

Commonwealth Edison Company
Quad Cities Generating Station
22710 206th Avenue North
Cordova, IL 61242-9740
Tel 309-654-2241



ESK-96-009

March 12, 1996

U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

Attention: Document Control Desk

Subject: Quad Cities Nuclear Power Station Units 1 and 2
Course of Action Status Report

The purpose of this letter is to provide the next in a series of updates on the progress of the Quad Cities Station Course of Action (COA). The first status report was submitted on December 23, 1994, a supplement on selected subjects was provided on January 11, 1995 and the last status report was sent on May 1, 1995.

The COA remains a viable and comprehensive plan for the long term improvement of Quad Cities Station. We have critically examined the COA through 1994 and 1995, and have determined that it contains the necessary elements, if properly executed, to position the station at or better than the overall industry average by the end of 1996. Completion of the COA in no way implies that all necessary improvements have been effected. Continuing improvement efforts will always be necessary, even with all of the COA objectives met.

The Quad Cities Station year-to-year Management Plans, among other functions, are the implementing documents for the COA. Actions to close the COA are included in the 1996 Management Plan which was issued on January 18, 1996. Revisions or additions to the Management Plan may be issued during 1996 if deemed necessary. The Management Plan concept is a continuing one, and will continue to be used in the future to guide station actions for improvement beyond completion of the COA.

Reviews of actions accomplished in 1994 and 1995 reveal significant progress in executing the COA, and define the remaining work to be done before the end of 1996. Analysis of the COA work remaining, shows that it is well within our capability to complete before the end of this year, and the 1996 Management Plan will provide the means to accomplish closure.

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Completed objectives in the 1995 Management Plan were presented to the Site Planning Group (SPG), which functioned as the closure authority for the objectives. This is a departure from past practices for closing Management Plan actions and represents a major improvement in the quality of review. The SPG is normally chaired by the Station Manager, and is also made up of other senior station management. The SPG closure process consists of a critical appraisal of the effectiveness of the actions, a review to verify that the intent of the objective was or was not met, and an evaluation of the quality of the documentation of the actions. Closure packages for the objectives are retained centrally in one file. A similar closure evaluation format will be used for the 1996 Management Plan.

We have learned through closure reviews of objectives in the 1995 Management Plan, that some objectives, although executed as written did not adequately address the issues with which the objective was designed to deal, or simply failed in bringing lasting improvements. The fact that some of the improvement programs required changes or additional actions was not surprising. Some actions have been extended, enhanced or changed to bring the desired result and have been included in the 1996 Management Plan. We will continue to critically review the progress of the 1996 Management Plan and make adjustments as necessary to bring about effective completion of the COA.

In my letter of December 26, 1995, detailing the status of the 1995 Management Plan, I discussed a number of issues where our efforts in 1995 fell short of bringing acceptable results. In each case, we are reconsidering and undertaking new efforts in 1996 to bring about more acceptable results. A brief summary of these issues is contained in the following paragraphs.

WORK MANAGEMENT

We have not yet significantly improved our ability to plan, schedule and execute work effectively and efficiently, in spite of an extensive effort during 1995. We conducted a maintenance stand-down in October and November of 1995 to identify and make needed improvements in our work control processes. We will soon be able to evaluate the results of our improvement efforts.

MATERIAL CONDITION

Very closely related to work control issues, the materiel condition of the plant as measured by our backlog of work requests leaves considerable room for improvement. Problems in improving materiel condition come from two causes: our slowness in getting work done, and lack of good root cause analysis which leads too often to rework. Although the backlog is decreasing, it is not decreasing commensurate with the level of resources applied. We will

continue in 1996 to work on materiel condition improvement through targeted training for first line supervisors and craft, allocation of additional funds for refurbishment of equipment and systems and more improvements in our work control processes.

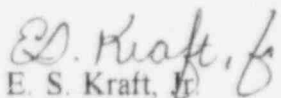
TECHNICAL SUPPORT PERFORMANCE

The largest single aspect of technical support performance in need of improvement is the conduct of root cause analysis. We too often have not determined true root causes and thus are sometimes ineffective in devising solutions. This will continue to be a major focus of effort in 1996.

Attached is an integrated summary of actions completed since promulgation of the COA. Items marked with an asterisk (*) are those items completed as the result of actions taken specifically under the 1995 Management Plan. The other items were completed by management actions prior to 1995, or during 1995 in activities that were outside the scope of specifics of the 1995 Management Plan. Those items remaining in the COA for completion in 1996 are not enumerated.

I am ready to discuss any questions you may have on this material. I can be reached by telephone at (309) 654-2241, ext. 3600.

Sincerely,



E. S. Kraft, Jr.
Site Vice President
Quad Cities Station

Attachment

cc: W. T. Russell, Director for the office of NRR
J. M. Taylor, Executive Director for Operations, NRR
H. J. Miller, Regional Administrator - Region III
A. B. Beach, Deputy Regional Administrator - Region III
C. G. Miller, Senior Resident Inspector, Quad Cities Station
D. C. Tubbs, MidAmerican Energy Company
R. J. Singer, MidAmerican Energy Company

ATTACHMENT

This attachment describes the actions completed through the end of 1995, to satisfy the objectives contained in the Quad Cities Station Course of Action (COA).

Items listed in this attachment that were completed as a result of actions taken in accordance with the 1995 Management Plan are marked with an asterisk (*). Items listed that are not so marked were completed by management actions in 1994, or were completed in 1995 by management actions that were not specified in the 1995 Management Plan.

COURSE OF ACTION PROGRESS REPORT

SECTION 1

The first portion of the Quad Cities Course of Action (COA) contains foreword letters from the Commonwealth Edison Chief Nuclear Officer, the Site Vice President and an executive summary of the issues and the approach to be taken in dealing with those issues. Included in Section 1 is an Introduction which gives background, an overview of the COA, its relationship to other station planning documents, a list of actions completed prior to early 1994, and planned implementation strategies. There were no specific action plans delineated through the end of Section 1.

SECTION 2 - MANAGEMENT

Strengthen Leadership

- Additional improvements have been made in 1995 to strengthen the management leadership at the station. A new Site Engineering Manager and new Maintenance Superintendent were hired in 1995, among others. The site management team is stable, strong and working with increasing levels of teamwork.
- Senior management ensures clear conveyance of expectations for management involvement and accountability through a new Performance Planning Review (PPR) process, governed by a new procedure issued in March, 1995. (*)
- Management expectations and accountability are reinforced through periodic meetings conducted by the Site Vice President and Station Manager. The content and format have evolved over time to make them more effective.

Leadership and Management Development

- Leadership and management development is ongoing and will continue for the foreseeable future. Nuclear Business Leadership (NBL) courses at Northwestern University continue, initial team building sessions were conducted in 1995, and will continue in 1996. A company-wide training course for first line supervision is being refined and is being pilot tested. Other varied types of management training is ongoing including SRO Certification for selected managers. (*)
- Management selection for department heads and upper management positions is addressed in the station's management succession plans. (*)
- The PPR process is being used to define management development issues on an individual basis. Individual reviews and feedback are expected to be done on a quarterly basis in accordance with QCAP 2400-5.

Performance Expectations, Responsibilities and Accountabilities

- Quad Cities senior management clearly defines the vision and direction for sustaining improved performance. The best example of this activity are the monthly Site Vice President information meetings with all station personnel. These meetings have been held since mid-1994 and will continue for the foreseeable future.
- The actions to define roles and responsibilities, accountabilities, interfaces and performance expectations were completed. (*)
- Individual performance measures for implementation of the Management Plans are now incorporated into individual PPRs in accordance with QCAP 2400-5. (*)
- Actions to ensure fair and uniform discipline as a matter of accountability, is now a matter of policy and set forth in QCPP 2303. Individual positive recognition is also used extensively in the Individual Excellence Award, Pro of the Month and other programs.

Effectiveness Monitoring and Assessment

- Station management has developed and implemented appropriate mechanisms such as the IQE system, and SQV monthly reports to measure the effectiveness of management in setting standards, reinforcing performance expectations and achieving improvements. (*)

- Current management tools such as tracking and trending were evaluated and enhanced to effectively provide the information needed by Quad Cities management. Improved tracking and trending is regularly evaluated and changes are made as appropriate. (*)

SECTION 3 - ISSUES AND ACTION PLANS BY ORGANIZATIONS

OPERATIONS

Definition of Roles, Responsibilities and Accountability of Operations Personnel

- A Senior Reactor Operator (SRO) has been added for each unit and acts as the Unit Supervisor. Unit Supervisors are supervised by the Shift Engineer (SRO). Two additional SROs are assigned to all shifts, one per unit, and act as the Shift Supervisor.
- As an interim measure in 1995, "white papers" were written, issued and used to specify expectations concerning the conduct of operations. The "white papers" were superseded by the Conduct of Operations manual which will be finalized in 1996. (*)
- Control Room crews are being overviewed on a shift rotation basis by the Shift Engineer and on a regular basis by senior Operations management. Observations and feedback are provided to the crews. (*)

Facilitation and Promotion of Interdepartmental Communications

- Operating Engineers (Lead Unit Planners) have been assigned functionally to Work Control primarily to interface with Maintenance and schedulers. They communicate Operations' needs and priorities for input into work schedules.
- The Shift Engineer attends the daily morning Superintendents' Meetings to directly communicate problems to senior station management.

Communication of Performance Expectations

- Senior Operations management provides regular feedback to Operations supervisors to reinforce performance expectations. This is done through Control Room and Simulator observation and providing feedback to the Shift Engineers. (*)
- Shift Supervisors and Shift Engineers have increased their field involvement to provide coaching to operators and support staff. (*)
- All Operations management personnel have been given performance objectives using the PPR process. (*)

- Regular meetings are being held between the Shift Engineers and the Station Manager to promote communications and reinforce expectations.
- Meetings between the Shift Operation Supervisor and Unit Supervisors were begun to promote communications and reinforce expectations in 1994. In 1995 and currently, these meetings occur during the final day of Operations regular training weeks.
- Operations Department meetings held by the Operations Manager have begun to promote communications and reinforce expectations.

Proactive Actions to Correct and Prevent Plant Problems

- Quad Cities has held Safety Culture (Conservative Decision Making) Seminars with all licensed Operations personnel. These seminars were also held for selected Maintenance and Engineering personnel.
- Operations has developed and maintains an "Operator Work Around" list. Operator Work Arounds were reduced from a 1995 high of about 105 to 38 at the end of the year. (*)

Improvement of the Corrective Action Process

- Shift involvement was strengthened in the area of investigating and determining causal factors for events occurring on shift and in applying appropriate corrective actions. This was done by completing HPES training for the Operating Crews and by outfitting an Operating Staff, experienced in Root Cause Analysis Techniques. Feedback is provided to the Operating Crews and Management regarding problems, causes and corrective actions. (*)

Promotion of Procedural Adherence

- Strict adherence to and required use of procedures has been emphasized as a requirement and is monitored by management. (*)
- Procedure adherence has been incorporated into the Senior Management overview of operations.
- The on-shift procedure change process has been streamlined, and priority is given to changes requested by Operations crews.

Improvement of Control of Plant Activities

- An SRO has been assigned to each unit as the Unit Supervisor. An additional SRO has been assigned to each unit as the Shift Supervisor whose principal duties include field supervision of Operations work.
- SROs or ex-SRO individuals are assigned to the work control process. These individuals are involved in reviewing action requests, scheduling work, reviewing post maintenance tests and preparing daily HLA sheets. (*) An SRO is provided outside the Control Room during day shifts to review and authorize work.

Improvement of Operability Evaluations

- The Problem Identification Form (PIF) is used to document problems, including degraded equipment, and to initiate operability determinations.
- Operations management, with Engineering input as needed, makes all operability determinations.

MAINTENANCE

Improvement of Plant Materiel Condition

- Developed and implemented action plans to improve the following issues relating to materiel condition:
 - Communication of management expectations related to materiel condition. (*)
 - Reduction of the work request backlog. (*)
 - A review was performed on the effectiveness of previous equipment root cause evaluations for issues which impacted unit reliability. Efforts to improve equipment root cause evaluations are part of the 1996 Management Plan. (*)
 - Reduction of radiation hot spots. (*)

Reduce the Maintenance Backlog

- Nuclear Work Request backlog steadily reduced from April to September 1995, but remained fairly constant as we prepared for Q1R14.

(NOTE: The backlog numbers reflect a step increase in September 1995. This increase was due to the implementation of the Electronic Work Controls System (EWCS) and the change from NWRs to EWCS tasks. A second spike in numbers came in mid-February 1996 and consisted of numbers of tasks which were pending to be cancelled but not yet cancelled. This change was brought about by a corporate/station effort to standardize reporting between the sites. Both of these spikes were anticipated and not due to emergent work increases.)

Our ability to prepare work packages, plan, schedule and execute work has not significantly improved, despite 1995 Management Plan efforts to improve. Additional work process improvements, aimed at these issues with resultant backlog reduction, is a priority item to be pursued in 1996.

Improved Maintenance Management Effectiveness

- Maintenance Department managers have been required to:
 - Develop expectations that include all of the high standards of work, communications, qualifications, skills, accountability, self checking and other attributes. (*)
 - Communicate these expectations and followup to ensure understanding. This was done, but communication of expectations and followup is an ongoing process that will continue to be emphasized in 1996.
- Enhanced the management performance review process to include performance measures for implementation of Management Plan actions. (*)
- The performance appraisal process has been implemented for bargaining unit personnel. (*)

Improvement of the Effectiveness of the Preventive Maintenance Program

- The Performance Centered Maintenance (PCM) process has been developed and addresses Preventive Maintenance (PM) tasks, periodicity, and effectiveness reviews. (*)

ENGINEERING

Improvement of Engineering Effectiveness and Timeliness

- System Engineering has been assigned the lead for identifying and managing the completion of technical solutions for plant problems.
 - Duties and responsibilities of System Engineers have been reviewed and enhanced. (*)
 - An Electrical, Instrumentation and Controls (E&IC) Group was established to provide support to Operations and Maintenance on E&IC-related issues.
- A site Motor Operated Valve (MOV) Team has been established to coordinate the design and implementation of enhancements to MOVs. (*)
- A site Vibration Team has been established to monitor, address and correct problems with systems and plant components and machinery. (*)
- A complete, consistently formatted set of critical control room drawings which reflect the station as-built configuration has been provided.
- Engineering has issued an administrative guideline clarifying roles, responsibilities and expectations. (*)

Improvement of Engineering Standards and Expectations

- Engineering management has defined roles, responsibilities and expectations for Engineering and has communicated those concepts throughout the Engineering organization. (*)
- Engineering management has conducted benchmarking visits to other stations and received an INPO assist visit in order to assess engineering performance and identify areas needing improvement. In addition, further benchmarking activities are planned for 1996. (*)

Improvement of Engineering Experience Level

- The Engineering organization's capabilities and experience base has been improved through external hiring to support design independence activities and the addition of new senior System Engineers. In addition, a new Site Engineering Manager from outside ComEd was hired in 1995. (*)

- A Senior System Engineer program has been established within the Systems Engineering Department. (*)
- The Site Engineering Training Advisory Committee (TAC) met on a regular basis during 1995 in order to identify the necessary training for each department within the Engineering Organization. Training, as well as TAC meetings, continue on an on-going basis. (*)

Improvement of Engineering Products and Functions

- Design change functions have been improved by defining and applying new design change criteria. Design change backlogs have also been significantly reduced. (*)
- The vendor manual review and update process was enhanced to allow for more efficient vendor manual processing. The backlog of vendor manual information to be reviewed has been reduced, and further reduction efforts will continue in 1996.
- Although not yet complete, a culture of meeting all internal and external commitments is being established. This culture is reinforced during daily departmental, as well as station-wide, meetings.

Improvement of System Design Basis Information

- Completion of the revised Design Basis Document (DBD) Program initial scope is scheduled for the end of 1996.

Improvement of the In-Service Testing (IST) Program

- The IST Program improvement work was started in the 1995 Management Plan, but actions to complete those items will not be completed until later in 1996.

Improving Monitoring and Self Assessment

- Plant system performance goals and standards were established. In 1996 the Maintenance Rule process will monitor system performance. (*)
- Reviews of Engineering performance were conducted. Periodic reviews will continue in 1996. (*)

QUALITY VERIFICATION

Strengthen the Role and Authority of the Quality Verification Function

- Changes have been made in senior Site Quality Verification (SQV) personnel to implement necessary improvements. In addition to Audit, ISEG and Integrated Analysis functions, Quality Control is also now part of SQV. (*)
- The SQV Director was changed from reporting to an off-site manager, to reporting to the Site Vice President. (*)
- The role of Site Quality Verification is to conduct independent assessment activities and maintain awareness of, but not direct involvement in, line self-assessment. However, there may be occasions when Site Quality Verification will participate in an investigation.
- Roles and responsibilities models were used to train SQV personnel and other station personnel.
- The SQV Director remains on the Management Review Board (MRB), the successor forum of the Safety Review Board (SRB).
- An Independent Assessment Policy Statement has been issued.

Strengthen the Process of Review and Resolution of Identified Issues

- The SQV Director position has been defined and filled with an experienced manager. The SQV Director reports to the Site Vice President.
- A program has been developed to define data acquisition, analysis and assessment for SQV findings. Monthly reports are issued. Additional enhancements are included in the 1996 Management Plan. (*)

Improvement of the Effectiveness and Timeliness of Quality Verification Products and Processes

- Actions continue towards addressing the opportunities for improvement contained in the effectiveness review of Quality Verification conducted by the independent contractor. (*)
- Periodic Escalation Issues Reports are now being issued, to bring items to the attention of Senior Management. (*)

- In addition to Audit Reports and Surveillance Reports a Site Quality Verification Monthly Report is issued. These reports are for use by Station Management. (*)
- Quality Verification procedures have been revised to reflect organizational and process changes. (*)

Ensuring Quality Verification Staffing Experience Levels Support Effective Execution of Necessary Processes

- A review was conducted of the Quality Verification organization to assess the effective use of department resources. (*)
- Interaction and use of other utilities and other site's personnel have been expanded to improve oversight effectiveness. Station personnel have similarly taken part in audits at other sites.
- Site visits to utilities outside of ComEd have been performed for the purposes of benchmarking. (*)
- Staffing has increased at the more senior and supervisory levels and other additional personnel have been added to SQV staff since issue of the COA.

Improvement of Site Quality Verification Communication Effectiveness

- SQV utilizes the SQV Monthly Report to routinely orally communicate the results of its observations to cognizant organizations and individuals. This is done in advance of the issuance of the SQV Monthly Report or in a few cases, as soon after issue as possible. (*)
- The previous daily SQV conference calls have been changed to weekly, and participation continues.
- Site Quality Verification continues to attend the daily Superintendents Meeting, (currently designated as the Station Manager's Meeting).
- The SQV Director remains on the Site Management Team, but the Business Planning Group has been disbanded. Additionally, the SQV Director meets personally with the Site Vice President weekly, and he also conducts the monthly SQV Issues Meeting with Senior Station Management.
- The SQV Director and SQV Supervisors continue to attend the Monthly Department Head Meeting (now called the Monthly Supervisors' Meeting).

RADIOLOGICAL PROTECTION

Reduce Workers Collective Radiological Dose

- Evaluation of selected portions of the Optimum Water Chemistry Program continues as part of source term reduction to minimize collective dose.
- Reduction of activation products to reduce the source term from the plants, including decontamination, and elimination or minimization of Stellite used in primary system replacement parts continues. (*)
- Enhancements in ALARA continue through increased involvement of line managers and the work force in the work planning process.

Reduction of Contaminated Areas

- Improving plant material condition, a concentrated decontamination effort and plant surface painting have contributed significantly to reduction of contaminated areas. At the end of 1995, contaminated areas in the plant were reduced to less than 5%. (*)
- The drip funnel program continues with information updated periodically in the Plan of the Day.

Improvement of Radioactive Material Controls

- A centralized tool issue area inside of the Radiologically Posted Area (RPA) has been established. The amount of radioactive material leaving the RPA has been greatly reduced. Satellite RPAs have also been greatly reduced. This effort continues in 1996.
- The Laundry, Trash and Decontamination (LTD) building has been finished and is in use.
- Surveying continues at the relocated main access point in the low background area in order to make surveying as efficient and accurate as practicable.
- The control of vehicles carrying radioactive material both inside and outside the protected area has been improved. Improved radiological controls with respect to exclusive use vehicles continues to ensure pre and post receipt surveys for delivery and shipment of radioactive materials.

SECTION 4 - ISSUES AND ACTION PLANS ON SELECTED TOPICS

CORRECTIVE ACTION PROGRAM

Improvement of the Problem Identification and Root Cause Analysis Processes

- The Integrated Reporting Program is in place. Problems are being reported of varying significance. Each Problem Identification Form (PIF) is reviewed for safety significance. Significant problems require a more in depth review. PIFs are entered into the PIF data base for tracking and trending.
- Actions were completed in 1995 to enhance the Root Cause Analysis Process. While these actions did result in some program improvements, this area will receive additional management attention aimed at further improvement in 1996.

Improve the Timeliness of Corrective Actions

- Senior management approval is required (Station Manager) to extend commitment dates. Overdue commitments are discussed daily at the Plan of the Day (POD) meeting. This increased management attention has resulted in a significant improvement in the timely completion of site corrective action commitments.
- The Issues Management Process has been implemented and is meeting the objectives to identify and resolve site issues and eliminate overdue NRC commitments.

Communication of Consistent Expectations to Ensure Effective Followup of Corrective Actions

- While progress has been made towards reviewing implemented corrective actions and determining their effectiveness, efforts are continuing through items in the 1996 Management Plan. (*)

SELF ASSESSMENT

Improvement of the Quality of Future Internal Self Assessment Processes

- Initial actions were completed in 1995 to implement a comprehensive self-assessment process. Additional actions are specified in the 1996 Management Plan to ensure continued improvement in this area.
- The Integrated Quality Effort (IQE) process is in full operation as an internal tool to monitor and assess performance.

PROCEDURAL ADEQUACY

Reduction of the Procedures Backlog

- A single coordinator now reviews the existing procedure review and approval process. (*)
- Additional trained resources have been provided to appropriate departments for 10CFR50.59 reviews. (*)

Improvement of the Coordination and Timeliness of Procedure Revisions

- Department procedure coordinators have been named in each department. (*)

Improve Existing Procedures

- Based on departmental priorities, a procedure schedule was established for procedures to be reviewed and approved.

PROCEDURE COMPLIANCE

Performance Trending

- The PIF process is used to monitor and trend the most frequent causal factors, including procedure adherence, by SALP area. This is currently accomplished in the SQV Monthly Report which is distributed to Senior Management for dissemination to their personnel. This trending is performed if procedural adherence is one of the top three causal factors.

Procedure Improvements

- The station's procedure improvement program continues. The current Procedure Writer's Guide enhances usability and format. (*)

MATERIEL CONDITION

Improvement of Plant Materiel Condition

- The Maintenance organization has developed and is implementing an action plan to improve plant, area, equipment and system materiel condition. (*)

MOV Program Staffing

- Significant progress has been made in advancing the MOV program at the station. Closure activities for Generic Letter 89-10 are planned in 1996. (*)

MOV Testing Priority

- The MOV testing program continues. All of the high and medium priority MOVs scheduled for Q2R13 have been completed. (*)

MOV Margin Review

- The planned 1995 design margin review for safety related MOVs has been completed and all required modifications have been completed on Unit 2 in Q2R13.

MOV Valve Issues

- All of the necessary MOV valve factor selections have been made and motor capacity issues tested.

MOV Program Control

- The procedure governing programmatic control of the MOV program has been in use since 1994. It was revised in 1995 in accordance with provisions of the 1995 Management Plan. (*)

RESIDUAL HEAT REMOVAL (RHR) SYSTEM

RHR Vibration Analysis

- RHR valve vibration problems in the torus cooling valves were corrected by installation of anti-cavitation trim in those valves in 1995.

RHR Vibration Analysis

- The vibration problems of the 1B RHR pump have been corrected.

RHR Service Water Pump Impeller Modifications

- The impeller modifications have been completed for five (5) of the eight (8) RHR Service Water Pumps. The modifications to the remaining pumps are scheduled for completion in 1996.

RHR Test Line Installation

- Test lines to RHR testable check valves in the RHR System are installed on both units. The Unit 1 RHR torus suction valves are scheduled to be replaced in Q1R14.

HIGH PRESSURE COOLANT INJECTION (HPCI) SYSTEM

Implementation of Reliability Centered Maintenance (RCM) Recommendations

- The HPCI RCM study recommendations have been completed. In addition, the recently developed Performance Centered Maintenance (PCM) process has reevaluated the HPCI System critical components, and a Preventive Maintenance (PM) program based on the PCM has been implemented. (*)

Drain Pot Level Alarm Resolution

- Special testing of drain pot high level alarms has been completed. Periodic functional testing is being done.

HPCI Sparger Modification

- The HPCI exhaust line sparger installations have been completed on both Unit 1 and Unit 2. (*)

HPCI Maintenance Overhaul

- The Unit 2 HPCI pump modifications were completed during Q2R13. Pump vibrations have been reduced. (*)

HPCI Performance Indicators

- HPCI performance indicators have been established and are being monitored and trended. (*)

REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM

Implement RCM Recommendations for RCIC

- The implementation of the final RCIC RCM recommendation is scheduled for Q1R14. In addition, the recently developed PCM process will include RCIC critical components and the PM Program will be adjusted accordingly.

RCIC Rupture Disk Modifications

- The design of the rupture disk assemblies have been upgraded and installed in both units.

RCIC Performance Indicators

- System performance indicators for RCIC have been established and are being monitored and trended. (*)

EMERGENCY DIESEL GENERATORS (EDG)

EDG Preventive Maintenance Program

- A comprehensive preventive maintenance program, developed in conjunction with the owners group and approved by the vendor, has been implemented for all three EDGs.

EDG Fuel Oil Supply Modification

- Fuel oil system modifications, (changing piping, oil pumps, connections and pipe hangers) have been installed on all three EDGs.

EDG Cooling Water Pump Modifications

- Emergency diesel generator cooling water pumps and motors have been replaced for all EDGs.