

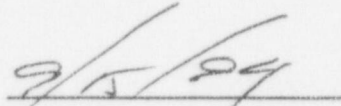
COOPER NUCLEAR STATION

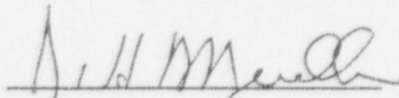
STARTUP PLAN

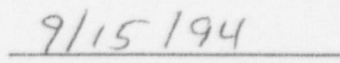
REVISION 1

APPROVED BY:


Plant Manager


Date


Site Manager


Date

COOPER NUCLEAR STATION
PERFORMANCE IMPROVEMENT PLANS
PHASE 1: STARTUP PLAN

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I. Purpose

Cooper Nuclear Station has embarked on a performance improvement program. This program addresses the actions that management will take to establish the organizational and management capabilities necessary to achieve required levels of performance improvement.

Management previously identified certain critical success factors in improving organizational performance and is taking action to address these. These actions include such areas as:

- Recruit new managers who bring leadership skills and have higher standards and expectations for performance. Make appropriate organizational adjustments including reassignment or augmentation of resources to address immediate needs to support startup or correct significant program or process deficiencies.
- Assess and realign the capability of the organization to identify and resolve problems that may challenge safe and reliable operations.
- Improve critical work processes and develop a transition for longer-term improvements.

The recent forced outage, NRC enforcement actions and Diagnostic Self Assessment Team (DSAT) evaluation provided management with a set of performance issues to address that relate to material condition items, program and process findings, and management issues. There are also other performance issues identified from the Confirmatory Action Letter (CAL), inspection reports, and management self-identified issues, including those issues addressed in the Integrated Enhancement Plan (IEP).

To assure that all performance issues are identified and adequately addressed, a comprehensive planning process and framework was developed to guide the performance improvement efforts at CNS. This framework consists of three phases:

1. Phase 1 (Startup Plan) - This phase is the tactical planning process that addresses those significant issues identified in the DSAT, the CAL and open inspection report items, and management self-identified issues that must be resolved prior to plant startup.

2. Phase 2 (Short-Term Plan) - This phase involves those essential management actions that will be accomplished within the next two to three months. Because this phase is of short duration, only a few, high-priority issues will be addressed. These issues are important to the station's near-term success and are of such a nature as to require expeditious action.
3. Phase 3 (Long-Term Plan) - This phase is the long-term strategic planning phase. It provides the framework for managing the performance improvement actions essential in meeting long-term objectives for safety, production and economics. This phase is anticipated to include planning cycles from one to several years in duration.

The objective of the Phase 1 planning process is to identify all significant issues that must be resolved prior to the startup of the station to assure a safe, error-free startup and a subsequent period of safe and reliable operations. This document is the Phase 1 Plan and provides the framework for activities necessary for plant restart. The plan discusses, where appropriate, relationships with the subsequent two planning phases.

II. Phase 1 Scope

NPG management established a Startup Plan Team of senior managers who were assigned the responsibility to develop a comprehensive and effective startup plan. The Team's charter was to (1) establish an integrated approach for completing work activities for startup and (2) identify management, program, and process initiatives to assure an error-free startup and subsequent period of safe and reliable operations.

Actions necessary to implement an effective Startup Plan include clearly communicating management expectations. These expectations are included in the improvement initiatives and address important organizational performance measures, such as adherence to procedures and other work rules, identification and resolution of problems, and reduction in work backlogs. The startup plan also addresses other performance improvements that are necessary to achieve the objective of a safe and error-free startup and a subsequent period of safe and reliable operations. The actions and performance improvements include:

- Communicate the startup plan throughout the organization, and assign responsibility and accountability for the action plans.

- Set startup goals to define when the plant is ready for restart, including
 - Root causes are understood and appropriate startup actions are defined.
 - Maintenance, engineering and other material condition backlogs are adequately resolved.
 - Specific completion activities and initiatives (e.g., management and organizational changes and startup action plans) are completed.
- Establish an integrated schedule to complete the actions necessary for restart.

As a part of developing the Startup Plan, the Team also addressed plant startup preparation and planning. The Startup and Power Ascension Plan addresses restoring the plant to power operation, including dedicated management, augmented management structure and responsibilities, and special testing evolutions.

In addition, an assessment of the effectiveness of the completed action plans and an independent review of plant readiness for restart has been included, which addresses:

- System walkdown by teams with participation from Operations, Maintenance, System Engineering and Design Engineering to confirm system acceptance for startup and satisfactory identification of all open issues.
- Independent verification by QA that the necessary startup plan actions have been satisfactorily completed.
- Assessments of performance during startup by QA.
- Assessment and review by the SRAB of the startup plan adequacy and effectiveness of the plan results.

The startup planning process provided a comprehensive evaluation to assure that all significant issues for startup were identified. These issues stem from three broad areas as follows:

1. DSAT Open Items - Hardware, program and process, and management issues that result from a thorough evaluation of the DSAT report. The DSAT report was used as the framework to identify and categorize the remaining issues discussed below.
2. CAL items and open inspection report items. The CAL and responses were evaluated to identify all appropriate issues for resolution, and open inspection and enforcement documents were reviewed.
3. Self-Identified Issues - Open management and organizational performance issues and material condition items management is tracking for resolution prior to plant startup.

Cumulatively, the three planning phases, startup, short- and long-term, are intended to correct the root causes of the performance decline at Cooper Nuclear Station, which are described in the DSAT report. However, each of the root causes may not be fully corrected prior to plant startup, since the startup plan is structured to address corrective actions in a logical and prioritized basis. Those issues important to startup are the first issues to be resolved. Concurrent with the startup process, management will prepare and subsequently implement a short-term plan to address high-priority issues, followed by a long-term improvement plan.

Content of the Plan

The Startup Plan has been structured to address those items essential to restart the plant. The plan's content is as follows:

- Program and Process changes that are reflected in appropriate action plans.
- Management issues to be corrected (these are contained in associated program and process categories and action plans).
- A Startup Plan Action Item List that contains those open items that must be further reviewed to determine if any additional actions are required for startup. (Appendix A).
- Material Condition. (Appendix B).

III. Identification of Restart Actions

The process to identify and resolve the startup issues consisted of: (1) Issue Identification, (2) Issue Screening Evaluation, and (3) Issue Disposition. The potential effects of all known issues on safe plant startup and continued operations were evaluated to pre-established startup criteria. The issues were then dispositioned for resolution prior to plant startup, or the issue was deferred for future planning, resolution and closure. The characterization of each part is as follows:

Issue Identification

Issue Identification involved a review of CAL items and the responses, open inspection report items, DSAT issues, and self-identified issues. Identification of issues was coordinated by a team of senior managers and outside consultants (the Startup Plan Team) that provided assurance that all relevant issues were identified.

Once the complete set of issues was identified, the Team segregated them into either hardware issues or program and process issues. The program and process issues were further assigned to specific categories to allow more effective evaluation and to provide the ability to evaluate the significance of the issues as they related to the overall effectiveness of programs and processes at the station. The resulting categories are as follows:

1. Independent Oversight and Self Assessment - roles and responsibility of SRAB, SORC, QA and QC and organizational self assessment.
2. Corrective Action Program, Planning and Performance Monitoring - problem identification, root-cause analysis, planning and issue resolution, performance monitoring and follow-up.
3. Work control - identification, tracking, planning and scheduling.
4. Design Control and Configuration Management - plant design change control, clearance program, valve lineups, and drawing control.
5. Engineering Support - roles, responsibilities, and support to operations and maintenance.
6. Plant Testing - IST, surveillance, post-maintenance testing, and preconditioning.
7. Operational Experience Review (OER).
8. Procedural Control - technical quality, procedure changes, and procedure adherence.
9. Additional Management Issues - issues that are not specifically addressed in individual program and process categories.

Issue Screening Evaluation

Once categorized, the issues were evaluated to determine if they should be resolved prior to station startup or carried forward for the short-term or long-term planning phases. The issue screening evaluation process provided a structured method to assure each issue was addressed appropriately.

The issue screening evaluation was performed in two levels to pre-established criteria. This allowed station management to focus on those issues that were clearly important to plant restart, yet assure that all issues were captured for future resolution.

Level 1 Screening Evaluation - Issues were evaluated to identify potential safety or operability concerns. These issues were automatically designated as requiring resolution prior to plant startup.

Level 2 Screening Evaluation - The second level evaluation characterized the remaining issues to determine if they should be resolved prior to startup. The following criteria were used:

1. An event, component failure, deficiency or condition that could result in operation in an LCO Action Statement.
2. Failing to perform a required surveillance test or other license requirement or meet a commitment to an outside agency.
3. Failure of power production equipment that could result in a plant transient, derate, or plant shutdown.
4. Conditions that have resulted in repetitive safety system equipment failures.
5. Potential licensing-basis deficiencies requiring maintenance to restore to conforming conditions, i.e., deficiencies in safety-related or other qualified equipment (e.g., EQ, Appendix R, or seismic).
6. Potential design basis deficiencies, i.e., deficiencies in safety related equipment or other Technical Specification equipment not in conformance with the USAR.

7. Deficiencies in configuration management programs, processes, engineering analysis codes, or documentation that have, or could have, a reasonable probability of affecting equipment operability.
8. Conditions that may create an unacceptable potential for an unplanned radioactivity release to the environment or discharge of effluent in excess of limits.

In addition, the Team also assessed each of the program and process areas in an integrated manner, such that the cumulative effects of the individual deficiencies within each area were assessed. This resulted in a reexamination of program and process areas to assure that all startup issues were identified.

It should be noted that many management-related improvements were included as integral parts of the action plans. For example, improvements in management oversight are captured in Independent Oversight and Self Assessment. The category of Additional Management captures those issues that are not specific to other program or process areas. Additionally, since the common element of all identified root causes is management-related, Section VI, *Results of the Planning Process*, provides a description of startup improvement initiatives from all of the categories as they relate to management.

Issue Disposition

Issue Disposition assured that items that were identified as requiring resolution prior to plant startup are appropriately tracked in existing administrative systems until closed. The Plan contains a performance monitoring action plan that will review the effects of work backlogs on station operation and confirm acceptability for startup.

Following the completion of this part of the plan, the results were independently reviewed by the NPG Industry Advisory Group to assure the acceptability of the results.

IV. Development of the Phase 1 Plan

Categorization Of Issues

As described in the *Scope* section to this plan, the startup planning process included a comprehensive evaluation of three broad input sources to assure that all significant issues for startup were identified. These sources included:

1. DSAT Observations and Findings - Hardware, program and process, and management issues that resulted from a thorough evaluation of the DSAT report.
2. CAL items and open inspection report items.
3. Self-Identified Issues - Hardware and other issues that management is tracking for resolution prior to plant startup.

The manner in which each of the inputs was factored into the plan is described below:

DSAT Observations and Findings

The DSAT report identified a number of program and process areas that were combined with other areas by the Startup Planning Team into the nine program and process areas listed below. The hardware-related issues were independently reviewed for inclusion into the startup plan. DSAT observations and findings were reviewed against the startup plan criteria, and placed into these nine categories:

1. Independent Oversight and Self Assessment
2. Corrective Action Program
3. Work control
4. Design Control and Configuration Management
5. Engineering Support
6. Plant Testing
7. Operational Experience Review
8. Procedural Control
9. Additional Management Issues

The program and process areas were then expanded to include specific areas to define performance improvement necessary for startup from CAL, open NRC inspection items, and from self-identified issues. The individual areas were then assigned to line managers to develop startup action plans for subsequent review and integration by the Startup Planning Team.

The action plans that address the nine major improvement areas, together with the material condition items and the startup action item list, constitute the startup plan. The action plans describe corrective actions and other changes to programs and processes that will be completed prior to startup to address the identified performance issues.

CAL and Inspection Reports

The CAL and NPPD responses were reviewed by the Startup Planning Team to identify any remaining open issues that would require resolution prior to startup. The Team concluded that the CAL responses had appropriately addressed the actions specified in the CAL and that each of the issues was adequately tracked for resolution prior to startup. The Team also discussed whether or not there were any larger issues stemming from the individual item review of the CAL responses. The conclusions indicated that there were several issues that should be addressed for further analysis and improvements in the Phase 2 or 3 performance improvement plans. These include providing additional barriers to personnel error (e.g., training), further improvements to the OER program, and improved technical support to resolve problems at the plant.

A review of open NRC inspection report items was conducted by the CNS Licensing organization, and the issues were evaluated as to those that required resolution prior to startup. The results from that review were presented to the Startup Plan Team for evaluation of their generic implications. The Team concluded that the identified issues were the correct ones for startup and that there was sufficient overlap between the open item tracking system and other open issues to provide assurance that all appropriate issues had been identified and would be addressed. For example, open issues on adequacy of procedures and configuration control were reviewed on the inspection item list, and these are separately addressed in startup action plans.

Self-Identified Issues

Management has identified a number of issues that are being tracked for completion prior to plant startup. These issues include several management-related issues that are contained in the Additional Management startup planning category, in addition to specific program, process and material condition issues that the Team addressed for startup. The review also examined generic implications of the identified items. The self-identified issues and their resolution are discussed below.

Program and Process Issues

1. Inspection Report Items:

The inspection and enforcement history prepared for the DSAT was reviewed by the Team. Based upon a trend of issues, the Team identified the need to improve the process for providing information to the NRC. While identification and

resolution of safety issues may also be an item, the team concluded that this is adequately addressed for startup in the plans addressing Corrective Action, Independent Oversight and Self Assessment, Operational Experience Review and Additional Management.

A weakness was identified in the ability to evaluate correctly a range of issues the first time, including 50.59 evaluations. The broader issue was determined to include potentially inadequate evaluations on operability evaluations (OEs). The action plans intended to address the OE program adequately address these issues for startup.

2. Self Assessment:

The Team reviewed evaluations of self assessments performed since 1991. The Team initially reviewed Radiological Safety Incident Report (RSIR) issues and determined them to be acceptable for startup. In addition, the Team reviewed the MOV assessment for any potential startup issues or other concerns not addressed. No additional startup items related to the MOV program were identified.

3. Open Condition Report Review:

A review was conducted of all significant CRs (categories 1 and 2) and other CRs that had been identified for pre-startup completion. There were 78 category 1 and 2 CRs open, and approximately 175 category 1-3 CRs were identified for startup. The review of category 1 and 2 CRs revealed a number that were not significant according to 10CFR50, Appendix B. The Team also reviewed open CRs not on the startup list and evaluated them for significance, categorized them as appropriate, and determined whether they should be on the startup plan.

As a result of the CR reviews, 8 category 1 CRs were identified that had startup significance. These items will be closed prior to startup. There were no additional specific or generic issues identified.

4. Open QA items:

Past QA trend reports were reviewed by the Team. For the current quarter, adverse trends were identified in configuration management and in fire protection program implementation. The Corrective Action Program was identified as needing improvement in timely resolution of problems and root-cause determination. A specific off-gas system hardware problem was also identified. The team reviewed

previous Joint Utility Management Audits and QA reports; no additional startup items were identified.

The Team reviewed DSAT issue MRB-02 on QA audit frequency and ANSI 18.7. The current audit schedule appears to be in compliance with the NRC-accepted QA program since the reduction in audit frequency meets docketed commitments.

The Team also reviewed the results of the Corrective Action Review Board (CARB) addressing QC startup issues: low standards for procedures used in the field, a laborious procedure change process, and a commitment to have a vendor review the procedure change process. The Team also reviewed QA observations in maintenance and modifications, including independence, qualifications to identify when QC should be applied, implementation compliance, understanding of ownership (QA versus implementing organizations), and low common standards. A startup action plan was developed to address this issue. No additional startup issues were identified.

5. Field Coaching Team Report:

The Team met with the Field Coaching Team to discuss observations and potential startup issues. Industrial safety concerns were discussed as well as supervisor presence in the field. The Team discussed examples of industrial safety issues and the effectiveness of communication of management expectations. The Team reviewed procedure use and adherence, accountability for correction of problems, and the control of field documents. The main concerns of the Field Coaching Team are to assure that the valve lineup issues and independent verification requirements are correctly addressed for startup. The Team was satisfied that the issues identified are adequately addressed in the plans developed for startup.

6. Integrated Enhancement Plan:

The Integrated Enhancement Plan was reviewed by the Team. None of the action items in the plan were determined to be necessary for startup; however, they will be reviewed for inclusion in the short- and long-term plans.

7. Engineering Work Requests (EWRs):

The backlog of Engineering Work Requests (EWRs) was not reviewed by the Team, but an action plan was developed to assure prioritization of these items and establishment of appropriate goals for startup.

8. Design Criteria Document (DCD) Open Items:

The Team reviewed a report on design criteria documentation open items. A graded approach is used to categorize item significance with 1 and 2 being potential startup issues. Category 3 items have no safety, operability or reportability significance, and category 4 and 5 items are of lesser significance. While there were no open category 1 or 2 items, the Team identified a potential need in the short- and long-term improvement plans to establish trending of category 1 and 2 items.

9. Safety System Operability Review:

The Team addressed verification of the operability of safety systems in light of problems previously experienced with the maintenance program and the surveillance test program. The Team determined that the overall issue would be addressed through the following reviews:

- a. System walkdowns (to address preventive and corrective maintenance backlog and outstanding item functional review).
- b. Maintenance Work Practice Review.
- c. The RPS and ECCS surveillance testing review.
- d. Design verification of valve, switch, breaker and damper lineups and walkdowns of those lineups.

The Team reviewed the system readiness review checklists. The checklists were completed in the July-August time frame, and a startup action plan was developed. An additional action plan was also developed to establish multi-discipline team reviews of systems to complement this approach.

The Team reviewed the *Maintenance Work Practices Review* as part of the review of equipment operability as a result of issues associated with performing some maintenance actions without SORC-approved procedures. The initial report requires additional review of field work to determine that all MWRs were implemented correctly. This item is carried for closure on the Action Item List, Appendix A.

10. Program Health Cards:

The Team reviewed the program health card status for the sixty-one programs included in this effort. Evaluations have not been completed for the operability determination, oversight (SRAB, SORC, IRG), microbiologically induced corrosion, operability evaluation, Q List, design basis reconstitution (DBR), and configuration

management programs. In addition, the following programs were determined to have a low score, which would indicate potential problems that should be addressed: Appendix J, check valve, reliability and performance monitoring, vendor manuals, and relay setpoints. These low scores were confirmed by the team as appropriate, given the related issues identified by management and the DSAT.

A start-up action plan has been developed to address NPG program ownership and to establish clear accountability. The Startup Plan includes action plans to address significant startup-related program weaknesses identified in the health cards. The team determined that, outside of other actions being taken (for example, in response to enforcement actions or NPPD initiatives), no other actions are necessary before startup. Program enhancement will be addressed in the short- and long-term plans.

11. Operability Evaluations/Operability Determinations:

The Team identified a concern regarding the lack of tracking of open operability determinations and evaluations and added an item to develop a startup plan to resolve this concern.

12. MOV Program:

The Team reviewed the MOV program. The main open issue is completion of IEB 89-10 testing during the next refueling outage. Clarification with the NRC is needed due to the delay in the next outage from the original schedule for the outage prior to the end of 1994. Other issues included resolving CS-5A maintenance and testing commitments and resolving any potential LER overthrust issues.

13. Primary Containment Root Cause Report

The Team reviewed the primary containment root-cause report and determined that all specific issues have been resolved. The report reinforces the need for the organization to recognize safety significance rather than straight compliance (e.g., extension of SORC training to other managers). It also addresses program ownership, consideration of acceleration of the DBR project, and the need for an improved CNS/NED interface agreement. These items are addressed in startup action plans.

Other Management Issues Reviewed

1. The most recent SALP report and INPO evaluation have been adequately reviewed and incorporated into the Integrated Enhancement Plan, which in turn was reviewed by the Team.
2. The Tim Martin staffing study was reviewed and no startup issues identified.
3. The Outage Effectiveness Evaluation was reviewed under Self Assessments.
4. The Failure Prevention, Inc. evaluation results were incorporated into the IEP, which in turn was reviewed by the Team as described above.
5. The Strategic Plan For Performance Improvement was incorporated into the IEP, which in turn was reviewed by the Team.
6. The MWR Backlog, open procedure changes, Nuclear Action Item Tracking items, Startup Issue List, LERs, and OERs were reviewed by system engineering with overview provided by the Team. No additional startup action items were identified.

Material Condition/Hardware Issues

The team specifically addressed material condition issues and establishment of appropriate management performance indicator targets. These would include the following:

1. MWR backlogs
2. Temporary Modifications
3. Red Arrow Log (Control Room instruments out of service)
4. Caution Tags
5. EWRs
6. CRs

The Team reviewed the DSAT field notes and identified hardware and material condition issues. The report was independently reviewed, and CRs are being generated for all hardware issues. The open items from this review will then be identified for startup and tracked accordingly. The DSAT material condition issues are contained in Appendix B.

V. Results of the Planning Process

Based upon the review process described above, the issues that must be resolved prior to startup in each of the nine categories have been determined. A summary of these issues, by category, is provided below. Action plans that address these issues are presented in Section VIII.

1. Independent Oversight and Self Assessment:

- Revise the SRAB charter to address member independence and changes in membership, as required.
 - Evaluate 1993 self-assessment activities
 - Review the startup plan
 - Evaluate startup activities
- Improve SORC effectiveness
 - Provide independent experts for mentoring.
 - Establish subcommittees to allow more effective use of member time and provide more focused reviews (e.g., procedures, design changes, special instructions)
 - Conduct training for members.
 - Minimize overlap of committee membership (SRAB, SORC, CRG).
- Conduct independent QA assessments.
 - Startup action plans
 - CAL item closeouts
 - Closed category 1 and 2 CRs for adequacy of root cause and treatment of safety significance
- Resolve concerns regarding the independence of the QC function and consistent application of QC requirements

2. Corrective Action Program, Planning and Performance Monitoring:

- Corrective Action Program (CAP)
 - Clarify responsibility, authority and accountability for the CAP.
 - Review and disposition the CR backlog for startup.
 - Establish improved criteria for determining category 1 and 2 classifications for CRs and conduct appropriate training.
 - Improve root-cause analyses (depth, quality), and integrate it with a rechartered CRG function.

- NPG Planning
 - Initiate the 3-phase performance improvement planning, as described in this report.
- NPG Performance Monitoring
 - Establish performance monitoring for important management indicator backlogs, e.g., MWRs, EWRs, CRs, Temporary Modifications, Red Arrows, and Caution Tags, including setting standards, expectations and goals for startup, safety prioritization of backlogs, and performance monitoring of backlogs

3. Work Control

- Establish and implement a plan for integrated work control, planning and scheduling
 - Clarify responsibility, authority and accountability for work control.
 - Provide SRO screening of MWRs outside the Control Room.
 - Establish up-front Operations input to work priority and schedule.
- Implement an effective LCO tracking and work coordination interface system.

4. Design Control and Configuration Management:

- Conduct a plant configuration verification prior to startup.
 - Valve, switch, breaker, and damper lineup design verification
 - Valve, switch, breaker, and damper lineup walkdown
 - Modification review for lineup changes
- Identify and review priority vendor manuals.
 - Identify required PMs.
 - Update PMs as required.
- Modify the procedure for approval of configuration changes that affect the design to insure NED approval.
 - As-found (as-built) DCNs
 - Lineup changes
 - Require NED authorization for use of SORC-approved MWRs
 - Procedures
- Provide for an improved near-term capability, e.g., through augmenting the DBD staff, to provide more efficient and better-quality safety

evaluations and resolution of design-basis questions. Provide training to appropriate technical staff in locating design-basis information.

- Confirm technical adequacy of RPS and ECCS surveillance procedures.
- Review SORC-approved MWRs for potential issues.
- Change the calculation approval process to prevent issuance prior to modification installation.
- Review safety system readiness for operation.
 - Establish multi-discipline teams to walkdown selected systems to identify all open items, and validity check the MWR, OER, and other open item reviews.
 - Develop a new system engineering startup readiness review checklist and conduct additional system reviews prior to startup. Use the multi-discipline team reviews as a pilot for this effort.

5. Engineering Support:

- Improve NED support and station interface to assure timely resolution of operating problems.
 - Clarify the interface agreement.
 - Augment on-site NED support to support startup plan activities.
- Review and determine disposition of all OD/OEs including any cumulative effects.

6. Plant Testing:

- Complete resolution of the CAL pre-conditioning issues.
- Conduct a comparison of IST and surveillance tests with another BWR to determine program adequacy.

7. Operational Experience Review:

- Evaluate currently open OERs for startup significance.
- Conduct special operating experience search for startup issues following long shutdown.
- Resolve the reactor vessel thermal transient issue.

8. Procedural Control:

- Create a hierarchy of certain key procedures such that a reduction in the level of control provided by these key procedures can not be made in any sub-tier procedure without appropriate review and approval.

- Establish interim procedural controls for Special Instructions.
 - SORC approval.
 - Eliminate ability to isolate work boundary for personnel protection using special instructions (use clearance order process).
 - Validate and walkdown special instructions prior to SORC review.
- Screen the backlog of procedure changes for significant, startup-related items.
- Resolve the EPZ dose assessment model issue.
- Formalize an interim administrative process for handling surveillance tests and LCOs without allowed outage times.

9. Additional Management Issues:

- Resolve the lack of ownership of certain NPG programs.
- Provide nuclear safety awareness training to all employees.
- Establish an enhanced management field observation program.
- Address near-term improvements in the industrial safety program.
- Formalize a procedure for licensing submittals and commitment closure.

VI. Management-Related Improvements in the Startup Plan

Many of the startup action plans address important and immediate management improvements. These improvements are structured to address specifically the root causes identified from the DSAT report, which are:

- Management's ineffectiveness in establishing a corporate culture that encourages the highest standards of safe nuclear plant operation.
- Failure of management to establish the vision supported by adequate direction and performance standards to improve station performance.
- Failure of management to establish effective monitoring and failure to direct critical self assessment activities that recognize program and process deficiencies and make necessary improvements.
- An ineffective management development program has resulted in a lack of management and leadership skills necessary to ensure that

strong leaders and managers are available to fill key corporate and station positions.

The key aspects of the first three root causes identified by the DSAT relate to management capability in setting high standards, providing the vision and direction to improve station performance, and recognizing and correcting program and process deficiencies. Appropriate action plans have been categorized based upon improvements in each of these management deficiencies and listed below. The fourth root cause addresses the need to develop in-house capability to manage long-term performance improvement. In the short term, improved management capability is addressed by the addition of experienced managers to the NPG management team to enable the station to move forward with the required performance improvements.

Set High Standards

1. Establish standards, expectations and goals for startup (NPG Performance Monitoring)
2. Create a hierarchy of key procedures (Procedural Control)
3. Develop a new system engineering startup readiness review checklist (Design Control and Configuration Management)
4. Review and determine disposition of all OD/OEs, including any cumulative effects (Engineering Support)
5. Improve the Industrial Safety Program (Additional Management)
6. Provide safety awareness training to all employees (Additional Management)
7. Improve root cause analysis (CAP, Planning and Performance Monitoring)
8. Review and disposition the CR backlog for startup (CAP, Planning and Performance Monitoring)
9. Implement an effective LCO tracking and work coordination interface system (Work Control)
10. Screen backlog for significant procedure changes (Procedural Control)
11. Assure technical adequacy of design changes (Engineering Support)
12. Evaluate currently open OERs for startup significance (Operational Experience Review)
13. Conduct special OER search for startup from long outages (Operational Experience Review)

Provide the Vision and Direction to Improve Station Performance

1. Initiate the three-phase performance improvement plans (CAP, Planning and Performance Monitoring)

2. Establish performance monitoring of important backlogs (CAP, Planning and Performance Monitoring)
3. Establish an enhanced management field observation program (Additional Management)
4. Evaluate the Power Ascension Plan for integration with the Startup Plan (Additional Management)
5. Establish and implement a plan for integrated work control (Work Control)
6. Improve NED support and station interface to assure timely resolution of operating problems (Engineering Support)

Correct Deficiencies in Programs and Processes

1. Resolve the lack of ownership of certain NPG programs (Additional Management)
2. Revise the SRAB charter (Independent Oversight and Self Assessment)
3. Improve SORC effectiveness (Independent Oversight and Self Assessment)
4. Clarify responsibility, authority and accountability for CAP (CAP, Planning and Performance Monitoring)
5. Formalize a procedure for licensing submittals and commitment closure (Additional Management)

VII. Management of the Startup Plan

A plan manager is assigned responsibility for overall plan management, including monitoring the performance of the action plans and is accountable for reporting the performance results from the plan to management. The plan manager also control changes, additions and deletions to the startup plan.

VII.1. Responsibilities

Site Manager

The Site Manager, in conjunction with the Division Manager of Nuclear Engineering and Construction, Division Manager of Quality Assurance and VP-Nuclear, will assure that sufficient resources are provided to complete the startup plan satisfactorily. In addition, he will actively participate in establishing expectations for performance results with management, monitoring plan results, reviewing management presentations for the purpose of establishing accountability within the organization, and providing overall plan guidance, leadership, and monitoring.

Startup Plan Manager

The day-to-day management of the startup plan is assigned to a senior NPPD manager, who is responsible for assuring that the plan progresses satisfactorily. The startup plan manager is responsible for the following activities:

- Coordinating and preparing management reports for the management team,
- Assuring that plan activities are integrated effectively with the overall site schedule,
- Facilitating changes to existing action plans or the development of new plans as emerging issues develop,
- Establishing and managing the agenda for periodic management review meetings,
- Interfacing with Licensing and the NRC (as appropriate) to assure that any regulatory issues are resolved, and
- Coordinating and assuring the adequacy and acceptable closure of the action plans.

The startup plan manager assures that the action plans are scheduled, responsibility assigned, and resources available for each activity. Working with NPG management and with appropriate planning and scheduling organizations, he will progress the plan and develop required management reports.

Action Plan Managers

Each of the action plans has an assigned action plan manager. The responsibilities of the action plan manager are to review the action plan and ensure that it is implemented effectively. In reviewing the action plan, the assigned manager will verify that the action plan is implementable and will achieve its objectives.

In cases where the action plan manager identifies the need to change the action plan, those changes will be submitted to the startup plan manager for review and approval by the Site Manager.

VII.2. Periodic Assessment

The NPPD management team (Site and Senior Managers), as assisted by the startup plan manager, will provide the focal point for review of startup plan effectiveness through a review of reports of completion of startup action plan activities. These reports will be provided in periodic management review meetings held to review plan results.

VII.3. Verification of Action Plan Closure

Reviews and documentation will be used to verify that the individual action plans are satisfactorily completed. The individual action plan managers are responsible for reporting satisfactory plan closure to the Site Manager and the management team. QA will independently assess the completion of plan actions.

START-UP ACTION PLAN

ISSUE: Revise the SRAB charter; address member independence and revise membership

PROGRAM/PROCESS ISSUE CATEGORY: Independent Oversight and Self Assessment

SPONSOR: R. G. Jones/S. J. Jobe

ACTION PLAN MANAGER: R. G. Jones

DESCRIPTION OF ISSUE:

Concerns and improvements identified in the 1991 and 1993 self assessments, DSAT, and other Cooper-identified weaknesses concerning SRAB Charter and membership concerns have not been incorporated into SRAB procedures.

OBJECTIVE:

Ensure SRAB procedures and membership provide effective independent review, audit and oversight of NPG activities in order to ensure Cooper Nuclear Station is safely operated and maintained. Changes must ensure SRAB is self-critical and challenges line management.

ACTION:

1. Provide additional independent membership to SRAB.
2. Minimize overlap of CRG, SORC, and SRAB.
3. Evaluate deficiencies in SRAB performance and revise charter accordingly.
4. Develop an effective oversight of SORC.
5. Review of Startup Plan.
6. Evaluate completion of Startup Activities.

START-UP ACTION PLAN

ISSUE: Improve SORC Effectiveness

PROGRAM/PROCESS ISSUE CATEGORY: Independent Oversight and Self Assessment

SPONSOR: R. L. Gardner/S. C. Woerth

ACTION PLAN MANAGER: R. Gardner

DESCRIPTION OF ISSUE:

The independent oversight of SORC in meeting its responsibilities in accordance with Regulatory requirements needs improvement.

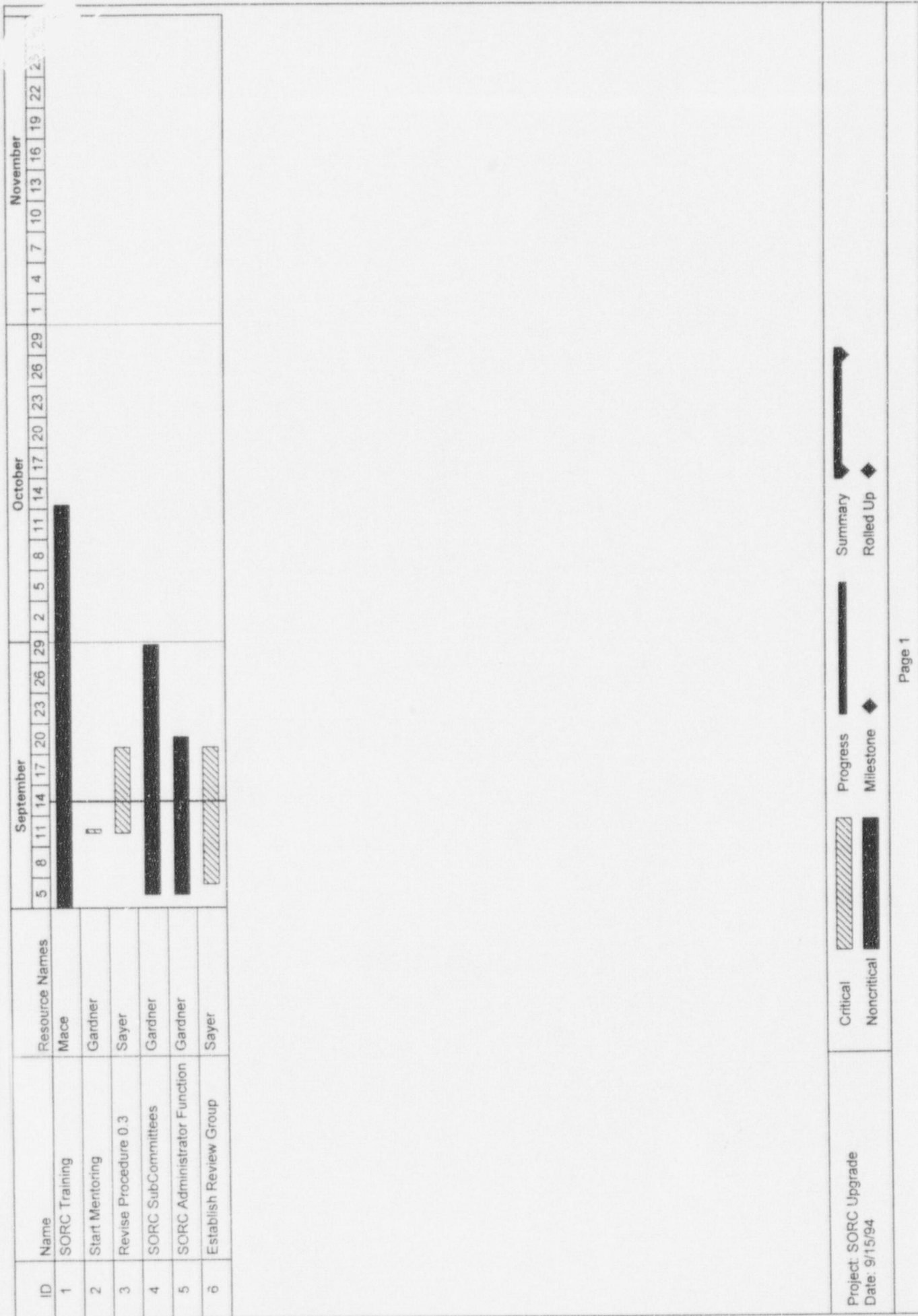
OBJECTIVE:

Improve independent oversight ability of SORC to ensure that an appropriate review is performed for all proposed additions, deletions, and changes to safety-related activities.

Enhance the process utilized by SORC to ensure sufficient independent oversight is maintained.

ACTION:

1. Provide a Nuclear Safety Training course to SORC members and alternates.
2. Establish a mentor to serve as a protagonist, purview SORC review items and assist in presentation preparation.
3. Revise Procedure 0.3 to more accurately describe SORC activities.
4. Implement SORC subcommittees and sponsors for review of procedures, design changes, special instructions.
5. Implement SORC Administrator to improve coordination and documentation.
6. Establish group to review other utility SORC organizations, membership, procedures and methods of meeting requirements.



Project: SORC Upgrade
Date: 9/15/94

START-UP ACTION PLAN

ISSUE: Independent Assessment of Startup Action Plan, Confirmatory Action Letter, Condition Reports

PROGRAM/PROCESS ISSUE CATEGORY: QA Assessment

SPONSOR: R. A. Sessoms

ACTION PLAN MANAGER: D. R. Robinson

DESCRIPTION OF ISSUE:

This action plan does not pertain to an "issue". The attached Assessment Plan is provided to describe the specific activities of the Quality Assurance Division to conduct independent assessments of the Startup Action Plan; CAL response and actions; and Closed Category 1 and 2 Condition Reports.

OBJECTIVE:

To conduct the independent assessments as described above and provide timely reporting of results as appropriate. To ensure a quality startup plan and that significant issues are appropriately addressed prior to startup.

ACTION:

1. Assess the development and implementation of the Startup Action Plan.
2. Assess the adequacy of CAL responses and actions.
3. Assess the adequacy of disposition of Closed Category 1 & 2 Condition Reports.

START-UP ACTION PLAN

ISSUE: Quality Control

PROGRAM/PROCESS ISSUE CATEGORY: Independent Oversight and Self Assessment

SPONSOR: R. A. Sessoms

ACTION PLAN MANAGER: G. E. Smith

DESCRIPTION OF ISSUE:

Quality Control inspections are not consistently specified or performed and personnel are not all adequately trained in QC Program implementation.

OBJECTIVE:

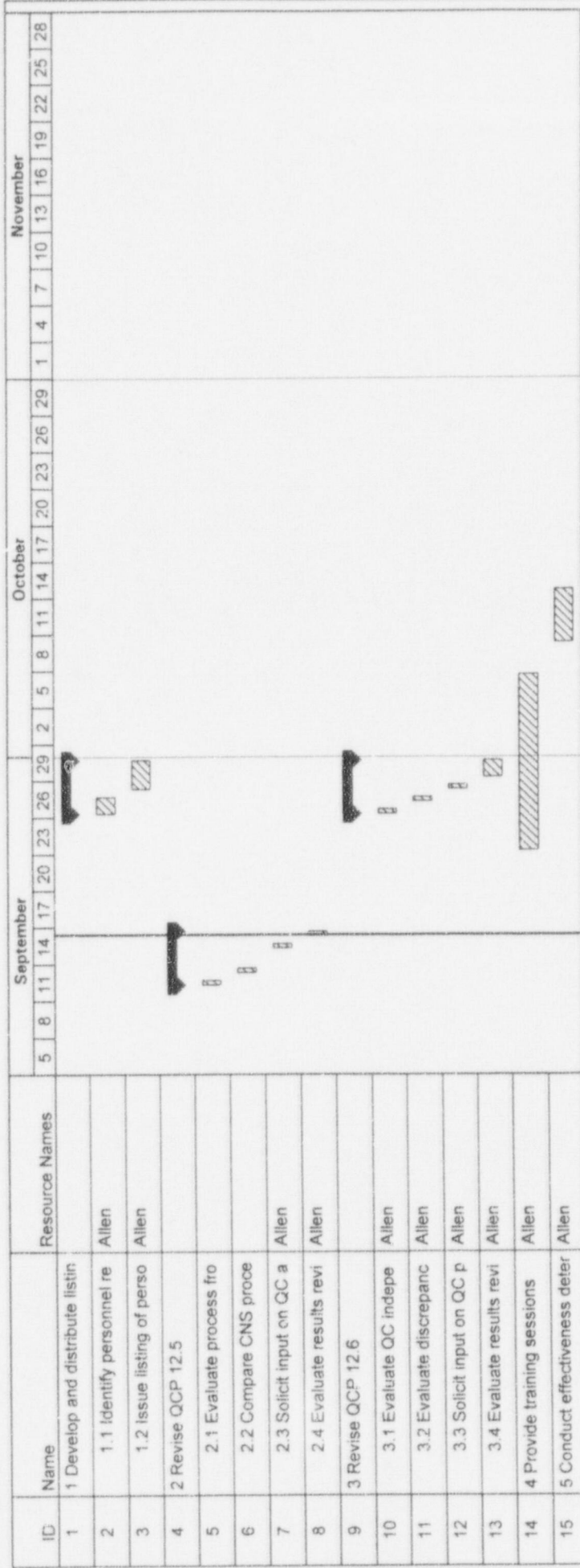
1. Provide increased consistency in the application of QC requirements.
2. Provide increased QC inspection for additional activities.
3. Impose limitations on the amount of persons reviewing and specifying QC requirements.
4. Coach/counsel QC personnel on new program requirements.

ACTION:

1. Develop and distribute listing of persons (titles) who will review and specify MWR instructions for QC application.
 - Identify personnel responsible for assignment and incorporation of QC inspections
 - Issue listing of personnel responsible for reviewing and specifying QC requirements on MWR special instructions
2. Revise QCP 12.5 to improve amount of QC and consistency of application.
 - Evaluate QC designation and assignment process from another utility (ANO)
 - Compare CNS QC process with the other utility's QC process

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- Solicit input from CNS departments on QC application requirements
 - Evaluate results and revise procedure
3. Revise QCP 12.6 to provide enhanced instructions to QC personnel.
 - Evaluate current detail of QC independence
 - Evaluate the procedural directions for discrepancy documentation
 - Solicit input from CNS departments on QC performance requirements
 - Evaluate results and revise procedure
 4. Provide training sessions for persons affected by the QC Program enhancements.
 5. Conduct effectiveness determinations to assure enhancements as intended.



Project:
Date: 9/16/94

Critical
 Noncritical
 Progress
 Milestone
 Summary
 Rolled Up

START-UP ACTION PLAN

ISSUE: Corrective Action

PROGRAM/PROCESS ISSUE CATEGORY: Corrective Action Program

SPONSOR: R. L. Jones/S. J. Jobe

ACTION PLAN MANAGER: J. Flaherty

DESCRIPTION OF ISSUE:

Clarify responsibility, authority, and accountability for CAP, improve root cause quality and depth of analysis and corrective action to prevent recurrence. Also, review and disposition CR backlog and clarify criteria for category 1 and 2 CRs.

OBJECTIVE:

Use the dedicated Corrective Action Program group to provide clear management of the program and establish a self-critical root cause culture at CNS which ensures rigorous investigation and effective correction of all conditions adverse to quality.

ACTION:

1. Establish program manager with 5 CR team leaders with sole responsibility for program management.
2. Establish group mission, provide training, leading and/or mentoring investigation teams, perform backend reviews of completed root cause investigations and implement lessons learned for continued program improvement.
3. Conduct Senior Manager meeting to establish Corrective Action Program expectations and accountability.
4. Revise 0.5 series procedures to incorporate CAP organization and responsibilities and lessons learned feedback.
 - 4.1 Restructure CRG.
 - 4.2 Senior Management to determine CR category and set prioritization and assign accountability for evaluation.

5. Provide expectations to potential CARB members.
 - 5.1 Focus on ensuring the understanding of timely convening of a Condition Review Team, accurate root cause and corrective action.
 - 5.2 Provide additional management training.
6. Provide method for review, disposition, and management of the CAP backlog to support startup.
7. Revise the Condition Reporting Program Guidelines to ensure clear categorization of conditions. This will include a routine work feature for those issues requiring evaluation, tracking, or resolution but do not require apparent or root cause investigations.

START-UP ACTION PLAN

ISSUE: Departmental Performance Indicator Goals/Monitoring

PROGRAM/PROCESS ISSUE CATEGORY: Corrective Action, Planning and Performance Monitoring

SPONSOR: D. A. Whitman

ACTION PLAN MANAGER: A. L. Dostal

DESCRIPTION OF ISSUE:

Determine performance criteria against which departmental goals will be measured.

REFERENCE: NPG Business Plan

OBJECTIVE:

To ensure that departmental goals not only accurately reflect management expectations for the Start-Up Performance Indicator program, but are also attainable.

ACTION:

1. Assess current program and data availability and industry programs
2. Establish startup performance indicators. For each indicator:
 - 2.1 Define data needs
 - 2.2 Assign responsibility
 - 2.3 Define report format
3. Establish goals
 - 3.1 Confirm CR goal of Average Days open and promptness of CR report
 - 3.2 Establish MWR backlog goal
 - 3.3 Establish EWR backlog goal

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- 3.4 Establish Temp Mods backlog goal
 - 3.5 Establish Red Arrow goal
 - 3.6 Establish Caution Tag goal.
4. Start publishing requests weekly

START-UP ACTION PLAN

ISSUE: Establish and implement a plan for integrated work control, planning, and scheduling

PROGRAM/PROCESS ISSUE CATEGORY: Work Control

SPONSOR: R. L. Gardner/E. M. Mace

ACTION PLAN MANAGER: M. Estes

DESCRIPTION OF ISSUE:

The existing processes for work package preparation, planning, and scheduling work do not sufficiently limit the potential for challenges to nuclear safety and adversely affect the ability of the Maintenance Department to function effectively.

OBJECTIVE:

Correct existing deficiencies in work package content, work coordination, and daily scheduling through implementation of a work process improvement plan.

ACTION:

1. Improve work planning/package preparation by:
 - 1.1 Adding experienced planners.
 - 1.2 Implementing a planning guide to control package content and format, and ensuring that planners address appropriate requirements when planning packages.
2. Improve work scheduling by:
 - 2.1 Adding experienced schedulers.
 - 2.2 Focusing on schedule adequacy/adherence.
 - 2.3 Developing a short-range look ahead by all work groups.
 - 2.4 Developing an improved short-range schedule.

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3. Provide operations control in establishing priorities for repair of equipment.
4. Establish a work control center, outside the control room, to allow an SRO to control work.
5. Establish divisionalized work control for the current forced outage.
6. Improve short-range work control by developing an interim schedule that can be used to transition to a system based 12-week rolling schedule. Focus on maintaining division and system separation, and coordination between groups to minimize the times equipment is removed from service.

ID	Name	Resource Names	September							October							November											
			5	8	11	14	17	20	23	26	29	2	5	8	11	14	17	20	23	26	29	1	4	7	10	13	16	19
1	Improve Work Planning/work	Unruh	[Solid bar]																									
2	Add experienced planner		[Hatched bar]																									
3	Implement planners guid	Unruh	[Hatched bar]																									
4	Improve work Scheduling		[Solid bar]																									
5	Add experienced schedu		[Hatched bar]																									
6	Focus on schedule adeq		[Hatched bar]																									
7	Develop short range look		[Hatched bar]																									
8	Develop improved short-	Hess	[Hatched bar]																									
9	Develop Operations prioritizin	Hess	[Solid bar]																									
10	Establish work control center		[Hatched bar]																									
11	Establish divisionalized work		[Hatched bar]																									
12	Establish interim scheduling	Estes, Hess	[Hatched bar]																									

Project: Work Control
 Date: 9/16/94

START-UP ACTION PLAN

ISSUE: Implement effective LCO tracking and work coordination interface system

PROGRAM/PROCESS ISSUE CATEGORY: Work Control

SPONSOR: R. L. Gardner/E. M. Mace

ACTION PLAN MANAGER: R. Brungardt

DESCRIPTION OF ISSUE:

An LCO tracking system does not exist to provide the shift supervisor with guidance to assist in work authorization. Mode-dependent LCOs are not tracked. System/train related maintenance is not grouped on the schedule and LCOs are not identified by the schedule.

OBJECTIVE:

Improve tracking of technical specifications-related equipment that is out of service to limit challenges to safety systems caused by work coordination problems.

ACTION:

1. Establish an LCO tracking system that identifies equipment out-of-service that would cause entry into an LCO or would be a restraint to a division swap or mode change. Use this system to assist the shift supervisor in authorizing work.
 - 1.1 Revise STETS for LCO Tracking.
 - 1.2 Review outstanding open items.
 - 1.3 Review status of significant LCOs daily.

ID	Name	Resource Names	September							October							November													
			5	8	11	14	17	20	23	26	29	2	5	8	11	14	17	20	23	26	29	1	4	7	10	13	16	19	22	25
1	Establish LCO Tracking		[Gantt bar: Sept 5 to Oct 1]																											
2	Revise STET for LCO tra	Hitzel	[Gantt bar: Sept 11 to Sept 14]																											
3	Review outstanding ope	Hitzel	[Gantt bar: Sept 26 to Sept 29]																											
4	Review status of signific	Hitzel	[Gantt bar: Sept 23 to Sept 26]																											

Project: LCO Tracking
Date: 9/16/94

 Critical
 Noncritical
 Progress
 Milestone
 Summary
 Rolled Up

START-UP ACTION PLAN

ISSUE: Plant Configuration Verification (1 of 2)

PROGRAM/PROCESS ISSUE CATEGORY: Design Control/Configuration Management

SPONSOR: R. L. Gardner

ACTION PLAN MANAGER: R. Brungardt

DESCRIPTION OF ISSUE:

Concerns noted with plant valve configurations, as well as other configuration control problems, indicate a potential configuration control concern with other components that are required to be in specific line-ups.

OBJECTIVE:

Determine if the standby alignment of the plant safety systems is properly specified such that, if called upon to automatically initiate, the systems will meet their design objectives.

ACTION:

1. Identify the expected valve, switch, breaker and damper positions for the RHR B Loop after it is auto-initiated into the LPCI injection mode and SGT system after it is auto-initiated into the accident mode.
2. Review the Elementary Diagrams for RHR Loop B and SGTS to determine if the valves, switches, breakers and dampers start in the expected standby mode; if the logic automatically re-aligns these components into the accident mode as expected; and if the logic will in any way prevent alignment into the accident mode.
3. Compare the normal (100% power lineup) standby position from valve and switch/breaker checklists, system operating procedures and operator knowledge against the required design position.
4. Screen discrepancies and resolve. Evaluate need to expand to other systems.

START-UP ACTION PLAN

ISSUE: Plant Configuration Verification (2 of 2)

PROGRAM/PROCESS ISSUE CATEGORY: Design Control/Configuration Management

SPONSOR: R. L. Gardner/K. C. Walden

ACTION PLAN MANAGER: R. Brungardt

DESCRIPTION OF ISSUE:

The DSAT team identified many examples of recently identified valve and switch mispositionings. They also identified that many valve lineup sheets had known deficiencies.

OBJECTIVE:

Perform valve, switch, breaker, and damper lineup walkdown and initiate corrective action for discrepancies.



ACTION:

1. Operations Department to perform valve, switch, breaker, and damper lineup walkdown, and initiate corrective action for discrepancies.
2. NED to perform review of past Design Changes against existing valve lists.
3. Review NED results and submit to Operations Department.
4. Operations Department field verify condition.
5. Operations Department generate TPCNs for affected procedures.
6. Operations Department perform valve position verification of TPCNs (verification of changes only).

ID	Name	Resource Names	September							October							November													
			5	8	11	14	17	20	23	26	29	2	5	8	11	14	17	20	23	26	29	1	4	7	10	13	16	19	22	25
1	1 Design Verification		[Summary bar from Sept 5 to Oct 29]																											
2	1.1 ID. expected RHR po		[Progress bar from Sept 5 to Oct 23]																											
3	1.2 ID. expected SBT v	Freborg, Jeanneret,	[Progress bar from Sept 5 to Oct 8]																											
4	1.3 Review RHR Loop B	Freborg, Jeanneret, Fi	[Progress bar from Sept 5 to Sept 20]																											
5	1.4 Review SGTS elem.	Freborg, Jeanneret, Fi	[Progress bar from Sept 5 to Sept 17]																											
6	1.5 Compare the normal		[Milestone diamond at Sept 5]																											
7	1.6 Screen any identified	Freborg, Jeanneret,	[Progress bar from Sept 5 to Sept 11]																											
8	1.7 Resolve startup discr	Freborg, Jeanneret, Fi	[Critical bar from Oct 20 to Oct 27]																											
9	2 Plant Configuration Verificat		[Summary bar from Sept 5 to Sept 14]																											
10	2.1 Operations departme	Black	[Progress bar from Sept 5 to Sept 11]																											
11	2.2 NED perform review	Fischer	[Progress bar from Sept 5 to Sept 11]																											
12	2.3 Submit review to OP		[Critical bar from Sept 11 to Sept 14]																											
13	2.4 Operations departme	Black	[Milestone diamond at Sept 5]																											
14	2.5 TPCNs	Black	[Milestone diamond at Sept 5]																											
15	2.6 Verify TPCNs	Black	[Milestone diamond at Sept 5]																											

Project: Plant Configuration Verif.
Date: 9/16/94

Critical  Noncritical 

Progress  Milestone 

Summary  Rolled Up 

START-UP ACTION PLAN

ISSUE: Identify and Review Priority Vendor Manuals

PROGRAM/PROCESS ISSUE CATEGORY: Design Control/Configuration Management

SPONSOR: R. L. Gardner/K. C. Walden

ACTION PLAN MANAGER: R. Foust

DESCRIPTION OF ISSUE:

DSAT noted a concern with the backlog of safety-related vendor manuals that have not been reviewed to identify PM requirements for associated components.

OBJECTIVES:

1. Resolve the DSAT concern by ensuring that those essential components associated with the backlogged safety-related vendor manuals are evaluated, if necessary, for inclusion in the PM program.
2. Add confidence to our ability to sustain plant operations by evaluating those components associated with certain non-safety-related vendor manuals, if necessary, for inclusion in the PM program.

ACTION:

1. Collect and compile all backlogged safety-related vendor manuals.
2. Identify new or different significant PM requirements. Make changes to appropriate PMs.

START-UP ACTION PLAN

ISSUE: NED review of procedures and DCNs to ensure Configuration Control.

PROGRAM/PROCESS ISSUE CATEGORY: Design Control/Configuration Management

SPONSOR: R. E. Wilbur/K. C. Walden

ACTION PLAN MANAGER: G. S. McClure

DESCRIPTION OF ISSUE:

Configuration Control is not effectively maintained. Contributing factors are the need for greater involvement of NED in specific procedure changes that may affect design and the changing of drawings without adequate justification as to the effect on design. The specific concerns are the lack of positive control of:

1. valve/power supply line-ups that may be due to Procedure changes
2. operating conditions/parameters that may be due to Procedure changes
3. drawing changes made independent of the design change process.

OBJECTIVE:

Provide mechanisms for assuring that changes to configurations reflect station design. This includes strengthening review of drawing changes and specific procedures.

ACTION:

1. Modify both CNS/NED DCN Procedures to require Engineering justification of reason for DCN, if not a Design Change.
2. Provide a screening process that identifies when a Procedure change requires NED review to assure the change does not affect the design basis.
3. Provide a screening process that identifies when an NED calculation requires a CNS review to assure the changes does not affect plant operation.
4. Provide training.

START-UP ACTION PLAN

ISSUE: Efficient Resolution of Design-Basis Questions

PROGRAM/PROCESS ISSUE CATEGORY: Design Control/Configuration Management

SPONSOR: R. E. Wilbur/K. C. Walden

ACTION PLAN MANAGER: W. L. Swantz

DESCRIPTION OF ISSUE:

Provide for a near-term capability, e. g., through augmenting the DBD staff, to provide more efficient resolution of design-basis questions and improve the quality of safety evaluations submitted for SORC approval.

OBJECTIVE:

Provide a more efficient method of responding to design basis questions and identifying design basis information and upgrade the quality, detail and accuracy of 10CFR50.59 evaluations before they are submitted to SORC for review and approval.

ACTION:

1. Add six (6) new senior engineering consultants to the Design Basis Group for twelve (12) months to focus specifically on responding to design basis questions and reviewing work from other groups to ensure that the design basis and requirements of 10CFR50.59 are met. Focus will be on evaluations associated with current /future DCs, STPs and SPs
2. Develop a simple one page Design Basis Information Request Form, with instructions on the back.
3. Develop a training session and guidance document on how to locate design basis information and distribute to appropriate technical staff.
4. Conduct training for appropriate technical staff on how to locate design basis information.
5. Solicit and evaluate formal feedback through discussion, and through a questionnaire distributed at the training session, on the Design Basis Information Request Form and explain its use.

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6. Conduct a review to confirm that recent assessment, inspections, etc. resulted in high confidence level of capturing past 10CFR50.59 evaluation deficiencies.

START-UP ACTION PLAN

ISSUE: Surveillance Procedure Adequacy

PROGRAM/PROCESS ISSUE CATEGORY: Design Control/Configuration Management

SPONSOR: R. E. Wilbur/K. C. Walden

ACTION PLAN MANAGER: W. L. Swantz

DESCRIPTION OF ISSUE:

Verify technical compliance of CSCS (ADS, CSS, HPCI, LPCI) and RPS surveillance procedures

OBJECTIVE:

Complete surveillance procedure validation for CSCS and RPS.

ACTION:

Perform detailed review of surveillance procedures for CSCS and RPS to verify testing is being conducted in accordance with CNS Technical Specifications, USAR, IST Program, and DCDs (as applicable). Review includes:

1. Review applicable documentation (including drawings) and yellow-line documents to provide an overview of testing performed.
2. Generate Surveillance Program Review Resolution Forms for deficiencies or concerns noted during review. Track forms to closure and provide daily/weekly updates to CFM Manager.
3. Complete Procedure Review Form for each procedure indicating:
 - * Review resolution forms submitted
 - * Components tested & screened for operability concerns
 - * Reference documentation and drawings
 - * Technical Specification line items satisfied

September 15, 1994 8:07 pm

* USAR testing requirements satisfied

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START-UP ACTION PLAN

ISSUE: SORC Approved MWRs and Subsequent Design Changes

PROGRAM/PROCESS ISSUE CATEGORY: Design Control/Configuration Management

SPONSOR: R. E. Wilbur/K. C. Walden

ACTION PLAN MANAGER: G. S. McClure

DESCRIPTION OF ISSUE:

SORC approved MWRs are sometimes used to expedite the installation of a modification. There have been two cases where the follow-up, formalized design change documented required changes to the original SORC approved MWR. Additionally, some of the design calculations were not prepared until the modification had been installed for over a year.

OBJECTIVE:

Provide added assurance that SORC approved MWRs used to implement modifications receive a higher level technical review to guard against design deficiencies or violation of design basis.

ACTION:

1. Identify level and type of any enhanced (ANSI N45.2.11) reviews required. Additional reviews by both NED and site personnel will be evaluated.
2. Verify procedures are adequate to assure that follow-up documentation is completed within 30 days or alternatively require justification for leaving the documentation open.
3. Changes to the CNS Engineering Procedure 3.4 will be made to incorporate the requirements determined above.
4. Review the outstanding SORC approved MWRs to assure there are no potential issues that would require additional modifications, changes or safety significant concerns.

START-UP ACTION PLAN

ISSUE: Inadequate Calculation Control Prior to Implementation

PROGRAM/PROCESS ISSUE CATEGORY: Design Control/Configuration Management

SPONSOR: R. E. Wilbur/K. C. Walden

ACTION PLAN MANAGER: G. S. McClure

DESCRIPTION OF ISSUE:

Current calculation process does not prevent the issuance of an approved calculation before its associated modification is installed in the plant. This can contribute to misunderstanding of "current" design.

OBJECTIVE:

Ensure calculations that are approved prior to the associated field modification/implementation are appropriately identified.

ACTION:

1. Develop and implement a process for identifying calculations that are approved and not implemented in the field.
2. Approve PCN to Procedure 3.4.7 to Include Installation Status of Calculations.
3. Identify current calculations that have been approved, but are yet to be implemented, and revise revision status.
4. Provide Training on changes made by above PCN

START-UP ACTION PLAN

ISSUE: Multi-discipline Team System Readiness Reviews.

PROGRAM/PROCESS ISSUE CATEGORY: Design Control/Configuration Management

SPONSOR: R. L. Gardner/S. C. Woerth

ACTION PLAN MANAGER: S. C. Woerth

DESCRIPTION OF ISSUE:

The DSAT identified a number issues regarding the ability and resources in System Engineering to perform adequate reviews of systems. This review will provide a comprehensive check of the reviews that have been performed for the various programs (OERs, MWRs, CRs,etc) as well determine the thoroughness of original system engineer walkdowns. From these reviews, recommendations will be made to upgrade the checklists and to provide a multi-discipline review of the systems as the normal method for conducting these reviews in the future.

OBJECTIVE:

Complete Multi-discipline review of all open items and conduct walkdowns for the RHR and SBGT systems. Revise checklist for walkdowns and conduct multi-discipline reviews of all important systems prior to startup.

ACTION:

1. Perform Pilot Multi-Discipline system reviews.
 - 1.1 Identify scope of review for multi-discipline team, develop schedule for completion.
 - 1.2 Complete documentation reviews.
 - 1.3 Complete system walkdowns.
 - 1.4 Document results.
2. Based on results of above, identify changes needed for system checklists and incorporate changes.

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3. Develop schedule and complete system multi-discipline reviews just prior to startup for important systems based on revised checklist.

ID	Name	Resource Names	September							October							November											
			5	8	11	14	17	20	23	26	29	2	5	8	11	14	17	20	23	26	29	1	4	7	10	13	16	19
1	1 Pilot Multi-Discipline Revie		[Gantt bar: Sept 5-11]																									
2	1.1 Identify scope and sc		[Gantt bar: Sept 8-14]																									
3	1.2 Complete document		[Gantt bar: Sept 11-17]																									
4	1.3 Complete system wa		[Gantt bar: Sept 14-20]																									
5	1.4 Document Results		[Gantt bar: Sept 17-23]																									
6	2 Incorporate changes into S		[Gantt bar: Sept 20-26]																									
7	3 Conduct System Reviews		[Gantt bar: Sept 23-29]							[Hatched bar: Oct 2-8]																		

 Critical
 Noncritical
 Progress
 Milestone
 Summary
 Rolled Up

Project: System Readiness Reviews
 Date: 9/16/94

START-UP ACTION PLAN

ISSUE: Improve NED Site Support during Startup and Power Ascension (S/PA)

PROGRAM/PROCESS ISSUE CATEGORY: Engineering Support

SPONSOR: R. E. Wilbur/J. E. Lynch

ACTION PLAN MANAGER: S. McClure, R. Wenzl

DESCRIPTION OF ISSUE:

Improve NED support and station interfaces to assure timely resolution of operating problems.

- Clarify the interface agreement.
- Augment on-site NED to support start-up & power ascension

OBJECTIVE:

Provide a coordinated review of the NED/CNS Engineering functions and interfaces related to startup and power ascension, and develop an upgraded interface agreement better defining work function, and responsibilities

Provide augmented NED on-site support for CNS startup and power ascension activities.

ACTION:

1. Conduct NED/CNS Engineering Managers and Supervisors Interface Meeting to review current functions and interfaces to identify and upgrade existing Engineering functions/interfaces as required to support startup/power ascension.
2. Document the results of the above meeting in a startup interface agreement.
3. Identify any additional resource requirements to support assigned functions through startup.
4. Generate data base of industry experience and CNS experience of issues related to startup from long term outages.

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5. Review the information from the data base to determine possible restart issues/problems to determine the type of technical support required from NED to support plant startup/power ascension.
6. Organize a multi-disciplined NED on-site startup team to augment NED on-site support for CNS startup and power ascension activities.

START-UP ACTION PLAN

ISSUE: OD/OE Review

PROGRAM/PROCESS ISSUE CATEGORY: Engineering Support

SPONSOR: R. G. Jones/J. E. Lynch

ACTION PLAN MANAGER: C. Moeller

OBJECTIVE:

Review ODs and OEs for degraded and nonconforming conditions that currently exist and assess startup significance.

ACTION:

1. Obtain listing of all ODs and OEs approved to date.
2. Determine status of documented condition.
 - 2.1 Cross reference each OD/OE to a CAP document or MWR.
 - 2.2 Review status of CAP document or MWR to determine if documented condition has been resolved.
3. Review adequacy of "open" ODs/OEs for startup.
 - 3.1 Adequacy review will be by CNS Engineering or NED, depending on which organization supported the original OD/OE.
4. Evaluate "open" ODs/OEs for cumulative impact.

ID	Name	Resource Names	September							October							November											
			5	8	11	14	17	20	23	26	29	2	5	8	11	14	17	20	23	26	29	1	4	7	10	13	16	19
1	1 Obtain listing	Bowlby	[Solid bar from 5 to 17]							[Solid bar from 23 to 26]																		
2	2 Determine status	Bowlby	[Solid bar from 5 to 8]							[Solid bar with arrow from 20 to 23]																		
3	2.1 Cross reference to c		[Hatched bar from 11 to 14]																									
4	2.2 Review status of cap		[Hatched bar from 17 to 20]																									
5	3 Review adequacy (CNS En	Sanchez	[Solid bar from 5 to 17]							[Solid bar from 23 to 26]																		
6	4 Review adequacy (NED)	Gay	[Solid bar from 8 to 11]																									
7	5 Evaluate cumulative impact	Swantz								[Hatched bar from 26 to 29]																		

 Critical
 Noncritical
 Progress
 Milestone
 Summary
 Rolled Up

Project:
Date: 9/16/94

START-UP ACTION PLAN

CATEGORY: Plant Testing

SPONSOR: R. L. Gardner/S. C. Woerth

ACTION PLAN MANAGER: S. C. Woerth, R. Brungardt

DESCRIPTION OF ISSUE:

NRC identified preventive and corrective maintenance which would preclude discovery of degraded conditions through scheduled testing. DSAT found insufficient guidance for evaluating potential preconditioning cases to determine whether system functionality concerns potentially exist due to past practices.

OBJECTIVE: Complete resolution of the CAL pre-conditioning issues.

ACTION:

1. Identify and revise station procedures which direct possible pre-conditioning of components:
2. Review and integrate surveillance and PM schedules as necessary to ensure potential preconditioning concerns due to scheduling of activities is precluded. This should be done by performing the following:
 - 2.1 Surveillance Coordinator (J. Peaslee) and Maintenance Planner/Scheduler (R. Alexander) jointly devise an interim plan for controlling performance of SPs and PMs to preclude preconditioning.
 - 2.2 Activate interim plan.
 - 2.3 Communicate requirements/limitations of interim plan to affected personnel and Management.
3. Include in GOT Training (Initial/Requal).

START-UP ACTION PLAN

ISSUE: IST and Surveillance Testing

PROGRAM/PROCESS ISSUE CATEGORY: Plant Testing

SPONSOR: R. L. Gardner/S. C. Woerth

ACTION PLAN MANAGER: R. Brungardt

DESCRIPTION OF ISSUE:

Incomplete IST and Surveillance Testing program scope or inappropriate testing methods.

OBJECTIVES:

1. Verify IST program scope and testing adequacy by constructing the basis for component IST requirements and identifying discrepancies.
2. Conduct an evaluation of [types and numbers of] surveillance tests performed to determine program adequacy.

ACTION:

1. IST
 - 1.1 Complete development of ASME Section XI testing and inspection boundary identification and basis.
 - 1.2 Accelerate review of system components for testing requirements and development of testing basis which was previously scheduled as part of the third interval IST program update.
 - 1.3 Compare existing IST Program to the program basis requirements to identify discrepancies.
 - 1.4 Evaluate identified discrepancies to determine startup concerns.

2. Surveillance

- 2.1. Obtain of surveillance procedures for selected safety systems from two other BWRs.
 - 2.2. Compare the listing with CNS surveillance procedures for selected safety systems to identify if the number and types of tests performed at CNS appear to be appropriate.
3. Document review performance. Initiate corrective action for any items of concern noted during the review.

ID	Name	Resource Names	September							October							November											
			5	8	11	14	17	20	23	26	29	2	5	8	11	14	17	20	23	26	29	1	4	7	10	13	16	19
1	1 IST		[Solid bar]							[Solid bar]							[Solid bar]											
2	2 Complete development of A		[Solid bar]							[Solid bar]							[Solid bar]											
3	3 Accelerate review of syste		[Solid bar]							[Solid bar]							[Solid bar]											
4	4 Compare existing IST Progr		[Solid bar]							[Solid bar]							[Solid bar]											
5	5 Evaluate identified discrepa		[Solid bar]							[Solid bar]							[Solid bar]											
6	6 Surveillance		[Solid bar]							[Solid bar]							[Solid bar]											
7	6.1 Obtaining listing	Holm	[Hatched bar]							[Hatched bar]							[Hatched bar]											
8	6.2 Compare listing CNS	Holm	[Solid bar]							[Solid bar]							[Solid bar]											
9	7 Document review performa	Holm	[Solid bar]							[Solid bar]							[Solid bar]											

 Critical
 Progress
 Summary
 Milestone
 Rolled Up
 Noncritical

Project:
Date: 9/16/94

START-UP ACTION PLAN

ISSUE: Open OERs

PROGRAM/PROCESS ISSUE CATEGORY: Operational Experience Review

SPONSOR: R. L. Jones/S. J. Jobe

ACTION PLAN MANAGER: C. Moeller

OBJECTIVE: Evaluate current open OERs for startup significance.

ACTION:

1. Obtain listing of OER documents received subsequent to previous Stone & Webster review.
2. Upgrade previous review methodology to reflect current task.
3. Complete initial screen for possible startup significance.
 - 3.1 Level 1 and 2 screening to be done by Stone & Webster.
4. Disposition potential startup issues identified by initial screen.
 - 4.1 OERs identified by Stone & Webster will be directed to the appropriate line organization for further evaluation. This review effort will be coordinated by the Technical Staff.

START-UP ACTION PLAN

ISSUE: Reactor Vessel Thermal Transient

PROGRAM/PROCESS ISSUE CATEGORY: Operational Experience Review

SPONSOR: R. E. Wilbur/S. J. Jobe

ACTION PLAN MANAGER: W. L. Swantz

DESCRIPTION OF ISSUE: Resolve the reactor vessel thermal transient issue.

OBJECTIVE:

Review the reactor vessel and attached piping thermal transients and determine that the thermal fatigue limits have not been exceeded and assure margin adequate for further operation exists.

ACTION:

1. Contacted Roger Reedy concerning code requirements on fatigue. Mr. Reedy stated that no Code Requirements had been violated.
2. All Fatigue Analyses for Class IN Piping have been reviewed. All piping has adequate margins to allow for the number of transients, which Cooper has experienced with the possible exception of the RF piping.
3. The Civil/Structural Group has performed a preliminary review of the RF Piping Fatigue Analysis. Based on this review, they feel that if the existing conservatism in the analysis were to be removed, that the RF piping could be shown to have a Usage Factor < 1.0 based on the number of transients, which Cooper has experienced with adequate margin to spare.
4. Neil Watts of Advent Engineering Services reviewed the CNS RF Piping Fatigue Analysis to help identify possible conservatism in the analysis. Mr. Watts will assist the NED Civil/Structural Group in re-evaluating the RF piping to show that there is still adequate margin in the RF piping, as well as the other IN piping.
5. NED is evaluating the CRD Mechanism Nozzle fatigue based on the thermal cycles observed to date.

6. Revise OE 94-000-050 to limit scope of discussion to technical evaluation. Remove section on long-term operability. Add discussion on long-term reporting requirements of T.S. Sect. 6.4., *this will remove CR 94-0599 resolution from the startup issues list.*
7. Vectra to incorporate the results of NEDC 94-208 into the attachments of the Operability Evaluation.
8. Add paragraph which deals with the impact of the Dec. 14, 1993, stratification event on CRD nozzles. Also mention that these nozzles should be considered a limiting component in vessel fatigue summary.
9. Final version of OE 94-000-050 prepared, checked and approved at GO.
10. Operability evaluation 94-000-050 and Attachments (fax copy) distributed to SORC by 9/15/94 a.m., with SORC convened on 9/16/94 a.m., (KES and GRT present) and expected approval no later than 9/16/94 p.m.

CONCLUSION: The long-term action plan for CR 94-599 will require and define the plan for monitoring and documentation of actual thermal cycles to ensure future operability of the primary system pressure boundary (require resolution prior to Cycle 17 startup). OE will be SORC approved on 9/16/94. No interim actions needed prior to startup.

START-UP ACTION PLAN

ISSUE: Startup Experience Following Extended Outages

PROGRAM/PROCESS ISSUE CATEGORY: Operational Experience Review

SPONSOR: R. G. Jones/S. J. Jobe

ACTION PLAN MANAGER: C. Moeller

OBJECTIVE:

Conduct special operating experience search for startup issues following long shutdown.

ACTION:

1. Conduct search for industry lessons learned.
2. Obtain listing of CAP documents generated during CNS startups.
 - 2.1 Identify startup dates from extended outages (i.e., greater than 30 days) for last ten years.
 - 2.2 Identify CAP documents generated one week prior to two weeks following startup date.
3. Interview selected CNS personnel for input.
4. Assess INPO, CAP, and interview input for significant startup issues following long shutdown. Assessment to be conducted with at least one individual with SRO background.
5. Develop and schedule training and/or simulator scenarios to emphasize lessons learned.

START-UP ACTION PLAN

ISSUE: Develop procedure hierarchy to identify controlling procedures

PROGRAM/PROCESS ISSUE CATEGORY: Procedure Control

SPONSOR: R. L. Jones/E. M. Mace

ACTION PLAN MANAGER: C. R. Moeller

DESCRIPTION OF ISSUE:

There is no management position on which procedures take precedence over others.

OBJECTIVE:

Identify all procedures which control and take precedence over other procedures. Screen lower level procedures for compliance with controlling procedures.

ACTION:

1. Develop list of controlling procedures utilizing procedure hierarchy process used at another utility (Nine Mile).
2. Promulgate procedure hierarchy guidance and procedure list to NPG Managers and Supervisors.
3. SRG provide interim screen for procedure revisions to ensure compliance with controlling procedures.

START-UP ACTION PLAN

ISSUE: Special Instructions

PROGRAM/PROCESS ISSUE CATEGORY: Procedural Control

SPONSOR: R. L. Gardner/E. M. Mace

ACTION PLAN MANAGER: C. M. Estes

DESCRIPTION OF ISSUE:

Numerous problems have been experienced with the use of Special Instructions at CNS. Among these problems have been the absence of SORC approval, technical and procedural inadequacy of the instructions, and absence of adequate validation and walk-down of the instructions prior to their use. These deficiencies have resulted in a range of problems, from inadequate control of work to tripping or initiation of Engineered Safeguard Systems.

OBJECTIVE:

Develop procedural controls and methods that ensure work performed using Special Instructions is performed at a quality and safety level consistent with that of existing SORC approved procedures.

ACTION:

1. Ensure that all Special Instructions used on work that could have an effect on nuclear safety are reviewed and approved by the SORC.

Status: Maintenance Procedure 7.0.1.2, Revision No. 2, dated August 27, 1994 contains a CAUTION statement after paragraph 8.1.2.3 that reads in part as follows; "SPECIAL INSTRUCTIONS to perform maintenance on system components and/or systems that could have an effect on nuclear safety shall be reviewed by SORC prior to issue." **THIS ACTION IS COMPLETED.**

2. Ensure that Special Instructions are not used to isolate work boundaries for personnel protection. This must remain within the exclusive authority of the Plant Clearance Order process.

Status: Maintenance Procedure 7.0.1.2 has been revised, (Rev. 2, 8/27/94) to include the statement in step 8.1.2.3.c.1.e.5 that requires that valve, breaker, or damper operation be performed per Procedure 2.0.1. (Conduct of Operations). In addition, Administrative Procedure 0.9, Rev. 15, dated 8/30/94, step 4.2.1 requires that Operations personnel be responsible for the generation and release of Clearance Orders and Caution Tag Orders. **THIS ACTION IS COMPLETED.**

- (3) Validate and walk-down Special Instructions prior to SORC review.

Status: Procedure 7.0.1.2 under section 8.1.2.3 (Special Instructions) requires the Originator's Supervisor to evaluate all Special Instructions per the following criteria to determine if a technical walk-down is required prior to approval.

- 1) The Special Instructions are comprised of a long sequence of steps.
- 2) Special Instructions contain steps important to nuclear or personnel safety.

In addition, a MWR Special Instruction cover sheet, (M.P. 7.0.1.2, Rev. 2, Att. 3), is required for all MWR Special Instructions. This attachment requires sign off's for the "walk-down" activity as determined necessary by the originator's supervision. **THIS ACTION IS COMPLETED.**

START-UP ACTION PLAN

ISSUE: Screen backlog of procedure changes for significant items for start-up

PROGRAM/PROCESS ISSUE CATEGORY: Procedural Control

SPONSOR: R. G. Jones/E. M. Mace

ACTION PLAN MANAGER: C. Moeller

DESCRIPTION OF ISSUE:

There are ~ 400 procedures currently in the change process; ensure screening applied to these changes remain valid.

OBJECTIVE:

Identify all in-process procedure changes requiring approval prior to start-up or early in start-up sequence and ensure entry into tracking system.

ACTION:

1. Develop checklist of start-up related issues for screen.
2. Incorporate checklist into screen performed on future in-coming procedure changes.
3. Apply screen to assess validity of assigned priority.
4. Develop implementation schedule for start-up related procedures.

START-UP ACTION PLAN

ISSUE: ADAM Changes

PROGRAM/PROCESS ISSUE CATEGORY: Procedural Control

SPONSOR: E. M. Mace

ACTION PLAN MANAGER: N/A

DESCRIPTION OF ISSUE:

Resolution of the impact of EPA-400 methodology on the atmospheric dispersion assessment model (ADAM)

OBJECTIVE:

Purge ADAM (class "B" model, as defined in NUREG 0654) of all reference to dose, dose rate and any use there of for determination of PARs.

ACTION:

1. Complete ADAM code changes.
2. Revise ADAM section in EPIP 5.7.17.
3. Complete EAL revisions in EPIP 5.7.1.
4. Emergency Plan change submitted for SORC Review/Approval.
5. Emergency Plan Change submitted for SRAB Review/Approval.
6. Complete NRC submittal of Emergency Plan Change.
7. Emergency Plan printed and distributed.
8. Complete training for Dose Assessment personnel.

START-UP ACTION PLAN

ISSUE: Method for handling surveillance test LCOs without allowed outage times

PROGRAM/PROCESS ISSUE CATEGORY: Procedural Control

SPONSOR: R. L. Gardner/E. M. Mace

ACTION PLAN MANAGER: R. Brungardt

DESCRIPTION OF ISSUE:

Administrative controls for allowed out-of-service times do not exist for Technical Specification instrument surveillances.

OBJECTIVE:

Provide administrative controls for allowed out-of-service times for Technical Specification instrument surveillances.

ACTION:

1. Revise Procedure 0.26 to implement administratively controlled out-of-service times for Technical Specification instrument surveillances.
2. Conduct Operations Department training on Procedure 0.26 out-of-service time revision.

START-UP ACTION PLAN

ISSUE: Resolve the lack of program ownership in the NPG

PROGRAM/PROCESS ISSUE CATEGORY: Management

SPONSOR: R. G. Jones/R. L. Beilke

ACTION PLAN MANAGER: R. G. Jones

DESCRIPTION OF ISSUE:

Some NPG programs lack ownership. These programs need to be identified and procedures changed to clearly provide one owner who has the overall responsibility and authority to carry out that respective program. This issue must be resolved so that programs can be effectively managed and proper accountability assigned.

OBJECTIVE:

Establish effective ownership for programs which affect reactor safety.

ACTION:

1. Determine which programs need ownership corrective action.
2. Assign ownership responsibilities.
3. Correct procedures as required.
4. Counsel selected personnel assigned program ownership on responsibilities.
5. Evaluate effectiveness of results.

START-UP ACTION PLAN

ISSUE: Nuclear Safety Awareness

PROGRAM/PROCESS ISSUE CATEGORY: Management

SPONSOR: E. M. Mace/R. L. Beilke

ACTION PLAN MANAGER: J. Dutton

DESCRIPTION OF ISSUE:

The NPG has been ineffective in fostering and promoting a heightened sensitivity and awareness of Nuclear Safety.

OBJECTIVE:

Strengthen the NPG nuclear safety culture and establish high standards of safe, reliable nuclear plant operation.

ACTION:

1. Provide SORC, Managers, System Engineers, Design Engineers, and Supervisors with comprehensive Nuclear Safety Culture training.
2. Develop Nuclear Safety Culture training for presentation to entire NPG.
3. Senior Managers present Nuclear Safety Training to their reporting personnel.
4. Conduct ongoing field observations and solicit feedback to determine effectiveness of training.

START-UP ACTION PLAN

ISSUE: Management Observations - Field Coaching Team Plus Management Observations

PROGRAM/PROCESS ISSUE CATEGORY: Management

SPONSOR: R. L. Gardner/R. L. Beilke

ACTION PLAN MANAGER: J. V. Sayer

DESCRIPTION OF ISSUE:

Management's involvement in the field is not sufficient to ensure work is maintained to high standards with respect to industrial safety, procedural adherence, and material conditions. As such, basic concepts in the operation of a nuclear power facility are not being communicated to the work force, nor are they well understood or practiced at CNS.

OBJECTIVE:

Increase Management and Supervisory involvement in the field in order to:

1. Assess station material conditions
2. Assess compliance with established radiological and industrial safety work practices
3. Assess compliance with station work documents
4. Coach and mentor personnel in the field
5. Re-enforce management's expectations and standards in the field
6. Improve organization communication channels

ACTION:

1. Develop manager/supervisor field observation checklist which assists managers/supervisors in accomplishing the objectives listed above.
2. Develop standard manager/supervisor field observation schedule which specifies

September 15, 1994 10:30 am

dates and blocks of time to conduct field observations. Include specific management issues to be reviewed with schedule.

3. Review with Field Coaching Team the objectives of the Start-up Issues Plan. The Field Coaching Team provides specific issues with regard to appropriate field knowledge of the Startup Issues Plan and manager/supervisor involvement in the field.

START-UP ACTION PLAN

ISSUE: Industrial Safety

PROGRAM/PROCESS ISSUE CATEGORY: Management

SPONSOR: E. M. Mace

ACTION PLAN MANAGER: H. Hitch

DESCRIPTION OF ISSUE:

Industrial safety practices in the station are considered a weakness. Management expectations regarding industrial safety are frequently ignored or otherwise not carried out by the employee population. Observations were sufficiently numerous to indicate that management is either not out in the plant observing or, if they are, are not regularly enforcing expectations.

OBJECTIVE:

One of the major objectives of the District is to protect its employees and the public from accidents. Whenever economically possible, the District will eliminate hazards from employee work areas. However, where hazards cannot be economically removed, it becomes the responsibility of each supervisor and employee to recognize these hazards and deal with them in a manner that will prevent accidents.

ACTION:

1. Provide industrial safety training to managers and supervisors.
2. CNS Directive 7 requires managers to monitor their areas of responsibility "no less than twice per week. In turn, department supervisors shall also be expected to implement a program which follows these same guidelines."
 - 2.1 Field Observations will be conducted by Managers during monitoring activities to provide feedback on progress or weaknesses noted. (CNS Procedure 0.11, and proposed new CNS Procedure 0.11, Management Site Inspection, Audit, and Field Observation Program.)
3. The regular General Office Safety and Risk Management Department will provide regular site assistance visits to strengthen the Industrial Safety Program and increase the industrial safety awareness level of CNS Managers and Supervisors.

START-UP ACTION PLAN

ISSUE: Licensing submittals

PROGRAM/PROCESS ISSUE CATEGORY: Management

SPONSOR: R. L. Jones/R. L. Beilke

ACTION PLAN MANAGER: R. Godley

DESCRIPTION OF ISSUE:

Licensing submittals do not always supply sufficient identification, review and accountability for the correctness of information. Additionally, commitments that are embedded in licensing submittals are not clearly identified in internal NPPD documents with accountability for action. This has resulted in reduced credibility to outside agencies, enforcement actions and potential for important safety-related commitments to be missed.

OBJECTIVE:

Development of internal procedures and practices that assure that all licensing submittals contain accurate information and that all commitment made to external agencies are completed on time.

ACTION:

1. Review past problems and current procedures and practices in preparation of licensing submittals.
2. Identify changes to the current procedures and practices that will resolve these past problems. The new procedures should assure that the sources for information in licensing submittals are clearly identified to NPPD management, all commitments and accountable parties are clearly identified, and that commitments are entered into the commitment tracking system prior to signature.
3. Implement the improved practices and procedures for licensing submittals.





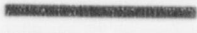

APPENDIX A - ACTION ITEM LIST

In addition to the action plans presented in the previous section, the Startup Plan Team identified a number of additional discrete action items that need to be addressed before startup. These items include review or close-out actions resulting from the team's effort in developing the plan or other discrete action items not warranting a full plan.

ACTION ITEM	ACCOUNTABLE
Evaluate DSAT field notes for long-standing equipment problems	E.M. Mace
Determine if control of spare parts for safety classification is a startup issue.	S.J. Jobe
Review DSAT material condition-hardware items for startup	E.M. Mace
Submit letter to NRC to clarify MOV testing schedule - Schedule - Letter	K. Almquist R. Godley
Resolve CS-5A maintenance and testing commitments.	K. Almquist
Determine if LERs contain any MOV overthrust issues	K. Almquist
Screen and correct APA-identified potential startup items. Ensure CRs are written when necessary	W.L. Swantz
Complete OER review; review for generic implications.	S.J. Jobe
Complete MWR Maintenance Work Practices Review, review results, and resolve recommendations.	E.M. Mace
Determine if action needs to be taken prior to startup for the "design change correcting the problem" issue.	S.C. Woerth

Evaluate the power ascension plan for integration with the Phase 1 startup plan. Include establishing management expectations for an error-free startup and other expectations.	E.M. Mace
Determine if action is needed to assure technical adequacy of design changes	K.C. Walden
Ensure specific issues are addressed in revised clearance order program <ul style="list-style-type: none"> - Non-operators operating equipment - Pull-to-lock protection use - Overriding danger tags - Independent verification 	S.J. Jobe
DCNs for Control Room P&IDs and electrical one-line drawings	K.C. Walden
ECCS minimum flow supplemental response to IEB 88-04	S. McClure
Training of craft and crews for configuration control procedure changes <ul style="list-style-type: none"> - Valve operation guidance - Guidance document & affected procedures 	T. Chard
Complete LER review	S.J. Jobe
Complete MWR review	M. Estes
Core Spray test mode vibration analysis	S. McClure
Convene management team to identify design changes that need to be completed prior to startup.	J. Gaussman
Complete cycle extension schedule and letter to NRC <ul style="list-style-type: none"> - Schedule - Letter 	R. Jansky R. Godley

ID	Name	Resource Names	September					October										
			14	17	20	23	26	29	2	5	8	11	14	17	20	23	26	29
1	1 Evaluate DSAT notes for lo	E. M. Mace																
2	2 Determine if spare part cont	S. J. Jobe																
3	3 Review DSA1 mat'l. conditi	E. M. Mace																
4	4 Submit letter to NRC to clar																	
5	4.1 Schedule.	K. L. Almquist																
6	4.2 Letter.	R. C. Godley																
7	5 Resolve CS-5A maintenanc	K. L. Almquist																
8	6 Determine if LERs contain	K. L. Almquist																
9	7 Screen/correct APA-identifi	W. L. Swantz																
10	8 Complete OER review; revi	S. J. Jobe																
11	9 Complete MWR MWP revie	E. M. Mace																
12	10 Determine if action neede	S. C. Woerth																
13	11 Evaluate power asc. plan f	E. M. Mace																
14	12 Determine if action neede	K. C. Walden																
15	13 Ensure specific issues are	S. J. Jobe																
16	14 DCNs for Control Room P	K. C. Walden																
17	15 ECCS minimum flow supp	M. S. McClure																
18	16 Training craft/crews for co																	
19	16.1 Valve operation gui	T. J. Chard																
20	16.2 Guidance documen	T. J. Chard																
21	17 Complete LER review.	S. J. Jobe																
22	18 Complete MWR review.	C. M. Estes																
23	19 Core Spray test mode vibr	M. S. McClure																
24	20 Convene mngt. team to id	J. W. Gausman																
25	21 Complete cycle extension																	
26	21.1 Schedule.	R. A. Jansky																
27	21.2 Letter.	R. C. Godley																

Project: Action Item List Date: 9/16/94	Critical		Milestone	
	Noncritical		Summary	
	Progress		Rolled Up	

Material

15-Sep-94

BIN seq Text

M CB-02 The station is living with a long-term equipment problem in the standby gas treatment system by blocking the filter housing viewing ports with tape.

Need Engineering to provide resolution (JEL).

M CB-15 The neutron monitor system engineer was interviewed regarding his judgment on postponing implementation of SIL 564 until next refueling outage.

Need Engineering to determine implementation schedule (JEL).

M CB-18 Spurious actuation of an electrical protection assembly (EPA) on the output of the RPS motor generator.

Recurring unexpected half-scrams and containment isolation due to spurious tripping of RPS motor-generator protective relays.

Need Engineering to determine if DC- 93-095 corrected the problem.

DC 93-095 has not yet been implemented DC 93-095 will be implemented during the '95 Refueling

M CB-20 Unexpected cycling of core spray minimum flow flow valves due to a long-standing problem with flow instrumentation (CB-20).

Engineering to determine if DC 93-095 corrected the problem (GSM).

MWR 94-2900

M DK-02 SBGT A&B room- some trash on the floor, two equipment ID tags laying on a support.

UT Working
Priority 1

BIN

seq

Text

M DK-02 RCIC area - two solenoid valves with yellow tape labels, painted plywood over hole in concrete mezzanine.

1. Found tape on operators for RCIC-AO-12 & RCIC-AO-13 valves had proper labeling in the form of valve tags removed tape from operators. (RB)

M DK-02 Steam Tunnel entrance- Writing all over the hallways- needs painting.

UT Working
Priority 1

M DK-02 Stairwell - Radio cable strung through penetration and tie-wrapped to piping and going down several floors.

Wrote CR to have antenna and cable removed 9/12/94.
(RB)

M DM-08 The control room HVAC system was not classified as essential (PTM '94-14).

Engineering to determine resolution (JEL).

M DM-08 Pressure gauges on DG air start are not essential (PTM 94-14).

Engineering to determine proper classification (JEL).

M DM-08 Marota Scientific Controls supplied valves to essential application not treated as safety-related were installed (see OD 94-063).

Engineering to determine proper classification (JEL).

BIN seq Text

M DM-09 RHR HX divider plate indicators are pegged low due to plugging.

Need CR to document and resolve (JEL).

M DM-09 Condenser 1A2 water box D/P line partially clogged due to silt.

See MWR's 94-2692 (status: Closed)
94-2787 (status: P Hold)

M DM-09 SW pumps are rotated periodically due to silt buildup in them while not running.

Engineering to address (JEL).

M DM-09 Intake structure sparger equipment problems have existed for some time and were only recently addressed.

Working out

M DM-09 Service Water switches plugging with silt.

Engineering to address (JEL).

M DM-09 CW flow transmitters indicate 0 GPM and Alert lights lit due to flow transmitter sensing line plugging (94-2206, 0064, 1907).

MWR's 94-2206, 94-0064, and 94-1097 are still open. (RB)

BIN

seq

Text

M GW-09 Although many of the problems that could be corrected by updating drawings or databases have been addressed, station actions to correct physical problems (tagging, labeling, physical repairs, and procedure revisions) have sometimes not been timely. As of April 30, 1994, 111 Type 2 and 827 Type 4 items were still awaiting resolution. Also, as of April 30, there was a total of approximately 2,400 of the discrepancies awaiting resolution.

Resolution in progress (WLS).

M GW-15 A review of RHR pump 1B test data noted that the pump had not achieved the reference value for a number of tests, with the differential pressure typically falling about 10 psi short of the reference value.

Need CR to document and resolve (JEL).

M GW-15 During additional RHR system walkdowns, the system engineer noted a tygon tube that exited from under the insulation on the "A" heat exchanger and was tie-wrapped to a nearby service water drain line, leading to a floor drain. When questioning other personnel about the purpose of the "gutter" the system engineer learned that there was a leak around a flanged connection on the heat exchanger that had existed since approximately 1986.

Repairs initiated by MWR's 94-4377, 94-4491, 94-4510, 94-4639, 94-4640.
Additional Engineering Evaluation required for final resolution (JEL).

M GW-15 It was later determined that the cause of the shutdown cooling isolations was leakage past the pump minimum flow valve, since the valve indicated closed, but was not fully seated.

Need CR to document and resolve (JEL).

BIN

seq

Text

M GW-15 During a walkdown with the mechanical system engineer, the evaluator noted that differential pressure switch RHR-125B was reading off-scale high.

Need CR to document and resolve (JEL).

M MDM-10 The control switch for main turbine bearing lift pump is in manual to prevent operation while the speed input to its control circuit is erratic.

Repaired by MWR 93-3128 closed 6-7-94
CTO 93-100 released 9-11-94 (RB)

M MDM-10 The B RFP minimum flow valve leaks by its seat at 200 gpm and as a result is kept isolated.

Work completed under MWR 94-3411.

M MDM-10 Caution tag guidance not to bias RFC-MA-84A/B positive due to causing RFPs to not go into track and hold following a scram. This occurred during scram 93-02.

NCR 93-265 answered this concern, a procedure has been completed, caution tags have been removed.
(RB)

M MDM-10 Drywell F sump low level cutout switch doesn't reset until level is high.

DC being developed for next refueling outage (GSM).

M MDM-10 A caution tag informs operators that operation of DGSA-V-37 or 38 with their PCV failing, could overpressurize the DG H&V air piping (6/18/94).

MWR 94-4667 (status P Hold)
94-4668 (status P Hold)

BIN seq Text

M MDM-10 Because the demin water LCV leaks by the seat, it has been isolated requiring operators to manually open DW-34 prior to starting the Mechanical Vacuum Pump from the MCR.

Reviewing MWR - may be closed (CME)

M MDM-10 While operating at full power on January 19, 1994 the HPCI pump minimum flow valve unexpectedly opened during a surveillance test.

NCR 94-011
LER 94-001

M MDM-10 RHR HX outlet conductivity ANN bypassed.

Conductivity elements are normally valved out of service, stagnant water causes hi cond. Alarms. Only used for Steam Condensing Mode of RHR. Procedure 2.2.69.4 Covers valving in & enabling points for

M MDM-10 In shutdown Cooling (SDC) operations the RHR system heat exchanger outlet valve, which is not design to be throttled, is throttled to control cooling to avoid throttling of Service Water (SW) valves designed for this purpose.

CR 94-0598 generated to resolve issue.
S/NO-07532

M MDM-10 More emphasis should be placed on minimizing the number of oil leaks in the plant.

Currently, containing oil leaks when pumps are run will write CR, evaluate & Fix oil leaks. Write level 2 CR. (CME)

M MDM-10 Because Vessel level injection valve NBI-SOV-738/739 leaks past seat, NBI-V-577A/B is isolated.

MWR's 94-3537 and 94-3801 corrected problem.

BIN

seq

Text

M MGW-02 Monitoring of potential erosion of portions of the RHR system were not established as required by the modifications made to the flow trim on valves M(1-27A/B and 34A/B.

Need Engineering evaluation to determine need (GSM).
Hillstrom working on, to be transmitted later. (GSM).

M MSV-03 Leakage in the REC (rector equipment cooling) piping has not been adequately monitored to minimize the potential for leakage and impact on plant operations.

Engineering to address issue (JEL).

M MSV-03 Temporary Design Change (TDC) 91-116 (Cameras in Heater Bay) has been installed for greater than the established goal of six months. (RC-09)

Generate design change (GSM).
To be documented in DC 92-100 which is scheduled for the 1995 outage. Procedure 3.4.4 states a TDC

M MSV-03 SCRAM discharge level transmitters installed with improper bolting and loose bolts on the RHR motor.

Engineering add CR references (JEL).

M MSV-03 During B Loop shutdown cooling, flow turbulence caused 'chugging' sounds in the vicinity of the heat exchanger bypass valve, RHR-MO-66B. (GW-08)

MWR's 94-4181 and 94-4180 addressed this.

BIN

seq

Text

M RA-09 Essential relays are not being tested or maintained on a regular basis. Per the EDAN report, these include 18 ground detection relays (50G) on 4160V buses 1F and 1G and Emergency Transformer overvoltage relays.

A CR was written for ground detection relays on the 4160 Volt Buses, this CR was generated on July 18, 1994, and was assigned as CR 94-0440, see attached NAIT and NCAP printout sheets. (GSM).

M RB-12 Loud, possibly cavitation, noise at water box south of downstream of RF-28MV.

Need Engineering Evaluation (JEL).

M RB-12 The contaminated area around the front standard is not marked on the floor with tape. This is the only exception noted.

Resolved.

M RB-12 Two overhead troughs outside MVP room have drain hoses that end outside the sump barriers. If draining occurs this will result in unnecessary pooling in the corridor.

Need Engineering Evaluation (JEL).

M RB-12 Condensate booster pump suction valves (chain operated) cannot be operated without standing on the pumps- poorly designed chain operator.

Need Engineering Evaluation (JEL).

M RB-12 Numerous oil leaks noted on the Hydrogen Seal Oil Pump skid and condensate booster pumps.

Maintenance to provide resolution (CME).

BIN

seq

Text

M RB-12 North water box condenser area is badly water stained.

Need Engineering Evaluation (JEL).

M RB-12 A hose runs in the clean area parallel to the front standard contaminated area. It is not secured, the walkway is tight and no floor level barriers exist. This could result in this clean hose moving into the contaminated area.

Resolved.

M RC-03 Designated smoking area located outside the mechanical maintenance shop with numerous ashcans within 15 feet of Oxygen and Argon gas bottle storage.

Resolved.

M RC-14 Excessive failures of LLRTs on one valve with no apparant root cause or detailed evaluation.

Engineering to resolve, reference DR 93-0581, NCR 93-0218, and MWR 93-4521 (JEL).

M SV-08 Approximately 250 terminations require repair.

Not fully inserted lug issue; tracked as a startup issue.

M SV-14 The fuel pump (5L, #2 D/G) was replaced using special instructions and did not include torquing of the bolts.

Researching MWRs
Write CR to take care of closing MWRs (CME)

BIN

seq

Text

M SV-14 Work performed on MWR 94-4203 and MWR 94-2923 on 8/2/94 to set the impeller clearance on the A service water pump was not in accordance with vendor specifications.

Write up as work was done. (CME)

M SV-14 Work conducted to replace the exhaust manifold on the #2 diesel generator was not in accordance with the vendor specifications.

Need CR to document and resolve (CME).

M SV-14 Contrary to the vendor specifications, the work crew did not tighten the bolts on "A" SWP coupling using a torque wrench . The bolting was not cleaned and lubricated prior to assembly and a tightening pattern was not used.

Write up as work was done. (CME)

M SV-21 A degraded condition of the MO39B RHR motor operated valve, known to some station personnel, is not identified in the MWR system.

Need CR to document and resolve (JEL).

M SV-22 Operability Determination No. 94-77 identifies lockwashers used on RHR pump motors A, B, C, and D were supplied as commercial grade on an essential purchase order and may not be qualified for use.

Need CR to document and resolve (JEL),

BIN

seq

Text

M SV-22 Operability Determination No. 94-50 identifies that a 250 volt control relay was installed in place of a 125 volt control relay for the Auxiliary oil pump on the HPCI pump.

Need CR to document and resolve (JEL).

M SV-22 Operability Determination No. 94-58 identifies that the relief valve installed on the Emergency Diesel Generator starting air system is undersized. Valve number DGSA-RV-15RV.

Need CR to document and resolve (JEL).

M SV-22 Operability Determination No. 94-63 identifies various check valves installed in the NBI, RCIC, RR, MS and HPCI were not supplied safety related.

Need CR to document and resolve (JEL).

M SV-23 The plant's corrective action did not include checking of other motor bolting on the remaining three RHR pump motors.

Corrected, reference MWR 94-4136 (RHR A), 94-4260 (RHR B), 93-2046 (RHR C), 94-4137 (RHR D), 94-4153 (CS A), 94-4154 (CS B).

M WW-04

1. 'A' and 'B' Reactor Feed Pumps have numerous oil leaks.
2. 'A' Reactor Feed Pump oil conditioner has a thick layer of oze.
3. A rope is hanging from the overhead in the angle valve room.

Currently containing oil leaks, when pumps are run, will write CR & evaluate & fix oil leaks. Write level 2 CR. (CME)

BIN

seq

Text

M WW-04 Air sampler and HP meter left on floor by drywell.

This is staging area access to the drywell. This equipment needs to be there to support the periodic drywell entries. Conducted during this Outage. No action to be taken. Equipment will be removed

M WW-04 A container of refrigeration oil is located in the compressor housing.

Maintenance to resolve (CME).

M WW-04 Welding cables are hung on a support in the HPCI room.

Maintenance to resolve (CME).

M WW-05

1. 'A' Reactor Feed Pump inboard pump bearing seal is leaking approximately one drop every two seconds.
2. The HPCI skid area has at least six oil leaks.
3. Oil bags are located in several area sumps.
4. Core spray surveillance test pump in stairwell, oil on skid between pump and wall.

Maintenance to resolve (CME).