

* Including some sub-division of SIL items.

8. Commitment Management

Schedules for providing SIL closure packages to the NRC have been established. There are currently no overdue commitments for restart on either Unit 3 or Unit 2. (See Appendix 3 for performance indicator information.)

9. Licensee Event Reports

Licensee Event Reports made to the NRC are trending down for Unit 3 reflecting that the discovery effort is concluding. Through May 16, 1997, Unit 3 has had 32 reportable events. Through May 16, 1997, Unit 2 has had 17 reportable events. For both Units 3 and 2, historical events make up a significant fraction of the total.

Corrective Action Program improvements currently underway are expected to reduce reportable events over the next year. (See Appendix 3 for performance indicator information.)

REMAINING ACTIONS

- Submit 10 CFR 50.54(f) 45-day updates and final response.
- Provide periodic submittal of FSAR/UFSAR changes.
- Complete remaining restart-related license amendment requests. (See Appendix 3 for performance indicator information)
- Support Independent Corrective Action Verification Program.
- Support Independent Third-Party Oversight Program.
- Provide response to Confirmatory Action Letter for Operations Training.
- Establish organizational ownership and implement Commitment Management Program.

OPERATOR TRAINING

ISSUE

Operator training effectiveness was questioned based on Millstone Unit 1 NRC license examination failures.

PROBLEM STATEMENT

The operator licensing qualification issue was identified following the examination failure (6 of the 7 candidates failed the Millstone Unit One licensed operator upgrade (LOUT) class on December 2, 1996).

SUCCESS CRITERIA

- Complete actions required by the IRT report and the Training Corrective Action Plan (CAP).
- A high degree of success is achieved with the Unit 3 initial license operator training class which is scheduled for examination by the NRC in July 1997.

PROGRESS

Millstone commissioned an Independent Review Team (IRT).

The Root Causes of this issue were identified by the IRT report on the 1997 Millstone Unit 1 License Operator Examination Failures were:

- 1) a lack of management oversight and accountability by management, supervisors, and staff; and
- 2) the Corrective Action Program was ineffective in resolving previously identified, long-standing issues.

As of May 30, 1997, 20 of the 60 Training CAP (33%) activities are complete.

Completed Activities include:

- Leadership changes to revitalize training occurred on March 17, 1997. A new Director, Nuclear Training Services, and a Training Recovery Manager were appointed to raise standards and strengthen the Nuclear Training Department. Both individuals were chosen based on his previous leadership and training management successes.
- The licensed operator requalification programs for each of the Millstone Units were assessed. The assessments identified some program deficiencies requiring corrective actions on two of the three units. Those programs were shut down for one week and program deficiencies corrected. The assessments then concluded that the programs were sound to continue.
- The Self-Assessment capability of the Nuclear Training Department has been upgraded. A Self-Assessment Team for training has been established, directed by a manager reporting to the Director of Training. The team has a core group of permanently-assigned training individuals. Additional personnel, including line and training, will be assigned to the team to support assessments, as appropriate.
- The Chief Nuclear Officer issued his expectations concerning training oversight to the Nuclear staff.
- The new Director, Nuclear Training Services issued his expectations concerning procedural compliance to the training staff.
- An Executive Training Council (ETC) consisting of executive management and chaired by the Chief Nuclear Officer has been established and is meeting regularly.
- On May 15, 1997, the three Unit Directors, the Recovery Officer - Nuclear Engineering and Support, and Senior Training management provided a summary of actions taken and planned with regard to operator training and readiness for restart, to the Region I Staff at King of Prussia, PA. The Unit Directors emphasized the following activities as keys to operator readiness:

1. The continuation of Licensed Operator Requalification Training, which has been conducted on its normal schedule despite the extended plant outages.
 2. Planned observations for licensed and non-licensed operators at operating and startup/returning-from-outage plants of similar design.
 3. Emphasis on raised standards, including the "Northeast Utilities Nuclear Safety Standards and Expectations".
 4. Attention to the operating experience and command and control principles emphasized in INPO SOER 96-01, "Control Room Supervision, Operational Decision-Making, and Teamwork".
 5. Focusing crews on startup evolutions and tasks during the requalification training cycle immediately preceding startup.
 6. Increased use of industry experts to verify that the proper standards are in place.
- Performance indicators for such items as attendance, corrective action plan items, and supervisor observations of training are being monitored (See Appendix 3)

Work in Progress:

The Training CAP is comprised of 60 activities and addresses the following key areas:

- Management oversight and accountability,
- Self-assessment and Corrective Action programs,
- Experience and Staffing,
- Maintenance of program and student records,
- Training materials, and
- Complete necessary training to have operators ready to support restart and subsequent operations.

The CAP schedule calls for 59 of 60 activities to be complete by August 15, 1997. Completion of all activities is currently slightly ahead of schedule. The activity to finish the implementation of the Northeast Utilities Training Information Management System (NUTIMS) for an integrated records/qualification management system is to be completed by January 5, 1998.

With respect to the March 7, 1997 NRC issued Confirmatory Action Letter, it is comprised of 9 activities. Current status of these activities is as follows:

1. Submit the complete corrective action plan, including a schedule for addressing each of the identified IRT weaknesses and a review of the extent of the problems and root causes for the training area to the NRC staff by April 2, 1997. As part of the corrective action plan, clearly define roles and responsibilities for completing NRC Form 398. **[COMPLETE]**
2. Complete corrective actions for the Millstone Unit 1 LOIT/LOUT (licensed operator initial/upgrade training) program prior to restarting respective classes. **[IN PROGRESS]**
3. Complete corrective actions for Millstone Unit 2 LOIT program prior to restarting LOIT classes. **[IN PROGRESS]**
4. Complete corrective actions for the Millstone Unit 3 LOIT/LOUT program prior to NRC examinations of the current LOIT/LOUT class. **[IN PROGRESS]**
5. Conduct a thorough review of the Millstone Unit 3 LOIT program against the accredited program requirements prior to submittal of the license applications to the NRC. **[COMPLETE]**
6. Forward the scope of NRC Form 396 (medical certification) process review and its expected completion date for Millstone Units 1, 2, and 3 and the Haddam Neck plant (HNP) by April 2, 1997. **[COMPLETE]**
7. Submit the results of HNP data reviews of LOIT/LOUT findings to the NRC by April 2, 1997. **[COMPLETE]**
8. Submit the results of initial reviews of additional classes on all the units to the NRC by March 15, 1997. **[COMPLETE]**
9. Complete specific reviews of the HNP LORT (licensed operator requalification training) program by April 4, 1997. **[COMPLETE]**

REMAINING ACTIONS

- Complete all Confirmatory Action Letter items required to support restart of Unit 3.
- The effectiveness of the corrective actions taken will be monitored by internal and external organizations. An integrated schedule for the internal assessments is to be developed by June 15, 1997.

Comprehensive plans are being developed by Training and Unit management to ensure that the Unit operations staff members are ready to support restart and subsequent operation.

WORK CONTROL AND PLANNING

ISSUE

Ineffective Work Control & Planning processes

PROBLEM STATEMENT

The work control process is excessively complex leading to worker frustration, ineffective work execution and the poor quality of work packages as evidenced by a high rate of packages rejected from the craft.

SUCCESS CRITERIA

- The backlog of system and equipment deficiencies has been reduced to industry standards. (KPI and goals developed)
- Preventative Maintenance and surveillances are routinely completed as scheduled. (KPI developed)
- At least 75% of the work is accomplished as scheduled. (KPI developed).

PROGRESS

Work management processes have been established which can effectively control work activities in the plant. Improvement is still needed in simplifying the process and standardizing high quality work packages across the site and improving efficiency. Several assessments of our present work processes have been performed, including specific self-assessments. These assessments show improvements over the last several months but further improvements are needed in most areas assessed.

- The Managers of the Work Control organizations for all Units now meet on a routine basis for the purpose of sharing strengths and lessons learned.

- The number of AWO's completed on a weekly basis has improved over the first quarter of 1997. The AWO backlog has not shown the same improvement primarily due to the discovery phase of all unit CMP's. (Refer to the associated KPIs in Appendix 3.)
- Improvements have been made to enhance the scheduling and work scope capabilities of the computerized AWO process. Further changes are in the test mode and will be implemented by August, 1997.
- Each unit has established a "Fix It Now Team" (Unit 2 terminology is "Work It Now"). These teams have dramatically improved the response to emergent issues which allow Maintenance and Instrument & Control personnel to focus on scheduled activities. They have completed the following maintenance tasks:

Unit 1, started 11/11/96, completed 1415 jobs as of 5/29/97,

Unit 2, started 11/18/96, completed 1214 jobs as of 5/29/97, and

Unit 3, started 12/01/96, completed 1501 jobs as of 5/29/97.

- Retraining of Maintenance, I&C, and Work Planning personnel is being conducted in accordance with new lesson plans, and enhanced procedures. This action has been completed on Unit 1, is underway presently on Unit 3, and is being prepared on Unit 2.
- Schedule discipline meetings have been instituted to focus the work force on current issues while raising the level of accountability among performers and support personnel.

REMAINING ACTIONS

- Upon completion of the recovery, return to use of 12 week rolling schedule, utilizing the work week manager process to control daily work, and a model of system windows based on PRA risk significance. (This process has been implemented, but is not currently in effect across the site, pending restart)
- Standardize the maintenance planning training, and turn it over to the Nuclear Training department so that new employees will be provided a consistent set of requirements and expectations.
- Develop focused restart schedules with appropriate work group buy-in, and then measure effectiveness.

- Continue to improve work package quality, and develop a means to quantify the improvement.

Develop a more standardized work package.

Procedure Quality and Adherence

ISSUE

The effectiveness of Millstone's Technical Procedure Quality and Adherence

PROBLEM STATEMENT

Procedure quality and adherence have been long-standing and well-documented concerns.

SUCCESS CRITERIA

- All procedure deficiencies required for restart are resolved. (KPI developed)
- Procedure quality for new and revised procedures is acceptable. (KPI developed)
- Instances of not adhering to procedures are reduced to an acceptable level. (KPI developed)

PROGRESS

Development of the following performance indicators have been initiated to determine if a negative trend exists relative to procedure quality that may warrant programmatic corrective action.

- During the second quarter of 1997, the Station Administrative Procedure Group will have a performance indicator program implemented to track and trend all changes or revisions to technical procedures made by each Department that is fully implemented in the Station Qualified Reviewer (SQR) Program. The program will track the types of technical and administrative deficiencies that are being corrected and the impact of the deficiencies on the plant. This information is entered when the change is initiated and will allow any negative trends to be quickly identified.
- In addition, the Station Administrative Procedure Group reviews level 1 and 2 Condition Reports which have cause codes relating to procedure deficiencies and trends those found to involve corrections to a technical procedure. Information is

tracked on the Department involved, the type of procedure deficiency identified and whether the procedure was upgraded at the time. This information allows the reviewer to determine the comparative magnitude of procedure related Condition Reports per Unit and Department and if a negative trend has occurred that requires management attention.

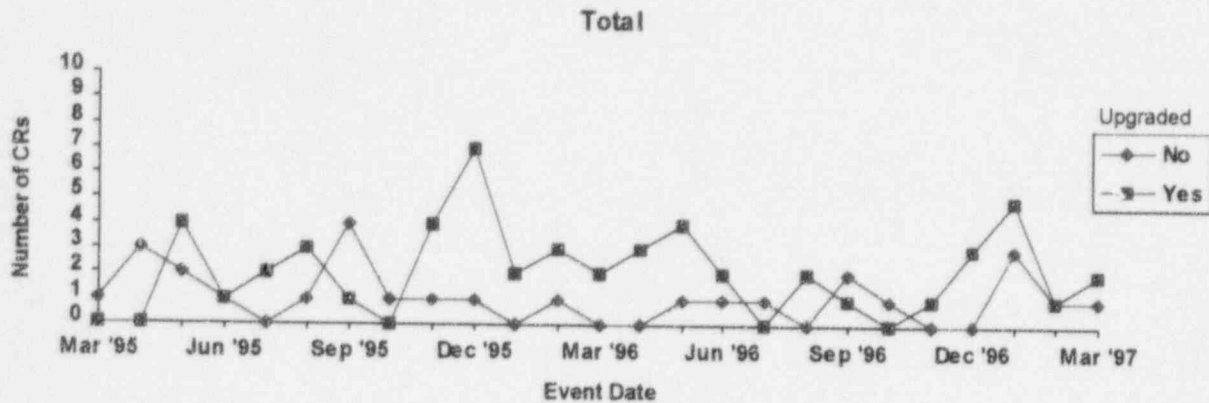
- In January 1997, substantial revisions were made to the Administrative Procedures to support implementation of the Station Qualified Reviewer Program which provides Departments with authority to approve new, changed or revised procedures or programs in lieu of PORC/SORC review and approval, if a Safety Evaluation is NOT required. This will reduce the administrative burden on PORC and SORC to review large numbers of procedures and allow the committees to focus on safety significant issues. Significant care was taken to ensure these processes accommodate the heightened responsibility that must be assumed during the SQR process. The SQR Program implemented qualification requirements for Independent Reviewers, Cross-Discipline Reviewers and Procedure Screeners. (50.59 and Environmental Screens)
- Five assessments have been performed on the Procedure Upgrade Project during the last three years. The more significant corrective actions from the assessments are as follows:
 - Engineering has established a Vendor Tech Manual Action Plan to revise the process for control of vendor information and conduct validation of Vendor Tech Manuals and applicable plant procedures.
 - Training was developed and provided covering the essentials of verification activities. A qualification process for Independent Reviewers, Cross-Discipline Reviewers and Procedure Screeners was implemented. Guidance has been added to document development procedure on the selection of validation methods.
 - Guidance for conducting Engineering reviews and Nuclear Oversight reviews have been added to procedures, and enhancements were made to the Independent Review process. Qualification requirements were established for Independent Reviewers, Cross-Discipline Reviewers and Procedure Screeners. Familiarization training was provided to hundreds of Millstone personnel.
- Unit 3 EOP/AOP upgrade has been completed. The Unit continues to maintain the network to incorporate feed back, design changes and updated Westinghouse Owners Group (WOG) information.
- The Unit 3 EOP/AOP setpoint calculations have been revised and the appropriate procedures are revised and will be effective in June 1997.

REMAINING ACTIONS

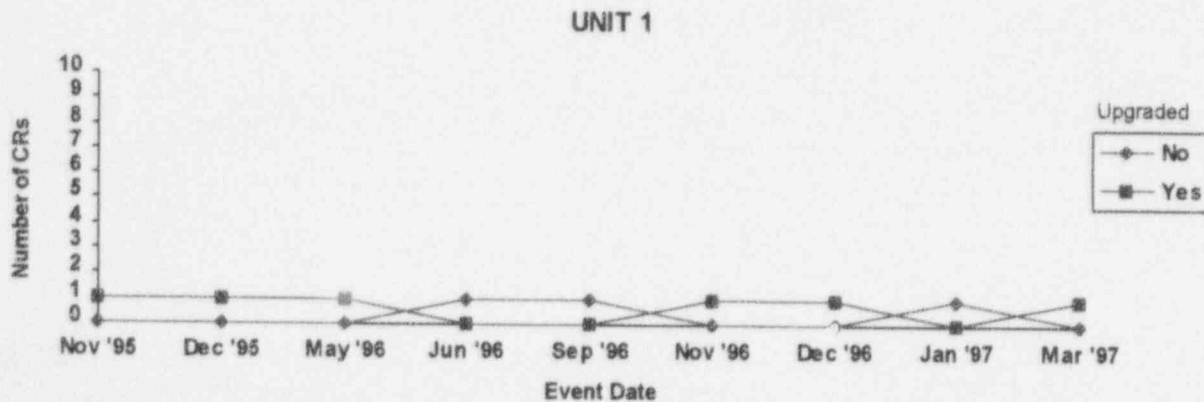
- Each Unit will complete the upgrade on its required remaining technical procedures before restart. This is being measured by Key Performance Indicators (see Appendix 3). As of April 1997, the procedures remaining were as follows:
 - Unit 1 had 96 of 872 procedures which have not been upgraded;
 - Unit 2 had 166 of 998 procedures which have not been upgraded;
 - Unit 3 had 81 of 1247 procedures which have not been upgraded;
 - Service Groups had 25 of 777 procedures which have not been upgraded; and
 - Total procedures remaining are 368 out of 3894 or 9% left to upgrade.
- The Centralized Unit Procedure Group recently established by Unit 2 will help determine if a centralized group is preferable to having each Department responsible for the long term procedure maintenance of its procedures to the standards established through the Procedure Upgrade Project.
- At Unit 3, most EOPs revised for Appendix R have been reviewed, and a major portion of this project will go to PORC in mid-June for approval. Training will be conducted during the current cycle of LORT. Appendix R procedures will be in effect in July 1997.
- Unit 2 currently approved set of EOPs and the EOP support procedures are being revised to support unit restart.
- Unit 2 AOP upgrade has approximately 37 AOPs to be upgraded prior to unit restart (including approx. 25 Appendix R AOPs).
- Unit 2 Severe Accident Management Guidelines are under development and proceeding according to schedule.
- Reinforce management expectations on Procedure Compliance and ensure that it is periodically reinforced.
- Develop indicators that represent the number of Human Performance issues which include procedure non-compliance with requirements outlined in company, station, and department procedures.
- Unit and Department Self-Assessments on Procedure Adherence are being performed on a periodic bases.

- Unresolved Item Reports (UIR) or Open Item Reports (OIR) using the Configuration Management Plan (CMP) are initiated for procedure discrepancies identified during the 50.54(f) reviews. Upon review by the Management Review Team, they are either closed or converted to Action Requests and assigned to Departments within the Units for closure. Any procedure deficiencies identified by the 50.54(f) or System reviews that are restart items will be resolved prior to startup. The procedures that need to be modified by unit restart are being tracked by each unit as indicated in the Key Performance Indicators (see Appendix 3).
- See the following trend data sheets for:
 - Closed Condition Reports Involving Deficient Technical Procedures (Millstone Station, Unit 1, Unit 2 and Unit 3);
 - Unit 1, 2, and 3 Operations Department Condition Reports Involving Deficient Technical Procedures; and
 - Significance Levels of Technical Procedure Deficiency Related Condition Reports From January 1995 to March 1997.

Closed CRs Involving Deficient Technical Procedures



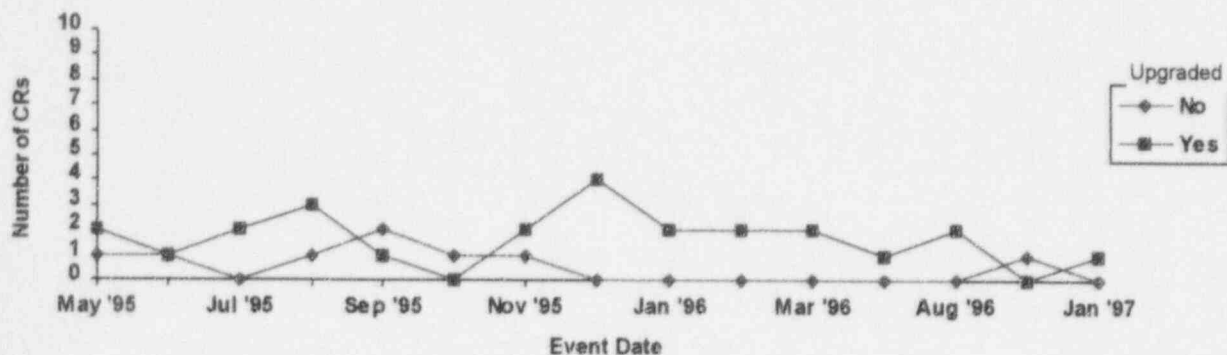
As of March 31, 1997
 Total Number of Upgraded Procedures = 2457
 Total Number of Non-Upgraded Procedures = 358



As of March 31, 1997
 Total Number of Unit 1 Upgraded Procedures = 776
 Total Number of Unit 1 Non-Upgraded Procedures = 96

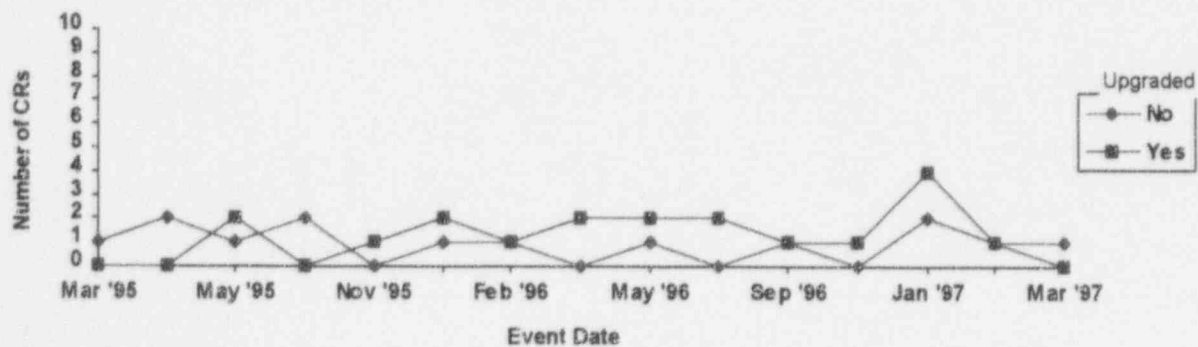
Closed CRs Involving Deficient Technical Procedures

UNIT 2



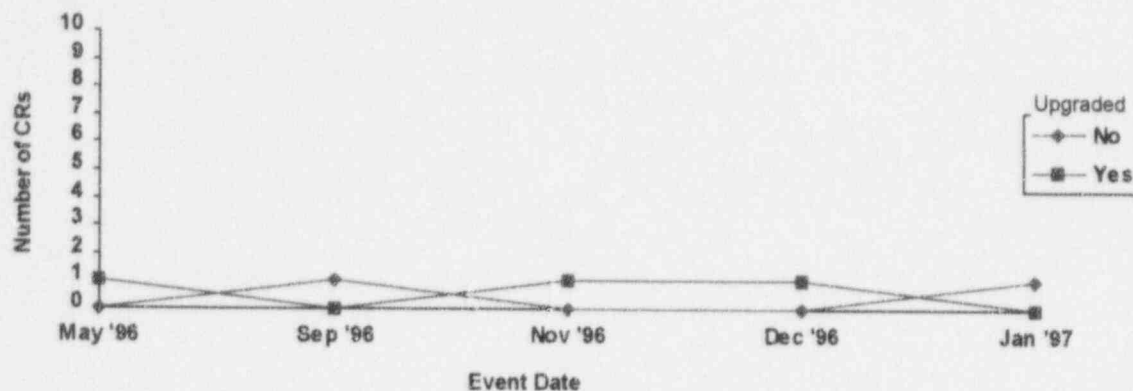
As of March 31, 1997
 Total Number of Unit 2 Upgraded Procedures = 831
 Total Number of Unit 2 Non-Upgraded Procedures = 167

UNIT 3

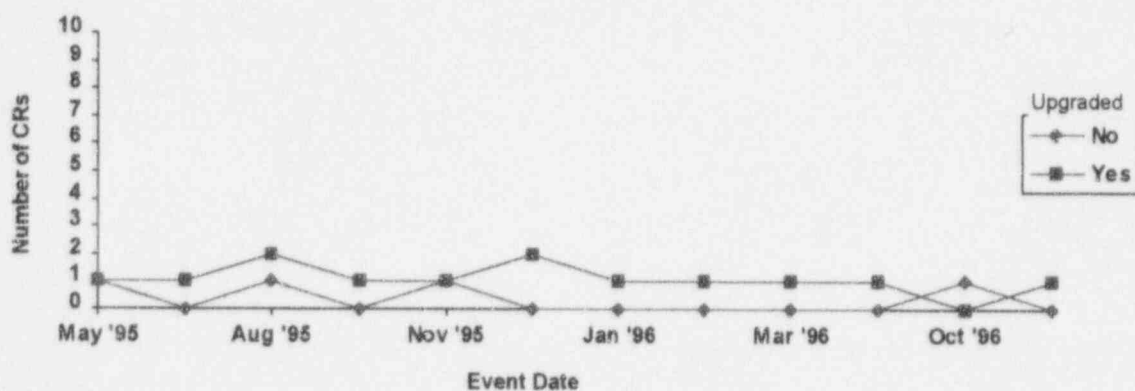


As of March 31, 1997
 Total Number of Unit 3 Upgraded Procedures = 850
 Total Number of Unit 3 Non-Upgraded Procedures = 95

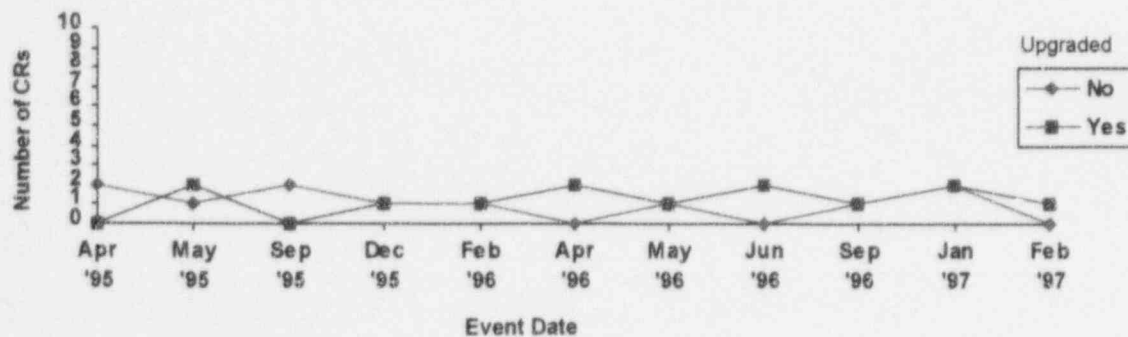
Unit 1 Operation Department CRs Involving Deficient Technical Procedure



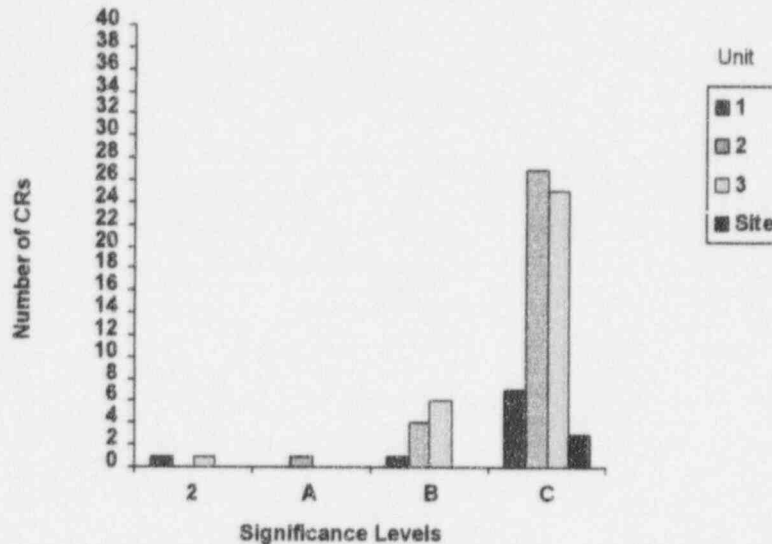
Unit 2 Operation Department CRs Involving Deficient Technical Procedure



Unit 3 Operation Department CRs Involving Deficient Technical Procedure



Significance Levels of Technical Procedure Deficiency Related CRs From Jan 1995 to March 1997



Significance Level 1 = 0
Level Totals Level 2 = 2
 Level A = 1
 Level B = 11
 Level C = 63

Condition Report Process

February 25, 1997 - Present

Level 1 - Significant Adverse Level

A significant or important adverse condition which is important to the degree that action to preclude recurrence is appropriate.

Level 2 - Adverse Condition

An adverse attention which has increased management attention and interest but does not meet the criteria for a significant adverse condition.

Adverse Condition Report Process

January 1995 - February 1997

Level A - Events or issues of such importance they deserve the immediate undivided attention of whatever resources are required to mitigate the consequences, determine the causes and implement at least sufficient interim corrective measures to prevent recurrence.

Level B - Events or issues which are expected to occur infrequently but need to be minimized for the company to achieve its safety and business goals.

Level C - Events or issues which indicate programmatic weaknesses or adverse trends of non-consequential occurrences which if not corrected increases the probability that a consequential event will occur in the future.

EMERGENCY PLANNING

ISSUE

Reasonable assurance that the organization will appropriately respond to a Millstone emergency event (Real or Simulated).

PROBLEM STATEMENT

The radiological emergency exercise held at Haddam Neck in August 1996 identified weaknesses in the areas of emergency event classification & protective action recommendation formulation. These weaknesses were equally applicable to Millstone Station in that they are founded upon the same procedures and training.

SUCCESS CRITERIA:

Effective Emergency Planning organization as evidenced by a satisfactory response in the 1997 NRC graded Emergency Exercises.

PROGRESS

The Root Cause of this issue was described in:

- ACR 96-0642,
- ACR 96-0910,
- ACR 96-0911,
- ACR 96-0988,
- Emergency Planning Root Cause Report, November 1996,
- ACR 97-0122, and
- NRC Inspection Report 50-213/96-07.

Completed Actions

- Provide Senior Management Expectations regarding the importance of radiological emergency activity in writing to all emergency response personnel;

- Obtain Industry Experience in the use of NUMARC Emergency Action Level's (EAL's) to ascertain areas where clarification or additional information has been found to be necessary or convenient for the users to assist in making proper emergency classifications;
- Conduct an Emergency Response Organization Job Task Analysis (JTA) to ensure design of tasks and functions at the appropriate levels of the response organization and clarify roles and responsibilities where necessary;
- Update Emergency Action Level Clarification Documents to include results of industry improvements and suggestions from emergency responders;
- Redesign the Protective Action Recommendation Process (PAR's) to meet industry standards and the relevant aspects of NUREG 0654 Supplement 3 to support a less complex methodology for the emergency responders;
- Design PAR Training Material to address the newly designed process. Include State of Connecticut Department of Environmental Protection management, as recipients of the NU Protective Action Recommendation, in the new PAR process design;
- Establish a Self-Assessment program within the Emergency Planning Services Group by formulation and implementation of a department level procedure;
- Design a segment of Licensed Operator Requalification (LORT) to include radiological emergency activity such as classification, dose assessment, protective action recommendation formulation, and notification of offsite authorities;
- Review the Millstone emergency response organization design and staffing to ensure proper structure, task assignment, and personnel assigned to positions;
- Conduct classroom training and drill scenarios for the emergency response organization personnel; and
- Conduct Station Emergency Response drills and training.

Work in Progress

- Licensed Operator Requalification training for EP responsibilities;
- A self-assessment of the emergency response organization dose assessment capability; and
- Drills to measure effectiveness of procedure changes, training and staff performance scheduled for June 19 and August 7, 1997.

REMAINING ACTIONS

- Implement the capability to perform on-shift dose assessment;
- Complete Self-assessment of the effectiveness of corrective actions associated with Emergency Classification;
- Complete Self-assessment of the effectiveness of corrective actions associated with Protective Action Recommendations; and
- Complete Self-assessment of the Emergency Planning Maintenance Program.

HEALTH PHYSICS

ISSUE

Millstone Station has experienced Radiation Worker deficiencies.

PROBLEM STATEMENT

These deficiencies primarily involve instances of workers entering radiation-controlled areas without specified dosimetry equipment (TLDs, and electronic dosimeters).

SUCCESS CRITERIA

Ensure compliance with regulations and company procedures with a low incidence of procedural violations. (KPI to be developed)

PROGRESS

This condition was identified by:

- Worker self-identification;
- Condition Reports (CRs) written by Health Physics and line management;
- Nuclear Oversight audits of Worker and Health Physics practices;
- Management in the field observations; and
- NRC inspections (Region 1).

Note: Condition Report CR M1-97-1016 was written by the Management Review Team using RP-4 guidelines to document this adverse trend and initiate a Common Root Cause Assessment.

Completed Actions

Actions completed to date focused in five areas:

1. Documentation - The CR system is used to document infractions of the dosimetry controls. The CR system has vastly lowered the threshold to report any deficient condition. The CR system's formalized processes are used to evaluate and trend this HP information across all Units. In the past, the station HP program rarely evaluated this information in such a comprehensive manner, nor has this information been subjected to review by the multi-discipline Management Review Team (MRT) process.
2. Training - The radiation worker training program has been upgraded to emphasize the importance of dosimetry issues. Health Physics technicians are now assigned directly to the Training Department to give "practical factor" sessions to all incoming employees.
3. Communications - Articles have been written in the stations newspaper (*To the Point*) on this topic. Major departments on site have participated in Unit Standowns and received direct communication from HP and Station management on the importance of following HP procedures. Benchmarking trips to other utilities have been conducted to see best industry practices in this area.
4. Personal Accountability - Standards have been articulated to workers on their responsibility as Radiation Workers. Discipline has been administered to individuals who have failed to comply with the Health Physics programs.
5. Challenge Reduction - Selected RCA entry/exit points have been eliminated. The reduction of more RCA points is under evaluation. Additionally HP technicians act as "greeters" at selected RCA entry locations. A prototype RCA entry turnstile (similar to a subway turnstile) has been constructed and will be evaluated.

Work in Progress

- A formal Root Cause team has been formed to evaluate problem areas in HP and Security;
- Engineering fixes incorporating one-way traffic turnstiles are being designed;
- Multiple entry point stations are being evaluated for elimination; and
- Additional communications to the Millstone work force are being developed for station distribution.

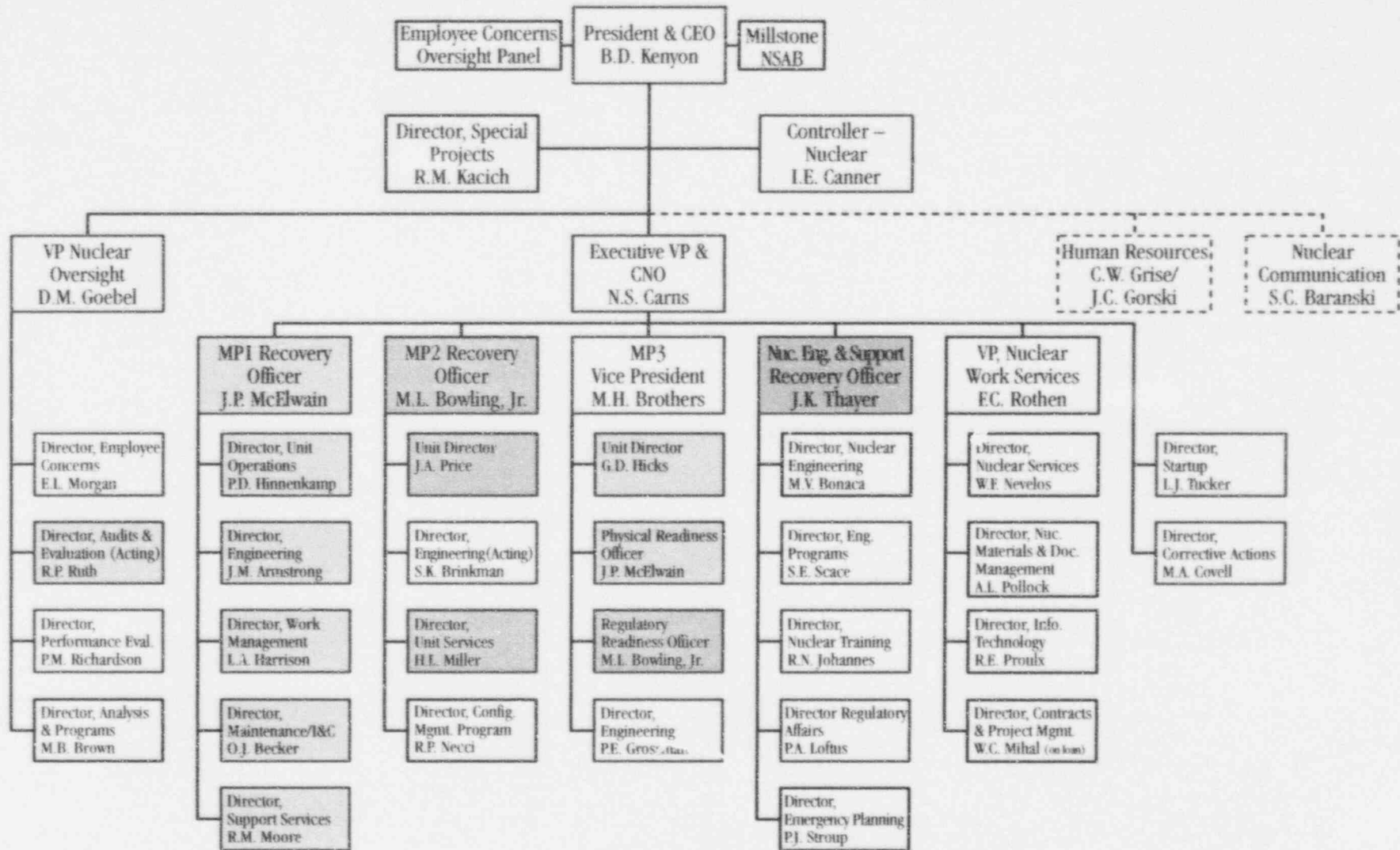
REMAINING ACTIONS

- Complete the evaluations and implementation of "Actions in Progress";
- Monitor performance and Corrective Action Trend reports; and
- Develop required KPIs.

Appendix 1

MILLSTONE LEADERSHIP TEAM

Figure 1
Millstone Leadership Team



Key

On Loan from PECO
On Loan from VEPCO
On Loan from CP&L
On Loan from Yankee Atomic

On Loan from Duke Power
Matrixed Positions
New to position since 9-96

Appendix 2

NU NUCLEAR SEVEN SUCCESS OBJECTIVES

SUCCESS OBJECTIVES

Success Objective #1

That we are an organization with high standards and clear accountabilities.

Success Objective #2

That we demonstrate a strong nuclear safety philosophy - evidenced by careful adherence to high nuclear safety standards and conservative decision making.

Success Objective #3

That there is effective self-assessment.

Success Objective #4

That we have an effective corrective action process.

Success Objective #5

That licensing and design bases have been properly restored - with processes to ensure that they are properly maintained.

Success Objective #6

That we have an environment that supports the identification and effective resolution of employee concerns.

Success Objective #7

That we are committed to achieve excellence in nuclear operations.

Appendix 3

KEY PERFORMANCE INDICATORS

Index

Appendix 3

Key Performance Indicators - Millstone Unit 3	- Pages A-1 through A-16
Key Performance Indicators - Millstone Unit 2	- Pages 1-16
Key Performance Indicators - Oversight	- Recovery Gap Chart
	- Pages A-1/2, A-10/11/12, B2, D 1
Key Performance Indicators - Employee Concerns Program	- Pages E-1/3/4
	- Completion Progress Curve
Key Performance Indicators - Training	- Corrective Action Plan
	- Supervisor Observations
	- Attendance (No-Show) Notification

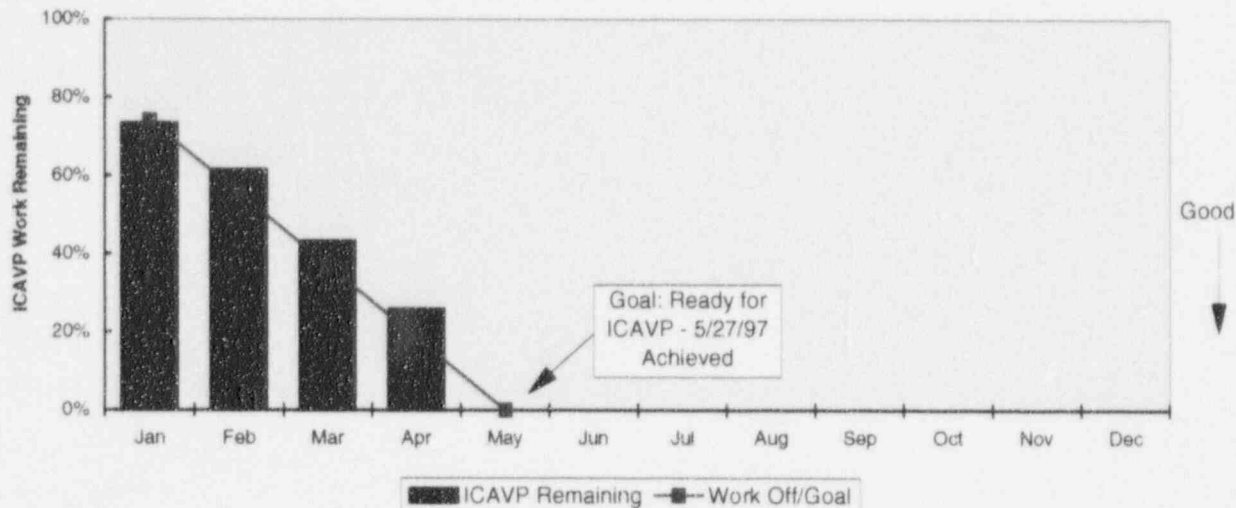
Appendix 3

**KEY PERFORMANCE INDICATORS
MILLSTONE UNIT 3**

Independent Corrective Action Verification Program Readiness

Millstone 3 - May 1997

Progress: The goal to be ready for ICAVP by May 27, 1997 was achieved.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
ICAVP Remaining	73%	61%	43%	26%	0%							
Work Off/Goal	74%	56%	37%	19%	0%							

Definition

This indicator measures progress in readiness for Independent Corrective Action Verification Program (ICAVP). For MP3 this consists of the following items for Wave 1 systems:

1. Configuration Management Plan (CMP) task completions (weighted at 70%).
2. Maintenance Rule Group 1 System Specific Assessments (SSAs) - (weighted at 25%)
3. 50.54(f) Program Reviews (weighted at 5%)

CMP includes: CMP Punch List items plus Licensing Commitment Validation, FSAR Change Request submittals, Piping & Instrument Diagram Walk Downs, and Design Basis Summary completions.

SSAs assure: That documented license and design basis documents are correct; that systems are operated, maintained and tested in conformance with the license and design bases; and identified discrepancies will be resolved.

50.54(f) program reviews include: Programs such as High Energy Line Break, Equipment Environmental Qualification, Electrical Separation, etc.

Analysis/Action

Wave 1 CMP tasks, SSAs, and 50.54(f) Program Reviews have been completed. ICAVP readiness date of May 27, 1997 was achieved.

The final May 27 readiness received Management and Nuclear Oversight concurrence.

Goal

The Unit 3 goal is to be ready for ICAVP by 5/27/97.

Comments

Wave 1 systems: Auxiliary Feedwater, Quench and Recirculation Spray, Emergency Diesel Generators, Electrical Distribution, and Service Water.

MR Group 1 systems: those systems that are safety and risk significant.

Data Source: G. Closius X4232MP

Analysis by:

G. Closius X4232MP

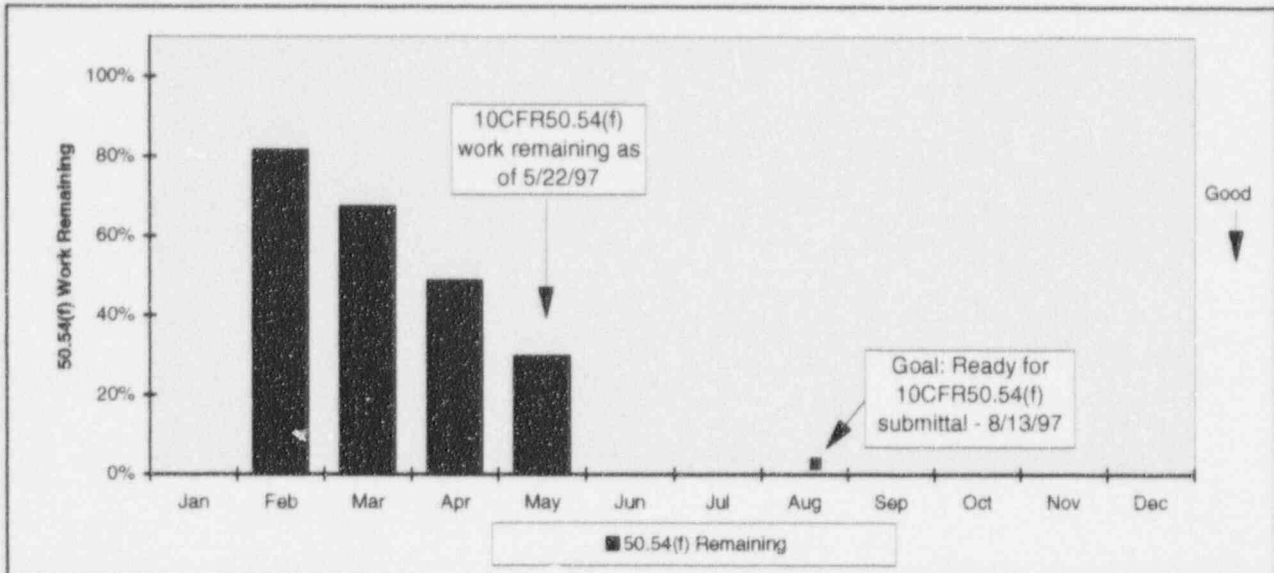
Owner:

M. H. Brothers X4303MP

10CFR50.54(f) Readiness for Submittal

Millstone 3 - May 1997

Progress: Submittal of this document to the NRC is on track to meet the 8/13/97 goal.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
50.54(f) Remaining	0%	81%	67%	49%	30%							
Work Off/Goal												

Definition

This indicator measures progress in readiness for 10CFR50.54(f) submittal - which is the NRC's requirement that management at each nuclear plant verify in writing that the design and operation of their plants is consistent with what the NRC has approved, and that all changes and commitments since original licensing are properly reflected in current licensing documents, such as the Final Safety Analysis Report (FSAR).

For MP3 this is made up of the:

1. Configuration Management Plan (CMP) task completion (weighted at 75%)
2. System Specific Assessment (SSA) completion (weighted at 25%).

The CMP task completion includes: CMP Punch List items plus Licensing Commitment Validation, FSAR Change Request submittals, Piping & Instrument Diagram Walk Downs, and Design Basis Summary completions.

The SSAs provide: assurance that documented license and design basis documents are correct; documentation supports the license and design bases; the system is being operated, maintained and tested in conformance with the license and design bases; and identified discrepancies will be resolved.

Analysis/Action

As of 5/22/97 CMP Punchlist is 77% complete, Group 1 System SSAs are 50% complete. This results in having 30% remaining to complete to be ready for 10CFR50.54(f) submittal.

Progress towards completion of the work necessary to allow the 10CFR50.54(f) letter submittal by 8/13/97 is on track.

Goal

The Unit 3 goal is to be ready for 10CFR50.54(f) submittal by 8/13/97.

Comments

Data through 5/22/97.

Data Source: G. Closius

Analysis by:

G. Closius X4232

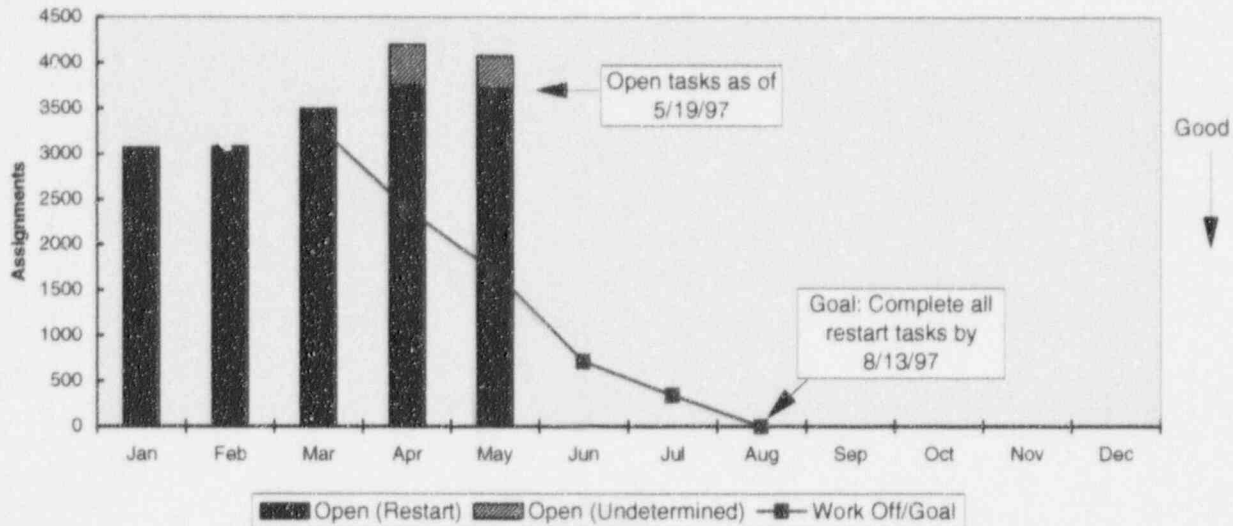
Owner:

M. H. Brothers X4303

Task Completions Required for Restart

Millstone 3 - May 1997

Progress: *This goal is very challenging; management attention is being applied to reduce the Open category and improve the workoff rate of open tasks required for restart.*



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Open (Restart)	3059	3076	3489	3753	3717							
Open (Undetermined)				438	353							
Work Off/Goal			3315	2393	1709	717	345	0	0	0	0	0

Definition

The total number of tasks is defined as those requiring closure prior to restart. Automated Work Orders (AWOs) required for restart are not included, as they are tracked in a separate indicator. **NOTE: the Open (Undetermined) category are those assignments that are still being screened to determine whether they are required for restart.**

Analysis/Action

- This indicator includes open items in the Action Item Tracking and Trending System (AITTS), such as NRC Open Items, Significant Items List issues, and Condition Report (CR) corrective actions.
- The number of tasks that must be completed prior to restart decreased slightly during the first two weeks in May.**
- Increased management attention is being applied to this area to ensure that all tasks entered into AITTS are evaluated correctly to determine whether they are truly restart-related tasks, or should be deferred until after restart. Management attention is also being directed toward completing restart-related tasks as scheduled and challenging requests for extensions to ensure that items that support restart are completed.

Goal

Goal is all complete prior to 8/13/97.

Comments

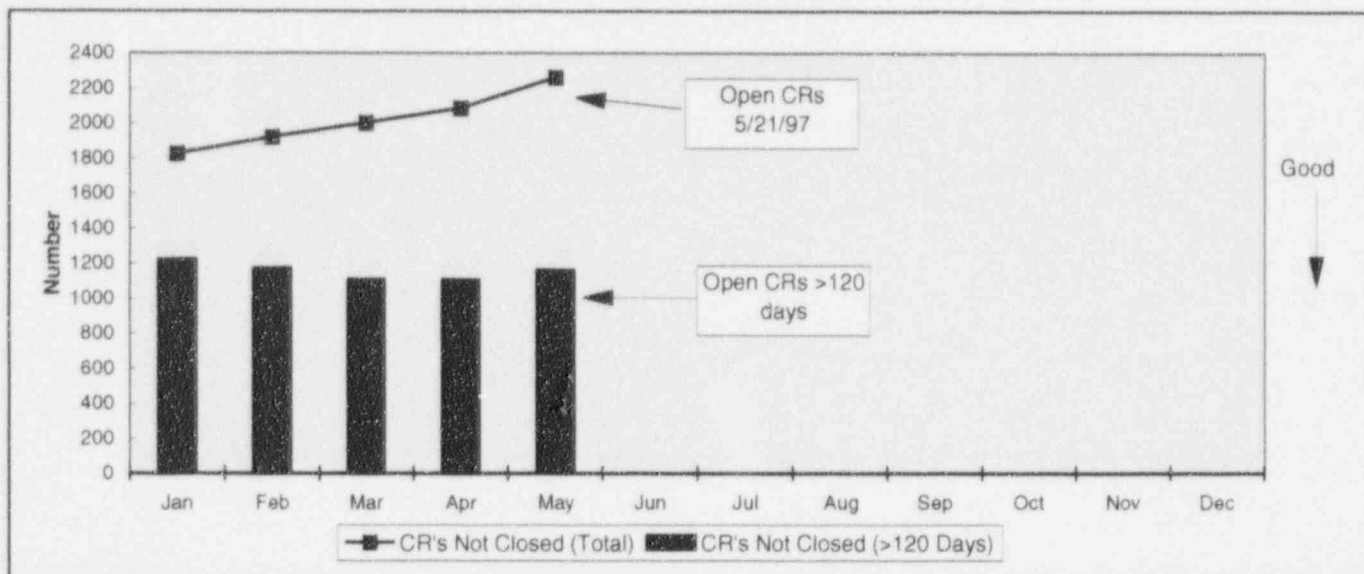
Data through 5/19/97.
These tasks are tracked in Action Item Tracking and Trending System (AITTS) and the P2 Schedule. Automated Work Orders (AWOs) are not included. Work off curve is based on a combination of AITTS due dates and P2 schedule dates.

Data Source: M. R. Strout x2299 Analysis by: B. Pinkowitz x4302 Owner: M. H. Brothers x4303

Open Condition Reports

Millstone 3 - May 1997

Progress: Condition Reports requiring corrective action are still increasing. Increased Management attention is being applied to this area to meet the restart goal.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
CR's Not Closed (Total)	1827	1921	2003	2086	2264							
Level 1	141	153	166	176	189							
Level 2	1686	1768	1837	1910	2075							
CR's Not Closed (>120 Days)	1223	1173	1109	1104	1162							
Level 1	83	81	74	72	95							
Level 2	1140	1092	1035	1032	1067							

Definition

This indicator depicts the number of condition reports (CRs) which have not had corrective actions implemented as *CRs not Closed (Total)*. The number of these total CRs which are over 120 days old and have not been deferred is depicted in the bar graph.

Condition Reports (CRs) are written to document degraded or non-conforming conditions associated with plant systems, structures or components necessary to support the generation of electricity.

Analysis/Action

Significant attention has been focused on completing the evaluation phase of recent and backlogged condition reports. This has resulted in a large number of corrective actions being identified and tracked. **Efforts are underway to review the identified corrective actions to ensure that they are properly scheduled and that redundancies are eliminated.**

Goal

The goal is to have all Level I Condition Reports closed by startup unless they have been reviewed by the Plant Operations Review Committee (PORC) and approved by a Unit Officer.

Comments

Data through 5/21/97.

Data Source: AITTS

Analysis by:

S. M. Smith x2277MP

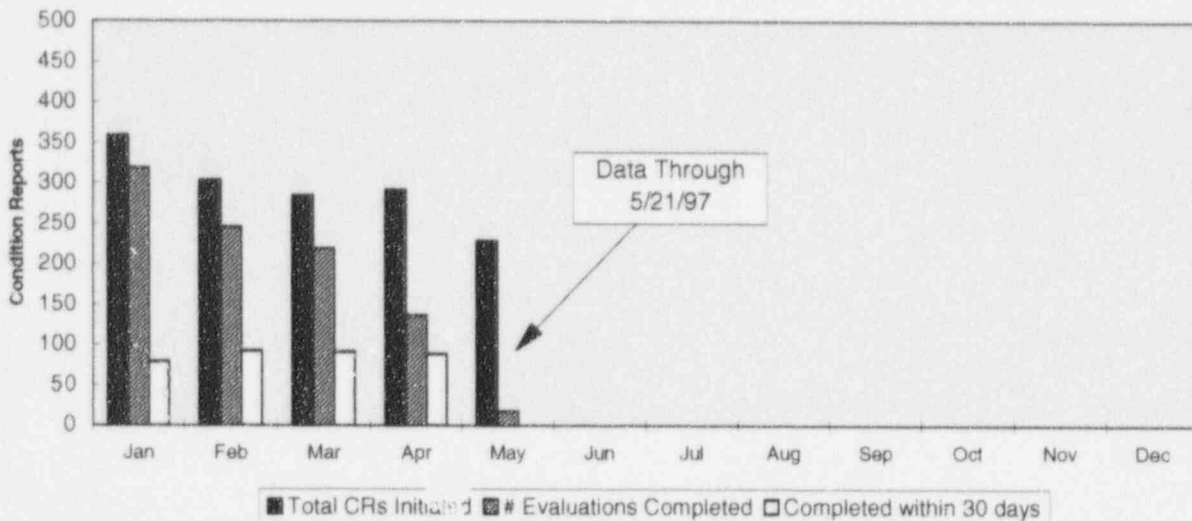
Owner:

D. McCracken x0481MP

Condition Report Initiation and Evaluation Timeliness

Millstone 3 - May 1997

Progress: *Steady improvement is being made in meeting goal of completing plant condition report evaluations and identifying appropriate corrective actions within 30 days.*



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Total CRs Initiated	358	303	284	291	228							
Level 1 CRs Initiated	46	24	16	11	11							
Level 2 and 3 CRs Initiated	312	273	247	280	215							
# Evaluations Completed	318	245	218	136	17							
Completed within 30 days	79	92	91	88	NA							
Success Rate	0.22	0.31	0.37	0.52	NA							

Definition

This indicator depicts the initiation of Condition Reports (CR) for the Unit and the number of evaluations which were not completed within the goal of 30 days.

The graph shows CR data beginning 1/1/97, and represents the current status/effectiveness of Corrective Action Initiatives.

Analysis/Action

NOTE: The success rate for April reflects completing 99 of 190 evaluations which are over 30 days old as of 5/21/97.

Initiation of CRs has declined since the beginning of the year but remains above the 1996 monthly average. The reason for the decline can be attributed to the completion of major portions of the discovery phases for several recovery projects. Slow improvement has been realized in completing evaluations within 30 days. Management attention has been focused in this area to enable the unit to complete a goal of having no evaluations over 30 days old by July 5, 1997.

Goal

Goal is to complete all evaluations and identify appropriate corrective actions within 30 days.

Comments

Data through 5/21/97. Evaluations are considered open if they are either in an open status or a pending review status prior to the approval of the corrective action plan. The latest month's data reflects the status to date.

Data Source: AITTS

Analysis by:

S. M. Smith x2277MP

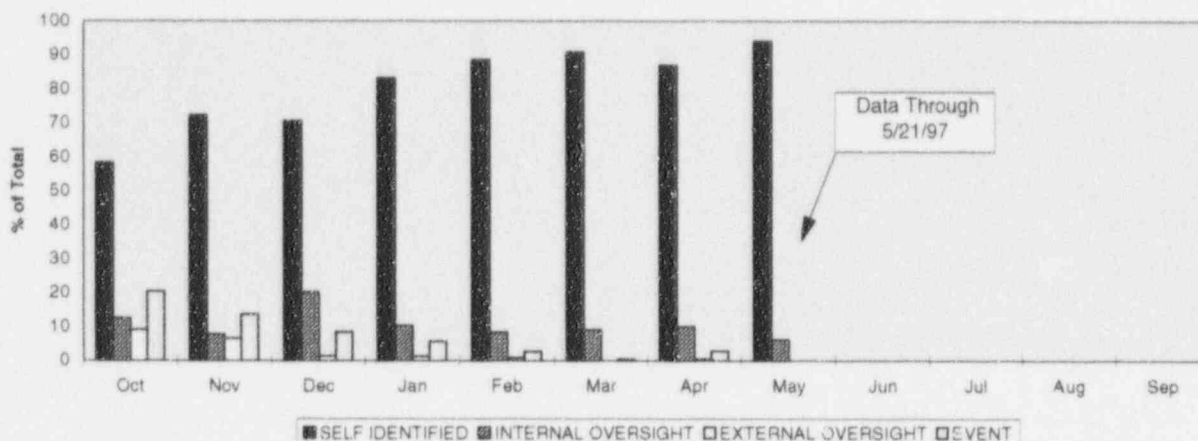
Owner:

D McCracken x0481MP

Condition Report Method of Discovery

Millstone 3 - May 1997

Progress: Self identification of issues has improved significantly during the first part of 1997.



Raw Data

	Oct-96	Nov-96	Dec-96	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97
Number of CR's												
Unit Identified	103	122	169	297	268	256	252	215				
Internal Oversight	22	13	48	36	25	25	29	14				
External Oversight	16	11	3	4	2	0	1	0				
Event	36	23	20	20	8	1	8	0				
Total Identified	177	169	240	357	303	282	290	229				
Dept Self ID Ratios												
Maintenance	0.42	0.35	0.33	0.53	0.47	0.45	0.33	0.31				
Operations	0.56	0.68	0.48	0.57	0.60	0.54	0.48	0.33				
Work Planning	0.29	0.36	0.19	0.27	0.36	0.16	0.73	0.29				
Design Eng	0.35	0.39	0.30	0.43	0.49	0.15	0.30	0.21				
System Eng	0.27	0.38	0.21	0.26	0.42	0.34	0.24	0.42				
Licensing	0.42	0.40	0.40	N/A	0.00	N/A	N/A	N/A				

Definition

This indicator represents the percentage of CR's identified by each of the barriers. CR's are categorized into the following four areas:

- Event Driven - Self-revealing, an event occurs.
- External Oversight - Identified by NRC, JUMA, INPO, etc.
- Internal Oversight - Identified by QAS, PORC, ISEG, NSAB, etc.
- Self - Supervisor observation, document review, Self-checking, Independent / dual verification, etc.

The department self identification ratios are a measure of the individual department's rate of identifying their own issues.

Dept Self ID ratio =

$$\frac{\text{number of CR's ID'd / assigned to that department}}{\text{number of CR's assigned to that department}}$$

Analysis/Action

Self identification of issues by Unit 3 has improved significantly during the first part of the year. One factor influencing this was the large number of CRs initiated by the discovery phase of the different recovery plans. Increased emphasis on self assessment will help to ensure that self identification of issues remains high.

Goal

Comments

Data through 5/21/97.

Data Source: AITTS

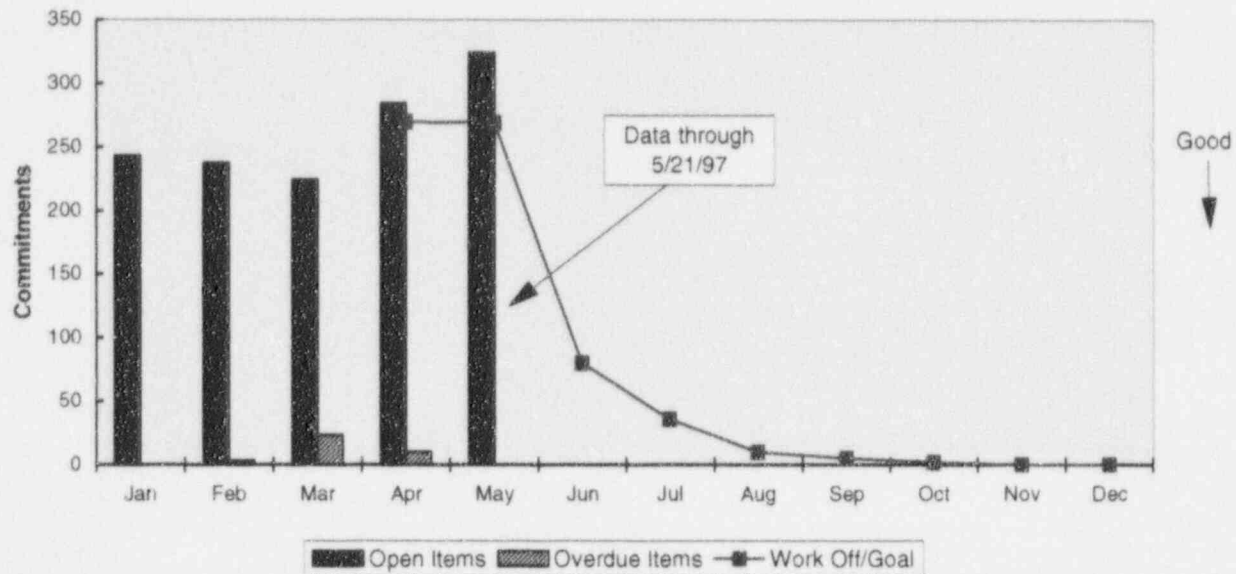
Analysis by: S. M. Smith x2277MP

Owner: D McCracken x0481MP

Open NRC Commitments for Restart

Millstone 3 - May 1997

Progress: While the total number of open commitments to the NRC remains high, we have reduced the number that are overdue with a goal of closing commitments on their due dates, and none open at restart.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Open Items	243	237	224	284	324							
Overdue Items	0	3	23	10	0							
Work Off/Goal				270	269	80	36	10	5	2	0	0

Definition

An NRC commitment is:

- written statement that is docketed.
- verbal statement to take a specific action, agreed to by an officer.
- requirement to take an action imposed by the NRC.

The commitments counted here are those that need final closure with the NRC prior to restart of the unit.

Analysis/Action

As of 5/21/97, 19 items have been closed this month. However, new commitments requiring closure prior to restart resulted in an increase in the number of open items. The number of overdue NRC items is zero.

To continue to focus management attention in this area, the overdue NRC commitments and a two week look ahead have been included in the Unit 3 daily report since 4/7/97.

Goal

NRC commitments closed on due dates prescribed and all closed prior to restart

Comments

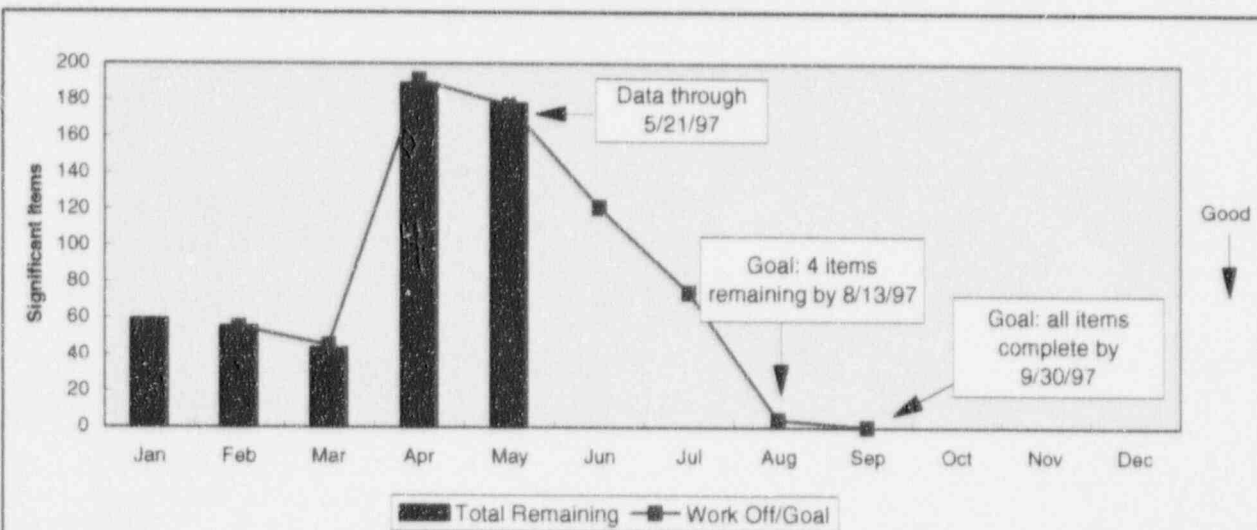
Data through 5/21/97.
Work Off/Goal is for end of month.

Data Source: H. Kross x8656 Analysis by: D. Smith x5840 Owner: D. Hicks x0326

Significant Items List

Millstone 3 - May 1997

Progress: Closure of items on the Significant Items List (including items identified by the NRC for closure prior to restart) are on track for the 9/30/97 goal.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Total Remaining	59	55	43	189	178							
Work Off/Goal		55	45	191	177	121	74	4	0			

Definition

Items on the Significant Items List include those Adverse Condition Reports (ACRs), Notices of Violation, Unresolved Items, Escalated Enforcement Items, Licensee Event Reports, and programmatic concerns chosen by the NRC which require closure prior to start up.

Analysis/Action

The Significant items list was revised to include the items from the NRCs Restart Assessment Plan issued on 3/24/97 which is reflected in the sharp increase in April. A new work off curve was developed to reflect the completion schedule provided to the NRC on 4/29/97. Significant Item List closure packages continue to be turned over to the NRC on schedule.

Goal

Goal: 4 items remaining by 3/13/97
All items closed by 9/30/97

Comments

Data through 5/21/97.
A total of 205 closure packages have been requested by the NRC to date through revisions of the Readiness Assessment Plan (RAP) issued on 3/24/97

Data Source: J. Gionet x5505MP

Analysis by:

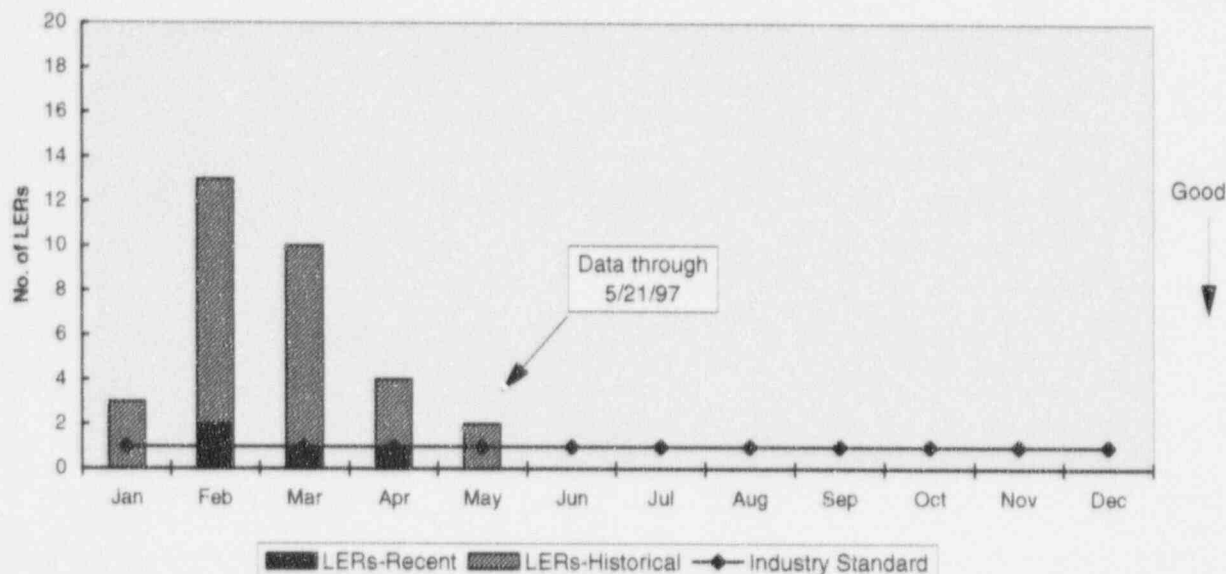
J. Gionet x5505MP

Owner: D. Smith x5840MP

Licensee Event Reports

Millstone 3 - May 1997

Progress: Licensee Event Reports made to the NRC are trending down, reflecting that the discovery effort is concluding.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
LERs-Recent	0	2	1	1	0							
LERs-Historical	3	11	9	3	2							
LERs-YTD	3	16	26	30	32							
Industry Standard	1	1	1	1	1	1	1	1	1	1	1	1

Definition

Licensee Event Reports (LERs):

- are reports made to the NRC pursuant to 10CFR50.73
- are defined as historical if the event did not occur within the last 12 months
- are reported in the month of the submittal to the NRC

Analysis/Action

Two LERs have been submitted in May. These LERs involved historical issues, one related to the RSS system design and the other related to the use of the Main Steam Pressure Relief Bypass Valves.

Goal

Comments

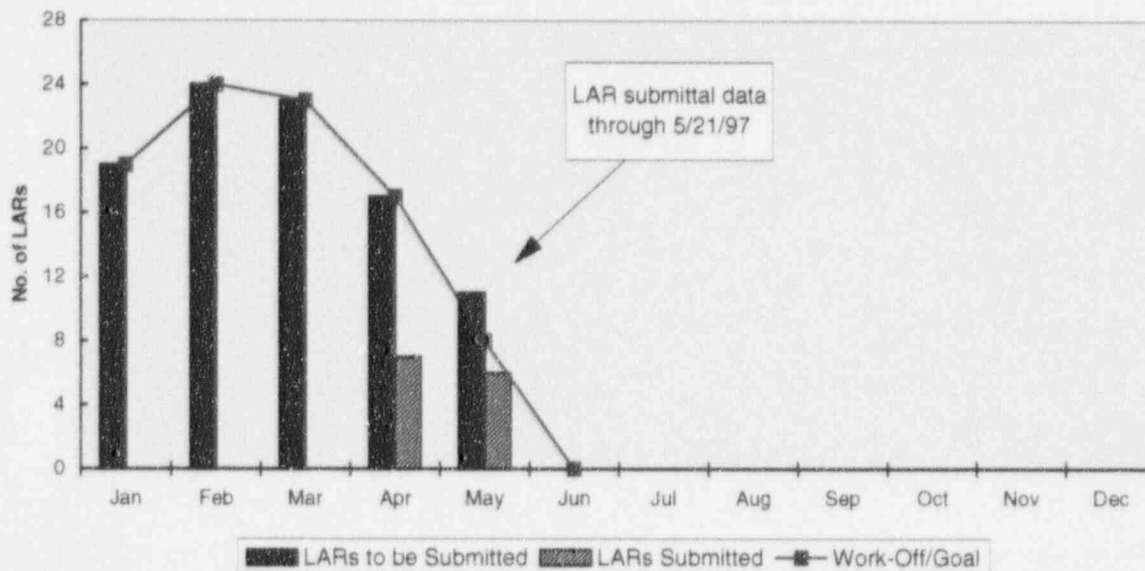
Data through 5/21/97.

Data Source: Licensing Analysis by: D. Smith x5840 Owner: D. Smith x5840

License Amendment Requests

Millstone 3 - May 1997

Progress: The June 30 goal for submittal of all License Amendment Requests needing approval prior to restart will be challenged by nine LARs.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
LARs to be Submitted	19	24	23	17	11							
LARs Submitted	0	0	0	7	6							
Work-Off/Goal	19	24	23	17	8	0						

Definition

License Amendment Requests (LARs) are changes to Technical Specifications or other license changes that are required for restart, and that must be submitted to the NRC for approval.

Analysis/Action

The resolution of engineering issues is delaying the submittal of 8 LARs. Daily review meetings are being conducted to monitor status of activities and expedite completion of the LARs. Additional ongoing engineering review may identify additional Technical Specifications that require revision. Also, communications have been ongoing with the NRC staff to insure that the delays in filing the amendment requests do not significantly threaten the NRCs ability to support our restart schedule.

Goal

All LARs requiring NRC review submitted by June 30, 1997.

Comments

- Data through 5/21/97
- Five Proposed Amendment Requests are in final review.
- Two are in Nuclear Safety Assessment Board review.
- Two are in Plant Operations Review Committee review.
- Six are in Engineering review.

Data Source:

G. Papanic x2069

Analysis by:

D. Smith x5840

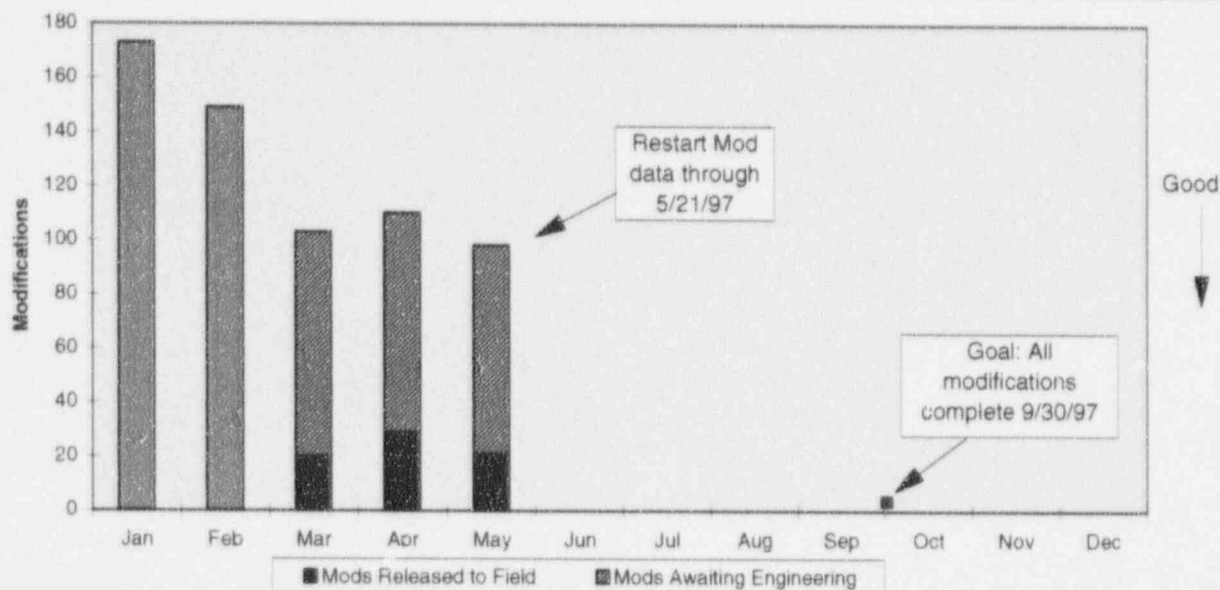
Owner:

D. Smith x5840

Restart Modifications Awaiting Implementation

Millstone 3 - May 1997

Progress: *Completing design modifications required for restart by the 9/30/97 goal requires increased management attention.*



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97
Mods Released to Field			20	29	21						
Mods Awaiting Engineering			83	81	77						
Total Mods Remaining	173	149	103	110	98						
Work Off/Goal											

Definition

The total number of outstanding modifications identified as required prior to restart that have not been turned over to Operations.

Analysis/Action

As of 5/21/97, the total number of design modifications is 259. Of these, 98 are required to be implemented prior to restart. This month:

- 10 modifications were completed in the field
- 6 modifications not requiring field implementation were completed by Engineering
- 1 modification was deferred until after restart
- 4 new modifications were added
- 1 modification was re-evaluated from desired to required for restart

Continued management attention is being applied to the proper screening of modifications required/desired for restart to ensure those required for restart are properly identified and scheduled for implementation.

Goal

All start up related design modifications completed by 9/30/97.

Comments

Data through 5/21/97

Data Source: S. Sudigala x4204

Analysis by:

S. Sudigala x4204

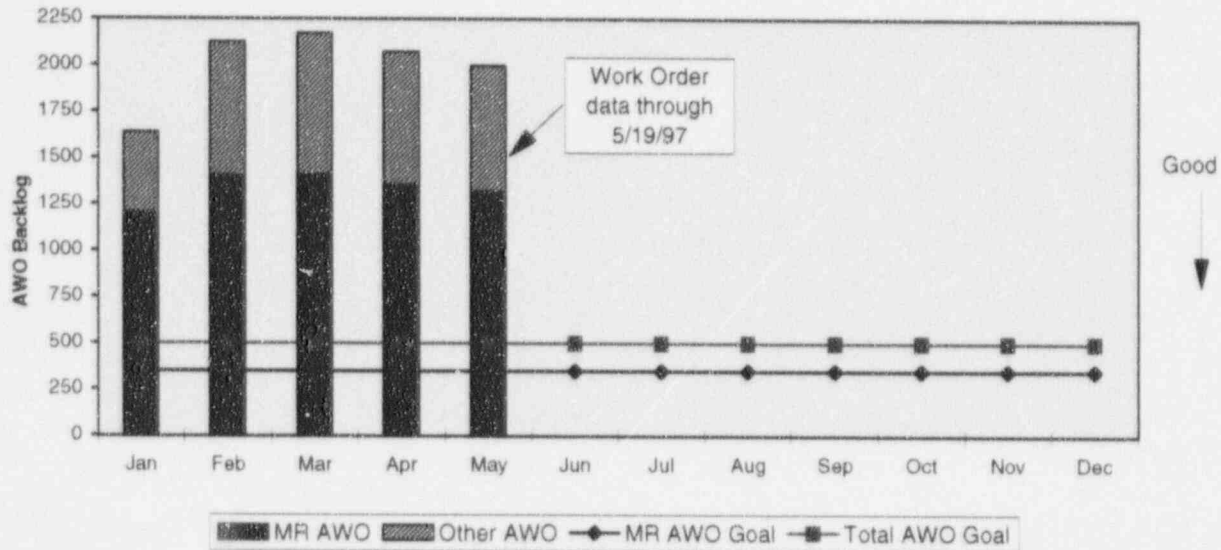
Owner:

D. Hicks x0326

AWOs Required for Restart

Millstone 3 - May 1997

Progress: The generation and completion of corrective maintenance work orders required for restart is high and currently does not support the restart timeline.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Total AWO Backlog	1637	2123	2170	2069	1996							
MR AWO Goal	350	350	350	350	350	350	350	350	350	350	350	350
Total AWO Goal	500	500	500	500	500	500	500	500	500	500	500	500
MR AWO	1203	1400	1409	1354	1319							
Other AWO	434	723	761	715	677							

Definition:

- Automated Work Order (AWO) Backlog is the total number of corrective maintenance/condition driven (non-recurring) AWOs required or desired for restart.
- The total does not include: AWOs awaiting retest, in closure, work planned for future outages, AWOs that support field work already included in backlog (i.e. insulation, staging, etc.) and non-power block AWOs.
- Safety significant systems are defined as Maintenance Rule risk and/or safety significant systems.

Analysis/Action

The number of AWOs generated and completed during the first three weeks of May have been less than expected. Although the backlog decreased, the net reduction this month does not support meeting the goal at start up. Approximately 275 AWOs will be added to the backlog for work on Motor Operated Valves. In order to meet start up goals, the net reduction in backlog needs to be approximately 400 AWOs per month.

Goal

Goal < 500 total AWOs at start-up, less than 350 Maintenance Rule risk and/or safety significant system AWOs at start up, and no AWOs that are required for restart at start up.

Comments

Data through 5/19/97.

Data Source:

G. Rescek x2433

Analysis by:

R. Rothgeb x5241

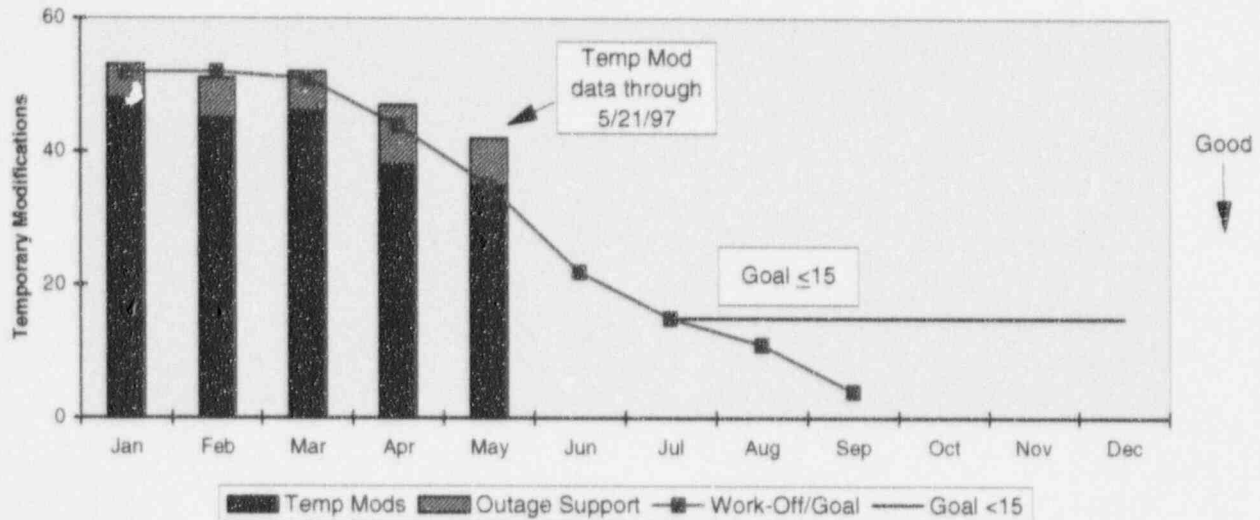
Owner:

R. B. Roy x5000

Temporary Modifications

Millstone 3 - May 1997

Progress: Temporary Modifications are being reduced, with the expectation of having only 5 in place at restart (goal is less than 15).



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Temp Mods	48	45	46	38	35							
Outage Support	5	6	6	9	7							
Total Installed	53	51	52	47	42							
Work-Off/Goal	52	52	51	44	35	22	15	11	4			

Definition

A temporary modification is a modification to plant design that is short-term in nature and not part of the permanent plant design change process.

Temporary Modifications to permanent plant design are categorized here two ways: "Outage Support" are those directly tied to physical work to plant equipment in an outage condition, and "Temp Mods" are all others.

Analysis/Action

The "projected work off" and "actual work off" curves are starting to diverge. The normal work planning process does not expedite removal of the temporary modifications. Increase attention is being provided to expedite the removal of the temporary modifications once they are no longer needed.

Five Temporary Modifications are currently scheduled to remain installed after restart.

It is expected that the goal for this indicator will be met.

Goal

<15 TMs installed at startup

None greater than one cycle without Unit Officer approval.

Comments

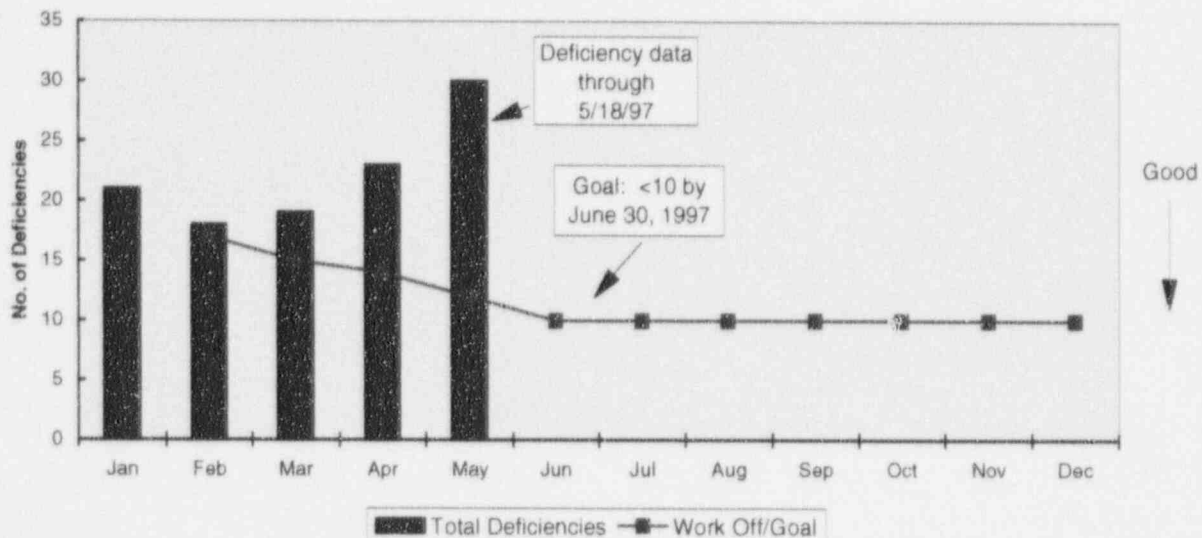
Data through 5/21/97

Data Source: S. Stricker x5409 Analysis by: S. Stricker x5409 Owner: G. Swider x5381

Control Room and Annunciator Deficiencies

Millstone 3 - May 1997

Progress: Goal of fewer than 10 deficiencies should be met by June 30, 1997.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Total Deficiencies	21	18	19	22	30							
Work Off/Goal		17	15	14	12	10	10	10	10	10	10	10

Definition

Control room instruments, recorders, indicators, and annunciators that function improperly that could affect the ability of the operators to monitor and control plant conditions.

Analysis/Action

Thirteen new items were added this month (through 5/18). Based on the current schedule 14 of the remaining items will be completed by 6/30/97.

Of the 14 to be completed by 6/30/97,

- 2 have the field work complete and are waiting normal plant operating pressure and temperature for testing.
- 7 are scheduled for work in May, and
- 5 are scheduled for work in June.

Goals

Fewer than 10 at startup.

None greater than 6 months old without Unit Officer approval.

Comments

Data through 5/18/97

Projected work off curve is based on less than 10 items by 6/30/97.

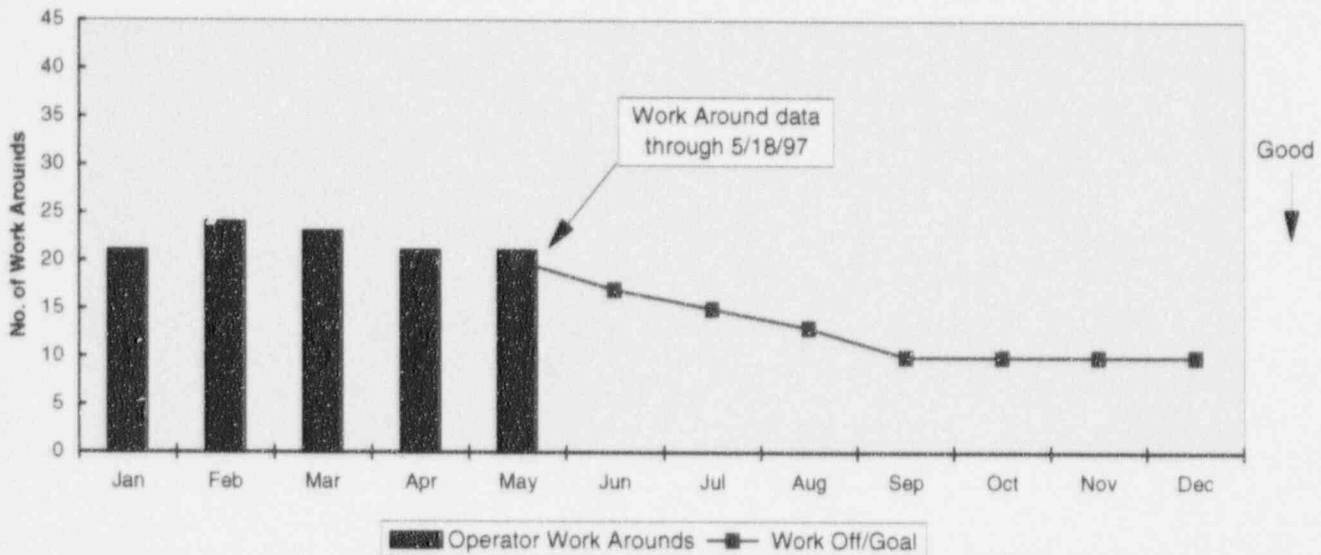
Work that is complete awaiting retest based on plant conditions will not be included in the total.

Data Source: B. Parish x0184 **Analysis by:** D. Beachy x4980 **Owner:** R. B. Roy x5000

Operator Work Arounds

Millstone 3 - May 1997

Progress: A workoff plan has been developed to support the goal of ≤ 10 .



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Operator Work Arounds	21	24	23	21	21							
Work Off/Goal					20	17	15	13	10	10	10	10

Definition

Operator Work Arounds are conditions requiring an operator to work with equipment in a manner other than original design which could:

1. Potentially impact safe operation during a plant transient,
2. Potentially impose significant burden during normal operation,
3. Create nuisance condition due to recurring equipment deficiency,
4. Distract an operator from noticing a recurring condition.

Analysis/Action

Some progress was made in the last month in the disposition of these deficiencies. Research on the status of design changes and Engineering Work Requests continues.

Goal

Goal <10

None greater than 6 months old without Unit Officer approval.

Comments

Data through 5/18/97

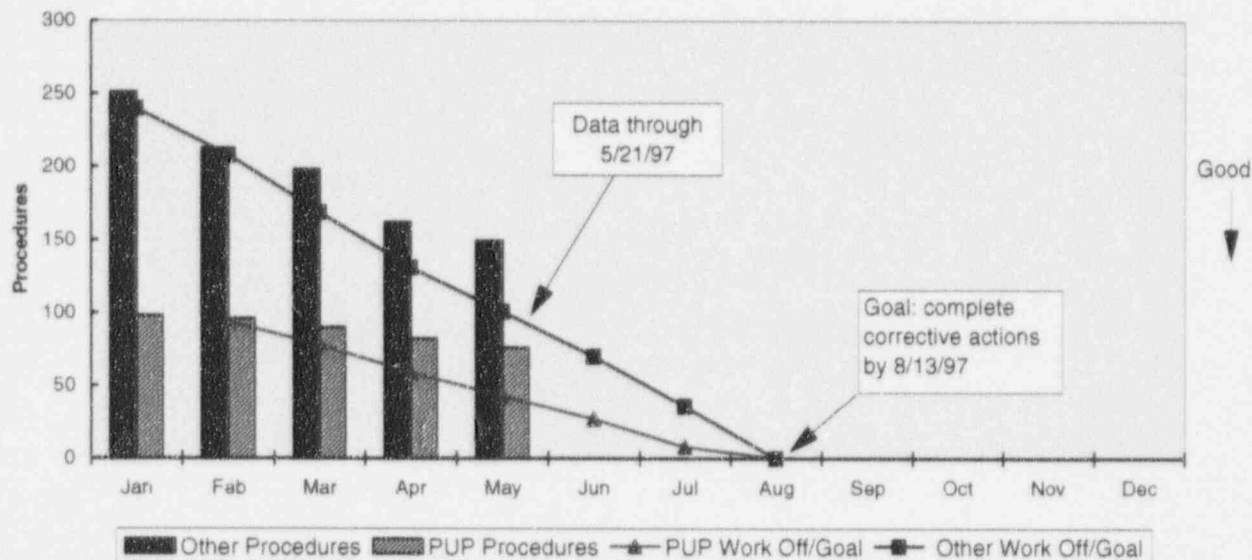
Work off curve reflects end of month goal.

Data Source: L. Palone x4737 Analysis by: L. Palone x4737 Owner: B. Pinkowitz x4203

Procedure Revision Backlog

Millstone 3 - May 1997

Progress: Procedure revision completion by the 8/13/97 goal is being challenged by the unavailability of Licensed Operator review resources.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Total Remaining	349	309	288	244	225							
Other Procedures	251	213	198	162	149							
PUP Procedures	98	96	90	82	76							
PUP Work Off/Goal	0	94	78	59	43	27	8	0				
Other Work Off/Goal	240	208	169	131	101	70	36	0				

Definition

Procedure Revision Backlog is the total number of new procedures or procedure revisions required or desired for restart. PUP is the abbreviation for Procedure Upgrade Program.

Analysis/Action

For non-PUP procedures, individual feedback items will be done as part of the procedure upgrade where applicable. This will minimize the number of times the procedure must be modified, reviewed, and approved. Revisions are in progress, there should be a significant decrease in the backlog in the next two weeks.

Operations is working primarily system operating procedures in order to complete PUP. These procedures include the system operating instructions and valve/electrical line ups.

Comments

Data through 5/21/97

Work off curve is based on 100% complete by 8/13/97

The biggest barrier to completion of PUP for Operations is Licensed Operator review support (independent review, validation). When the training cycle for the current Licensed Operator class is completed (2nd week of July), a portion of the class will be applied to this area. An additional resource from the Station Procedure Group is now being used to put the remaining Operations procedures in the upgrade format so that the procedure is ready for operator review. Procedure reviews and the number of procedure revisions started have increased.

Goal

All open items have been reviewed and proper corrective actions are completed prior to 8/13/97.

Data Source:

Departments

Analysis by:

T. Kulterman x5421

Owner:

B. Pinkowitz/R. B. Roy

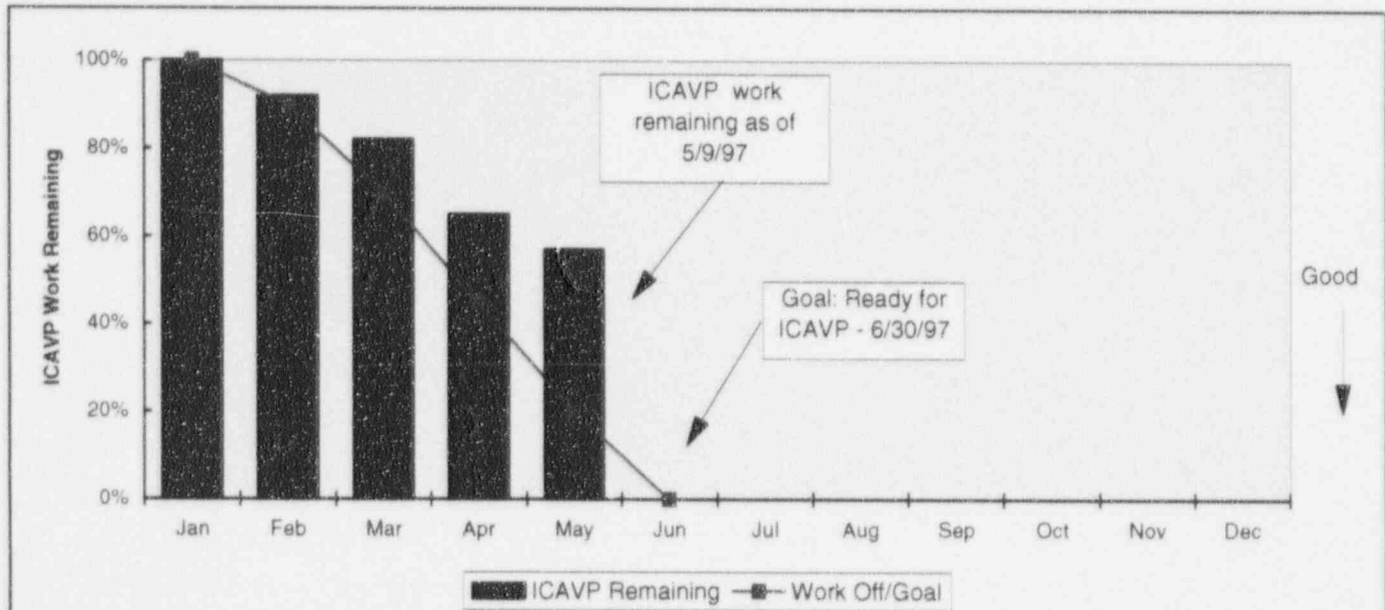
Appendix 3

KEY PERFORMANCE INDICATORS MILLSTONE UNIT 2

Independent Corrective Action Verification Program Readiness

Millstone 2 - May 1997

Progress: ICAVP readiness is progressing; however, the target completion date of June 30, 1997 is challenged.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
ICAVP Remaining	100%	92%	82%	65%	57%							
Work Off/Goal	100%	90%	70%	45%	20%	0%						

Definition

This indicator measures progress in completing the system reviews necessary prior to initiation of Independent Verification of Corrective Actions Program (ICAVP). System review involves evaluation of design and license basis documents for system and system components for incorporation into procedures.

Analysis/Action

Most telling conclusion: Phase 1 graded system review started and progressed more slowly than expected as structure was put into place. System review teams are gaining on work-off goals as they become more skilled in meeting performance goals.

Why negative occurred: Project wrestled with questions over the depth of review to be applied in the systems area.

Corrective action: U2 CMP has added more resources (i.e., professionals, hardware, and support staff), has forced greater focus on System Review Teams to reduce unproductive research or divergence from scope, and created specific task groups to tackle discrete issues critical to maintaining schedule.

Goal

Complete required system reviews prior to ICAVP start scheduled for June 30, 1997.

Comments

Upward adjustments were made since the last report that reflect a more precise approach to % complete measurement. About 3 weeks behind the original June 9 projection.
Graph reflects data through 5/9/97.

Data Source: W. Sawatzky x0016

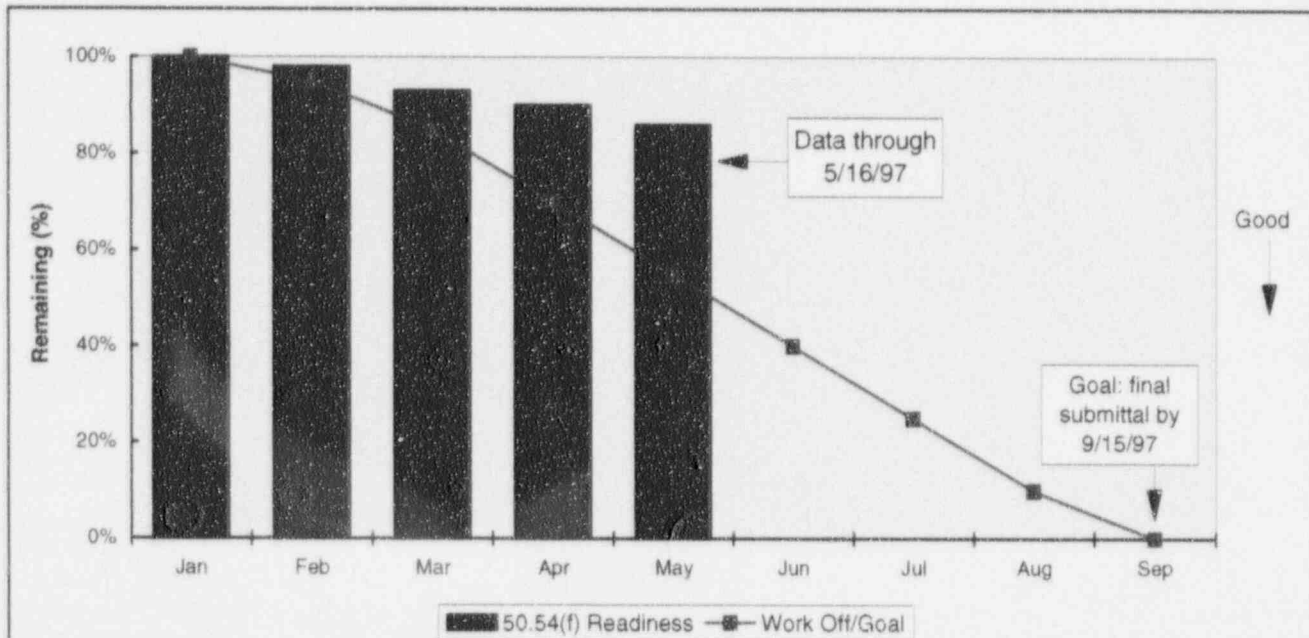
Analysis by: W. Sawatzky x0016

Owner: M. Ahern x5426

10CFR50.54(f) Readiness for Submittal

Millstone 2 - May 1997

Progress: Submittal of this key final document to the NRC is on track to be complete by 9/15/97.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
50.54(f) Readiness	100%	98%	93%	90%	86%							
Work Off/Goal	100%	95%	85%	70%	55%	40%	25%	10%	0%			

Definition

This indicator measures progress in readiness for 10CFR50.54(f) submittal. U2 readiness for submittal is defined as System Review Packages (SRPs) complete and approved for all Phase 1 and 2 Systems, along with graded reviews completed and documented for all Unit 2 programs.

Analysis/Action

The project started slowly as structure was put into place and what was really needed underwent more precise definition. The performance curve demonstrates an accelerating closure rate on the work off goal as the project becomes more skilled in meeting performance goals.

The project wrestled with questions over the depth of review to be applied in the systems area and breadth of scope of review questions regarding the number and depth of review for U2 programs.

U2 Configuration Management Program has added more resources (i.e., professionals, hardware, and support staff), has forced greater focus on System Review Teams to reduce unproductive research or divergence from scope, and created task groups to tackle specific issues critical to maintaining schedule.

Goal

The Unit 2 goal is to be ready for 10CFR50.54(f) submittal by 9/15/97.

Comments

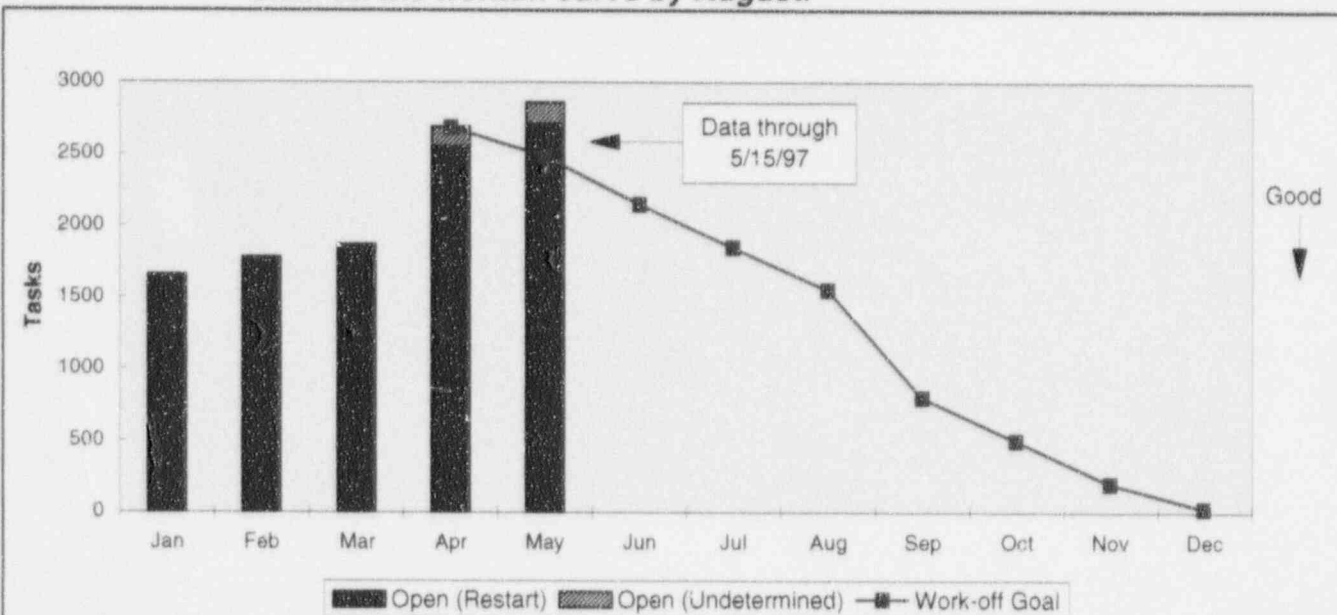
Data through 5/16/97. Reflects an upward adjustment as more conservative statistical approaches were applied. The May data are hard figures. The April figure adjusted upward to correspond.

Data Source: W. Sawatzky x0016 Analysis by: W. Sawatzky x0016 Owner: M. Ahern x5426

Task Completions Required for Startup

Millstone 2 - May 1997

Progress: *As discovery continues, the tasks required for startup continue to increase. With additional management attention, this indicator will be back on the workoff curve by August.*



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Open (Restart)	1655	1778	1866	2550	2708							
Open (Undetermined)				135	149							
Work-off Goal				2685	2485	2150	1849	1550	800	499	198	25

Definition

The total number of tasks is defined as those requiring closure prior to restart. Items in PMMS (AWOs) are not included. Undetermined are those assignments in AITTS that have not been screened as to required for restart.

Analysis/Action

Task completions have been re-assessed for restart readiness applicability.

Goal

The goal is to have all required tasks complete prior to entering the applicable mode restraints.

Comments

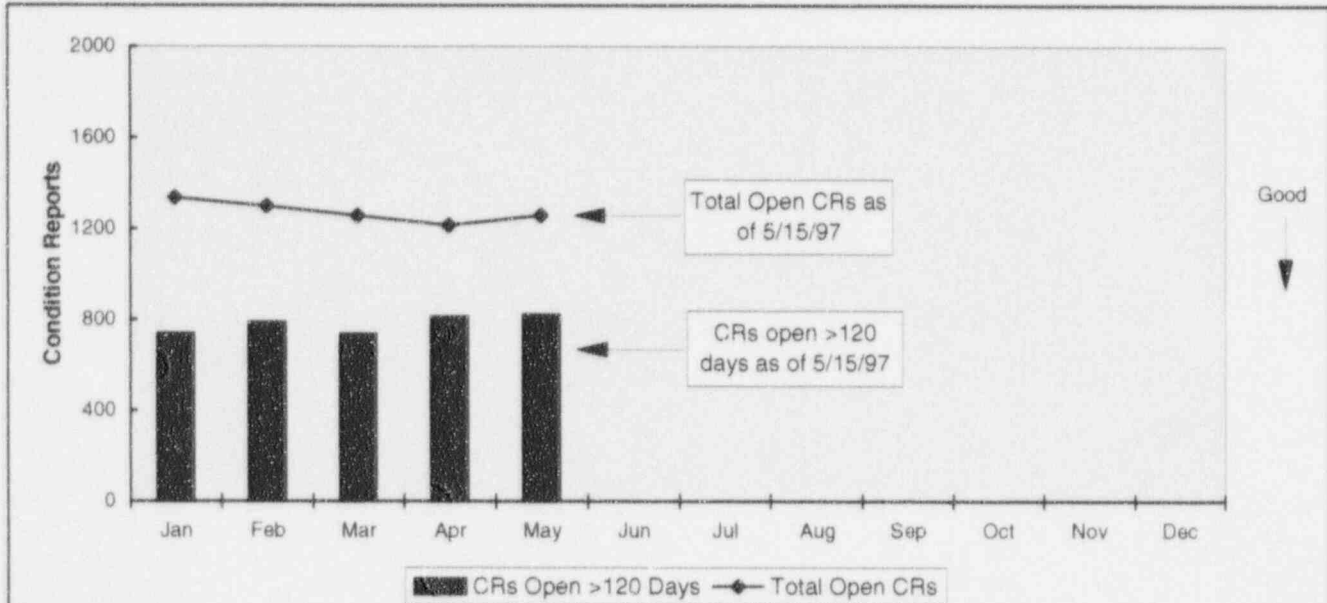
Data through 5/15/97

Data Source: G. L. Alix x2200 Analysis by: S.V. Heard x5600 Owner: S.V. Heard x5600

Open Condition Reports

Millstone 2 - May 1997

Progress: Condition reports have shown a slight increase in the total number that are open. This trend will turn and the expected number open >120 days will be < 550 by the end of June.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Total Open CRs	1335	1300	1255	1215	1258							
CRs Open >120 Days	738	787	735	810	821							

Definition

This indicator depicts the number of open condition reports (CRs) and CRs open > 120 days.

Analysis/Action

The May (through 5/15/97) number of CRs open > 120 days is up slightly as we have concentrated on closure of Phase 2 system items. In the Corrective Actions Department (CAD) we have a population of between 150-200 CRs that are indicated as having all corrective actions complete and require only final review. We expect to meet our goal of less than 550 CRs open greater than 120 days by the end of June.

Goal

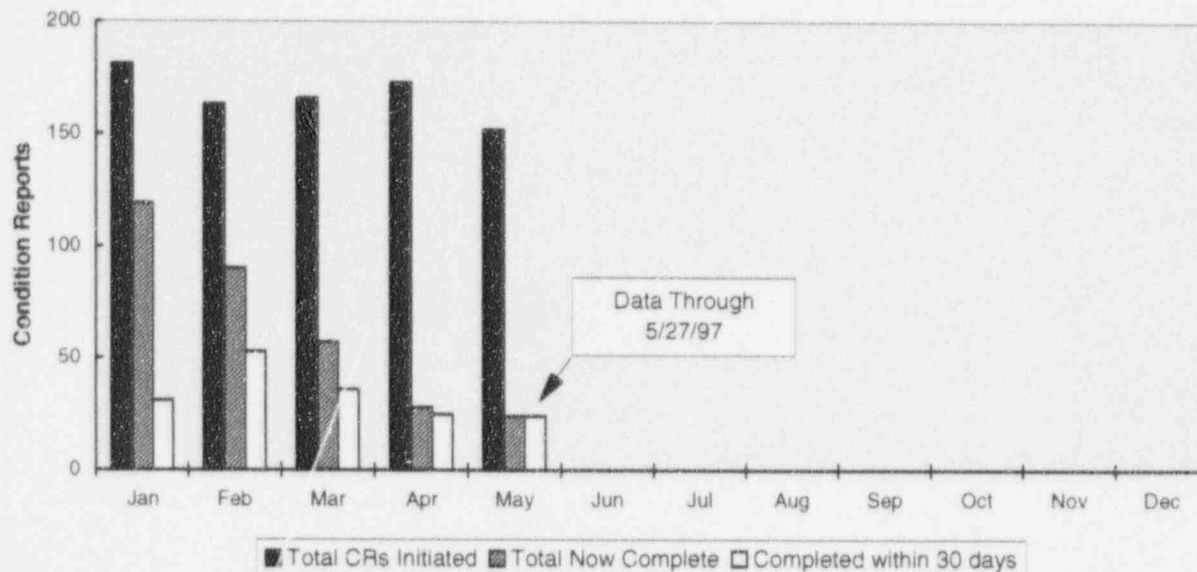
Comments

Data Source: G. L. Alix x2200 Analysis by: S. V. Heard x5600 Owner: S. V. Heard x5600

Condition Report Initiation and Evaluation Timeliness

Millstone 2 - May 1997

Progress: *The line departments continue to reduce the number of CRs open >30 days, the Corrective Action Department is not keeping pace with the increased input.*



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Total CRs Initiated	181	163	166	173	152							
Level 1 CRs Initiated	7	7	7	11	7							
Level 2 and 3 CRs Initiated	174	156	159	162	145							
Completed within 30 days	31	53	36	25	24							
Total Now Complete	119	90	57	28	24							
Success Rate	17.1%	32.5%	21.7%	15.7%	NA							

Definition

This indicator depicts the initiation of Condition Reports (CRs) for the Unit and the number of evaluations which were completed within the goal of 30 days. The center bar shows the number of CRs for which the investigations have been completed to date.

The graph shows CR data beginning 1/1/97, and represents the current status/effectiveness of Corrective Action Initiatives.

Analysis/Action

NOTE: April data for completed within 30 days (15.7%) reflects that 28 were successfully completed out of a total of 159 which have had 30 days elapse to date. The following breakdown shows the distribution of CRs in open (investigation phase) and P2 (in CAD for review) status:

Jan - 13 open / 49 CAD
 Feb - 17 open / 56 CAD
 Mar - 15 open / 94 CAD
 Apr - 51 open / 94 CAD

Goal

Goal is to complete all evaluations and identify appropriate corrective actions within 30 days.

Comments

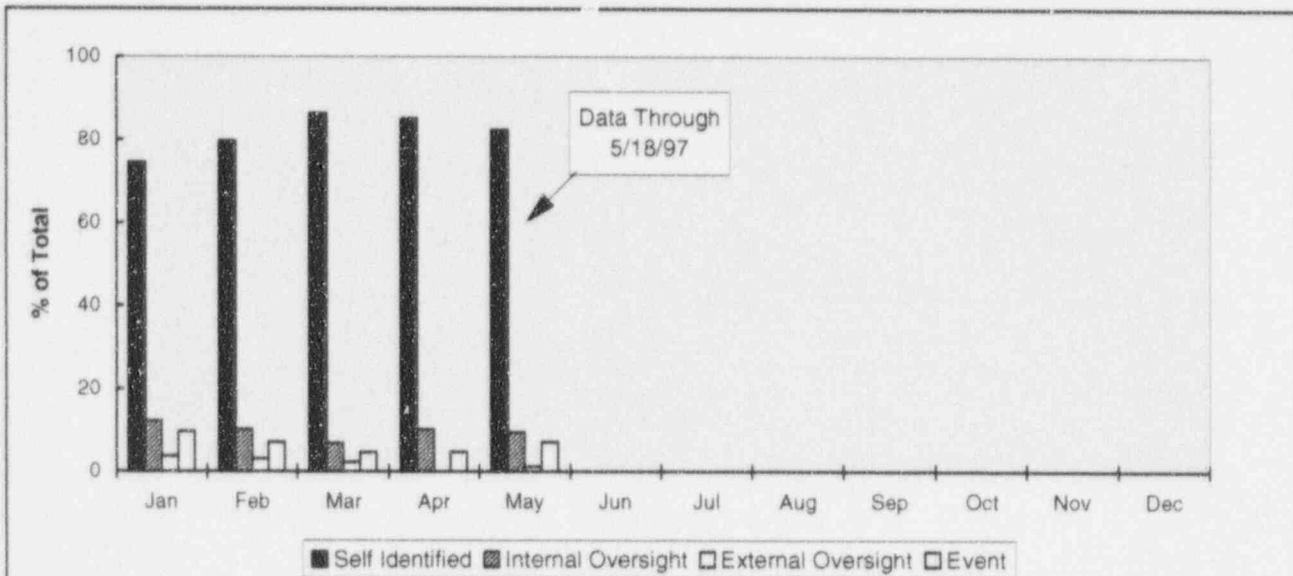
Evaluations are considered open if they are either in an open status or a pending review status prior to the approval of the corrective action plan. The latest month's data reflects the status to date.

Data Source: G. L. Alix x2200 Analysis by: S. V. Heard x5600 Owner: S. V. Heard x5600

Condition Report Method of Discovery

Millstone 2 - May 1997

Progress: *The positive trend of self identification continues*



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Self Identified	123	102	114	126	70							
Internal Oversight	20	13	9	15	8							
External Oversight	6	4	3	0	1							
Event	16	9	6	7	6							
Total Identified	165	128	132	148	85							

Definition

This indicator represents the percentage of CRs identified by each of the barriers. CRs are categorized into the following five areas:

Event Driven - Self-revealing, an event occurs.

External Oversight - Identified by NRC, JUMA, INPO, etc.

Internal Oversight - Identified by QAS, PORC, ISEG, NSAB, etc.

Self Identified - Supervisor observation, document review, Self-checking, Independent / dual verification, etc.

Analysis/Action

Condition reports continue to be self identified with one external oversight CRs identified in the first two weeks of May. **Event driven CRs remain low at 6.**

Goal

Comments

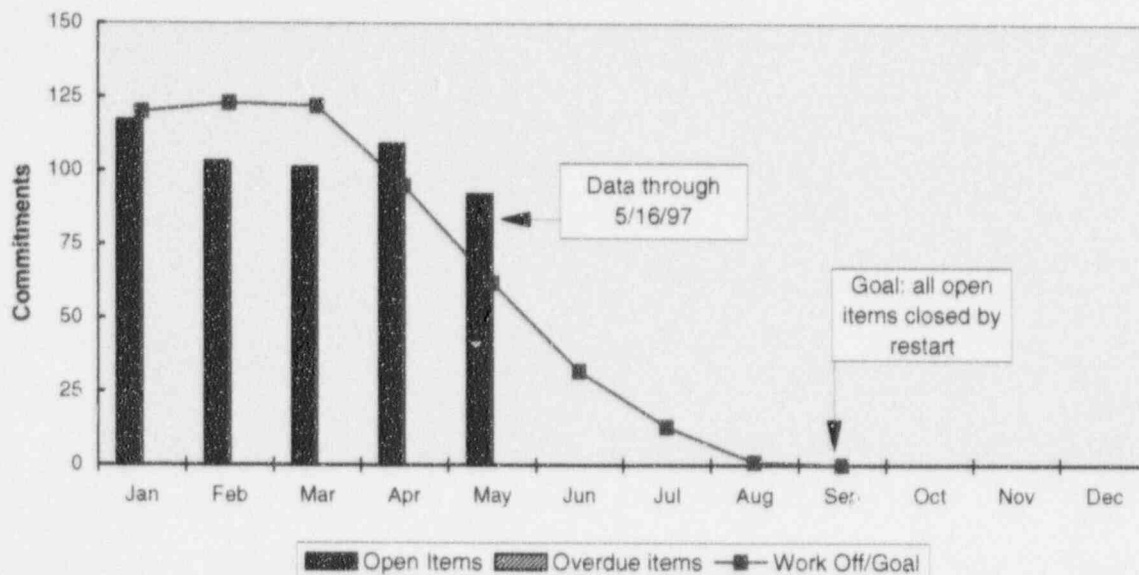
Improvement continues

Data Source: G. L. Alix x2200 **Analysis by:** S. V. Heard x 5600 **Owner:** S. V. Heard x5600

Open NRC Commitments for Restart

Millstone 2 - May 1997

Progress: No items have been overdue to the NRC this year. Closure of items is on track for completion in September.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Open Items	117	103	101	109	92							
Overdue items	0	0	0	0	0							
Work Off/Goal	120	123	122	95	62	32	13	1	0	0	0	0

Definition

An NRC Commitment is:

- Any written statement that is docketed.
- Any verbal statement to take a specific action, agreed to by an officer.
- Any requirement to take an action imposed by the NRC.

The commitments counted here are those that need final closure with the NRC prior to restart of the unit.

Analysis/Action

These commitments consist of Unit 2 URIs, IFIs, LERs, Violations, and Docketed correspondence. The total number has decreased by 17.

Goal

NRC commitments closed on due dates prescribed and all closed prior to restart.

Comments

Data through 5/16/97

Data Source: D. W. Perkins x 4604

Analysis by:

D. W. Perkins x4604

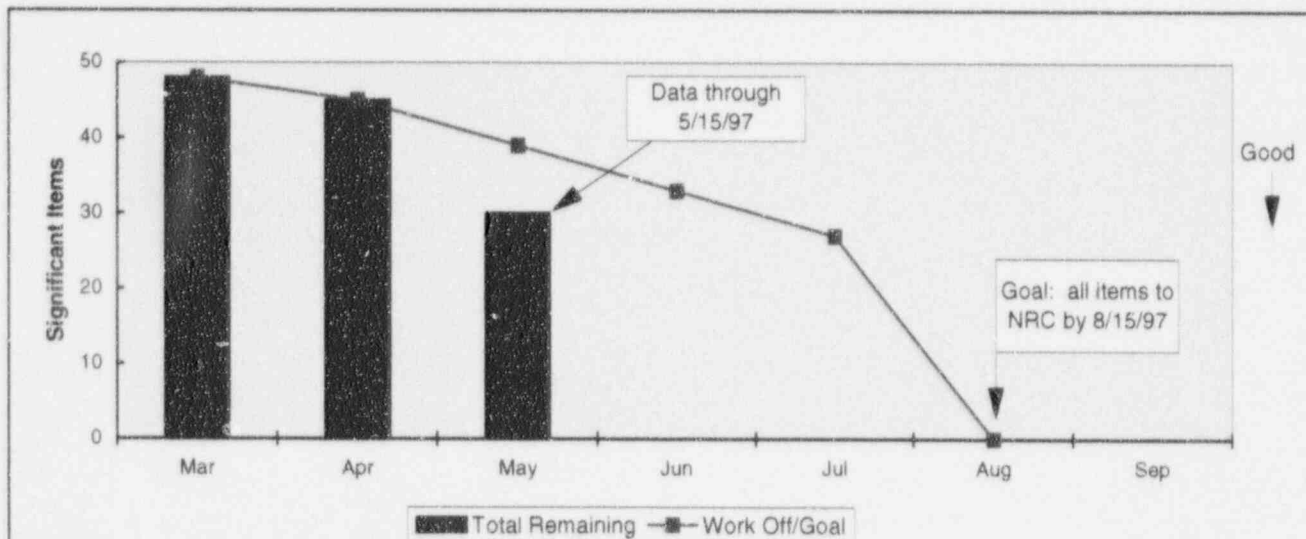
Owner:

R. Joshi x 2080

Significant Items List

Millstone 2 - May 1997

Progress: Closure of items on the Significant Items List are on track for delivery to the NRC by 8/15/97.



Raw Data

	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97					
Total Remaining	48	45	30									
Work Off/Goal	48	45	39	33	27	0						

Definition

Items on the Significant Items List include those items (48) chosen by the NRC which require closure prior to start up. Of the 48 SILs, 41 require closure packages to be submitted to the NRC. In May, the NRC determined that 7 SILs did not require closure packages. The work off/goal line in the graph above has been revised as of May to reflect the 41 SILs requiring closure packages.

Analysis/Action

Closure packages for issues related to 11 SILs have been submitted to the NRC for review. Closure packages for 4 additional SILs have been partially completed.

Goal

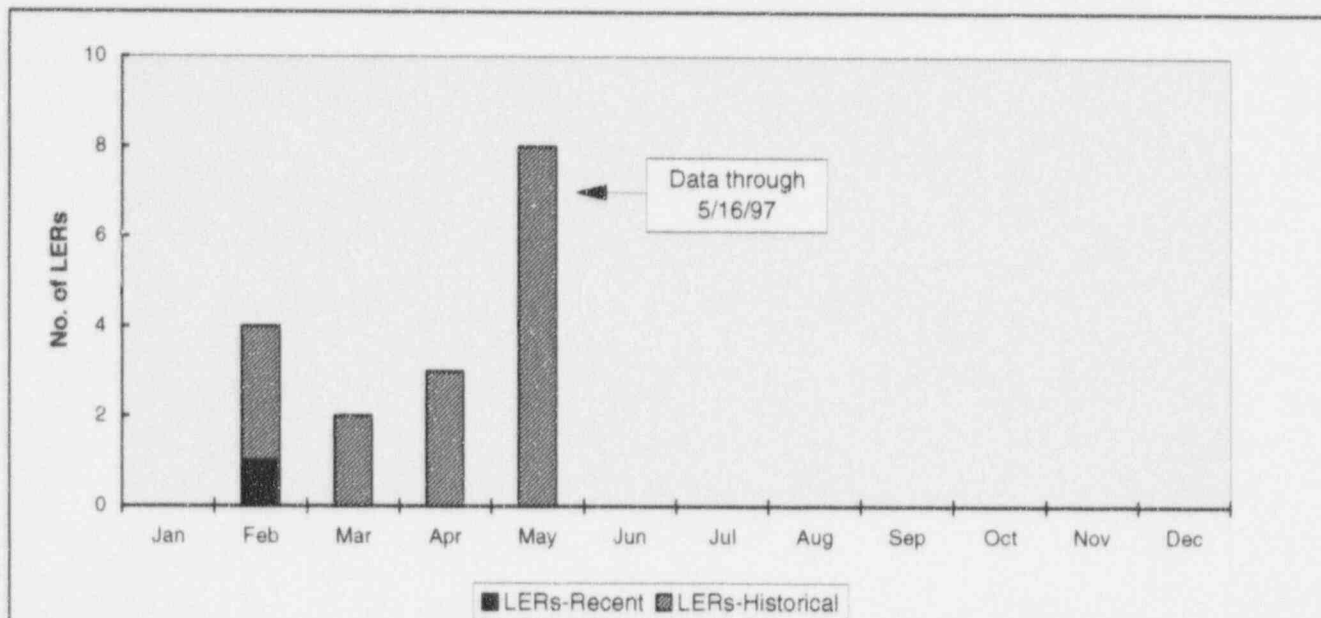
Goal: All closure packages to NRC by 8/15/97.

Comments

Licensee Event Reports

Millstone 2 - May 1997

Progress: *Historical License Event Reports made to the NRC should have peaked in May with the completion of Phase 1 & 2 system discovery.*



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
LERs-Recent	0	1	0	0	0							
LERs-Historical	0	3	2	3	8							
LERs-YTD	0	4	6	9	17							

Definition

Licensee Event Reports (LERs) are reports made to the NRC pursuant to 10CFR50.73.

LERs are defined as historical if the event did not occur within the last 12 months.

LERs are reported in the month of the submittal to the NRC.

Analysis/Action

Through May 16th, there have been 17 Reportable Events year to date. Corrective Action Program improvements currently underway are expected to reduce reportable events over the next year.

Goal

Comments

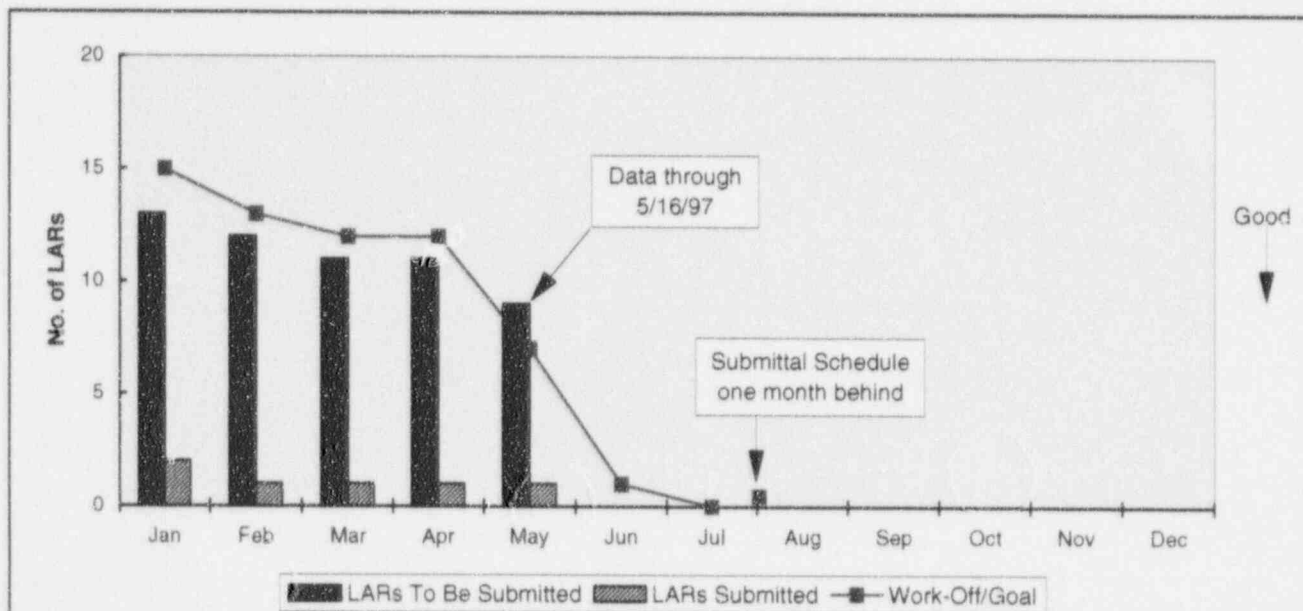
Data through 5/16/97

Data Source: M. Ehredt x2142 Analysis by: M. Ehredt x2142 Owner: R. Joshi x2080

License Amendment Requests

Millstone 2 - May 1997

Progress: License Amendments are approximately one month behind original schedule.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
LARs Submitted	2	1	1	1	1							
LARs To Be Submitted	13	12	11	11	9							
Work-Off/Goal	15	13	12	12	7	1	0					

Definition

License Amendment Requests (LARs) are changes to Technical Specifications or other license changes that are needed for restart that are to be submitted to the NRC for approval.

Analysis/Action

There has been one license amendment request submitted to the NRC during the first two weeks of May. Five license amendment requests were scheduled for NRC submittal by 5/30/97. Delays are a result of additional analysis required by outside support and the sharing of internal resources. The remaining LARs are required to be submitted to the NRC by 7/31/97.

Goal

Receive NRC approval prior to restart.

Comments

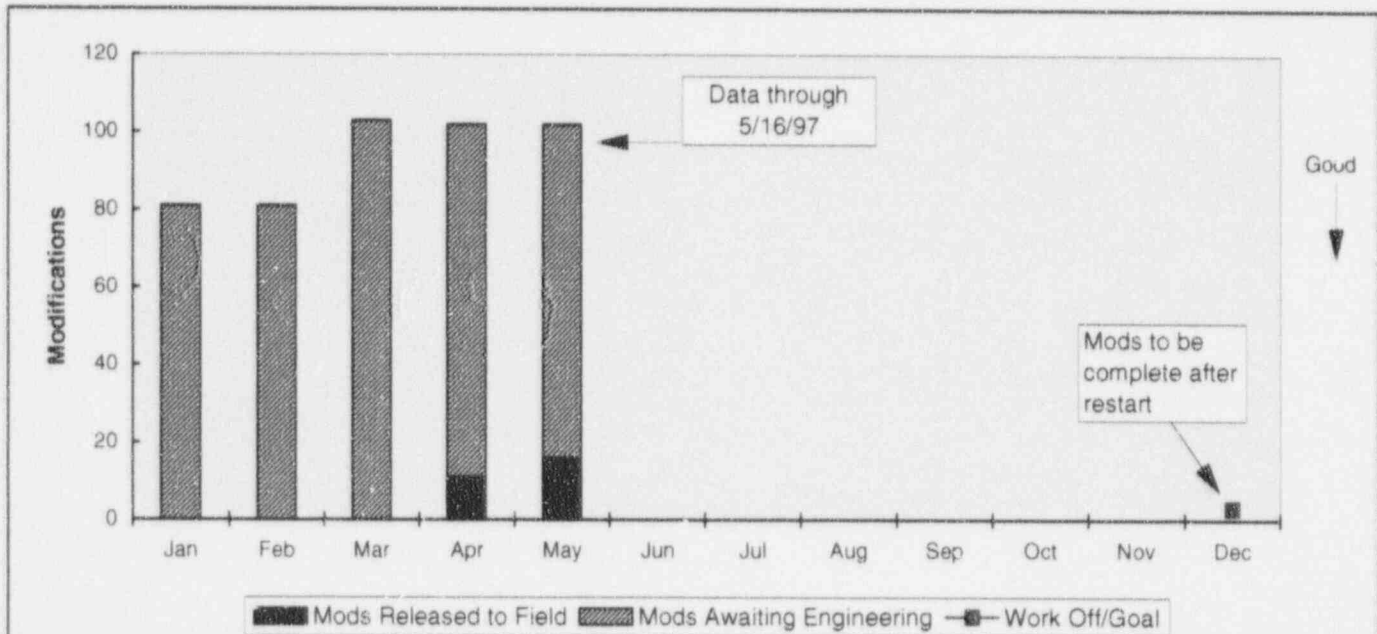
Data through 5/16/97

Data Source: R. Joshi x2080 Analysis by: R. Joshi x2080 Owner: R. Joshi x2080

Restart Modifications Awaiting Implementation

Millstone 2 - May 1997

Progress: *Modifications are being released for work. The completion of these modifications is a challenge.*



New Data

	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Mods Released to Field			11	16							
Mods Awaiting Engineering	81	103	91	86							
Total Mods Remaining	81	103	102	102							
Work Off/Goal											3

Definition

The total number of outstanding modifications identified as required prior to restart that have not been turned over to Operations.

Analysis/Action

The work off/goal has been adjusted to reflect scheduling changes resulting from design resources being shifted to support discovery issues and the preparation of new design/calculations to support the start of ICAVP.

Goal

All start up related design modifications completed prior to restart.

Comments

Data through 5/16/97

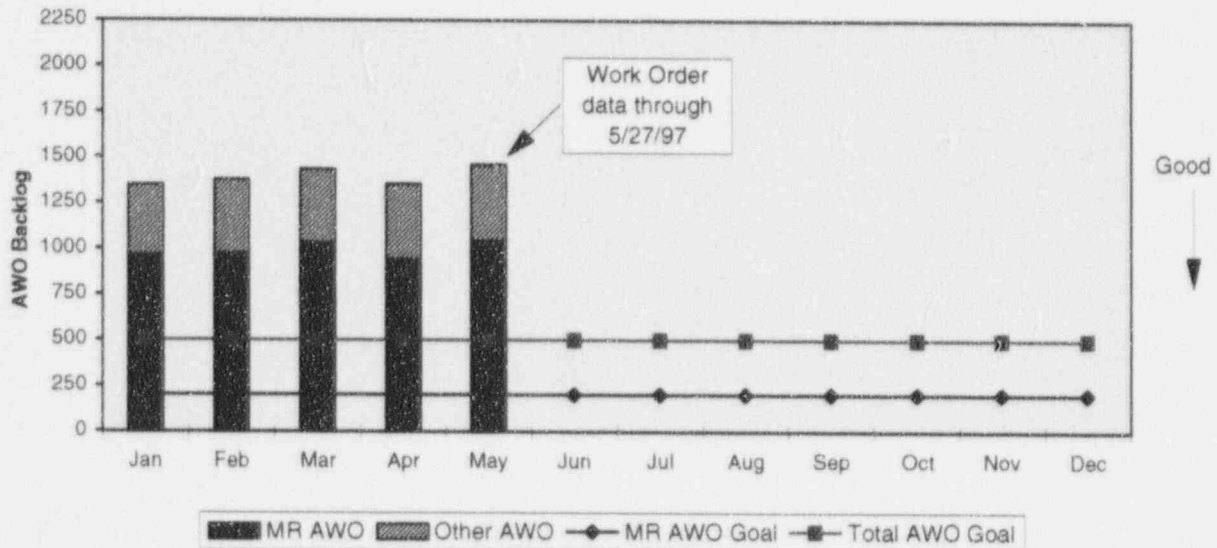
Three mods to be completed after power ascension.

Data Source: M. Amadon x6249 Analysis by: M. Amadon x6249 Owner: W. Corbin x0626

AWOs Required for Restart

Millstone 2 - May 1997

Progress: The generation and completion of corrective maintenance work orders required for restart is high and currently challenges the restart timeline.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Total AWO Backlog	1348	1376	1434	1354	1461							
MR AWO Goal	200	200	200	200	200	200	200	200	200	200	200	200
Total AWO Goal	500	500	500	500	500	500	500	500	500	500	500	500
MR AWO	964	976	1031	940	1045							
Other AWO	384	400	403	414	416							

Definition

- Automated Work Order (AWO) Backlog is the total number of corrective maintenance/condition driven (non-recurring) AWOs required or desired for restart.
- The total does not include: AWOs awaiting retest, in closure, work planned for future outages, AWOs that support field work already included in backlog (i.e. insulation, staging, etc.) and non-power block AWOs.
- Safety significant systems are defined as Maintenance Rule risk and/or safety significant systems.

Analysis/Action

The Maintenance Rule Backlog remains stable as new AWOs continue to be generated through the discovery process.

Changes in process are being evaluated to increase the through put of AWOs to provide an improving trend that will support goals established prior to restart.

Goal

Less than 200 MR AWOs and trending down prior to readiness for restart.

Comments

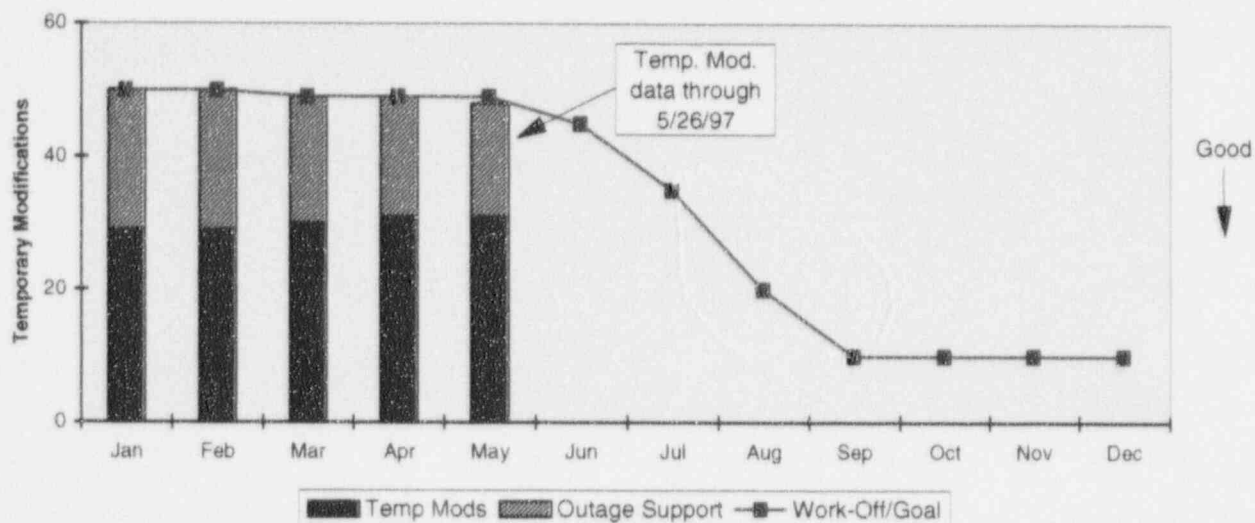
Data through 5/27/97

Data Source: R. Lally x4426 Analysis by: R.W. Poole x5338 Owner: S.J. Jordan x4292

Temporary Modifications

Millstone 2 - May 1997

Progress: Temporary Modifications are being reduced, with the expectation of having only 10 in place at restart.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Temp Mods	29	29	30	31	31							
Outage Support	21	21	19	18	17							
Total Installed	50	50	49	49	48							
Work-Off/Goal	50	50	49	49	49	45	35	20	10	10	10	10

Definition

A temporary modification is a modification to plant design that is short-term in nature and not part of the permanent plant design change process.

Temporary Modifications to permanent plant design are categorized here two ways: "Outage Support" are those directly tied to physical work to plant equipment in an outage condition, and "Temp Mods" are all others.

Analysis/Action

There are 47 Temp Mods installed on the plant. One is an operator burden (BAST level indication nitrogen supply monitoring was improved but not permanently repaired). The number of mods has been increasing as the outage continues. A review of the Engineering work list compared with the Temp Mod list showed a dramatic reduction in the number to be installed by startup. While future developments may require changes, current expectations call for fewer than 10 Temp Mods to remain installed at startup.

Goal

<10 TMs installed at startup

None greater than one cycle without Unit Officer approval.

Comments

Temp. Mod. data through 5/26/97

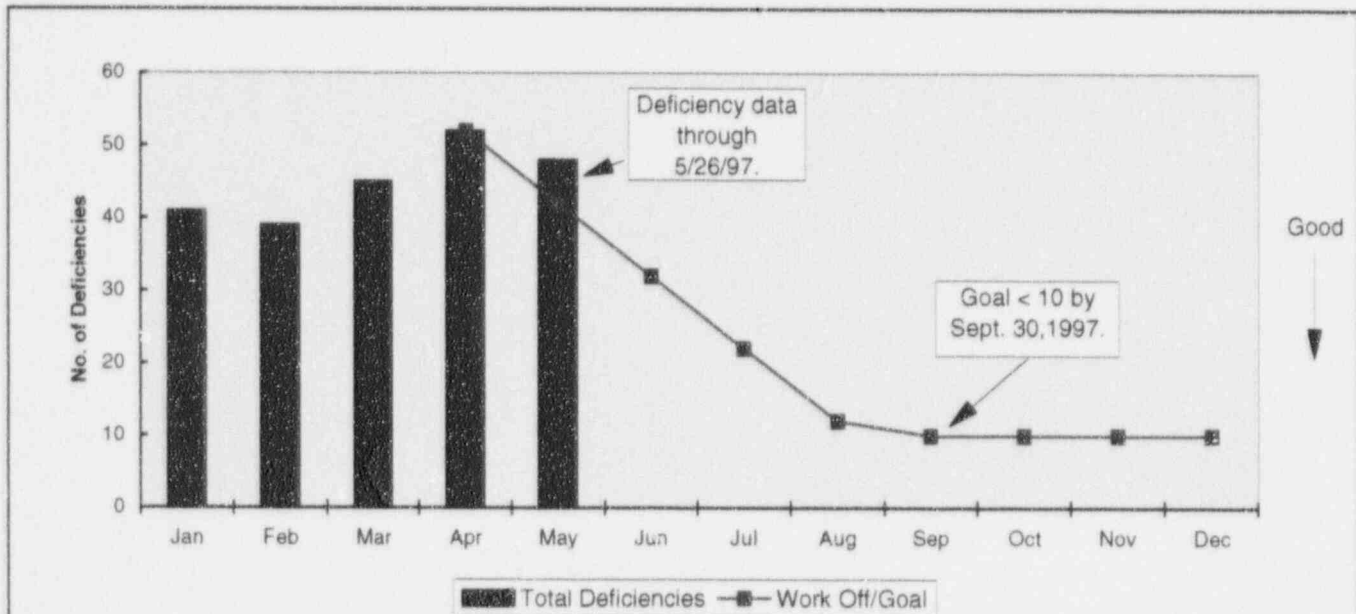
With the plant shutdown there are temp mods that are required to support shutdown work. There are currently seventeen temp mods for this purpose.

Data Source: W. Woolery x0698 Analysis by: W. Woolery x0698 Owner: M. J. Wilson x2081

Control Room and Annunciator Deficiencies

Millstone 2 - May 1997

Progress: Goal of fewer than 10 deficiencies will be met by Sept. 30, 1997.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Total Deficiencies	41	39	45	52	48							
Work Off/Goal				52	42	32	22	12	10	10	10	10

Definition

Control room instruments, recorders, indicators, and annunciators that function improperly that could affect the ability of the operators to monitor and control plant conditions.

Analysis/Action

The CRP Deficiency list is composed initially of Priority 3 TRs. As such, the individual deficiencies do not post an immediate challenge to safe operation. The concern is that the cumulative effect of many small deficiencies may cause a critical system to perform improperly in an emergency situation.

Goals

Goal < 10 by Sept. 30, 1997.

Comments

Deficiency data through 5/26/97.

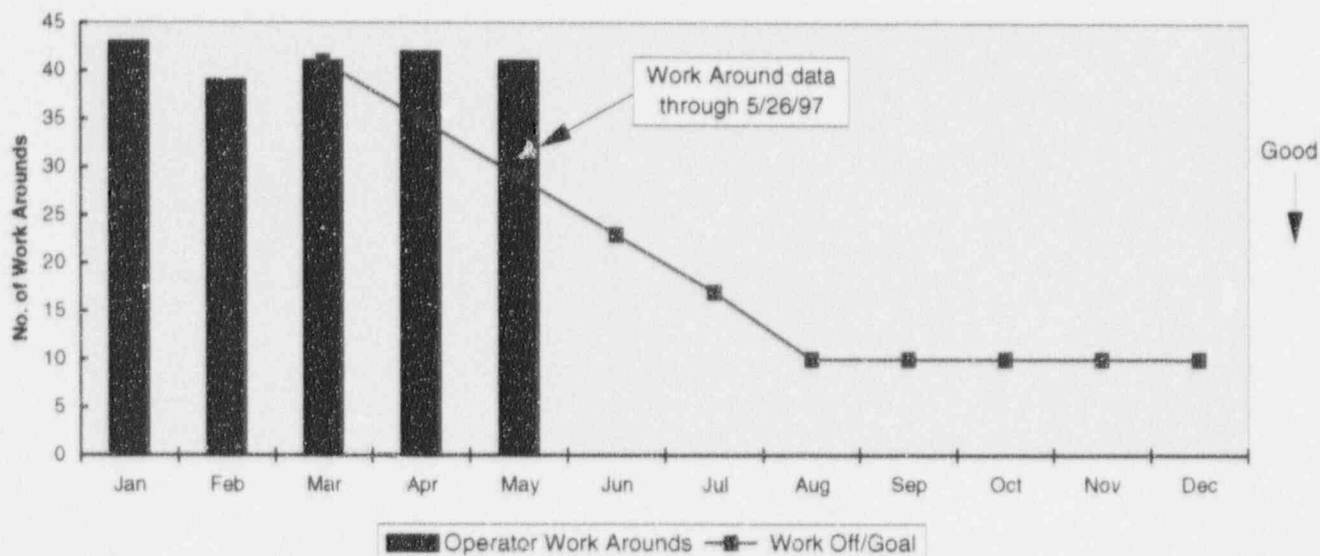
None greater than 6 months old without Unit Officer approval.

Data Source: W. Woolery x0698 Analysis by: W. Woolery x0698 Owner: M. J. Wilson x2081

Operator Work Arounds

Millstone 2 - May 1997

Progress: A workoff plan has been developed to support the goal of ≤ 10 .



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Operator Work Arounds	43	39	41	42	41							
Work Off/Goal			41	35	29	23	17	10	10	10	10	10

Definition

Operator Work Arounds are conditions requiring an operator to work with equipment in a manner other than original design which could:

1. Potentially impact safe operation during a plant transient
2. Potentially impose significant burden during normal operation
3. Create nuisance condition due to recurring equipment deficiency
4. Distract an operator from noticing a recurring condition

Analysis/Action

Repairs are being made and the 16 Operator burdens chosen to be removed are starting to be cleared. The population of items that will remain after startup is being reviewed for aggregate and individual impact on the plant operators. New items will be evaluated as they make the list.

Goal

Goal < 10

None greater than 6 months old without Unit Officer approval.

Comments

Work Around data through 5/26/97

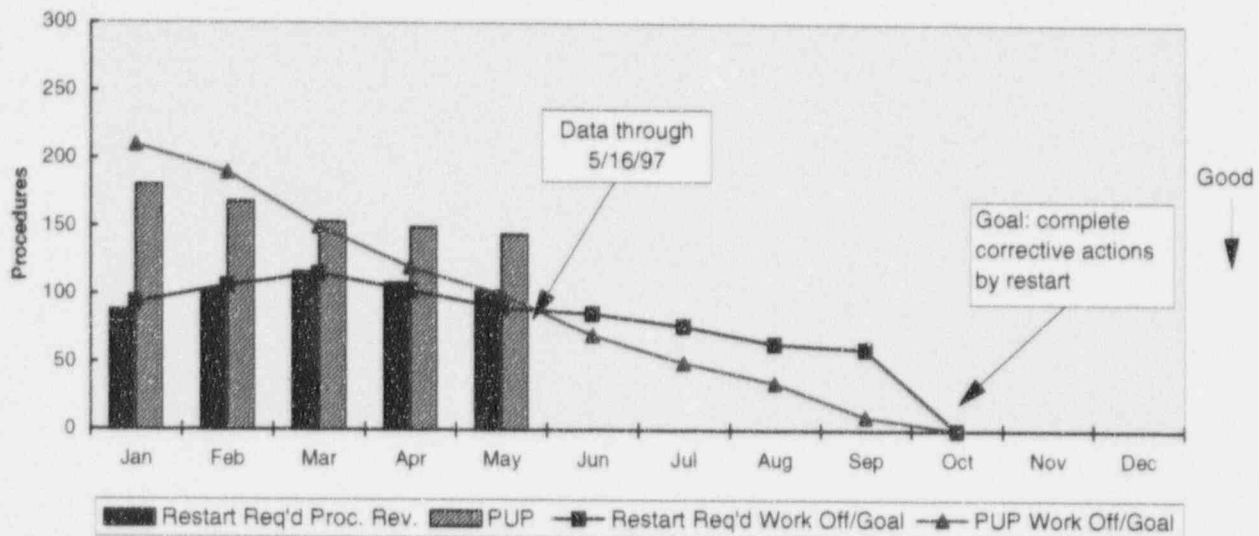
Work off curve reflects end of month goal.

Data Source: W. Woolery x0698 Analysis by: W. Woolery x0698 Owner: M.J. Wilson x2081

Procedure Revision Backlog

Millstone 2 - May 1997

Progress: *Procedure revisions are a challenge to be completed prior to restart. Additional resources and management attention is being applied.*



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Total Remaining	268	270	269	257	246							
Restart Req'd Proc. Rev.	88	102	116	108	102							
PUP	180	168	153	149	144							
Restart Req'd Work Off/Goal	94	106	115	103	90	86	77	64	60	0	0	0
PUP Work Off/Goal	210	190	150	120	100	70	50	35	10	0	0	0

Definition

Procedure Revision Backlog is the total number of new procedures or procedure revisions required or desired for restart.

Millstone Procedure Upgrade Project (PUP) (Phase III) - Upgrade the Technical Procedures at Millstone Station to a Standardized Writer's Guide and Verification and Validation (V&V) Process. The goal of PUP is to improve the technical quality and usability (human factors) of procedures; this will reduce human errors and enhance plant reliability by supporting quality of work.

Comments

Data through 5/16/97

Goal

All restart required procedure revisions and PUP requirements have been reviewed and proper corrective actions have been taken prior to restart.

Analysis/Action

One hundred fifty deficient procedures have been identified to date. The majority are EOP revisions and AOP development and upgrades. The remaining are actual deficiencies which are identified as needed for restart. This UPI is expected to have constant input of newly identified procedure deficiencies, still with the goal of completion before restart.

PUP is 89% complete. The Centralized Procedure Group (CPG) is continuing to work down the number of procedures not yet upgraded.

Data Source: W.J. Chaffant x6416

Analysis by:

W.R. Watson x6245

Owner:

H.L. Miller x0474

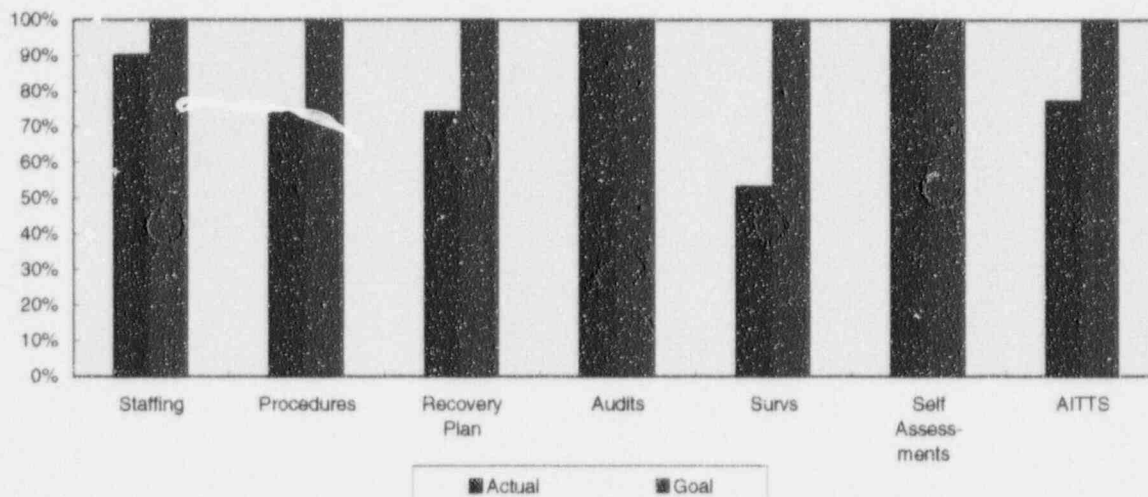
Appendix 3

KEY PERFORMANCE INDICATORS - OVERSIGHT

Millstone Oversight Recovery Gap Chart

April 1997

Progress: *Progress is being made in all areas. Outstanding recovery plan items continue to be an issue. Management attention is being focused on problem areas.*



Raw Data

	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97	Jan-98	Feb-98	Mar-98
Staffing - Actual	121											
Staffing - Goal	134											
Procedures - Actual	23											
Procedures - Goal	31											
Recovery Plan - Actual	88											
Recovery Plan - Goal	119											
Audits - Actual	2											
Audits - Goal	2	5	7	5	4	5	7	5	0			
Surveillances - Actual	18											
Surveillances - Goal	34											
Self Assessments - Actual *	NA	NA		NA	NA		NA	NA				
Self Assessments - Goal *	NA	NA	9	NA	NA	8	NA	NA	6			
AITTS Current - Actual	159											
AITTS Current - Goal	206											

Definition

This indicator measures progress in Millstone Oversight Recovery. The two bars measure actual percentage vs. the goal.

* Self Assessment goals set by the quarter.

Analysis/Action

Goal

Comments

Data Source:

Analysis by:

V. Papadopolis x5245

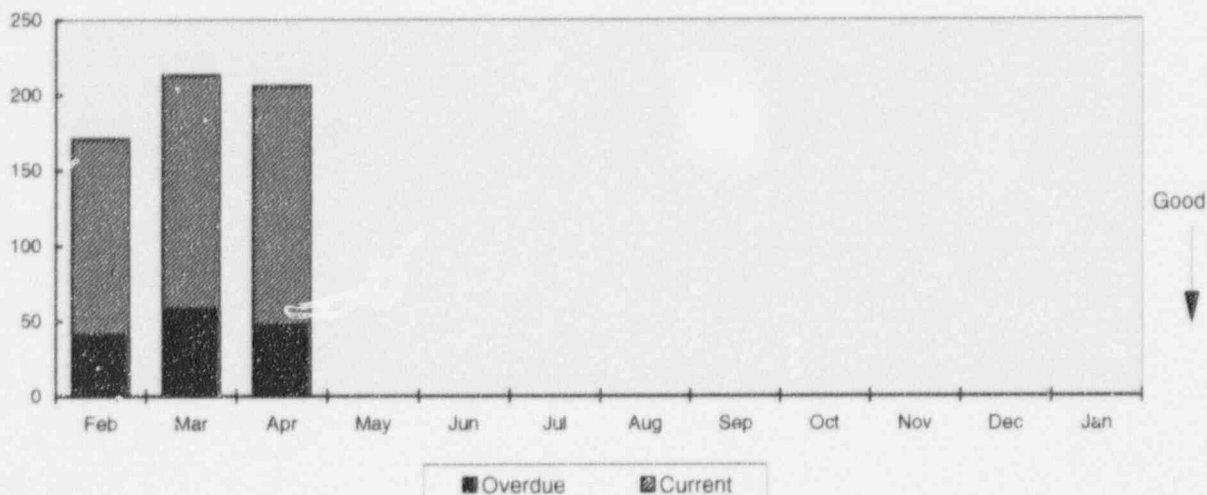
Owner:

D. Goebel

Millstone Oversight AITTS Assignments

April 1997

Progress: Outstanding items are being addressed by all organizations. Work off curves are being utilized to track individual group efforts.



Raw Data

	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97	Jan-98
Overdue	41	58	47									
Current	130	155	159									
Total	171	213	206									
NRC Commitments	4	17	4									
Unit Restart Items	105	114	119									

Definition

Displayed are the number of A/R assignments for the Nuclear Oversight Organization at Millstone in the Action Item Tracking and Trending System (AITTS). Both overdue and total assignments are shown.

Assignments made to Oversight groups that are designated as commitments to the NRC (assignment type:CATC in AITTS) are listed in the table, as well as assignments made to Oversight groups that the Millstone units have designated as necessary to be completed for their unit restart.

Data is based on all Millstone Oversight alert groups.

Analysis/Action

Breakdown of April data by Department:

Overdue/Total

VP 0/4
PE 38/156
ECP 0/3
A&P 8/28
A&E 1/15

Goal

Goal: No overdue items. Any items determined to require resolution prior to key events (ICAVP, OSTI or mode changes) are completed in a timely manner.

Comments

Item due dates are being screened to determine any which require resolution prior to key events, such as ICAVP, OSTI, or mode changes.

Data Source: M. Baldini x4456

Analysis by:

V. Papadopolis x5245

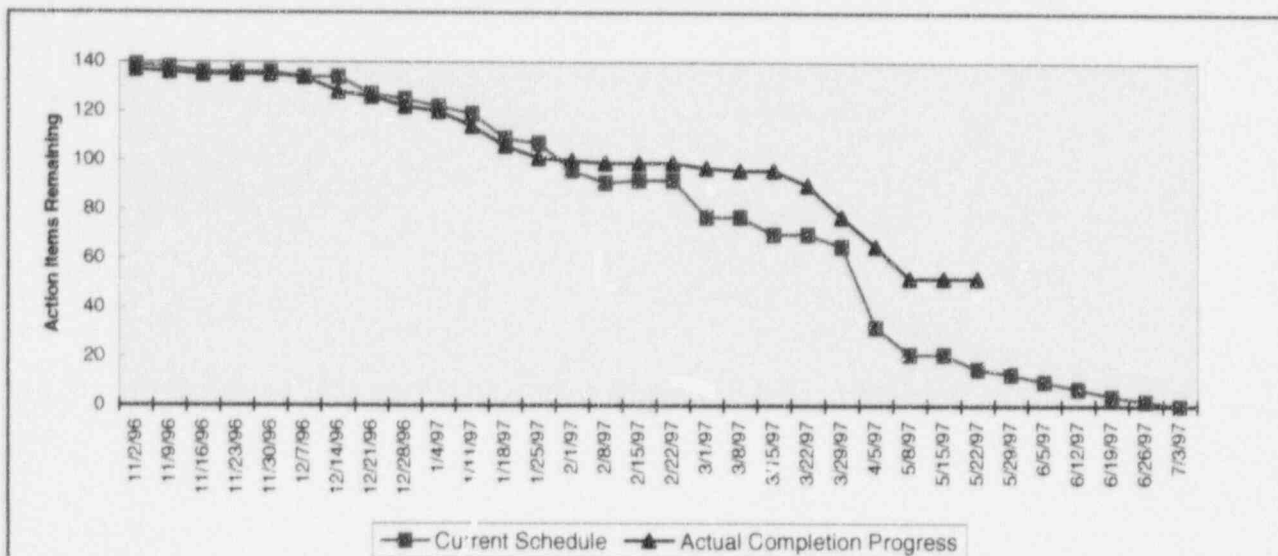
Owner:

D. Goebel

Millstone Oversight Recovery Plan Action Item Work Off Curve

May 1997

Progress: Oversight is behind schedule in completing Recovery Plan items.
Corrective measures are being taken to reduce overdue items.



Raw Data

Remaining Items	2/1/97	2/8/97	2/15/97	2/22/97	3/1/97	3/8/97	3/15/97	3/22/97	3/29/97	4/5/97	5/8/97	5/23/97
Actual	101	100	99	99	97	96	96	90	77	60	52	52
Current Schedule	96	91	92	92	77	77	70	68	67	25	21	15
Schedule Variance	0	0	0	0	0	0	0	0	0	35	31	37

Definition

This chart displays the work off curve for the action items in the Nuclear Oversight Recovery Plan. Depicted are the current schedule.

Analysis/Action

Weekly VP/Director meetings are conducted to review plan status and to implement corrective action. Management believes the plan schedule will be recovered and that Nuclear Oversight will not impact unit readiness for restart. The majority of Oversight internal process improvements were scheduled to be complete by 3/31/97. Four such initiatives slipped beyond that date, which account for most of the overdue action items. Corrective action underway is expected to bring three of these issues to closure by 4/18/97. Due to the significant scope of the license commitment review, this activity is rescheduled to be complete by 6/30/97.

Goal

The goal is to close out the Recovery Plan items in accordance with the approved schedule.

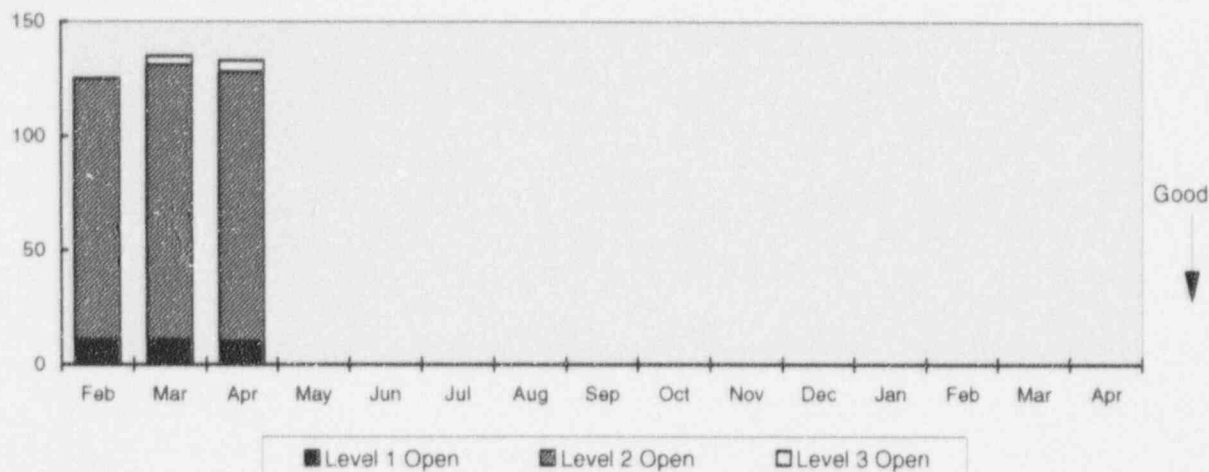
Comments

Thirty-seven action items are overdue as of 5/23/97.

Status of Oversight Condition Reports

Millstone 1 - April 1997

Progress: *Level 1 and 2 backlogs are not changing to meet goal expectations. Many CRs remain open.*



Raw Data

	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97	Jan-98
Total CRs	164	181	205									
Open	125	135	133									
L1/>30 days	11/10	11/10	10/9									
L2/>30 days	114/102	120/113	118/96									
L3/>30 days	0/0	4/0	5/4									

Definition

This graph displays the status of Condition Reports (CRs) initiated by Nuclear Oversight for adverse, discrepant, or other conditions needing improvement.

Open - Condition has been identified. The evaluation for reportability and operability, failure mode and/or root cause has not been performed, or, has been performed, but not yet approved.

Resolved - Condition has an accepted solution, a clear owner, a commitment for completion and a corrective action date and plan. The corrective action has not been completed by the unit.

Overall evaluation of the unit based on this KPI is as follows:
SAT (Green) No Level 1 or Level 2 CRs open > 30 days without an approved corrective action plan.

UNSAT (Red) Any Level 1 CR open > 30 days without an approved corrective action plan.

MARGINAL (Yellow) No Level 1 CR open > 30 days but a Level 2 CR open >30 days without an approved corrective action plan.

Analysis/Action

Goal

No Level 1 or 2 CRs open > 30 days.

Comments

Data Source: M. Baldini x4456

Analysis by:

V. Papadopolis x5245

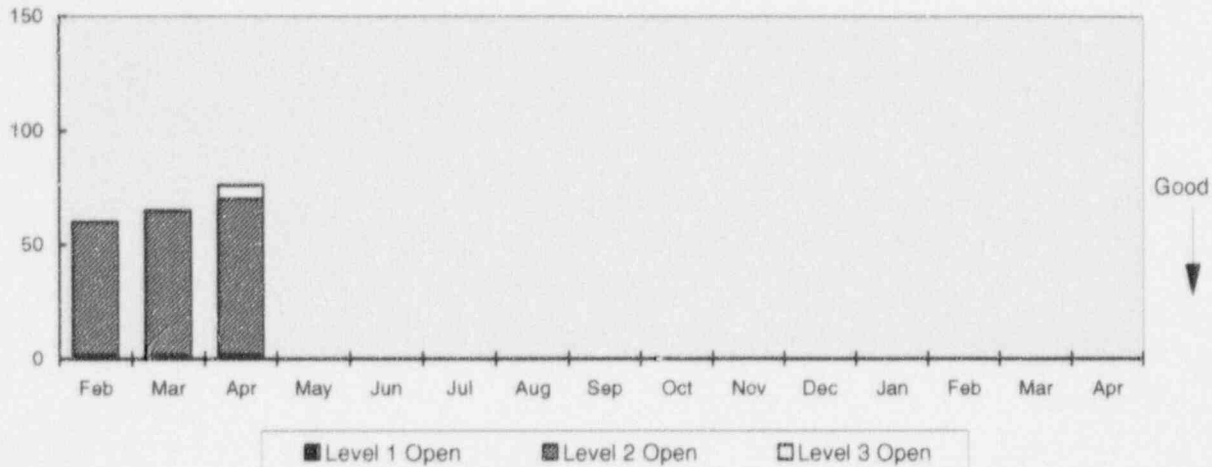
Owner:

D. Goebel

Status of Oversight Condition Reports

Millstone 2 - April 1997

Progress: *Backlogs continue to increase. Many items remain open with the majority over 30 days old.*



Raw Data

	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97	Jan-98
Total CRs	87	95	107									
Open	60	65	76									
L1/>30 days	2/1	2/2	2/2									
L2/>30 days	58/51	63/58	68/59									
L3/>30 days	0/0	0/0	6/1									

Definition

This graph displays the status of Condition Reports (CRs) initiated by Nuclear Oversight for adverse, discrepant, or other conditions needing improvement.

Open - Condition has been identified. The evaluation for reportability and operability, failure mode and/or root cause has not been performed, or, has been performed, but not yet approved.

Resolved - Condition has an accepted solution, a clear owner, a commitment for completion and a corrective action date and plan. The corrective action has not been completed by the unit.

Overall evaluation of the unit based on this KPI is as follows:
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MARGINAL (Yellow) No Level 1 CR open > 30 days but a Level 2 CR open >30 days without an approved corrective action plan.

Analysis/Action

Goal

No Level 1 or 2 CRs open > 30 days.

Comments

Data Source: M. Baldini x4456

Analysis by:

V. Papadopolis x5245

Owner:

D. Goebel

Status of Oversight Condition Reports

Millstone 3 - April 1997

Progress: *Some progress is evident in reducing overall numbers of issues. Many still remain open > 30 days which does not meet goal expectations.*



Raw Data

	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97	Jan-98
Total CRs	152	179	200									
Open	96	109	99									
L1/>30 days	11/5	15/11	11/10									
L2/>30 days	85/63	93/85	86/60									
L3/>30 days	0/0	1/0	2/1									

Definition

This graph displays the status of Condition Reports (CRs) initiated by Nuclear Oversight for adverse, discrepant, or other conditions needing improvement.

Open - Condition has been identified. The evaluation for reportability and operability, failure mode and/or root cause has not been performed, or, has been performed, but not yet approved.

Resolved - Condition has an accepted solution, a clear owner, a commitment for completion and a corrective action date and plan. The corrective action has not been completed by the unit.

Overall evaluation of the unit based on this KPI is as follows:

SAT (Green) No Level 1 or Level 2 CRs open > 30 days without an approved corrective action plan.

UNSAT (Red) Any Level 1 CR open > 30 days without an approved corrective action plan.

MARGINAL (Yellow) No Level 1 CR open > 30 days but a Level 2 CR open > 30 days without an approved corrective action plan.

Analysis/Action

Goal

No Level 1 or 2 CRs open > 30 days.

Comments

Data Source: M. Baidini x4456

Analysis by:

V. Papadopolis x5245

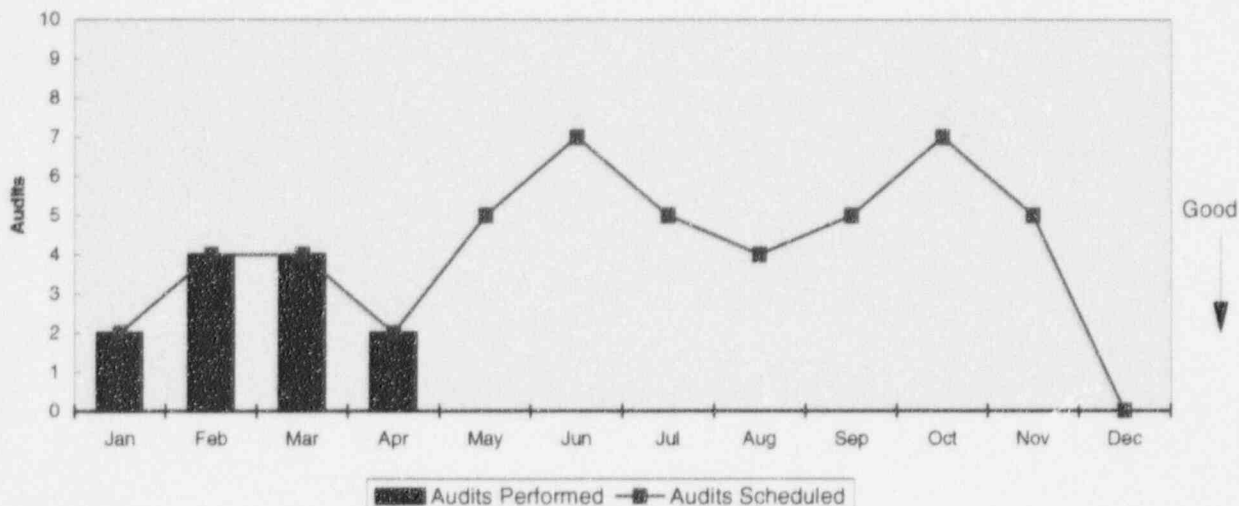
Owner:

D. Goebel

Millstone Oversight Audit Schedule Adherence

April 1997

Progress: Audits are on track and schedule adherence has been excellent.



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Audits Scheduled	2	4	4	2	5	7	5	4	5	7	5	0
Audits Performed	2	4	4	2								

Definition

This chart depicts the schedule adherence of Oversight Audits at Millstone Station. The audit schedule for the year was approved in January, 1997. The audit is considered performed when the exit occurred.

Analysis/Action

Goal

Goal: Perform all audits as scheduled.

Comments

Corrective Action audits for each unit were combined into one audit. See memo AE-97-4020 dated 4/7/97

Date Source: B. Kaufman x2246

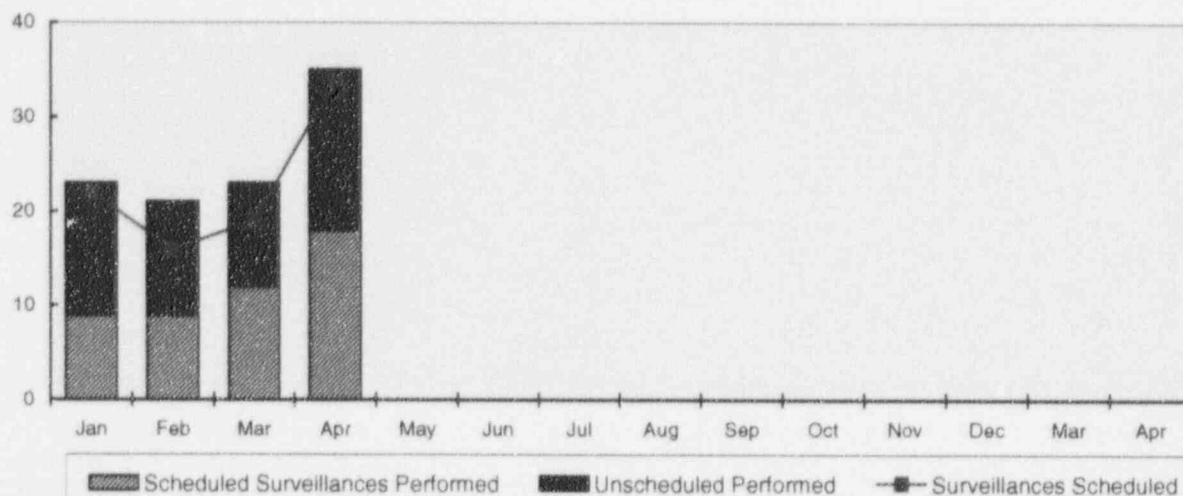
Analysis Ly:

B. Kaufman x2246 Owner:

Millstone Oversight Surveillance Schedule Adherence

April 1997

Progress: *Schedule adherence has been below goal levels due to emerging work. Overall surveillance philosophies have changed to reflect a quick turnaround for field observations.*



Raw Data

	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97
Surv Scheduled	22	16	19	34								
Surv Performed (sched)	9	9	12	18								
Performed (unscheduled)	14	12	11	17								
Performed/Scheduled by Unit:												
Unit 1	5/6	2/7	7/8	6/11								
Unit 2	2/12	3/4	2/4	7/17								
Unit 3	2/4	4/5	3/7	5/6								

Definition

This chart depicts the Oversight surveillance scheduled and the number of them performed. The table shows the breakdown of the scheduled surveillances performed vs. those scheduled by unit. It also shows the total number of unscheduled surveillances performed.

Analysis/Action

Surveillances were not formally scheduled at Millstone until Nov., 1996. The numbers indicate that 56% of the scheduled surveillances were performed in February. There are several reasons not all surveillances were performed as planned. Several surveillances were performed on emergent issues. The 1996 surveillances were scheduled to take one week for unit specific surveillances and 2 weeks for multi-unit surveillances. Experience indicates this is not currently achievable or desirable. In 1997 unit specific surveillances are scheduled to take 2 weeks and multi-unit 3 weeks. March surveillances did not meet the NU goal, although overall improvement was noted. The 4 week "look ahead" recently implemented should improve schedule adherence.

Goal

Preliminary goal is 100% schedule adherence. As of May 1, 1997, surveillances will be performed within 2 days.

Comments

April data:		
(Performed)	Scheduled	Unscheduled
Unit 1	6	8
Unit 2	7	5
Unit 3	5	4

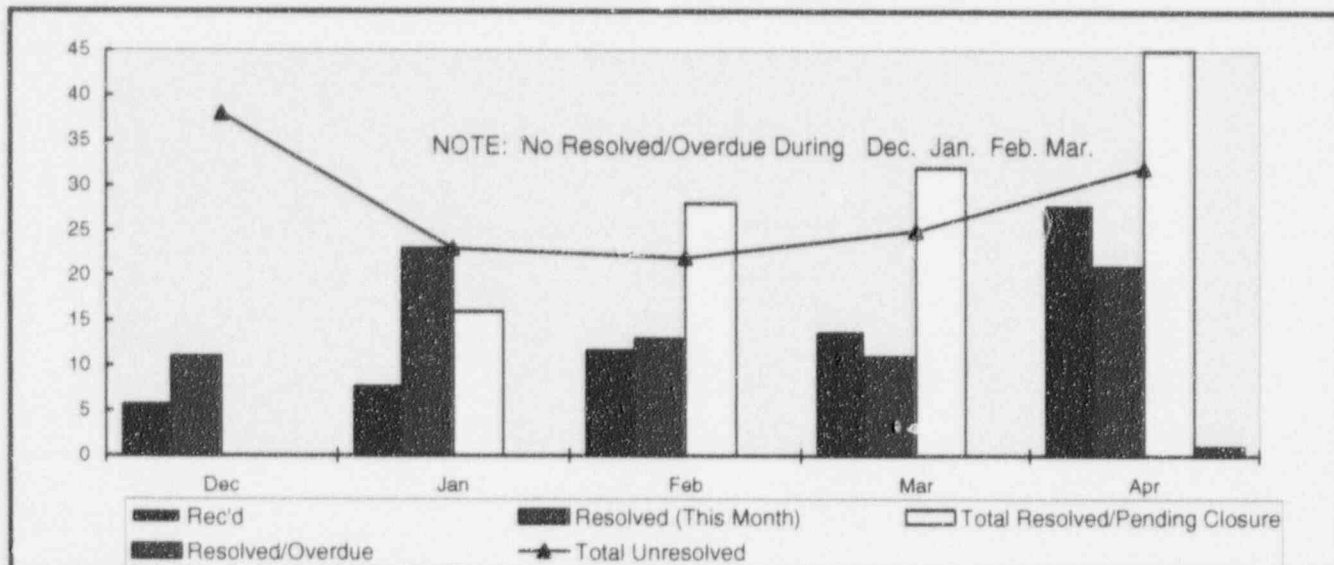
Appendix 3

**KEY PERFORMANCE INDICATORS - EMPLOYEE
CONCERNS PROGRAM**

Nuclear Employee Concerns Program Progress

Millstone/CY - April 1997

Progress: Employees are making more use of the ECP which is viewed as a positive indicator of their confidence in that program.



Raw Data

1996-1997	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Received	6	8	12	14	28							
Rate /Year	72	96	144	168	336							
Resolved	11	23	13	11	21							
Unresolved < 45 Days	12	4	12	16	20							
Unresolved 45-90 Days	6	4	2	5	10							
Unresolved >90 Days	20	15	8	4	2							
Total Unresolved	38	23	22	25	32							
Resolved/Pending Closure		16	28	32	45							
Resolved/Overdue		0	0	0	1							

NOTE: Data listed through 4/30/97.

Definition

The ECP receives, and attempts to resolve, concerns which are both directly safety related and non-safety related. This data reflects both types of concerns.

Beginning January 1, 1997 the Employee Concerns Program introduced "Resolved" as a category of concern status. To meet this condition a concern must have an accepted solution, a clear owner, a material commitment for completion and a corrective action completion date and plan. The data in this table reflects this new definition.

Beginning with February data, ECP is plotting the number of Resolved But Unclosed concerns as well as any concerns which have been identified as resolved, but whose corrective action completion is overdue for completion.

Analysis/Action

As of 4/30/97, 32 concern issues are unresolved. April new receipts nearly doubled over March. Based upon the current filings, ECP can expect to receive well over 100 concerns during 1997. Additional contractor staff began work on 2/3/97 to reduce the backlog. The use of expanded staff has allowed the ECP to process the sharp increase in concerns while maintaining a nearly unchanged backlog.

Goal

The ECP Goal is to have no unresolved concern older than one year by 2/13/97, no unresolved concern older than 3 months by 5/13/97, and no unresolved concern older than 45 days by 7/13/97.

The long term goal established in the ECP Comprehensive Plan calls for concern resolution within 45 days of initial filing.

Comments

Data Source: C. Mihalko x4541

Analysis by: C. Mihalko x4541

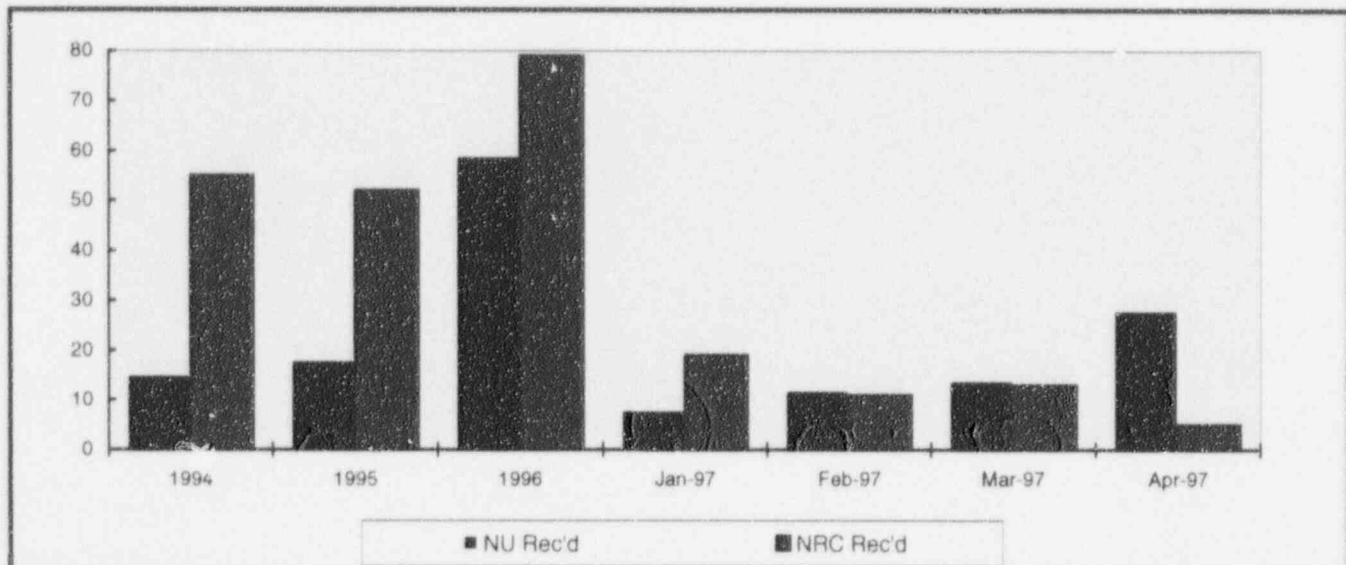
Owner:

E. Morgan x4335

Number of NU and NRC Received Concerns

Millstone/CY - April 1997

Progress: April results continue improving trend of NRC vs NU concerns received.



Raw Data

1997	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NU Received	8	12	14	28								
NRC Received	19	11	13	5								
NU Rec'd YTD	8	20	34	62								
NRC Rec'd YTD*	19	30	43	48								

NOTE: Data listed through 4/30/97.

Definition

Nuclear safety concerns are nuclear or radiological events or observations reported to NU's Employee Concerns Program (ECP) believed to violate regulatory requirements or NU policy or procedure concerning nuclear safety, which have not been adequately/promptly addressed by formal Quality Program Reporting mechanisms or fall outside the scope of the formal reporting mechanisms; e.g. Nonconformance Reports, Adverse Condition Reports, Drawing Change Requests, etc. The ECP also receives, and attempts to resolve, concerns which are not directly safety related.

NRC concerns include concerns received from licensee employees, contractors, the general public and concerns self-generated by NRC staff based upon observations and/or media reports.

Analysis/Action

During the month of April, the NU ECP received significantly more concerns than were received by the NRC. This continues the trend began in February. A continued decline in the number of concerns filed with the NRC, combined with an increased number raised with the NU ECP, would be evidence of increased employee confidence in our internal resolution process.

Goal

	1993	1994	1995	1996
NRC Rec'd Concerns				
Millstone	39	45	42	76
Haddam Neck	13	8	9	23
US Avg. (110 stations)	8.8	8.1	7.4	8

Comments

The final NRC tally for the Millstone site for 1996 was 76 concerns. 1996 concerns lodged with the NRC from the Haddam Neck plant total 23. Both totals represent corrected final tallies as received from the NRC Allegations Advisor.

Data Source: C. Mihalko x4541

Analysis by: C. Mihalko x4541

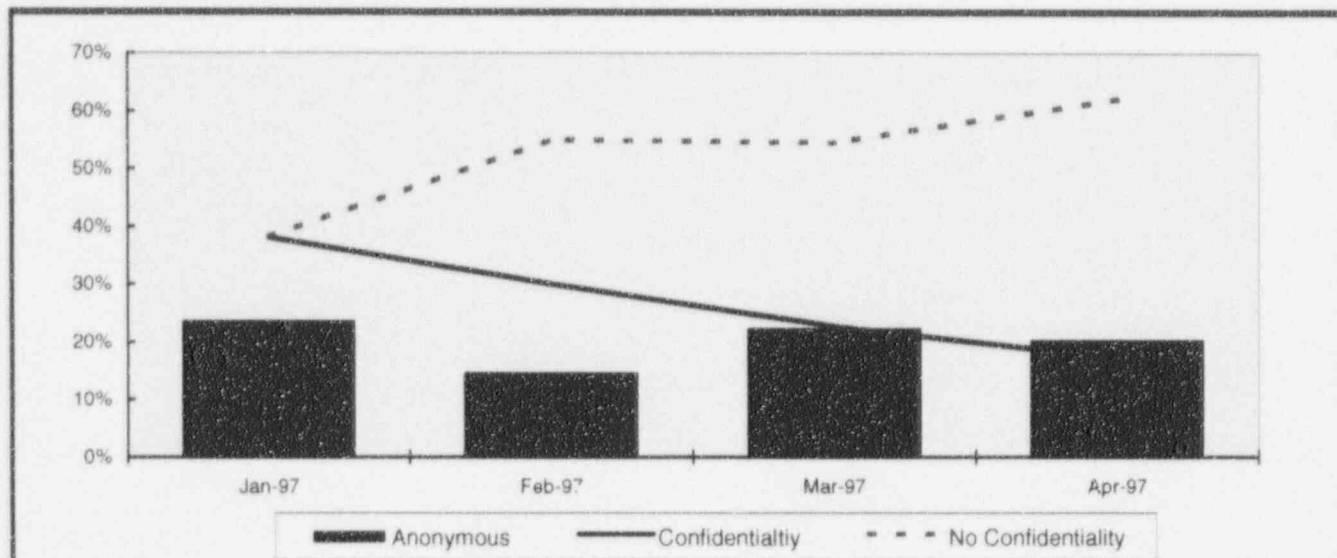
Owner:

E. Morgan x4335

Millstone Employee Concerns Confidentiality Trend

April 1997

Progress: Increase in confidentiality waivers may indicate employee confidence in the ECP process is improving.



Raw Data

1997	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Anonymous	5	3	5	6								
Confidentiality	8	6	5	5								
No Confidentiality	8	11	12	18								
Total	21	20	22	29								

Definition

Nuclear safety concerns are nuclear or radiological events or observations reported to NU's Employee Concerns Program (ECP) believed to violate regulatory requirements or NU policy or procedure concerning nuclear safety, which have not been adequately/promptly addressed by formal Quality Program Reporting mechanisms or fall outside the scope of the formal reporting mechanisms; e.g. Nonconformance Reports, Adverse Condition Reports, Drawing Change Requests, etc. The ECP also receives, and attempts to resolve, concerns which are not directly safety related. This data includes such concerns.

Analysis/Action

Goal

Comments

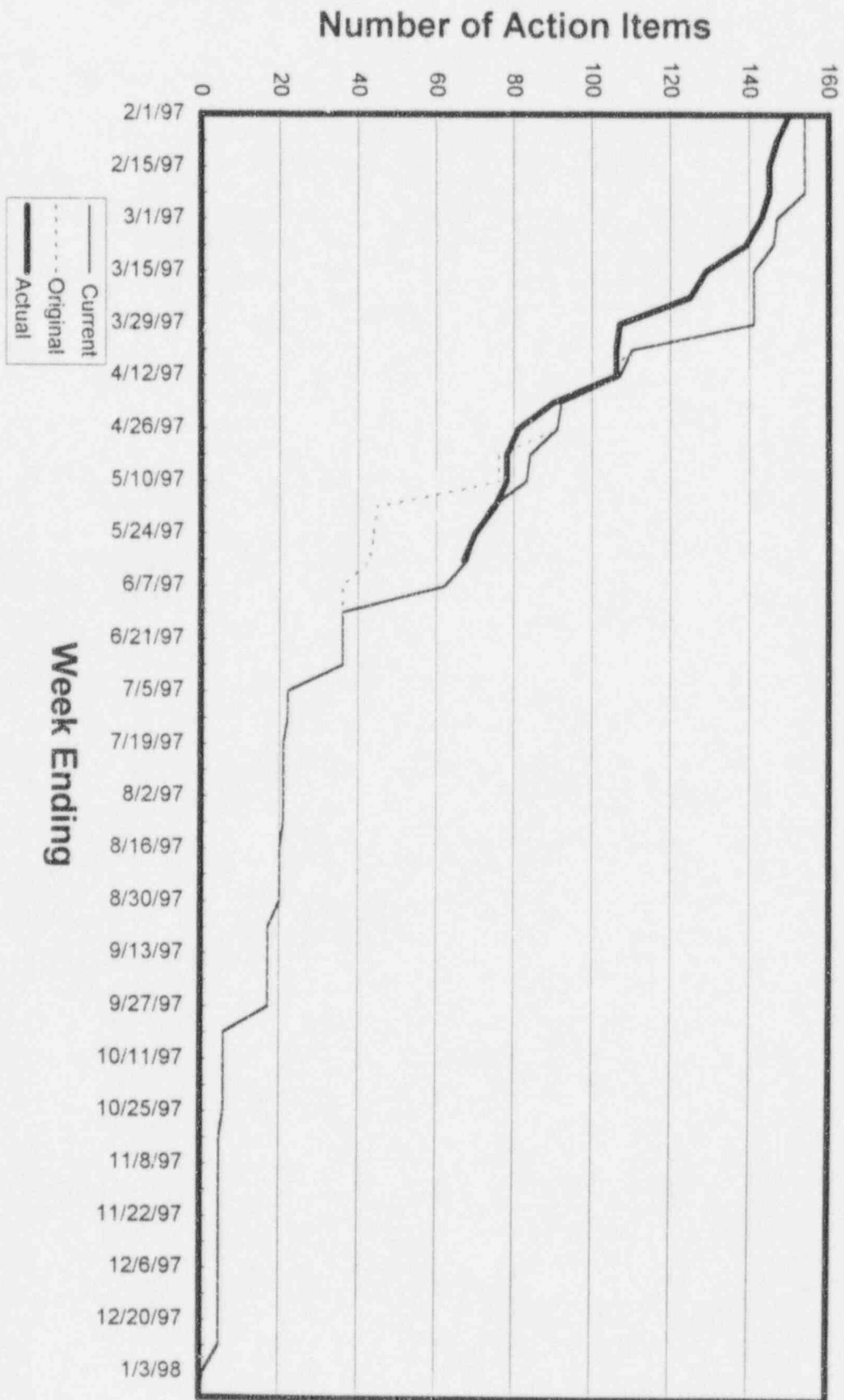
Data Source: C. A. Mihalko x4541

Analysis by: C. A. Mihalko x4541

Owner:

E. Morgan x4335

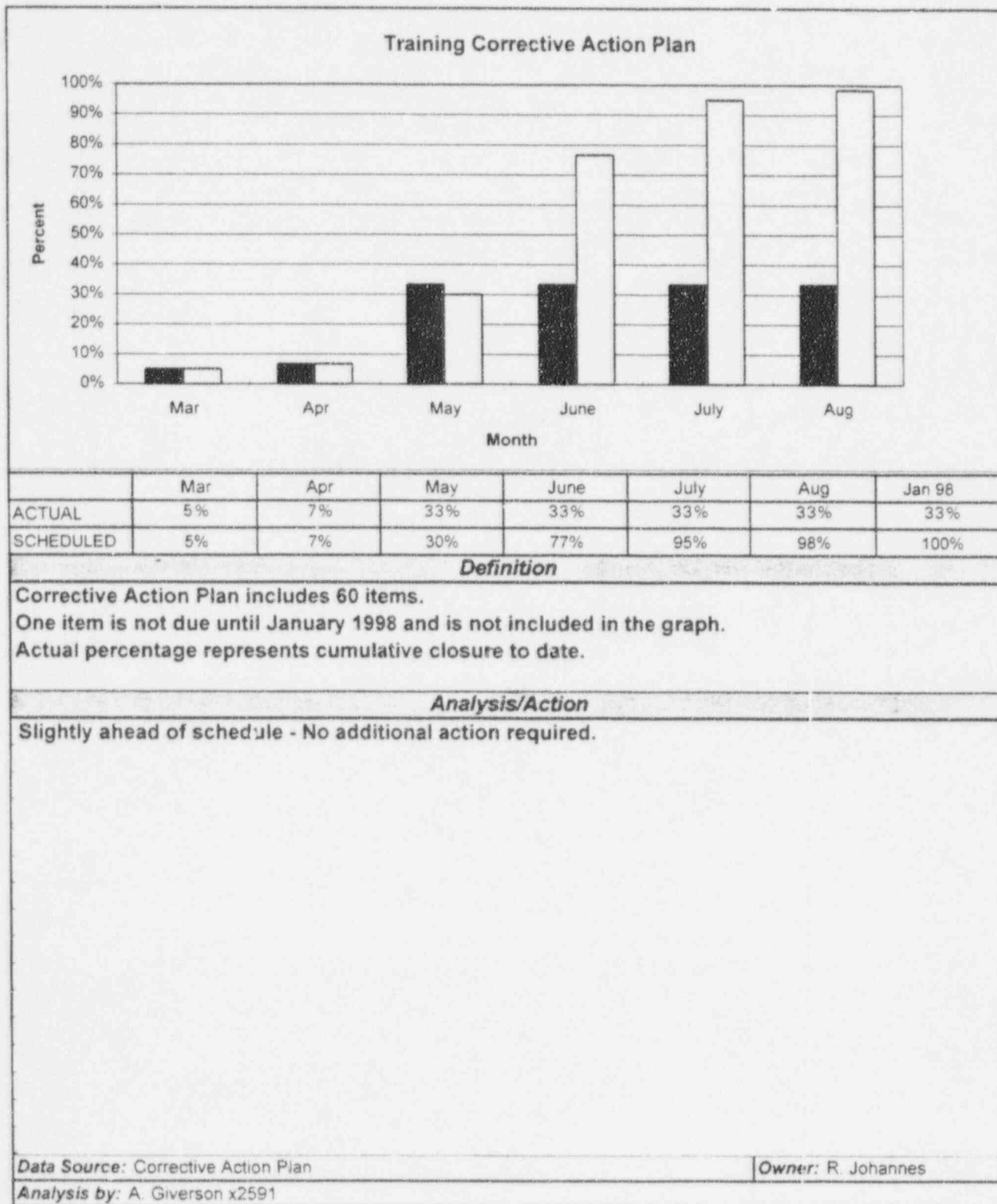
Employee Concerns Comprehensive Plan Completion Progress Curve
Status as of 5/30/97



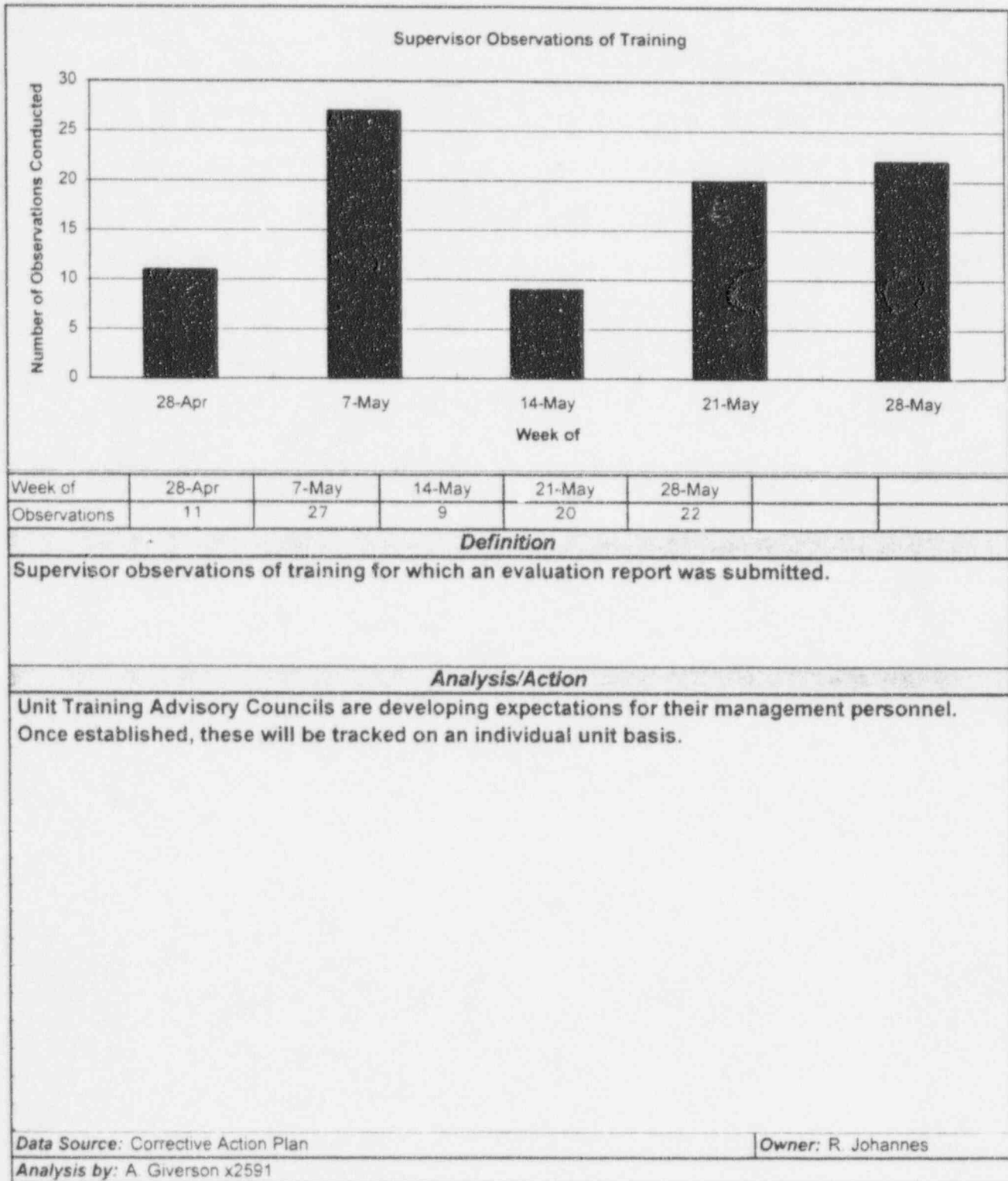
Appendix 3

KEY PERFORMANCE INDICATORS - TRAINING

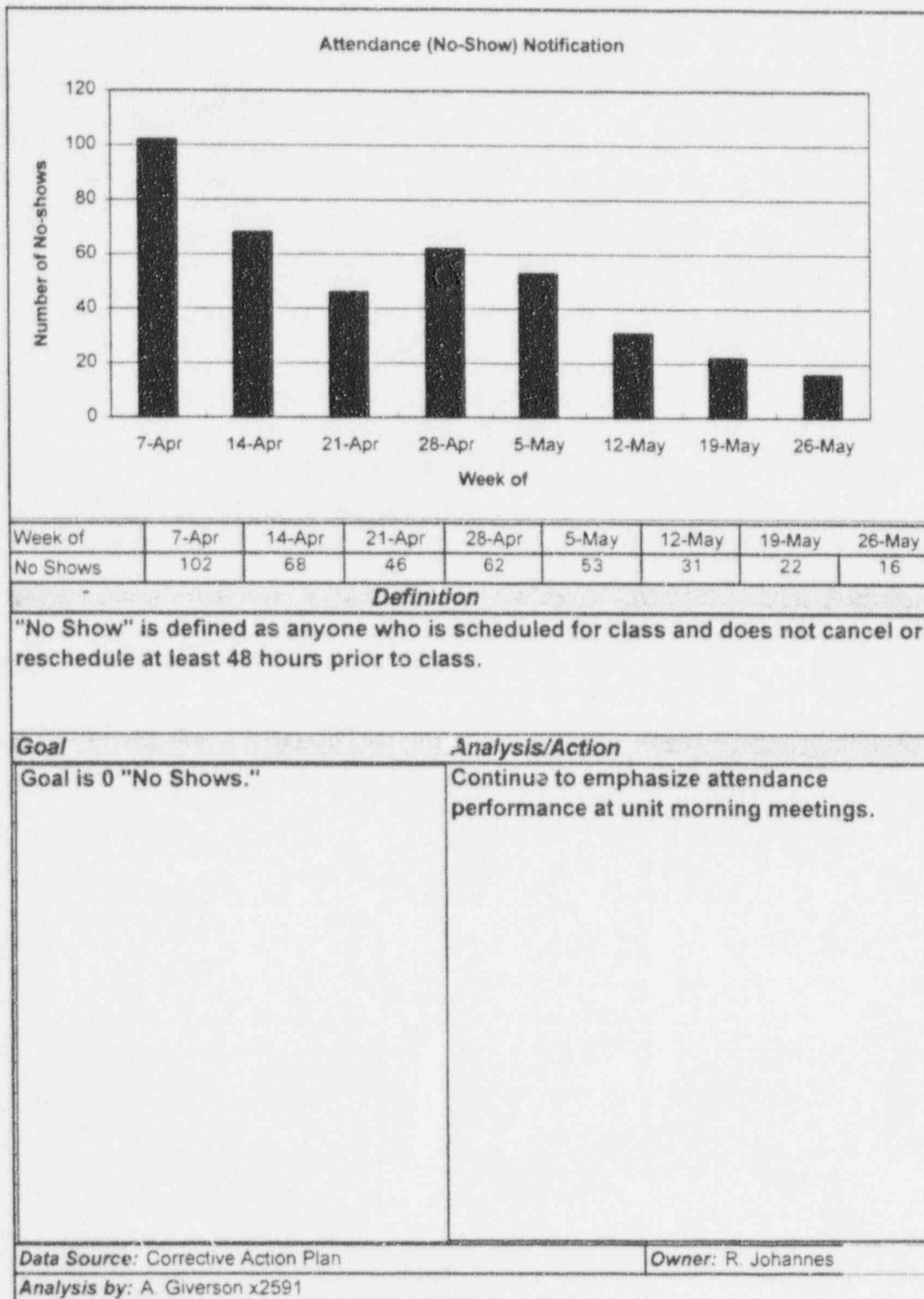
Training Corrective Action Plan



Supervisor Observations of Training



Attendance (No-Show) Notification



Appendix 4

NU RESTART DEFINITIONS

APPENDIX 4

NU Restart Definitions *

ICAVP READINESS

- 1) Audit Plan finalized
- 2) Discovery phase complete for 50% of safety and risk significant systems and associated Engineering Programs
- 3) ICAVP Contractor and NRC Inspection support in place

PHYSICAL PLANT READINESS

- 1) Systems functional
- 2) Satisfactory pre-startup test results
- 3) Adequacy of system line-ups
- 4) Restart hardware issues resolved (including SIL)
- 5) Maintenance backlog managed and impact on operation assessed
- 6) Startup and power ascension program in place
- 7) Adequate plant materiel condition
- 8) Operator work-arounds and control room annunciator deficiencies addressed
- 9) Plant drawings reflect as-modified conditions

* Excerpt from May 21, 1997 Northeast Utilities Briefing for the NRC Restart Assessment Panel

OSTI READINESS

- 1) Plant operated within regulatory requirements
- 2) Organizations that control and support operations are functioning effectively
- 3) Staff and plant are fully prepared for resumption of power operation
- 4) 03560, SIL, ISP and restart items closed or disposition scheduled with work-off controlled and tracked and results showing favorable trend or at goal
- 5) 10 CFR 50.54(f) responses on schedule
- 6) Corrective action plan implementation addresses root causes of performance decline
- 7) Startup and power ascension program in place
- 8) Long-term performance program in place
- 9) Operator readiness
- 10) NRC Inspection support in place

READY FOR RESTART (Regulatory)

- 1) Restart related ICAVP, OSTI, 0350, Inspection, ISP, 10 CFR 50.54(f) and licensee identified items resolved and deferred items dispositioned
- 2) Compliance with regulatory requirements (including Technical Specification changes and license amendments implemented)
- 3) Startup and power ascension program in place
- 4) Long-term performance program in place
- 5) NRC Restart Assessment Panel response support in place

Appendix 5

SITE INTEGRATED SCHEDULE

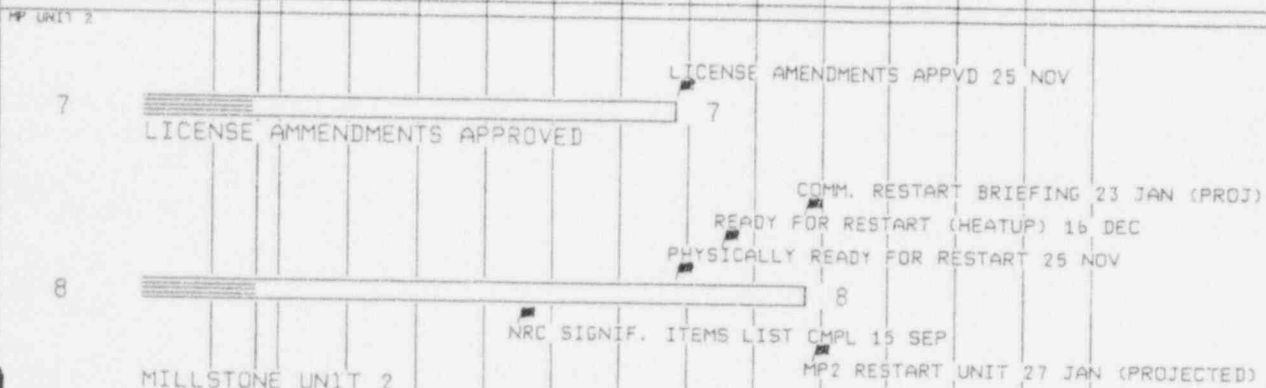
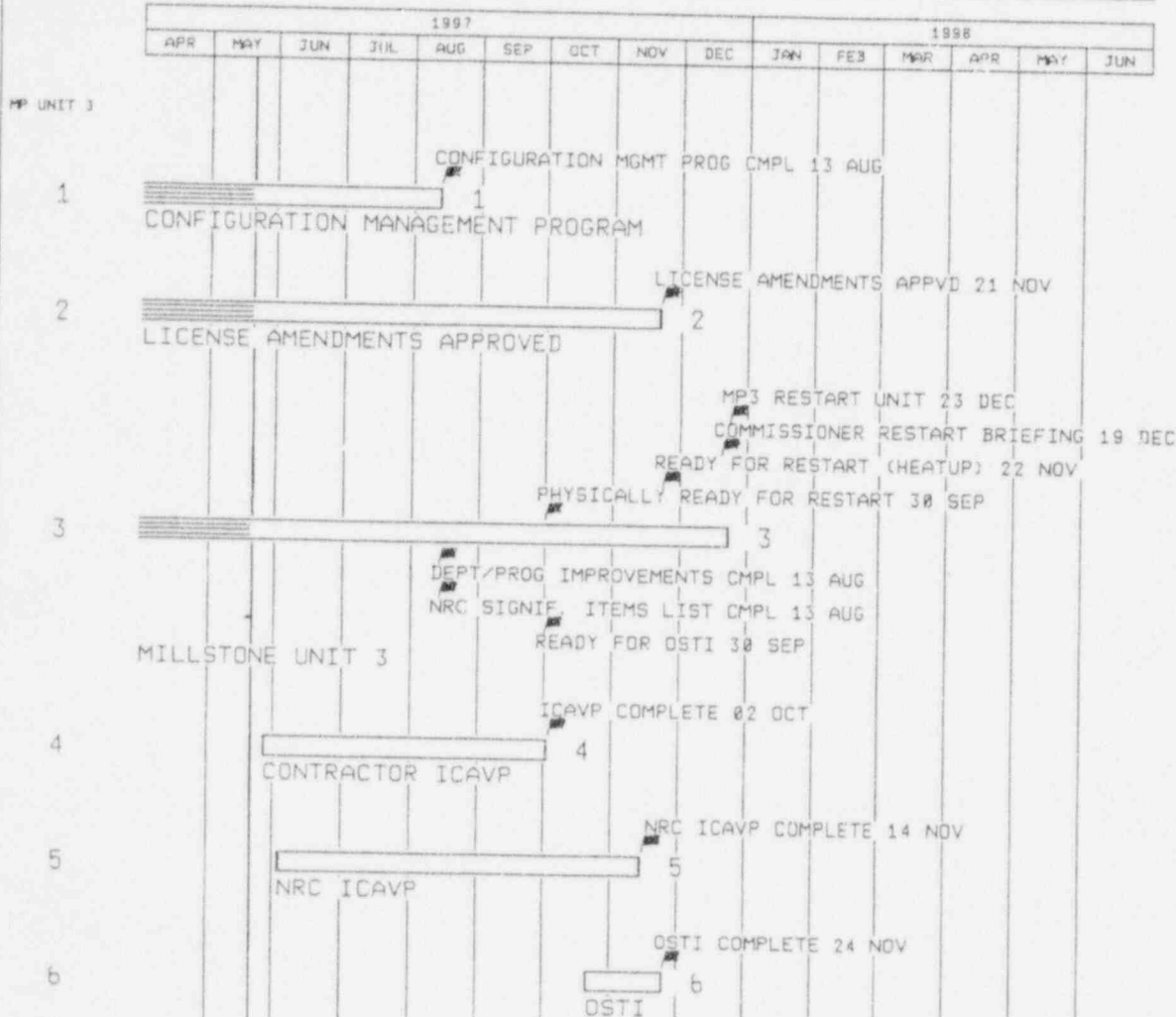
Millstone Nuclear Power Station
Site Integrated Schedule

MILLSTONE

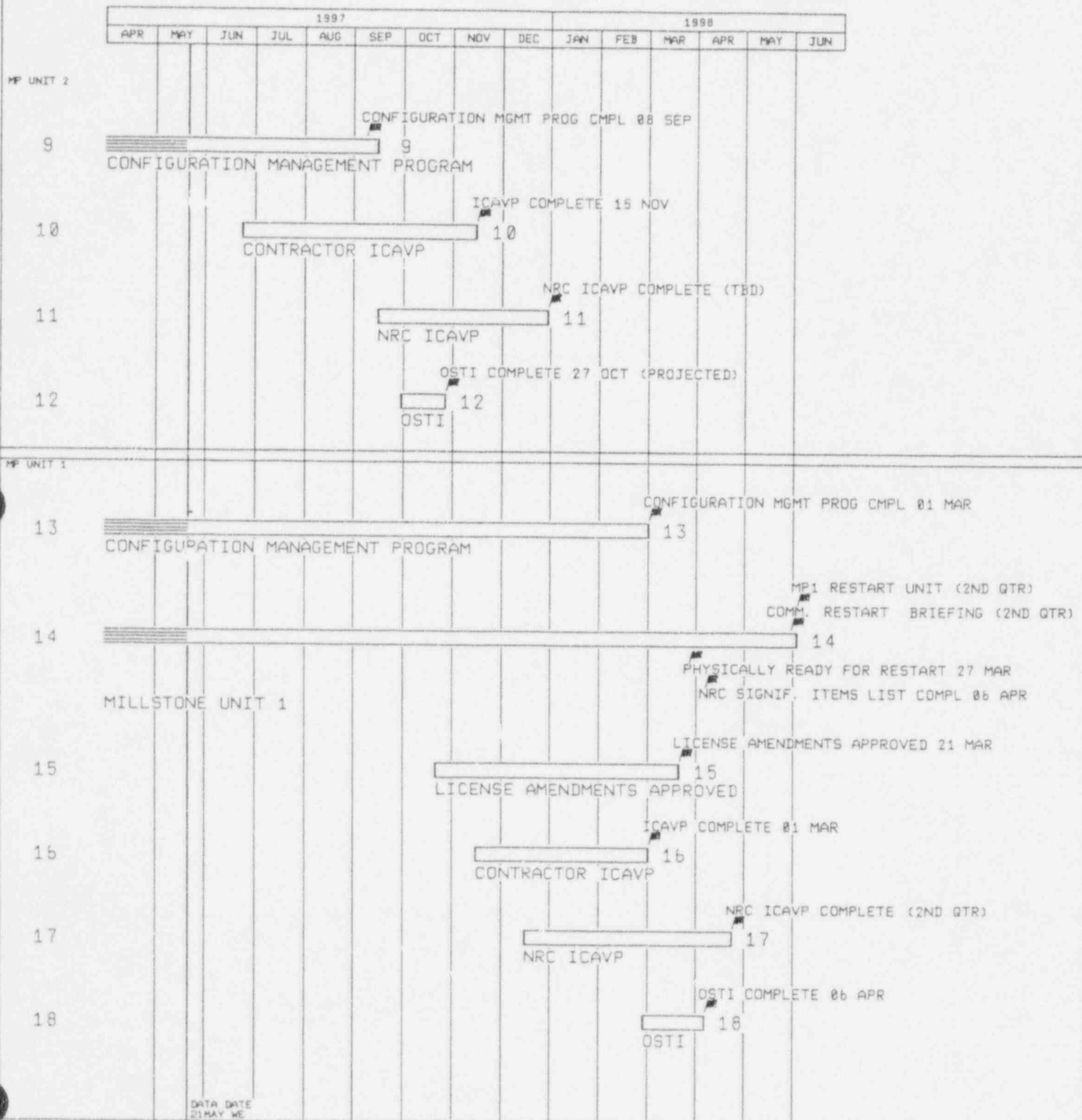
SITE INTEGRATED SCHEDULE

AS OF 5/23/97 (REV. 0)

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PLOT SITE	FINISH	6 JUN 99	LINE BREAK ON	INTERVAL: 1 MONTH(S)	PROJECT 72 93A1
PAGE 1/1 SHEET 1/2	DATA DATE	21 MAY 97	SHORT BREAKS E START E FINSH NODES		SCHEDULE BAR CHART



DATA DATE
21 MAY 97



Millstone Nuclear Power Station
Millstone Units 1, 2 and 3
Level 1 Schedules

M I L L S T O N E


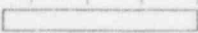
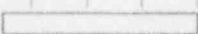
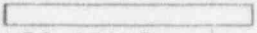

UNIT 1 LEVEL 1 SCHEDULE

AS OF 5/23/97 (REV. 0)

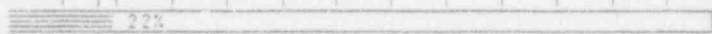
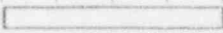
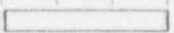


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PAGE 1/1 SHEET 1/3	DATA DATE	21MAY97	SHORT BREAKS E START E FINISH		SCHEDULE BAR CHART

1997												1998					
APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

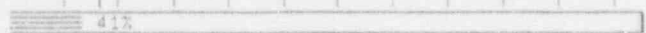
CONFIGURATION MANAGEMENT PROGRAM

- 1 25FEB TU  1DEC MO
CONFIGURATION MGMT PROGRAM - DISCOVERY COMPLETE
- 2 F 8NOV SA
UNIT READY FOR ICAVP
0%
- 3 15NOV SA  1MAR SU
CONTRACTOR ICAVP
8%
- 4 15NOV SA  1MAR SU
(50.54F) PROGRAM COMPLETE
8%
- 5 8DEC MO  23APR TH
NRC ICAVP
0%
- 6 F 1MAR SU
CMP FINAL LETTER SUBMITTAL
0%
- 8APR WE  23APR TH
NRC ISSUE RESOLUTION FROM CMP REVIEW
0%

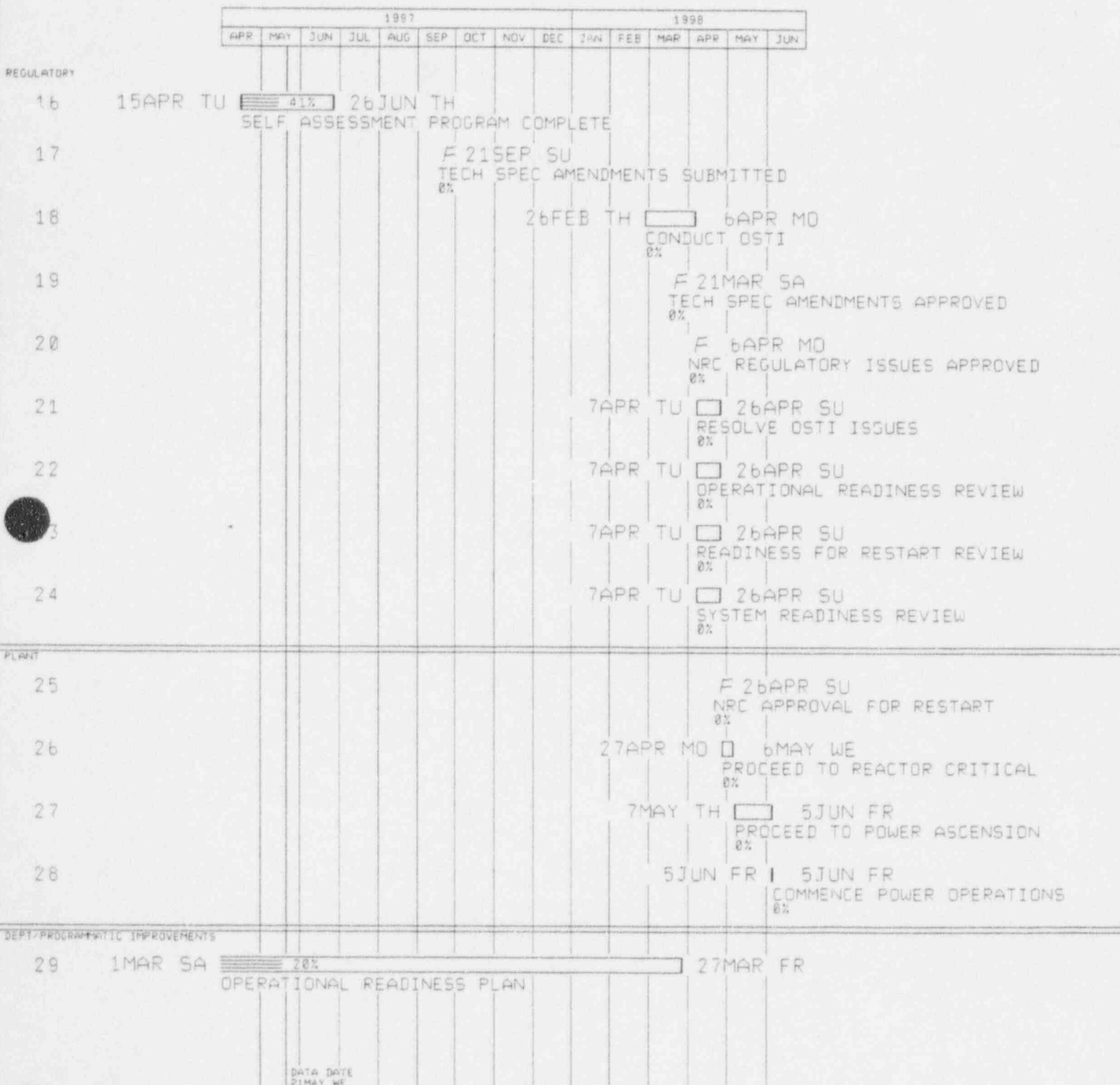
PHYSICAL WORK

- 8 25FEB TU  26APR SU
WORK BACKLOG REDUCED TO ACCEPTABLE LIMITS
- 9 2NOV SU  1MAR SU
ALL MODIFICATIONS REQUIRED FOR SU
8%
- 10 2NOV SU  1FEB SU
ALL MODIFICATIONS REQUIRED FOR RELOAD
8%
- 11 F 1FEB SU
ALL PHYSICAL WORK FOR RELOAD
0%
- 12 2FEB MO  6FEB FR
DOC REVIEWS & APPROVAL TO LOAD FUEL (PORC)
0%
- 13 7FEB SA  11FEB WE
CORE RELOAD
0%
- 14 F 27MAR FR
UNIT 1 PHYSICALLY READY FOR STARTUP
0%

REGULATORY

- 15 8OCT TU  17MAR TU
TECH SPEC AMENDMENTS IMPLEMENTED

DATA DATE
21MAY WE



DEPT/PROGRAMMATIC IMPROVEMENTS

30

1 JAN TH

1 MAR SU

ALL TRAINING REQUIRED FOR STARTUP

31

6 JUN SA

6JUN SU
LONG TERM IMPROVEMENTS
0%

DATA DATE
21 MAY WE

M I L L S T O N E

UNIT 2 LEVEL 1 SCHEDULE

AS OF 5/23/97 (REV. 8)

PROJECT SITE	START	8OCT96	PLANNING SCHEDULE		RUN 10MAY97 13:26
PLOT SITE	FINISH	6JUN99	LINE BREAK ON SCHEDULE SUB SECTIONS	MODE C/F	PROJECT/2 9JA1
PAGE 1/1 SHEET 1/3	DATA DATE	21MAY97	SHORT BREAKS E START E FINISH	INTERVAL: 1 MONTH(S)	SCHEDULE BAR CHART

1997									1998					
APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN

CONFIGURATION MANAGEMENT PROGRAM

PHASE 5 - (9/08/97)

PHASE 4 - (7/21/97)

PHASE 3 - (6/30/97)

PHASE 2 - (6/30/97)

PHASE 1 - (6/30/97)

1 3FEB MO 46% 8SEP MO
CONFIGURATION MANAGEMENT PROGRAM - 50.54 (F)

2 5MAY MO 16MAY FR
CMP INDEPENDENT REVIEW
100%

3 F 30JUN MO
NNECO READY FOR ICAVP
0%

4 30JUN MO 15NOV SA
CONTRACTOR ICAVP
0%

5 F 15SEP MO
10CFR50.54 (F) RESPONSE TO NRC
0%

6 F 30NOV SU
ICAVP REVIEW & REPORT COMPLETE
0%

PHYSICAL WORK

7 26DEC TH 41% 1DEC MO

MAJOR MODIFICATIONS TOTAL (108)
HIGH ENERGY LINE BREAK (9/27)
RBCCW PROJECT (10/15)
CHECK VALVE REPLACEMENT (12/01)
MOTOR OPERATED VALVES (11/20)

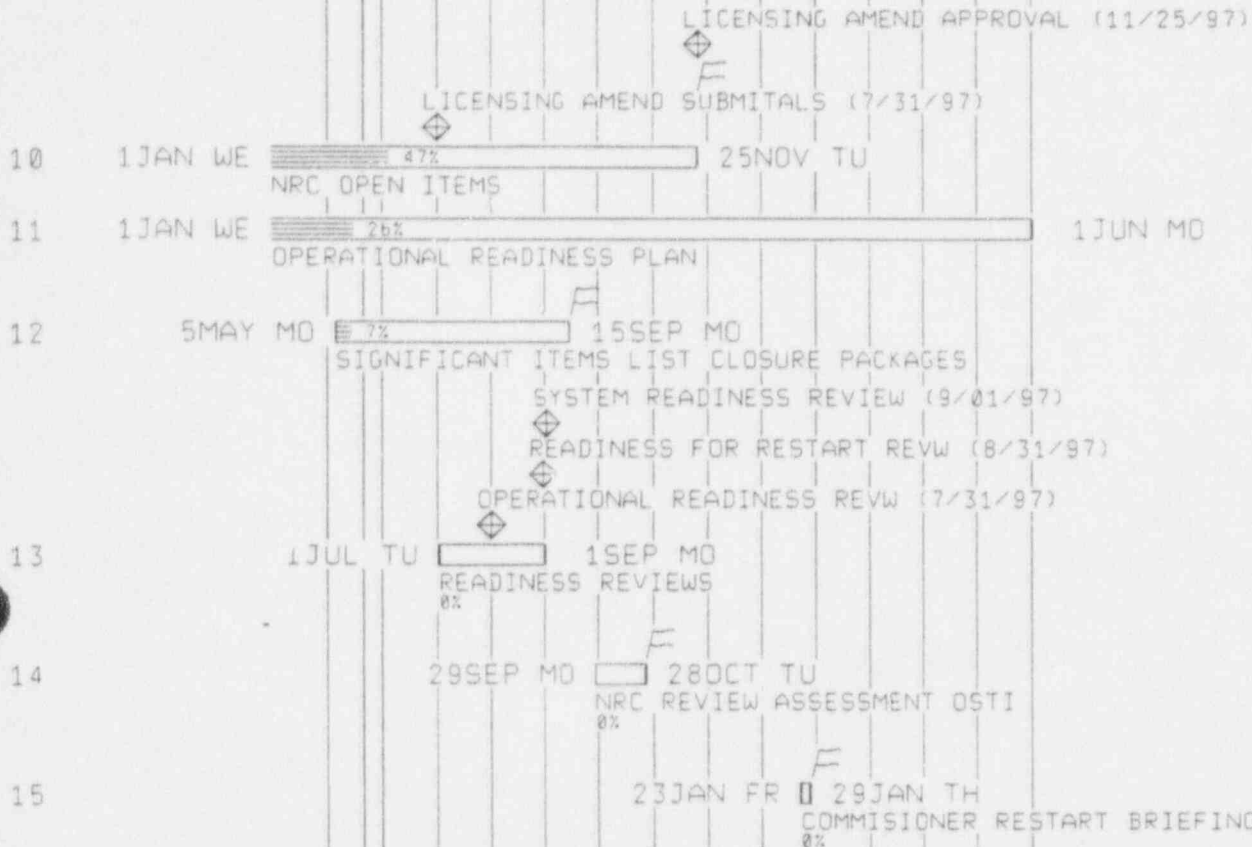
8 17FEB MO 58% 15JUL TU
PERFORM DRAINED DOWN WORK (DEFUELED)

9 16JUL WE 23JUL WE
REACTOR HEAD INSPECTIONS
0%

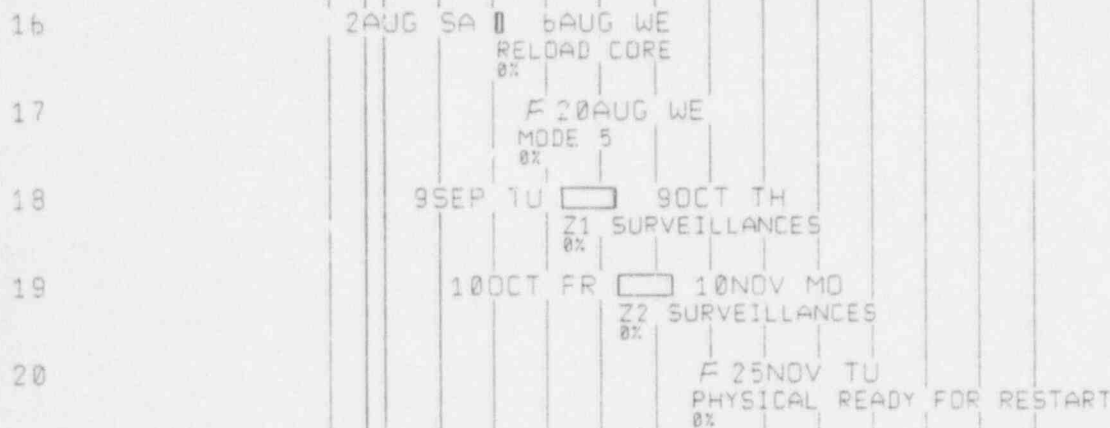
DATA DATE
21MAY 97

1997												1998					
APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

REGULATORY



PLANT



DATA DATE
 21MAY 97

PLANT

21

F 16 DEC TU
 READY FOR RESTART (COMMENCE HEATUP)
 0%

22

F 27 JAN TU
 MODE 2
 0%

23

F 17 FEB TU
 100 PERCENT POWER
 0%

DEPT/PROGRAMATIC IMPROVEMENTS

24

1 JAN WE

37%
 PROGRAMATIC IMPROVEMENTS
 ORGANIZATIONAL
 LICENSING
 NUCLEAR OVERSIGHT
 SELF ASSESSMENT
 NUCLEAR SAFETY ASSESSMENT BOARD

F
 23 DEC TU

25

1 JAN WE

37%
 DEPARTMENT IMPROVEMENTS
 OPERATIONS
 MAINTENANCE
 WORK MANAGEMENT
 ENGINEERING

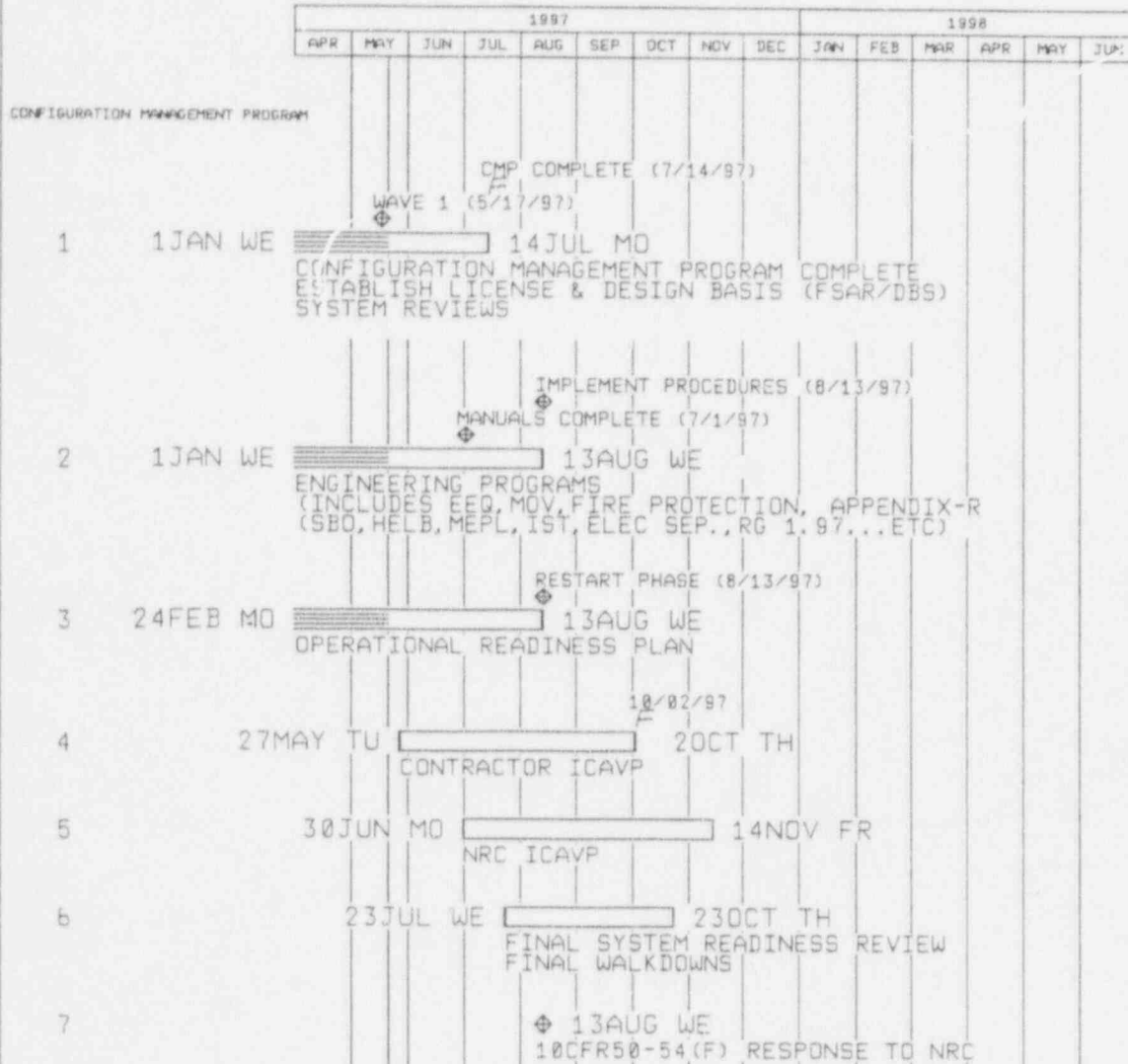
F
 23 DEC TU

MILLSTONE

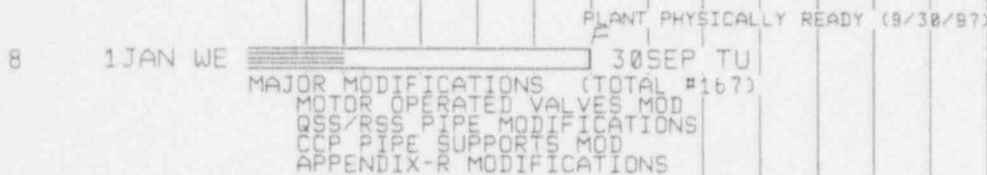
UNIT 3 LEVEL 1 SCHEDULE

AS OF 5/23/97

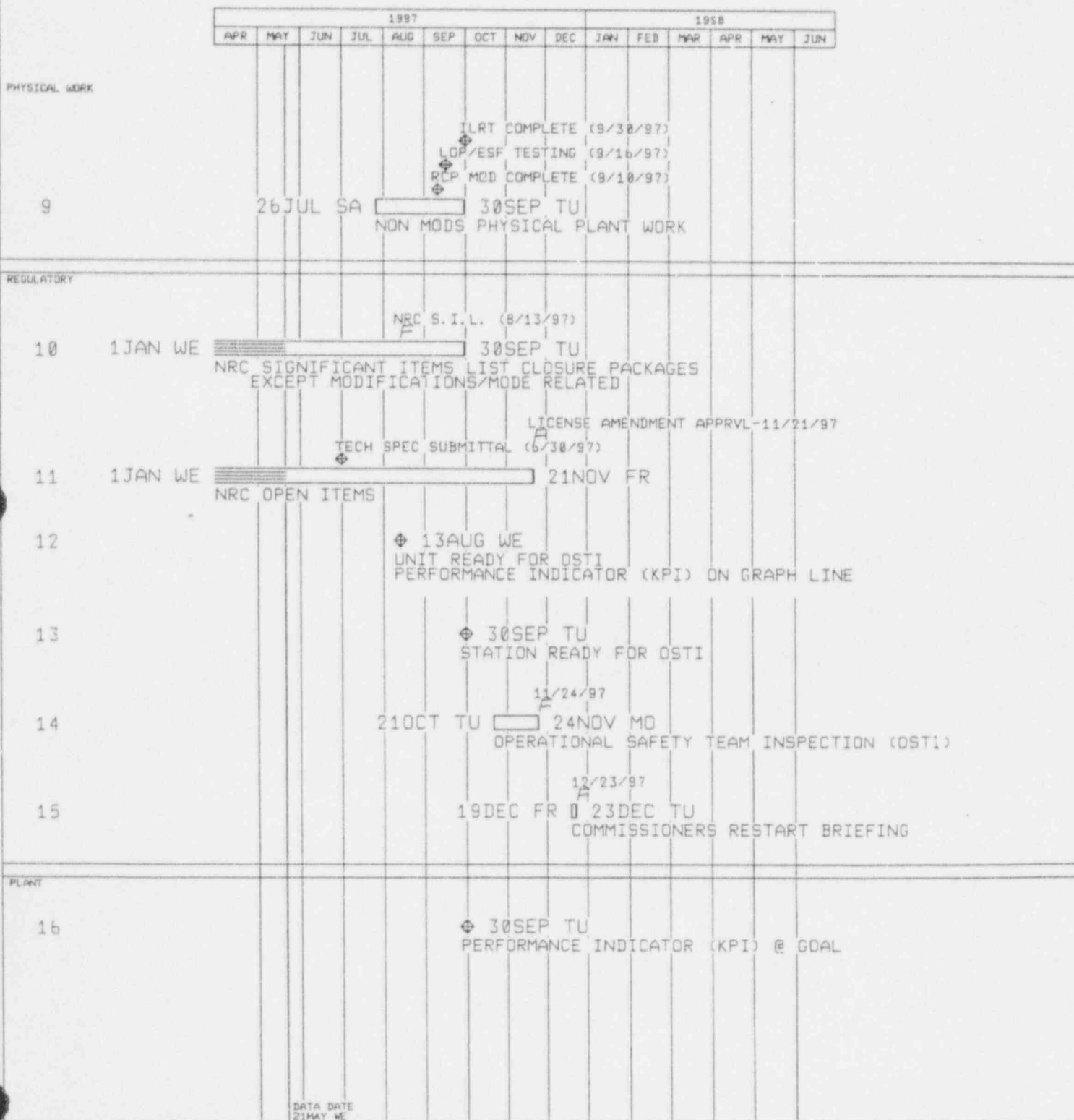
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PAGE 1/1 SHEET 1/3	DATA DATE	21 MAY 97	SHORT BREAKS E START E FINSH	INTERVAL: 1 MONTH(S)		SCHEDULE BAR CHART

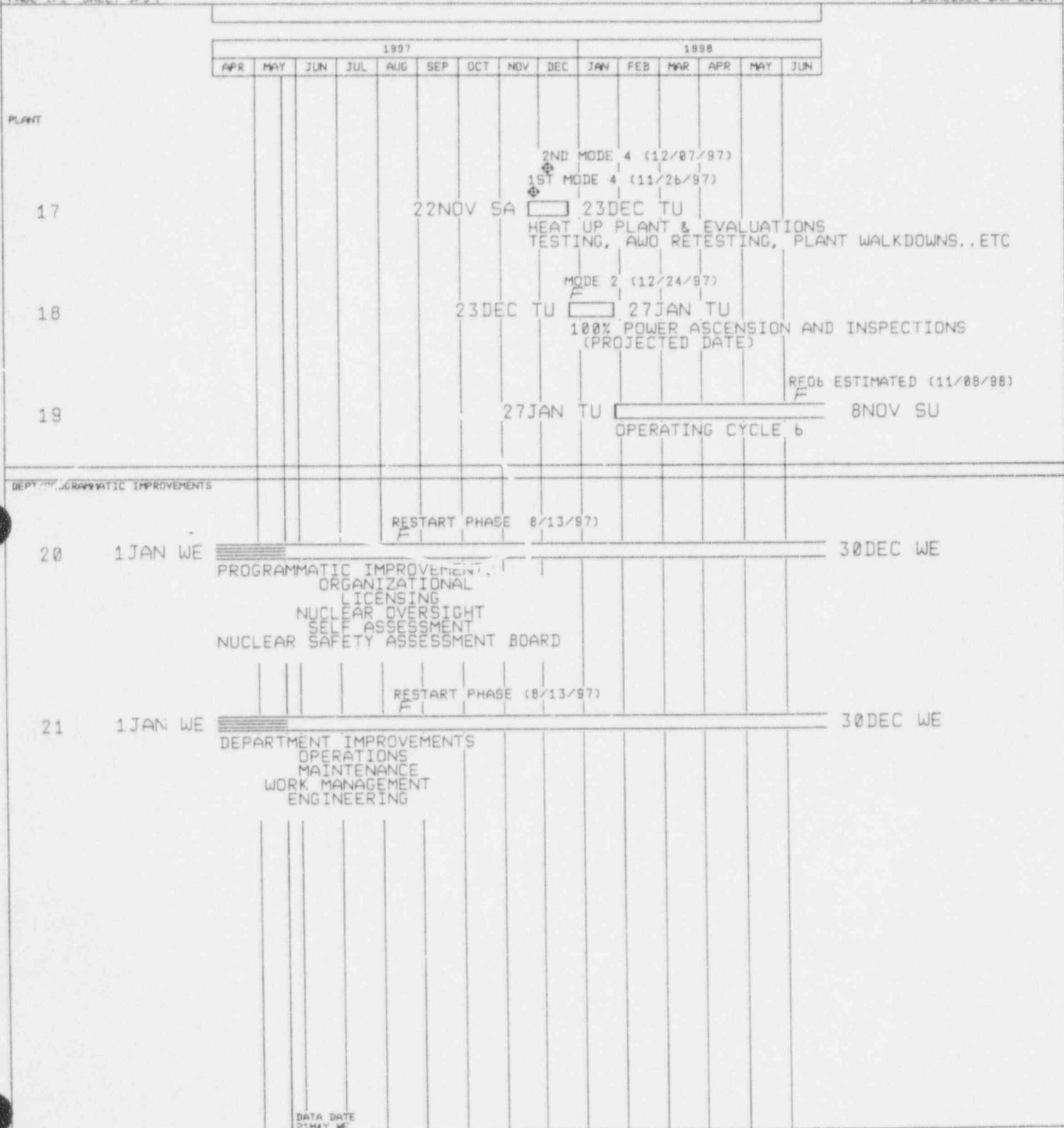


PHYSICAL WORK



DATA DATE
21 MAY 97





Appendix 6

**STATUS OF NUCLEAR OVERSIGHT RECOVERY
PLAN**

Status of
**NUCLEAR OVERSIGHT
RECOVERY PLAN**

**Presentation to the NSAB
May 29, 1997**

Nuclear Oversight Recovery Plan

- **The Recovery Plan - Revision 2**
- **Current Status and Challenges**
- **Readiness for Restart**

Recovery Plan Contents

- **Purpose**
- **Cause for Action**
- **Nuclear Oversight Recovery Plan Objectives**
- **Expected Results**
- **Roles and Responsibilities**
- **Attachment A: Detailed Action Plans**
- **Attachment B: Cross Reference with Independent Assessments Issues**

Recovery Plan Purpose

Implement an organization that will effectively identify and pursue correction of conditions adverse to quality. An integral part of this purpose is to oversee the line organization's ability to self assess, identify problems and correct them in a timely manner.

Cause for Action

- **ACR 7007 Event Response Team**
- **Fundamental Cause Assessment Team (FCAT)**
- **Annual external audits of the program (JUMA)**
- **Root Cause Evaluation of the Effectiveness of the Oversight Organization**
- **Millstone Restart Assessment Plan (NRC)**

Attachment B lists the issues and findings and shows where they are addressed in the Plan

Key Objectives of the Plan

- 1. Develop and implement an organization to provide oversight of NU nuclear units (effectiveness of the third level of defense of quality).**
- 2. Enhance the ability of the NU nuclear line individuals, work groups, supervision and management to identify and correct conditions adverse to quality (effectiveness of the first and second levels of defense of quality).**
- 3. Provide oversight of NU Nuclear unit recovery activities.**
- 4. Develop and implement an effective Employee Concerns Program.**

Key Objectives of the Plan ... cont'd

- 5. Enhance the effectiveness of the Nuclear Safety Assessment Board (NSAB).***
- 6. Provide oversight of NU Nuclear support organizations.**
- 7. Begin a continuous improvement process which will transition quality functions, analysis, and assessment of staff activities into the line organization. This process will not be completed prior to unit restart.**

*** Note: The role of the NSAB includes oversight of the Nuclear Oversight organization. The President and CEO NU Nuclear has requested the Vice President Nuclear Oversight to include the actions to enhance the NSAB in this plan.**

Expected Results

- **Problems are identified by line organizations prior to Nuclear Oversight, and by Nuclear Oversight prior to external agencies or events.**
- **The oversight function is an integral part of the management team's assessment process.**
- **The Nuclear Oversight organization is viewed as a key contributor and is fully supported by the President NU Nuclear and line management.**
- **Employees and contractors understand their rights and responsibilities for nuclear safety, including federal law, company policy, and internal and external reporting mechanisms.**

Expected Results ... cont'd

- **An environment exists which is conducive to reporting problems and having them addressed promptly, accurately and with professional feedback to the initiator.**
- **The Nuclear Oversight organization is clearly defined, with established roles, responsibilities, reporting relationships and interfaces which are well understood.**
- **Nuclear Oversight is appropriately staffed with professionals who are fully trained and qualified to perform their current jobs, and a training and development plan is in place to provide individual job growth and progression, and to provide organization bench strength and continuous improvement.**
- **Procedures conform to regulatory requirements and the commitments of the nuclear organization, including FSARs, Topical Reports, and technical specifications.**

Expected Results ... cont'd

- **Evaluations by external organizations (e.g. Independent Corrective Action Verification (ICAV), Employee Concerns third party oversight, NRC, etc.) determine that oversight activities by Nuclear Oversight and the line are being appropriately performed.**
- **Performance monitoring and indicators are established to permit assessment of Nuclear Oversight effectiveness, correction of negative trends, and continuous improvement.**
- **A continuous improvement process has begun which will transition quality functions, analysis and assessment activities and staff into the line organization and position Nuclear Oversight in the role of evaluator of the line's self assessment capability.**

Status - Foundation has been set for an effective Oversight organization

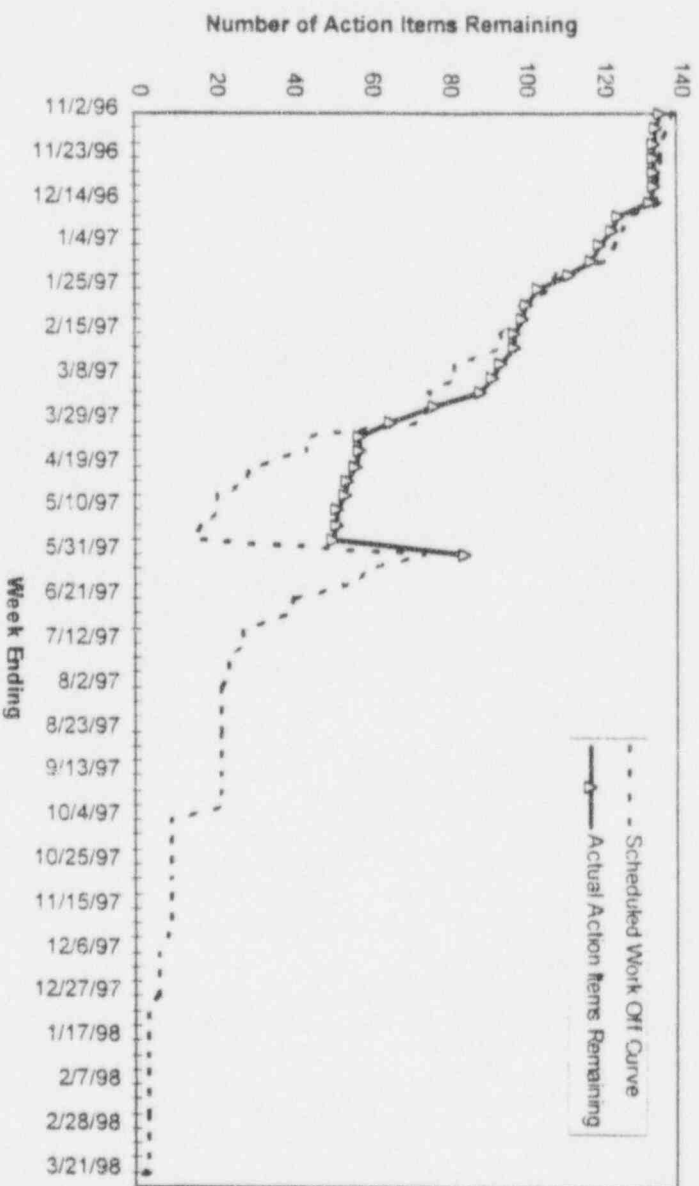
- **Expectations set in:**
 - **CEO Expectations for Nuclear Oversight**
 - **Interface Agreement on Mutual Expectations for Nuclear Oversight**
 - **Pre Access Training**
- **Organization structure revised with clear accountability**
- **Increased number of staff positions, including more permanent positions and job rotations with the line**
- **New procedures communicating higher standards**
- **NU QA Topical revised**
- **QA Hold point program revised -- surveillances to be conducted to assess effectiveness**
- **Feedback to the line improved**
- **Self Assessments being conducted**

Self Assessments have identified areas needing additional attention:

- **Operational experience backlog**
- **Audit records not properly transmitted to vault**
- **50.54(f) staff training and qualification deficiencies**
- **Number of years of QA experience of PE Management team is low**
 - PE developed a strategic plan to address this issue**
- **Surveillance of Recovery Plan closure packages revealed deficiencies**
- **Reviewing the effectiveness of Recovery Plan against previous external assessment findings**

Recovery Plan Status

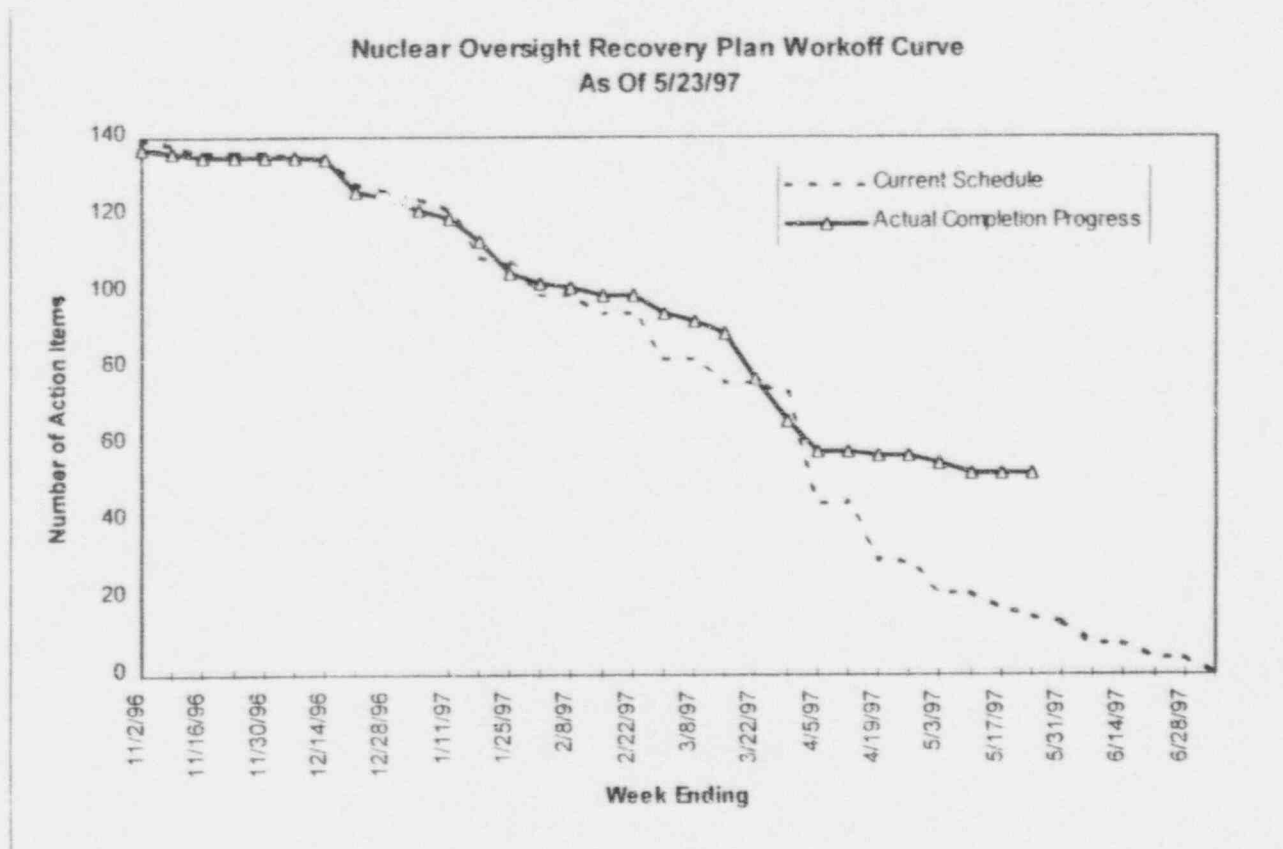
Nuclear Oversight Recovery Plan Workoff Curve -- Remaining Action Items
As Of 5/29/97



Note:

1. On 5/27/97 the total number of action items was increased by 34 and the schedule due dates were revised to provide more realistic goals.
2. Action items due after 10/4 relate mainly to Unit 2 and Unit 1 "readiness for restart" reviews.

Status - 60% complete; however, many essential activities remain to be completed in the Recovery Plan



Challenges still remain to be addressed

- **Training and Qualification programs have not been finalized**
- **Review and disposition of prior licensing commitments**
- **QA and Appendix B indoctrination for all site personnel**
- **Improving quality of work product**
- **Integrating activities across Oversight organization**
- **Improving the Monthly integrated report**
- **Assessing readiness for restart**

Assessing Readiness of Nuclear Oversight

Objective:

- Conduct an independent assessment of Nuclear Oversight to determine the organization's ability and effectiveness in fulfilling its regulatory responsibilities

Scope:

- Performance based observations of meetings, audits, surveillances and inspections; documentation and report reviews; and interviews (officers through workers)
- Does not directly cover Employee Concerns or ICAVP

Review elements:

- Compliance with 10CFR50 Appendix B and licensing commitments
- NU QA Topical Report
- Recovery Plan sufficiently complete to support restart; Attachment B issues (FCAT, JUMA, etc.) addressed
- NRC oversight assessment topics addressed
- Selected elements of NRC Inspection Procedure 40500 (Effectiveness Of Licensee Controls in Identifying, Resolving and Preventing Problems) and INPO 96-006 (Performance Objectives and Criteria)
- Demonstrated progress toward meeting Recovery Plan expected results

Assessing Readiness of Nuclear Oversight... cont'd

- **Team Members include:**
 - Former NRC Regional Director
 - Former NRC resident inspector (and current QA supervisor)
 - Two utility directors with recent successful QA Director experience
 - Former utility VP with QA and nuclear safety assessment background
 - Former utility manager with recovery experience
 - NSAB member
- **Deliverable:**
 - Assessment report providing overall conclusion regarding the readiness of Nuclear Oversight for Unit restart, as well as specific findings and conclusions in individual topic areas
 - Each topic area will be assessed as Ready for Restart; Expected to be Ready for Restart (on track, but all necessary activities not complete; or Not Ready for Restart (additional initiatives required)
- **Schedule:**
 - June 19 to July 3 (includes exit)
 - Final Report July 25
 - Oral Presentation to NSAB TBD- July or August meeting

Restart Verification

Purpose:

- **At critical milestones in the restart process, Nuclear Oversight will provide its independent conclusion on the readiness of each unit to proceed to the CNO and CEO/President**

These milestones include:

- **Readiness for ICAVP (each unit)**
- **Readiness for Corrective Action Program review (site program and unit implementation)**
- **Readiness for special team inspection of the Oversight Function (NRC Manual Chapter 40500 -- includes Nuclear Oversight, Line Oversight, NSAB, Corrective Action and Self Assessment)**
- **Readiness for ECP review**
- **Readiness for OSTI (each unit)**
- **Readiness for Startup and Power Ascension (each unit)**

Restart Verification ... cont'd

Approach:

- NO Directors are developing a matrix for each restart milestone consisting of the review criteria, type of assessment to be conducted, and schedule which will support the station schedule
- Criteria and schedules will be provided to units
- Each plan will be tracked by a manager
- VP and Directors of Nuclear Oversight will develop an integrated assessment of readiness to proceed
- VP Nuclear Oversight will provide NO's recommendation to the CNO and President/CEO.

Status:

- Review criteria are being developed for each key milestone using NRC and INPO criteria, Confirmatory Action Letters, and the Millstone Restart Assessment Plan
- Assessments are complete for ICAVP start Unit 3 and Corrective Action Program (not implementation effectiveness)

Appendix 7

**LITTLE HARBOR CONSULTANTS PRESENTATION
TO NRC ON NU COMPREHENSIVE PLAN
FOR ADDRESSING EMPLOYEE CONCERNS**

ITPOP REVIEW OF NNECo COMPREHENSIVE PLAN

Millstone
May 13, 1997
1:30 PM

5-13-97

Review of Comprehensive Plan

Expectations for the Comprehensive Plan (CP)

- Address Each Requirement Established in the 10/24/96 NRC Order
 - Provide for Review and Disposition of Safety Issues Raised by Employees
 - Ensure That Employees Who Raise Safety Issues Are Not Subject to Retaliation
 - Address the Root Causes of Past Performance Failures
- Establish Clear Path to Meeting Goal of Achieving a Safety-Conscious Work Environment

5-13-97

Review of Comprehensive Plan

Expectations for CP, Cont'd

- Identify Action Items That, If Implemented, Will Achieve the Stated Objective for the CP: a Safety-Conscious Work Environment
- Establish Completion Criteria for Each Action Item
- Identify Methodology for Measuring Progress Toward Achieving a Safety-Conscious Work Environment

5-13-97

Review of Comprehensive Plan

Process for Reviewing CP

- Reviewed 10/24/96 NRC Order to Identify Requirements for the CP
- Studied Millstone Employee Concerns Assessment Team Report (1/96), FCAT Report (7/96) and MIRG Report (9/96) to Understand Problems and Causes
- Interviewed Eleven ECTF Members
- Reviewed CP and Action Plans

5-13-97

Review of Comprehensive Plan

Conclusion 1: CP Provides an Adequate Approach for Upgrading Millstone ECP

- Requires New ECP Policy Statement and Development of Program Manual
- Calls for Management to Demonstrate Support for Program
- Requires Improved Qualifications and Training for ECP Staff and Line Supervision Personnel
- Requires a Policy Which Addresses Timely Response to Concerns and Feedback to Concerned Individual

5-13-97

Review of Comprehensive Plan

Conclusion 2: Creation of an Independent Concerns Oversight Panel Has the Potential to Accelerate Progress Towards Achieving the CP Goal

- Provides for Oversight of ECP and Millstone Station Environment with Feedback to Senior Management
- Calls for Review of Workplace Environment for "Chilling" Effect and Problem "Hotspots"
- Calls for Identifying If and Where Workplace Intervention is Required

5-13-97

Review of Comprehensive Plan

Conclusion 3: CP Does Not Address Full Scope of the 10/24/96 NRC Order

- Places Primary Emphasis on Expanding and Strengthening the ECP
- Does Not Place Proper Emphasis on Restoring Line Management's Accountability For Establishing a Safety-Conscious Work Environment
- Actions Identified to Address Root Causes From Past Investigations Appear to Be Inadequate or Too Narrow in Scope

5/13/97

Review of Comprehensive Plan

Conclusion 3: CP Does Not Address Full Scope of the 10/24/96 NRC Order

Example:

MIRG Report Root Cause 7.1

"The team concluded that ineffective problem resolution processes have contributed to continued employee concerns at Millstone, forcing reliance on the Nuclear Safety Concerns Program (NSCP) process to resolve concerns that should have been corrected by routine process."

As ITPOP has stated the CP does not address this Root Cause. The CP focus is the Employee Concerns Program and does not address the routine process adequately.

5/13/97

Review of Comprehensive Plan

Conclusion 3: CP Does Not Address Full Scope of the 10/24/96 NRC Order

Example:

MIRG Report Root Cause 7.5

"Communications appeared to be a continuing problem area, characterized by poor inter-departmental interaction, general failure to encourage questioning attitudes, and a tendency to manage by memorandum. Ineffective implementation of the concept of teamwork also appeared to have contributed to employee concerns at Millstone."

The action items identified in the CP to address the issues of poor communications and lack of teamwork are not sufficient to correct these problems at Millstone.

5/13/97

Review of Comprehensive Plan

Conclusion 4: CP Does Not Sufficiently Address the Normal Programs for Problem Identification and Resolution:

- No Requirement for Critical Review of Normal Corrective Action Programs and Their Implementation
- Places Insufficient Emphasis on Effective Use of Self-assessment Process
- Does Not Use Site Oversight Organization to Provide Feedback on Plan Effectiveness Regarding Problem Identification and Resolution

5/13/97

Review of Comprehensive Plan

Conclusion 5: The CP Does Not Clearly Identify Criteria for Success or Measurement Techniques.

- Action Item Elements Are Presented Essentially As "Punch List" Items
- Success Criteria Are Not Established for Many Action Item Elements, Thus Providing No Basis for Judging Implementation Success
- Measurement Techniques for Evaluating Implementation Against Success Criteria Are Not Adequately Specified

5/13/97

Review of Comprehensive Plan

Conclusion 5: The CP Does Not Clearly Identify Criteria for Success or Measurement Techniques.

Example:

Good:

Action 1-2 Feedback to Concerned Individuals

Poor:

Action 7-2 "Cooperate in investigations as appropriate"

Action 2-5 HR communications

There are no criteria for success

There is no mention of monitoring effectiveness

5/13/97

Review of Comprehensive Plan

Recommendations

Revise the CP to Address the Following:

- Ensure All Root Causes Are Effectively Addressed So That Resultant Action Plans, Combined With Management's Direction, Will Correct Each Root Cause
- Place the Focus on Line Management's Role and Accountabilities in Achieving the Desired Safety-Conscious Environment
- Develop Success Criteria and Measurement Techniques

5-13-97

Review of Compliance Plan

Recommendations, Cont'd

Revise the CP to Address the Following:

- Require a Critical Review of Current Corrective Action Programs
- Expand the Requirement for Formal, Periodic Self-Assessments by Each Organizational Element

5-13-97

Review of Compliance Plan

MILLSTONE EMPLOYEE CULTURE SURVEY HISTORY

Millstone
May 13, 1997
1:30 PM

CONCLUSIONS

- The surveys were not constructed to address nuclear safety culture.
- The survey process may have adversely impacted results.
- Survey results were not factored into plant improvement processes.

SURVEYS WERE NOT CONSTRUCTED TO ADDRESS NUCLEAR SAFETY CULTURE

Some Examples:

- Limited NNECo involvement in the design and selection of the questions.
- The survey questions, themselves do not address attributes of nuclear safety directly.
- Did not include employee concerns portion in analysis.
- The questions address processes and programs rather than relationships and morale.

OBJECTIVES

- What has NNECo done in the past?
- What is the quality of that effort?
- Should we rely on the data?
- Have past surveys yielded useful information?

RECOMMENDATION

Before Conducting the Next Survey Consider the Following:

- Objectives are clearly defined.
- Survey objectives are communicated.
- The scope and content of current questions are reviewed and validated.
- All areas of culture are included.
- Line managers are appropriately prepared and involved.
- Management is committed to translate and implement the results into actions.

SURVEY PROCESS MAY HAVE IMPACTED RESULTS

Examples:

- There has been little or no pre-survey communication.
- Did not involve line managers in the survey process. Ex: Did not train them how to analyze, communicate results.
- The administration process itself had minimal built-in controls over who filled out the survey, when, and how many times.
- Never conducted follow-on interviews.
- Graphical, raw data detail from October Survey given to line management to distribute without any training in how to analyze and communicate it.
- Surveys were conducted too close together.
- There has been no follow-on communication.

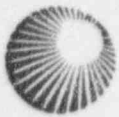
**SURVEY RESULTS WERE NOT
FACTORED INTO PLANT
IMPROVEMENT PROCESS**

Examples:

- No management commitment to effectively communicate, act on the results.
- No effective analysis completed on either survey.
- Management did not implement any action plan related to survey findings after the June and October Surveys.
- Some employees appear to be skeptical since there was no activity.
- Management chose not to communicate or analyze the results of the October 1996 Survey.

Appendix 8

**NU NUCLEAR SAFETY STANDARDS AND
EXPECTATIONS**



Northeast
Utilities System

**Northeast Utilities
Nuclear Safety Standards and Expectations
Rev. 0**

B. D. Kenyon

President and Chief Executive Officer
Northeast Utilities Nuclear Group

5/28/97

Date

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NUCLEAR SAFETY STANDARDS AND EXPECTATIONS

The mission of the Nuclear Group of Northeast Utilities is the safe, environmentally sound, dependable and economical generation of electrical energy utilizing nuclear power.

To successfully achieve this mission, every person within the Nuclear Group must consider Nuclear Safety as the top priority. The cornerstone for fulfillment of this mission will be the creation of a work environment established by the attitudes and behaviors of individuals that is based on the following:

PRINCIPLES

1. Every person involved directly or indirectly with the NU Nuclear Group must maintain a profound respect for the safety of the reactor core and the spent fuel.

Everyone must recognize the importance of how their activities contribute to maintaining the reactor core and the irradiated spent fuel in a safe condition. All of us must assume a personal responsibility for performing all operations, maintenance, design, and supporting activities in a conservative manner that fully supports this goal. Nuclear Plant Safety shall be the highest priority of individuals at every level of the organization. Our decisions and actions must be based on this priority and our behavior must actively ensure that concerns receive the attention warranted by their nuclear safety significance.

2. Our attention and resources must focus on proactively preventing events that compromise nuclear safety.

Inherent in this principle is the need to maintain positive control and to protect barriers implemented to prevent reactor core damage. Defense-in-depth must be practiced throughout the organization to maintain plant safety and reliability and to reduce the consequences of events. We shall establish the necessary barriers in procedures, processes and equipment configuration to prevent occurrences that could affect reactor safety.

3. The fundamental component to successful implementation of Nuclear Safety is the use of conservative decision-making.

Decisions affecting nuclear safety shall be based on established methods, procedures, and a thorough understanding of plant conditions. When conditions are such that an informed decision may not be possible, personnel are expected to seek the necessary information to make an informed decision and demonstrate conservative decision-making to ensure nuclear safety. Management shall support nuclear safety through its actions, and by actively supporting and encouraging the use of conservative decision-making.

The Nuclear Group will make conservative decision-making and nuclear plant safety integral to its culture. Individuals involved in Nuclear Group activities will demonstrate:

- a prevailing state of mind focusing on safety;
- an insistence on sound technical basis for action and a thorough understanding of the potential consequences of actions;
- a recognition that potential risks inherent in nuclear technology necessitate that safety considerations pervade all activities;
- a practice of adherence to all procedures;
- a rigorous self-assessment of performance;
- an environment that is receptive and responsive to safety issues raised by employees.

4. Personnel are required to do the "right thing" and enforce high standards.

Routine communications from Management shall consistently and frequently reinforce the belief among all personnel that every activity, regardless of the perceived importance, is to be performed to uniform high standards.

Focus on the task at hand and take the time needed to do the job right. Do not rush. Concentrate on the job and prevent distractions from affecting your task.

Individuals shall self check and expect and welcome being checked by others. Everyone must hold themselves accountable for their actions.

Clearly understand assigned tasks, and know how to determine if they are being done correctly.

Be conscious of the potential consequences of each action. Be cautious and have a questioning attitude. Individuals shall work in a cautious, conservative manner and ask the "what if" question particularly when faced with uncertain or degrading conditions involving reactor safety or other important tasks.

Work for success but be prepared to meet the worst case.

STANDARDS AND EXPECTATIONS

1.0-NUCLEAR FUEL

At the heart of nuclear power plant safety is the control of nuclear fuel. All activities affecting nuclear fuel shall be performed in a conservative, planned and controlled manner. Irradiated fuel shall be kept adequately covered with water and subcritical at all times when stored in the spent fuel pool.

1.1-Reactivity Management

The reactivity of fissile assemblies shall be changed only in a deliberate and controlled manner.

- 1.1.1 Administrative controls for reactivity management shall be established to develop a consciousness for reactivity issues in the organization and to implement conservative actions with regard to reactivity.
- 1.1.2 Licensed operators shall be responsible for control of reactivity and taking conservative actions to safeguard the integrity of the reactor core. All planned reactivity changes shall be made under direction from, and with the prior knowledge of, a licensed Senior Reactor Operator (SRO).
- 1.1.3 All unplanned, unexpected and inappropriate reactivity changes are considered reactivity events and shall be promptly investigated and condition reported.

1.2-Spent Fuel

- 1.2.1 The spent fuel pool system design basis includes a residual heat removal system, criticality control, appropriate confinement, filtering and protection against draindown, ventilation, cooling water makeup capability, and suitable shielding for radiation protection.
- 1.2.2 Removal of Spent Fuel Pool equipment and supporting systems from service to perform work shall be effected in a controlled manner consistent with approved programs and procedures that appropriately address all design and licensing basis requirements.
- 1.2.3 Adequate measures shall be provided to ensure a defense-in-depth philosophy which will preclude and mitigate the consequences of accidents postulated in the design basis of the spent fuel pool.

2.0-SAFETY OF OPERATION

Three physical barriers protect the public from fission product release: fuel cladding, reactor coolant system boundary and containment. Plant features are designed to reduce the probability of accidents that may challenge these barriers. Programs and procedures are implemented to prevent plant activities from challenging these barriers and provide for reactivity control, inventory control, heat removal, containment integrity, and availability of vital auxiliaries. Safety systems are implemented and maintained in a state of readiness so that they can mitigate the consequences of challenges to these barriers. This combination of physical barriers, prevention and mitigation equipment, procedures and trained personnel form multiple, redundant layers of defense which provide a defense-in-depth. The effectiveness of the implemented layers of defense depends on:

- Adherence to Administrative Controls;
- Effective Cognizance of Plant Conditions;
- Plant Configuration Control; and
- Availability of Safety Systems

2.1-Administrative Control

Administrative controls establish criteria that support safe reactor operation and maintenance of the design configuration.

- 2.1.1 Actions that depart from license conditions or Technical Specifications may only be taken in an emergency, when approved by a Senior Reactor Operator (as a minimum) to protect the health and safety of the public and when no alternative or equivalent action is apparent, consistent with the provisions of 10CFR50.54(x).
- 2.1.2 The Unit shall have administrative controls to ensure that all configurations and operations are consistent with the licensing basis or are appropriately evaluated per 10CFR50.59.
- 2.1.3 Technical Specification Clarifications shall not change the intent of Technical Specifications. A 10CFR50.59 Safety Screening/Evaluation and review by the Onsite Operations Review Committee will be performed as needed before implementation.
- 2.1.4 Nonconforming or Degraded Conditions:
 - Shall be documented and evaluated for impact on operability.
 - Corrective action to restore a nonconforming or degraded condition shall be taken in a timely manner, commensurate with its safety significance, and in accordance with 10CFR50 Appendix B, Criterion XVI.
 - If it is determined to be acceptable for a nonconforming or degraded condition to exist for an extended period of time, a 10CFR50.59 Safety Evaluation shall be performed. The guidance in Generic Letter 91-18 and SECY-97-035 should be considered to determine the time frame to perform the Safety Evaluation.

2.2-Cognizance of Plant Conditions

2.2.1 The Shift Manager has the primary responsibility for the safe operation of the facility and may only be relieved by another qualified individual with an active Senior Reactor Operator's License. The Shift Manager shall:

- Maintain a broad perspective of operational conditions affecting the facility and not become involved in any single operation when multiple operations are taking place.
- Ensure reactor parameters are maintained within established limits and procedures.
- Maintain strict control of tests / activities affecting core reactivity.
- Never compromise nuclear safety to meet schedules.
- Terminate any activity considered adverse to reactor safety.
- Inform management of any significant discrepancies between expected and actual plant conditions.

2.2.2 Safe operation requires that the status of equipment affecting nuclear safety can be readily determined and that it remain under the direct control of the Shift Manager and NRC licensed operators. Verification of equipment and system operating status is performed in order to prevent:

- Inadvertent bypassing of inspections and tests.
- Unsafe conditions caused by operation of damaged or defective equipment.
- Incorrect or inappropriate operation of equipment.

2.3-Plant Configuration Control

2.3.1 Configuration control (physical and functional) shall ensure that:

- Availability and operability of equipment can be readily determined.
- Plant configurations are consistent with the design and licensing bases.
- Activities affecting system availability and operability are effectively communicated.
- Programmatic commitments are implemented and preserved.

2.3.2 Plant modifications shall be conducted in accordance with approved procedures or instructions to ensure the following:

- The latest as-built configuration accurately reflects the current design and licensing basis.
- Procedures used to operate or maintain plant equipment are maintained current.

- Personnel responsible to operate, test, or maintain the affected systems are cognizant of the changes and the impact on Unit operation. Effect on off-normal and emergency operations will be thoroughly understood by those responsible for handling such situations.
- Temporary modifications are assessed for impact on Nuclear Safety prior to installation.

2.3.3 Work shall be performed in accordance with the established Maintenance Program to ensure related design basis, operating procedures and maintenance data have been updated as appropriate.

2.4-Availability of Safety Systems

2.4.1 Availability of Safety Systems per Technical Specifications

Risk to nuclear safety is reduced by assuring availability of safety systems. Therefore, equipment required by Technical Specifications needs to be maintained at the highest state of availability. The following guidelines should be implemented when working with systems and equipment specifically required to mitigate consequences of major accidents:

- Availability of safety systems that prevent or mitigate accidents needs to be maximized during an outage.
- Maintenance, surveillance, or design changes which take a portion of Technical Specification equipment out of service need to be evaluated for return to service testing (Post Maintenance Testing) requirements prior to performing the maintenance, surveillance, or design change where possible.
- The number and duration of activities simultaneously conducted on systems and components required to function to prevent or mitigate accidents should be minimized.
- If equipment failures or deviations from planned schedules force concurrent outages of key mitigating systems, then an evaluation using PRA insights should be performed to provide additional guidance on prudent compensatory measures.
- Open safety-related work orders are to be reviewed prior to unit startup following an outage, to ensure safety functions have not been degraded and are in compliance with the Unit's design basis.

2.4.2 Defeating Equipment or System Automatic Safety Functions

- The substitution of manual operator actions for safety-related automatic functions will be minimized and all practical efforts should be taken to maintain equipment in the as-designed configuration.
- If an automatic safety function, which is specifically stated or implied in Technical Specifications is not available, the equipment or system is to be declared inoperable and the applicable action statement entered.
- Automatic safety functions required by Technical Specifications will not be replaced with manual actions unless evaluated per the guidance of Generic Letter 91-18 and a 10CFR50.59 Safety Evaluation is prepared. Otherwise, prior NRC approval is required either in the form of a license amendment or through the use of the Enforcement Discretion process.
- Manual operator actions necessary to place the plant in a safe condition (which includes recovery from a transient) consistent with the provisions of 10CFR50.54(x) are not precluded.
- If an automatic safety function, which is described in the UFSAR but not required by Technical Specifications, is not available, a safety evaluation must be performed to support continued operation.

3.0-MANAGEMENT OF ACTIVITIES AND EVOLUTIONS

3.1-Conduct of Maintenance

3.1.1 Maintenance Activities Considerations

- Maintenance activities shall be minimized under the following situations:
 - 1) During activities that increase risk or safety consequences (e.g., during reduced inventory, refueling operations or PRA-identified risk significant equipment outages).
 - 2) When preparations for the maintenance are not complete.
 - 3) When return to service testing requirements (PMT) have not been established.
- Maximize safety awareness during maintenance evolutions conducted during periods of increased operating risks.

3.1.2 On-Line Maintenance

- In performing On-Line Maintenance an assessment of the total plant equipment which is out of service shall be performed to determine the overall effect on the performance of safety functions. Whenever possible, such an analysis should be supported by risk analysis techniques (e.g., PRA reviews or a pre-approved PRA based system risk relationship matrix).

- The operating status of structures, systems and components (SSCs) during On-Line Maintenance shall be readily determinable and remain under the control of the NRC-Licensed Operators.
- Prior to performing any On-Line Maintenance, the status of SSCs important to that evolution shall be verified.
- On-Line Maintenance activities simultaneously conducted on SSCs required to function to prevent or mitigate accidents should be performed only if allowed by a PRA review or a pre-approved PRA based system risk relationship matrix.
- Unit and switchyard activities should be minimized when critical On-Line Maintenance evolutions are taking place so that full attention can be focused on Nuclear Safety.
- If On-Line Maintenance will result in a Unit configuration or operation which is inconsistent with the licensing basis and administrative controls, an analysis shall be performed in accordance with the requirements of 10CFR50.59.
- For off-normal conditions and planned activities, the need for compensatory measures and resources shall be determined. Whenever possible additional guidance should be derived from PRA insights.
- Entrance into Technical Specification Action Statements shall require special controls as follows:
 - 1) Entrance into Action Statements should be minimized.
 - 2) Plant Management shall ensure that time spent in Action Statements is minimized by proper scheduling of resources, planning, and approval of work activities, and communication of priorities and activity status.
 - 3) Planned activities that will result in entrance into multiple Action Statements shall consider all structures, systems and components (SSCs) that are out of service in order to determine the overall effect on plant risk. Whenever possible PRA insights should be utilized.
 - 4) Planned work should not be scheduled to encompass more than half of the allowed Action Statement time without additional management review and approval.
 - 5) Repeated entry and exit from Action Statements shall be avoided.

3.2-Conduct of Outages

3.2.1 Outage Safety Assessment

An independent Outage Safety Assessment shall be performed for the planned outage activities potentially affecting safety to assure all activities are bounded by the Technical Specifications, UFSAR, and applicable procedures.

3.2.2 Startup Assessment

Prior to operation after an outage, an assessment shall be conducted by the Unit Director. Each applicable department shall identify the unit's readiness to operate from the department's perspective, identify items not resolved or completed and determine their potential impact on safe operation. Based on an assessment of this information, the Unit Director will determine if Unit operations may proceed.

3.2.3 Outage and Planning Considerations

- Optimize safety by considering the risk of performing maintenance for selected equipment and systems (e.g., Shutdown Cooling System) at power versus in an outage.
- Maximize availability of safety-related equipment.
- Minimize any increase in risk associated with removing equipment from service to perform maintenance by considering the total plant equipment which is out of service. Whenever possible PRA insights should be utilized.
- Minimize time spent at reduced Reactor Coolant System inventory.
- Mid-loop operations with fuel in the core shall be supported by a PRA review and the appropriate controls and heightened awareness to address the elevated risk posed by the configuration.

3.3-Evolutions

3.3.1 Critical Evolutions and Priorities

Significant reactivity changes, including reactor startup, reactor shutdown, significant reactor power changes, and safety system tests such as reactor physics tests, shall be the key focus of the control room and the highest priority activity of the Unit.

Operators shall conduct procedure reviews and receive simulator training, where feasible, in preparation for plant cooldown, draindown, reactor startup, etc.

3.3.2 Test Controls

- Testing activities including generic, special, or infrequently performed tests, shall be conducted such that the tests accomplish their intended objective, personnel and plant safety are not endangered, regulatory and other administrative controls are not violated, and plant operation is not jeopardized.
- Test controls required by 10CFR50 Appendix B, Criterion XI, for tests that can potentially affect core safety shall be supplemented by additional special test controls to assure test criteria address nuclear core safety and the recommendations of SOERs 87-1 and 91-1.

3.3.3 Infrequently Performed or Complex Tests or Evolutions

Infrequently performed or complex tests or evolutions such as the following may warrant additional senior line management oversight or controls to ensure plants are not operated in a manner that could degrade the margin of nuclear safety or violate license requirements:

- Evolutions not specifically covered by existing normal or abnormal operating procedures.
- Evolutions that seldom are performed even though covered by existing normal or abnormal procedures (e.g., plant startup after an outage that involves significant changes to systems, equipment, or procedures related to the core, reactivity control, or reactor protection).
- Special, infrequently performed surveillance testing that involves complicated sequencing of unusual plant configurations.
- Evolutions that require the use of special test procedures in conjunction with existing procedures.
- Conditions where the performance of multiple relatively simple tests or evolutions may make plant control complex (e.g., the conduct of many system tests prior to startup following a prolonged outage).

4.0-CONSERVATIVE DECISION-MAKING

Decisions affecting nuclear safety shall be based on established methods, procedures, and a thorough understanding of plant conditions. Personnel are expected to seek the necessary information to make informed decisions and to exercise conservative decision-making to ensure nuclear safety.

It is not always obvious which decisions affect nuclear safety. Decisions affecting availability or reliability of non-safety grade systems may affect nuclear safety by causing transients, or by affecting their probability of occurrence, or by reducing margin of safety. Personnel are expected to exercise conservative decision-making by approaching decisions with a questioning attitude and concern for potential consequences.

Management shall support nuclear safety through its actions and the clear endorsement and frequent reinforcement of conservative decision-making.

The following general requirements will be adhered to in order to support conservative decision-making:

- 4.1 Maintenance, modification, and testing activities that have the potential to reduce decay heat removal or shutdown margins shall be performed with either the reactor vessel defueled or the maximum number of safety and key support systems in service.

- 4.2 The Unit shall have controls in place to ensure that operability determinations appropriately reflect commitments associated with that equipment as well as the applicable Technical Specifications. Operability of equipment shall be assessed against all commitments associated with that equipment, not only those contained in the Technical Specifications.
- 4.3 No physical work with the potential to breach the primary boundary will be performed on the primary reactor coolant system up to and including the first closed isolation valves while at power.
- 4.4 Equipment that is unavailable which can affect the frequency of plant transients shall be restored to service on a priority basis even if not required by the Technical Specifications.
- 4.5 Personnel are expected to find their own safety and quality problems. When problems are found any other way, management shall investigate the self-assessment deficiency promptly through the established corrective action program and have it thoroughly corrected.
- 4.6 The root cause program shall be used to ensure proper corrective action is taken for events that could challenge nuclear safety.
- 4.7 Awareness of operator work-arounds shall be such that prompt corrective action will be taken to ensure a work-around or the aggregate of outstanding work-arounds does not impede the operator from operating the unit in accordance with procedures or affect his ability to respond to abnormal and emergency situations.

5.0-REVIEW AND MONITORING OF OPERATION

5.1 Self Check Program

The need for each individual's attention to detail is encouraged through implementation of a self check program (Stop, Think, Act and Review) to avoid personnel errors.

5.2 Independent Reviews

Independent reviews of items affecting safety are required to minimize bias and provide safeguards against normal influences from daily operating objectives and concerns. These critical examinations of potential or actual safety significant items are completed by qualified reviewers not directly responsible for the design or operation function under review.

5.3 Verifications

Design verifications shall be performed to verify incorporation of design requirements, accuracy of documents used in the design basis, and justification of conclusions. Independent verifications of items affecting nuclear safety during testing, operation, and maintenance shall verify that potential or actual safety significant evolutions are completed to administrative requirements. Where adverse safety consequences of actions may be immediate, concurrent/double verification of required conditions may be necessary. This process precludes operation of damaged or defective equipment, operation of equipment other than that which is intended to be operated, and incorrect or inappropriate operation of equipment.

5.4 Self-Assessment

Self-assessments will be used routinely to determine areas for improvement in terms of compliance and performance. Departments will use self-assessments as a means to identify and correct significant issues within their areas before they are identified by Oversight or external agencies. They will be focused to address specific areas, and the findings will be addressed and tracked within the corrective action program.

5.5 Monitoring of Safety Performance

The availability of key plant safety systems shall be monitored consistent with INPO reporting requirements and Maintenance Rule requirements. Integrated safety performance shall be monitored on a periodic basis using PRA techniques such as the Backward-Looking Risk Monitor.

5.6 Oversight

The on-site operations review committee (PORC/SORC), Nuclear Oversight and off-site nuclear safety audit review committee (NSARC/NSAB) shall provide oversight of operations, maintenance, design and support activities.

REFERENCES

- 1) Virginia Power Nuclear Standard, ASNS-3000, Nuclear Safety Policy, March 26, 1996
- 2) INPO 96-006, Performance Objectives and Criteria for Operating Nuclear Electric Generating Stations
- 3) INPO 92-009, Guidelines for the Organization and Administration of Nuclear Power Plants
- 4) INPO 90-020, Performance Objectives and Criteria for Corporate Evaluations
- 5) INPO Significant Operating Experience Report (SOER) 96-1, Control Room Supervision, Operational Decision-Making, and Teamwork
- 6) INPO Significant Operating Experience Report (SOER) 96-2, Design and Operation Conditions for Reactor Cores
- 7) INPO Significant Operating Experience Report (SOER) 94-1, Non-Conservative Decisions and Equipment Performance Problems Result in a Reactor Scram, Two Safety Injections and Water Solid Conditions
- 8) INPO Significant Operating Experience Report (SOER) 91-1, Conduct of Infrequently Performed Tests or Evolutions
- 9) INPO Significant Operating Experience Report (SOER) 87-1, Core Damaging Accident Following an Improperly Conducted Test
- 10) INPO Document, "Excellence in Human Performance," November, 1995
- 11) INPO Document, "Principles for Enhancing Professionalism of Nuclear Personnel," March, 1989
- 12) NSAC Report 125, Guideline for 10CFR50.59 Safety Evaluations
- 13) 10CFR50 Appendix B
- 14) USNRC, Generic Letter 91-18, "Resolution of Degraded and Nonconforming Conditions and on Operability"
- 15) Principals of Nuclear Power Plant Operational Safety, January 1996, W. R. Corcoran et al.
- 16) SECY 97-035, "Proposed Regulatory Guidance Related to Implementation of 10 CFR 50.59 (Changes, Tests and Experiments)," February 1997