April 19, 2006

CA 03-05-001

Mr. L. William Pearce Vice President FirstEnergy Nuclear Operating Company Perry Nuclear Power Plant P. O. Box 97, A290 10 Center Road Perry, OH 44081

# SUBJECT: PERRY NUCLEAR POWER PLANT CONFIRMATORY ACTION LETTER (CAL) FOLLOWUP INSPECTION CORRECTIVE ACTION PROGRAM EFFECTIVENESS - ACTION ITEM IMPLEMENTATION INSPECTION NRC INSPECTION REPORT 05000440/2006008

Dear Mr. Pearce:

The purpose of this letter is to provide you with Inspection Report (IR) 05000440/2006008, detailing the results of our recent review of actions that you completed to address issues associated with the implementation of your corrective action program. You and other members of your staff attended the March 14, 2006, public exit meeting, held at the Quail Hollow Resort in Painesville, Ohio, during which the results of this CAL followup inspection activity were presented. A summary of the public meeting was documented in a letter to you dated March 17, 2006.

As a result of poor performance, the Nuclear Regulatory Commission (NRC) designated the Perry Nuclear Power Plant as a Multiple/Repetitive Degraded Cornerstone column facility in the NRC's Action Matrix in August 2004. Accordingly, a supplemental inspection was performed in accordance with Inspection Procedure (IP) 95003, "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input." As documented in IP 95003 Supplemental Inspection Report 50-440/2005003, the NRC determined Perry was being operated safely. The NRC also determined that the programs and processes to identify, evaluate, and correct problems, as well as other programs and processes in the Reactor Safety strategic performance area were adequate. Notwithstanding these overall conclusions, the NRC determined that the performance deficiencies that occurred prior to and during the inspection were often the result of inadequate implementation of your corrective action program.

The purpose of this inspection was to review your accomplishment of actions associated with improving your implementation of the corrective action program. In particular, this inspection focused on determining whether your commitments associated with the corrective action program that were identified in your August 8 and 17, 2005, letters that responded to our

IP 95003 supplemental inspection report, as well as selected completed actions prescribed in the Perry Phase 1 and Phase 2 Detailed Action and Monitoring Plan (DAMP) to improve the corrective action program, were adequately implemented. A review of the overall effectiveness of these actions toward realizing improvements in the corrective action program will be conducted at a later date.

Based on the results of this inspection, no findings of significance were identified and the team confirmed that all three of your commitments associated with the corrective action program that the team reviewed were adequately implemented. In particular, the team observed that during work meetings to assess and resolve issues entered into the corrective action program, managers were responding to these issues in a manner consistent with senior management expectations on an increasingly consistent basis. Similarly, some positive improvement was reflected in your performance indicators associated with the corrective action program.

However, notwithstanding this overall positive result, the team also identified that 4 of the 31 action items that were reviewed had not been implemented to a level that was considered adequate by the NRC to allow these items to be considered closed. The reasons for this varied. In one case, the team identified that one of your completed actions inadvertently invalidated the qualifications for all of your root cause evaluators, which required that the corrective action be rescinded. In another case, an action was improperly re-classified as a temporary measure. In a third case, a section of a procedure was not revised as required by an action, although other sections were properly revised. And in a final case, a sufficient number of examples of the accomplishment of an action were not present for the action to be considered to have been implemented.

In addition, of the actions that were determined to have been adequately implemented, in a number of cases the implementation of those actions was judged to not be comprehensive. As a result, it was not clear whether these actions would be lasting and effective. In particular, some examples were identified in which the lack of a formalized process to ensure the continuation of actions taken could impact the overall long-term effectiveness of the actions.

Although none of these issues in and of themselves has had a direct impact on the safe operation of the facility, the fact that the NRC team, and not your staff, identified these issues causes us to question the quality of your measures to ensure that planned actions are properly accomplished in a high quality manner, and whether the actions accomplished will have a lasting and effective impact.

You are requested to respond within 30 days of the date of your receipt of this letter. Your response should describe the specific actions that you plan to take to address the issues raised during this inspection. In particular, if you intend to or have revised your planned actions as a result of the observations in this report, please describe for us the changes you have made or intend to make and your basis for those changes.

The NRC will continue to provide increased oversight of activities at your Perry Nuclear Power Plant until you have demonstrated that your corrective actions are lasting and effective. Consistent with Inspection Manual Chapter (IMC) 0305 guidance regarding the oversight of plants in the Multiple/Repetitive Degraded Cornerstone column of the NRC's Action Matrix, the L. Pearce

NRC will continue to assess performance at Perry and will consider at each quarterly performance assessment review the following options: (1) declaring plant performance to be unacceptable in accordance with the guidance in IMC 0305; (2) transferring the facility to the IMC 0350, "Oversight of Operating Reactor Facilities in a Shutdown Condition with Performance Problems" process; and (3) taking additional regulatory actions, as appropriate. Until you have demonstrated lasting and effective corrective actions, Perry will remain in the Multiple/Repetitive Degraded Cornerstone column of the NRC's Action Matrix.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS), accessible from the NRC Web site at <u>http://www.nrc.gov/reading-rm/adams.html</u> (the Public Electronic Reading Room).

Sincerely,

# /**RA**/

Mark A. Satorius, Director Division of Reactor Projects

Docket No. 50-440 License No. NPF-58

- Enclosure: Inspection Report 05000440/2006008
- cc w/encl: G. Leidich, President FENOC J. Hagan, Chief Operating Officer, FENOC D. Pace, Senior Vice President Engineering and Services, FENOC Director, Site Operations Director, Regulatory Affairs M. Wayland, Director, Maintenance Department Manager, Regulatory Compliance T. Lentz, Director, Performance Improvement J. Shaw, Director, Nuclear Engineering Department D. Jenkins, Attorney, FirstEnergy Public Utilities Commission of Ohio Ohio State Liaison Officer R. Owen, Ohio Department of Health

#### L. Pearce

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#### \*See previous concurrence

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# U.S. NUCLEAR REGULATORY COMMISSION

# **REGION III**

Docket No:	50-440
License No:	NPF-58
Report No:	05000440/2006008
Licensee:	FirstEnergy Nuclear Operating Company (FENOC)
Facility:	Perry Nuclear Power Plant
Location:	10 Center Road Perry, Ohio 44081
Dates:	February 6 - March 14, 2006
Inspectors:	<ul> <li>G. Wright, Lead Inspector, Project Engineer, DRP Branch 6, RIII</li> <li>R. Morris, Senior Resident Inspector - Fermi Power Plant, RIII</li> <li>D. Eskins, Resident Inspector - LaSalle County Station, RIII</li> <li>D. Stearns, Plant Support Branch, DRS, RIV</li> </ul>
Approved by:	Eric R. Duncan, Chief Branch 6 Division of Reactor Projects

# SUMMARY OF FINDINGS

IR 05000440/2006008; 2/6/2006 - 3/14/2006; Perry Nuclear Power Plant; Confirmatory Action Letter (CAL) Followup Inspection: Corrective Action Program Effectiveness - Action Item Implementation Inspection

This report covers a 2-week period of supplemental inspection by resident and region-based inspectors. No findings of significance were identified during this inspection. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

# A. <u>NRC-Identified and Self-Revealed Findings</u>

None.

# B. <u>Licensee-Identified Violations</u>

None.

# **REPORT DETAILS**

# 1.0 Background

As a result of poor performance, the Nuclear Regulatory Commission (NRC) designated the Perry Nuclear Power Plant as a Multiple/Repetitive Degraded Cornerstone column facility in the NRC's Action Matrix in August 2004. A summary of the performance issues that resulted in this designation is discussed in Attachment 2, "Perry Performance Background," of this report.

In accordance with Inspection Manual Chapter (IMC) 0305, "Operating Reactor Assessment Program," a supplemental inspection was performed in accordance with Inspection Procedure (IP) 95003, "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input." As documented in IP 95003 Supplemental Inspection Report 50-440/2005003, the NRC determined Perry was being operated safely. The NRC also determined that the programs and processes to identify, evaluate, and correct problems, as well as other programs and processes in the Reactor Safety strategic performance area were adequate.

Notwithstanding these overall conclusions, the NRC determined that the performance problems that occurred were often the result of inadequate implementation of the corrective action program. The IP 95003 inspection team identified that a number of factors contributed to corrective action program problems. A lack of rigor in the evaluation of problems was a major contributor to the ineffective corrective actions. For example, when problems were identified, a lack of technical rigor in the evaluation of those problems, at times, resulted in an incorrect conclusion, which in turn affected the ability to establish appropriate corrective actions. The IP 95003 inspection team also determined that corrective actions were often narrowly focused. In many cases a single barrier was established to prevent a problem from recurring. However, other barriers were also available that, if identified and implemented, would have provided a defense-in-depth against the recurrence of problems. The IP 95003 inspection team also identified that problems were not always appropriately prioritized, which led to the untimely implementation of corrective actions.

A number of programmatic issues were identified that had resulted in the observed corrective action program weaknesses. For example, the IP 95003 inspection team identified a relatively high threshold for classifying deficiencies for root cause analysis. As a result, few issues were reviewed in detail. In addition, for the problems that were identified that required a root cause evaluation, the IP 95003 inspection team found that the qualification requirements for root cause evaluators were limited and multi-disciplinary assessment teams were not required. The IP 95003 inspection team also identified that a lack of independence of evaluators existed. This resulted in the same individuals repeatedly reviewing the same issues without independent and separate review. In addition, the IP 95003 inspection team identified weaknesses in the trending of problems, which hindered the ability to correct problems at an early stage before they became more significant issues. Finally, the IP 95003 inspection team determined that a lack of adequate effectiveness reviews was a barrier to the

identification of problems with corrective actions that had been implemented. A summary of all of the IP 95003 inspection results is discussed in Attachment 3, "Perry IP 95003 Inspection Results," of this report.

By letter dated September 30, 2004, and prior to the NRC's IP 95003 inspection activities, FirstEnergy Nuclear Operating Company (FENOC) advised the NRC that actions were underway to improve plant performance. To facilitate these performance improvements, FENOC developed the Perry Performance Improvement Initiative (PII). As documented in the IP 95003 supplemental inspection report, in the assessment of the performance improvements planned and implemented through the PII, the NRC determined that the PII had a broad scope and addressed many important performance areas. The IP 95003 inspection team also observed that although substantially completed, the PII had not resulted in a significant improvement in plant performance in several areas, including the licensee's implementation of the corrective action program.

By letters dated August 8, 2005, "Response to NRC Inspection Procedure 95003 Supplemental Inspection, Inspection Report 05000440/2005003," (ML052210512) and August 17, 2005, "Corrections for Response to NRC Inspection Procedure 95003 Supplemental Inspection, Inspection Report 05000440/2005003," (ML052370357) the licensee responded to the inspection results documented in the IP 95003 supplemental inspection report.

As discussed in these letters, the Perry leadership team reviewed the achievements realized by the PII, the results of the NRC's IP 95003 supplemental inspection activities, and the conclusions from various additional assessments, and developed updates to the Perry PII. The Perry leadership team restructured the PII, referred to as the Phase 2 PII, into the following six initiatives that are briefly described in Attachment 4, "Summary of Phase 2 PII Initiatives," of this report:

- Corrective Action Program Implementation Improvement
- Excellence in Human Performance
- Training to Improve Performance
- Effective Work Management
- Employee Engagement and Job Satisfaction
- Operational Focused Organization

In addition to a discussion of the Phase 2 PII, the licensee's August 8 and August 17 letters also included actions planned to address the NRC's findings and observations detailed in the IP 95003 supplemental inspection report. Attachment 3, "Actions to Address Key Issues Identified in the IP 95003 Inspection Report," of these letters focused on the following areas and summarized the actions that FENOC had taken or planned to take to address those issues:

- Implementation of the Corrective Action Program
- Human Performance
- Performance Improvement Initiative
- IP 95002 Inspection Follow-Up Issues
- Emergency Planning

# 2.0 Inspection Scope

The purpose of this inspection was to review the licensee's accomplishment of actions associated with improving the implementation of the corrective action program. In particular, this inspection focused on determining whether the commitments associated with the corrective action program that were identified in the August 8 and 17, 2005, letters that responded to the IP 95003 supplemental inspection report, as well as selected completed actions prescribed in the Perry Phase 1 and Phase 2 Detailed Action and Monitoring Plan (DAMP) to improve the corrective action program, were adequately implemented.

To accomplish this objective, commitments and action items grouped in the following eight areas were reviewed, consistent with Revision 5 of Perry Business Practice (PYBP) PII-002, "Performance Improvement Initiative Detailed Action and Monitoring Plan (DAMP)."

- Improve Ownership and Station Focus
- Focus on Improving the Station's Ability to Self-Identify Problems Using the Corrective Action Program
- Focus on Prioritization of Problems Identified in the Corrective Action Program
- Improve Quality of Evaluations and Corrective Actions
- Improve Ability to Correct Problems Early Before They Become Significant
   Issues
- Focus on Improving Quality of Closure Documentation
- Improve Oversight of the Corrective Action Program
- PII Phase 1 Carry Over Activities

In addition, the team reviewed validated and closed Phase 1 PII Action Items to determine whether these items had been adequately implemented as well as key performance indicators (KPIs) associated with the corrective action program to evaluate the quality of the indicators and to evaluate the licensee's use of the corrective action program when the indicators suggested a decline in performance in a specific area.

# 3.0 Improve Ownership and Station Focus

The following Commitments and Action Items in the "Improve Ownership and Station Focus" area of PYBP-PII-002, "Performance Improvement Initiative Detailed Action and Monitoring Plan (DAMP)," Revision 5, were reviewed:

- Commitment 2.a: "Develop expectations necessary for successful implementation of the corrective action program (CAP). Train the site to the expectations and the accountability methods that will be used to improve implementation of the CAP."
- Commitment 2.b/DAMP Item I.1.2: "Implement management controls to improve line ownership and accountability at the individual level for successful implementation of the CAP."

- DAMP Item I.1.1: "Train all managers and supervisors on the role of a corrective action program in a 'learning organization' and how it must be used to drive station performance improvement."
- DAMP Item I.1.5: "Establish a periodic meeting for all managers and supervisors to improve organizational alignment. Periodically brief issues with CAP and overall performance."
- DAMP Item I.1.6: "Publicize CAP 'success' stories in the FENOC fleet newsletter."
- DAMP Item I.1.8: "Develop and communicate a CAP PII Communication Plan that outlines the initiative purpose, implementation plan and success measures that demonstrate effective improvement in corrective action program implementation."
- DAMP Item I.1.9: "Perform an interim effectiveness review of the #1 action items in this table."

To accomplish these reviews, the team reviewed selected documentation such as condition reports, corrective action program closure documentation, original and revised procedures, training plans and training attendance records, meeting schedules and minutes, and FENOC newsletters. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. For example, in some cases the team interviewed licensee personnel whose names appeared on training attendance sheets to determine whether these personnel had received the subject training and to determine whether the personnel were knowledgeable of the training material.

- 3.1 <u>Commitment 2.a</u>
- a. Inspection Scope

The team reviewed Commitment 2.a: "Develop expectations necessary for successful implementation of the corrective action program (CAP). Train the site to the expectations and the accountability methods that will be used to improve implementation of the CAP."

The following DAMP items addressed the areas of CAP expectations development, training, and accountability. Taken collectively, the accomplishment of these DAMP items implemented Commitment 2.a:

DAMP Item I.1.1: Training of supervisors, managers, and directors on CAP implementation expectations
 DAMP Item I.1.2: CAP implementation accountability
 DAMP Item I.1.8: Communications Plan for CAP implementation expectations and accountability
 DAMP Item I.2.1: Training of staff on CAP implementation expectations

• DAMP Item I.2.2: Development and distribution of CAP implementation expectations

To determine whether this commitment had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, training plans, and training attendance records associated with each of these DAMP items individually and collectively. In addition, the team interviewed licensee personnel whose names appeared on training attendance sheets to determine whether these personnel had received the subject training and to determine whether the personnel were knowledgeable of the training material. In particular, the team reviewed PYBP-SITE-0046, "Corrective Action Program Implementation Expectations;" Nuclear Operating Business Practice (NOBP) LP-2019, "Corrective Action Program Supplemental Expectations and Guidance;" and Nuclear Operating Procedure (NOP) LP-2001, "Condition Report Process," that were developed to promulgate licensee management expectations for implementation of the corrective action program.

# b. Observations and Findings

No findings of significance were identified and the team concluded that the DAMP items that collectively addressed Commitment 2.a were adequately implemented.

The individual DAMP items that accomplished Commitment 2.a are also discussed in this report.

# 3.2 Commitment 2.b/DAMP Item I.1.2

a. Inspection Scope

The team reviewed Commitment 2.b/DAMP Item I.1.2: "Implement management controls to improve line ownership and accountability at the individual level for successful implementation of the CAP."

To determine whether this commitment and DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and performance expectations contained in performance appraisals. In particular, the team reviewed revisions to performance appraisal elements and determined whether the revised appraisal elements included individual accountability for successful implementation of the corrective action program. The team also reviewed documentation that verified that all required appraisals had been revised.

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented Commitment 2.b.

The licensee revised the expectations in the staff performance appraisals to address this DAMP item. In particular, to reflect the differences in responsibility for implementing the corrective action program, individual performance appraisal elements were modified for each department position. Licensee personnel provided specific examples from recent performance appraisals to demonstrate that the action item had been adequately addressed on an individual basis.

## 3.3 DAMP Item I.1.1

#### a. Inspection Scope

The team reviewed DAMP Item I.1.1: "Train all managers and supervisors on the role of a corrective action program in a 'learning organization' and how it must be used to drive station performance improvement."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, training plans, and training attendance records. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team interviewed licensee personnel whose names appeared on training attendance sheets to determine whether these personnel had received the subject training and to determine whether the personnel were knowledgeable of the training material. In addition, the team reviewed PYBP-SITE-0046, "Corrective Action Program Implementation Expectations;" training course CAPC-200501\_PY, "Corrective Action Program Implementation Improvement;" and Condition Report (CR) 05-08057, "Disposition/Tracking of Personnel Not Trained Per CAPC-200501\_PY."

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.1.1.

The team reviewed the training material and concluded that it was adequate. Specifically, the material addressed the role of a corrective action program in a learning organization, FENOC and Perry management expectations for the corrective action program in improving performance, and individual responsibilities in the implementation of the corrective action program. The training was initially provided to managers and supervisors, prior to being provided to all site personnel. Typical training sessions were 1 to 2 hours in length. Attendance lists were generated and individuals who were unable to attend due to extenuating circumstances were identified. Condition Report 05-08057, "Disposition/Tracking of Personnel not Trained per CAPC-200501\_PY," was generated to identify individuals who were initially offsite and unavailable for the training to ensure that they received the training when they returned to the site. At the end of the inspection, licensee personnel stated that the list would be reviewed after about 3 months and 6 months to identify if any individuals still required the training. The team noted that the licensee combined DAMP Item I.1.1 and DAMP Item I.2.1 and provided the same training to all required site personnel.

3.4 DAMP Item I.1.2

Refer to Section 3.2 of this report.

- 3.5 <u>DAMP Item I.1.5</u>
- a. Inspection Scope

The team reviewed DAMP Item I.1.5: "Establish a periodic meeting for all managers and supervisors to improve organizational alignment. Periodically brief issues with CAP and overall performance."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, training plans, and training attendance records. In particular, the team reviewed training plan SSC-200502\_PY-01, "Supervisory Continuing Training," which included corrective action program elements and was used during periodic manager/supervisor meetings designed to improve organizational alignment. Team members also attended a manager/supervisor meeting on February 16, 2006, where corrective action program implementation expectations were discussed.

#### b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.1.5.

The training material associated with SSC-200502\_PY-01 was of appropriate depth and breadth to establish an adequate understanding of management's expectations for corrective action program implementation and management/supervisory oversight of work activities. The observed management meeting included appropriate reinforcement of corrective action program implementation expectations.

- 3.6 DAMP Item I.1.6
- a. Inspection Scope

The team reviewed DAMP Item I.1.6: "Publicize CAP 'success' stories in the FENOC fleet newsletter."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and FENOC fleet newsletters. In particular, the team reviewed FENOC fleet newsletters to

identify where corrective action program success stories had been published, corrective action (CA) 05-07233-03, and PYBP-PII-0006, "Process Improvement Initiative Process."

#### b. Observations and Findings

No findings of significance were identified; however, the team concluded that the licensee's actions had not adequately implemented DAMP Item D.1.6.

The team identified that the only CAP success story that had been published appeared in the November 17, 2005, FENOC fleet newsletter. DAMP Item I.1.6 was closed after that newsletter was published. However, PYBP-PII-0006, "Process Improvement Initiative Process," prescribed DAMP item closure only after several examples of an action involving periodic activities had been accomplished. Following discussions with the team, licensee personnel stated that additional stories would be published.

The team also concluded that due to a lack of quality and attention to detail, licensee personnel failed to identify that this DAMP item had not been adequately implemented during the DAMP item review and closure process. However, since the inadequate closure of DAMP Item I.1.6 had no actual impact on the facility, the issue was of only minor significance.

# 3.7 DAMP Item I.1.8

a. Inspection Scope

The team reviewed DAMP Item I.1.8: "Develop and communicate a CAP PII Communication Plan that outlines the initiative, purpose, implementation plan and success measures that demonstrate effective improvement in corrective action program implementation."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and original and revised procedures. In particular, the team reviewed the licensee's "CAP Improvement Plan: Communications Roadmap," to determine whether the plan adequately outlined the elements contained in the DAMP item for the improvement of the corrective action program. The team also reviewed a summary of the actions taken to address the individual items in the communications roadmap to determine whether those actions had been properly implemented.

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.1.8.

The "CAP Improvement Plan: Communications Roadmap" included the initiative and purpose prescribed by the DAMP item. Training requirements, necessary management

enhancements, Corrective Action Review Board (CARB) improvements, root cause improvements, and performance monitoring improvements were also included to address the implementation plan and success measure aspects of the DAMP item. The team also determined that the actions prescribed by the plan had been adequately implemented.

# 3.8 <u>DAMP Item I.1.9</u>

#### a. Inspection Scope

The team reviewed DAMP Item I.1.9: "Perform an interim effectiveness review of the #1 action items in this table."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and self-assessment documentation. In particular, the team reviewed Snapshot Assessment 810PII2005, "Perry Nuclear Power Plant Performance Improvement Initiative - Corrective Action Program Implementation Effectiveness," conducted as an interim effectiveness review, and assessed how well it had been performed; and CA 05-07223-05, which implemented the DAMP item.

#### b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.1.9.

The team noted that the assessment was thorough and identified a number of issues that warranted additional licensee attention. Issues identified in the assessment included incomplete supervisor and worker understanding of corrective action program implementation expectations, and the untimely completion of root cause and apparent cause evaluations.

# 4.0 Focus on Improving the Station's Ability to Self-Identify Problems Using the Corrective Action Program

The following action items in the "Focus on Improving the Station's Ability to Self-Identify Problems Using the Corrective Action Program" area of PYBP-PII-002, "Performance Improvement Initiative Detailed Action and Monitoring Plan (DAMP)," Revision 5, were reviewed:

- DAMP Item I.2.1: "Train site personnel to the expectations and accountability methods that will be used to improve implementation of the CAP."
- DAMP Item I.2.2: "Develop and distribute an expectations document to reinforce the requirements of NOP-LP-2001 and the behaviors necessary for successful implementation of the CAP. This is similar to DB [Davis-Besse] expectations document DBBP-PI-2000 CR Process Expectations."

 DAMP Item I.2.3: "Implement a plan to routinely perform cross-functional walkdowns of risk-significant systems. These walkdowns should include management supervision, system engineering and craft performing a joint walkdown with a focus on improving expectations and standards for identification of problems. Schedule walkdowns monthly."

To accomplish these reviews, the team reviewed selected documentation such as condition reports, corrective action program closure documentation, original and revised procedures, training plans and training attendance records, system walkdown schedules, and documentation regarding walkdown observations. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. For example, in some cases the team interviewed licensee personnel on licensee training attendance sheets to determine whether these personnel had received the subject training.

4.1 DAMP Item I.2.1

# a. Inspection Scope

The team reviewed DAMP Item I.2.1: "Train site personnel to the expectations and accountability methods that will be used to improve implementation of the CAP."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, training plans, and training attendance records. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team interviewed licensee personnel whose names appeared on training attendance sheets to determine whether these personnel had received the subject training and to determine whether the personnel were knowledgeable of the training material. In addition, the team reviewed PYBP-SITE-0046, "Corrective Action Program Implementation Expectations;" training course CAPC-200501\_PY, "Corrective Action Program Implementation Improvement;" and Condition Report (CR) 05-08057, "Disposition/Tracking of Personnel Not Trained Per CAPC-200501\_PY."

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.2.1.

As was discussed in DAMP Item I.1.1, the team reviewed the training material and concluded that it was adequate. In particular, the material addressed the role of the corrective action program in a learning organization, FENOC and Perry management expectations for the corrective action program in improving performance, and individual responsibilities in the implementation of the corrective action program. The training was initially provided to managers and supervisors, prior to being provided to all site personnel. Typical training sessions were 1 to 2 hours in length. Attendance lists were

generated and individuals who were unable to attend due to extenuating circumstances were identified. Condition Report 05-08057 was generated to identify individuals who were initially offsite and unavailable for the training to ensure that they received the training when they returned to the site. At the end of the inspection, licensee personnel stated that the list would be reviewed after about 3 months and 6 months to identify if any individuals still required the training.

The team noted that the licensee combined DAMP Item I.1.1 and DAMP Item I.2.1, and provided the same training to all required site personnel.

## 4.2 <u>DAMP Item I.2.2</u>

#### a. Inspection Scope

The team reviewed DAMP Item I.2.2: "Develop and distribute an expectations document to reinforce the requirements of NOP-LP-2001 and the behaviors necessary for successful implementation of the CAP. This is similar to DB [Davis-Besse] expectations document DBBP-PI-2000 CR Process Expectations."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports and corrective action program closure documentation. In particular, the team reviewed CR 05-02725, "Substantive Cross-Cutting Issue, Problem Identification and Resolution;" CR 05-03986, "Nuclear Oversight Audit PY-C-05-01;" and PYBP-SITE-0046, "Corrective Action Program Implementation Expectations." The team also reviewed handout, "FENOC CR Initiation Guidance," that the licensee developed to provide additional guidance concerning issues that should be documented in a condition report, specifically identify procedures related to the condition reporting process, and discuss condition reporting documentation timeliness goals.

#### b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.2.2.

The team determined that the documents reviewed adequately reinforced NOP-LP-2001 and prescribed the behaviors necessary for the successful implementation of the corrective action program. However, the team determined that due to a lack of quality and attention to detail, during the DAMP item review and closure process, licensee personnel failed to address whether PYBP-SITE-0046 and a handout entitled "FENOC CR Initiation Guidance," had been distributed to the staff. The team independently determined that these documents were appropriately made available to licensee personnel both electronically and during training. Licensee personnel generated CR 06-00576, "DAMP Item I.2.2. Did Not Provide Complete Closure Documentation," to enter this issue into the corrective action program.

# 4.3 <u>DAMP Item I.2.3</u>

# a. Inspection Scope

The team reviewed DAMP Item I.2.3: "Implement a plan to routinely perform cross-functional walkdowns of risk-significant systems. These walkdowns should include management supervision, system engineering and craft performing a joint walkdown with a focus on improving expectations and standards for identification of problems. Schedule walkdowns monthly."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and original and revised procedures. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. Specifically, the team reviewed procedures and guidance for system walkdowns including refresher training ESPC-SYS0503\_PY, "System Walkdown Refresher Training;" and Plant Engineering Section Policy (PESP) 9, "System Walkdowns." In addition, to assess the quality of the walkdowns, the team reviewed a sample of supervisory Observation Cards completed during system walkdowns and observed a system walkdown of the Main Generator and Exciter system. The team also reviewed PYBP-POS-1-11, "Operations Section System Ownership."

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.2.3.

Although the team concluded that DAMP Item I.2.3 had been adequately implemented, the team identified that documents and training that addressed system walkdowns were inconsistent and prescribed different types and frequencies of walkdowns. For example, CR 05-02725, "Substantive Cross-Cutting Issue, Problem Identification and Resolution," stated that "paired" system walkdowns would be conducted "once"; PESP-09, "System Walkdowns," stated that walkdowns would be performed bi-weekly and quarterly; and training provided to the system engineers prescribed monthly paired walkdowns. These inconsistencies were discussed with a system engineer who stated that his instructions regarding the paired walkdown program were to perform the walkdowns monthly. Based on the team's observations, licensee personnel planned to revise PESP-09 to clearly establish the requirements for monthly paired walkdowns.

The team concluded that due to a lack of quality and attention to detail, licensee personnel failed to identify the inconsistencies described above during the item resolution and closure process.

The team also noted that the practice of conducting a "cross-functional" walkdown as reflected in the DAMP item was not adopted. Discussions with licensee personnel confirmed that the change to the scope of the DAMP item had been reviewed and approved in accordance with licensee procedures.

The team also identified that although supervisors evaluated system walkdown activities on an Observation Card, most supervisors did not consistently evaluate all applicable areas listed on the Observation Card during their observations. For example, most observations conducted within the radiologically controlled area (RCA) did not include an evaluation of the use of personal safety equipment, such as eye and hearing protection; or the implementation of radiation safety practices, such as the obtaining of and use of radiation dosimetry, although personal safety equipment and dosimetry were required for entry into the RCA.

In addition to the specific engineering paired walkdowns, the team noted that PYBP-POS-1-11, "Operations Section System Ownership," encouraged operations personnel to take individual responsibility for equipment operation and reliability. Non-licensed operators were assigned ownership for individual systems to foster increased equipment reliability. The operation system owners participated in outage scope, design change evaluations, system health input, and walkdowns. The team concluded that this positive initiative had the potential to improve system reliability.

# 5.0 Focus on Prioritization of Problems Identified in the Corrective Action Program

The following action items in the "Focus on Prioritization of Problems Identified in the Corrective Action Program" area of PYBP-PII-002, "Performance Improvement Initiative Detailed Action and Monitoring Plan (DAMP)," Revision 5, were reviewed:

- DAMP Item I.3.1: "Revise procedure NOP-LP-2001, 'Corrective Action Program,' to provide guidance for initiation of a significant root cause evaluation at a lower threshold (i.e. issues that may not be significant but are considered to be a negative trend, repeat issues, and adverse trend)."
- DAMP Item I.3.2: "Implement a two-step screening process in accordance with PYBP-SITE-0045, 'Initial Screening Committee' to improve objectivity, consistency, and cognitive trending of new condition reports. Also include assignment of due dates based on the significance of issues."
- DAMP Item I.3.3: "Adopt controls to assure proper thresholds are set for human and organizational performance issues and prevent splitting and relegating these issues to lower classification."
- DAMP Item I.3.4: "Determine the appropriate number and select appropriate individuals to obtain RCE [root cause evaluation] and/or ACE [apparent cause evaluation] qualification."
- DAMP Item I.3.5: "Revise procedure NOBP-LP-2007, "Condition Report Process Effectiveness Review," to include specific guidance for performing early effectiveness reviews (i.e. based on negative trends) and to include requirements for evaluation when actions taken were determined to be ineffective."

To accomplish these reviews, the team reviewed selected documentation such as condition reports, corrective action program closure documentation, original and revised procedures, and meeting schedules and minutes. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished.

# 5.1 <u>DAMP Item I.3.1</u>

#### a. Inspection Scope

The team reviewed DAMP Item I.3.1: "Revise procedure NOP-LP-2001, 'Corrective Action Program,' to provide guidance for initiation of a significant root cause evaluation at a lower threshold (i.e. issues that may not be significant but are considered to be a negative trend, repeat issues, and adverse trend)."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and original and revised procedures. In particular, the team reviewed NOP-LP-2001, "Corrective Action Program;" and NOBP-LP-2019, "Corrective Action Program Supplemental Expectations and Guidance."

## b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.3.1.

Overall, the procedures contained appropriate guidance and prescribed an adequate, lower threshold for conducting root cause evaluations. However, during the review the team identified a discrepancy in NOBP-LP-2019, "Corrective Action Program Supplemental Expectations and Guidance." In the "Other" category of NOBP-LP-2019, the identification of organizational-based adverse trends was restricted to those that had an actual impact on safety, rather than those that had impacted or could impact safety as specified in other sections of NOBP-LP-2019. Licensee personnel generated CR 06-00636, "DAMP Item I.3.1 Inadvertent Omission from Attachment 1 of NOBP-LP-2019," to enter this issue into the corrective action program.

The team concluded that due to a lack of quality and attention to detail, licensee personnel failed to identify this error during the item resolution and closure process.

# 5.2 <u>DAMP Item I.3.2</u>

a. Inspection Scope

The team reviewed DAMP Item I.3.2: "Implement a two-step screening process in accordance with PYBP-SITE-0045, 'Initial Screening Committee' to improve objectivity, consistency, and cognitive trending of new condition reports. Also include assignment of due dates based on the significance of issues."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and original and revised procedures. In particular, the team reviewed PYBP-SITE-0045, "Initial Screening Committee," and attended an initial screening meeting and a Management Review Board (MRB) meeting conducted on February 7, 2006.

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.3.2.

By direct observation, the team determined that the licensee had implemented a two-step screening process that improved the objectivity, consistency, and cognitive trending of new condition reports; and assigned due dates based on the significance of issues. Through this process, a condition report was sent to the Initial Screening Committee (ISC) for review and discussion, and then to the Management Review Board (MRB) for final approval. Subsequently, the MRB ensured that the condition report was appropriately screened for "Category," "Assigned Group," and "Due Date." The MRB also discussed complicated and/or significant condition reports. The ISC was instituted by procedure, with required training for its members, and was accountable to the MRB.

Although not directly associated with the accomplishment of this DAMP item, the team noted that the licensee did not compare initial and final "Category" determinations between the ISC and MRB. The team concluded that this was a missed opportunity to monitor the alignment between supervisors and managers. Licensee personnel generated CR 06-00589, "No Indicators to Track Deltas from Condition Report Categorizations," to enter this issue into the corrective action program.

# 5.3 DAMP Item I.3.3

a. Inspection Scope

The team reviewed DAMP Item I.3.3: "Adopt controls to assure proper thresholds are set for human and organizational performance issues and prevent splitting and relegating these issues to lower classification."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and original and revised procedures. In particular, the team reviewed NOBP-LP-2011, "FENOC Cause Analysis;" and NOBP-LP-2019, Attachment 1, "Condition Report Category and Activity Tracking Descriptions," and Attachment 2, "Condition Report Evaluation Methods."

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.3.3.

The team identified that the closure documentation had not credited the revision to NOBP-LP-2011, which was necessary for closure of the DAMP item. However, through discussions with licensee personnel, the team determined that Revision 3 to NOBP-LP-2011, "FENOC Cause Analysis," specifically addressed the DAMP item. Licensee personnel generated CR 06-0604, "DAMP Item I.3.3 Did Not Provide Complete Closure Documentation," to enter this issue into the corrective action program.

The team concluded that due to a lack of quality and attention to detail, licensee personnel failed to identify that the item closure documentation associated with this DAMP item was not adequate to close the item during the item closure process.

## 5.4 <u>DAMP Item I.3.4</u>

#### a. Inspection Scope

The team reviewed DAMP Item I.3.4: "Determine the appropriate number and select appropriate individuals to obtain RCE and/or ACE qualification."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and original and revised procedures. In particular, the team reviewed CA 05-01043-7, which prescribed the assessment of resource needs for root cause and apparent cause evaluators and CR analysts, followed by the assignment of individuals to fill those positions.

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.3.4.

The subject DAMP item prescribed that for each department, licensee personnel identify and select the appropriate number of evaluators needed to support root cause and apparent cause evaluations. Corrective Action 05-01043-7, which implemented this DAMP item, prescribed that in addition to the identification and selection of root cause and apparent cause evaluators, that additional necessary personnel to support the CR Analyst position also be identified and selected.

During the review of CA 05-01043-7, the inspectors determined that the licensee's actions adequately implemented the DAMP item. However, the team also identified that licensee personnel had not identified or selected the individuals to support the CR Analyst position, although CA 05-01043-7 had been closed.

To address this issue, licensee personnel generated CR 06-00697, "DAMP Item I.3.4 Closed Correctly However, Reference CA Not Complete," to enter this issue into the corrective action program. Subsequently, licensee personnel identified the number of CR analysts needed. The team verified that the appropriate number of CR analysts

were either trained or scheduled to attend training to meet necessary CR analyst staffing levels.

The team concluded that the closure of CA 05-01043-7 was premature since all CR Analyst positions had not been filled as required by CA 05-01043-7. However, since the issue was associated with the staffing levels of CR analysts, and there had been no identified impact on the facility during the period the issue existed, the issue was of only minor significance.

# 5.5 <u>DAMP Item I.3.5</u>

a. Inspection Scope

The team reviewed DAMP Item I.3.5: "Revise procedure NOBP-LP-2007, 'Condition Report Process Effectiveness Review,' to include specific guidance for performing early effectiveness reviews (i.e. based on negative trends) and to include requirements for evaluation when actions taken were determined to be ineffective."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and original and revised procedures. In particular, the team reviewed NOBP-LP-2007, "Condition Report Process Effectiveness Review," and CA 05-07233-7.

#### b. Observations and Findings

No findings of significance were identified; however, the team concluded that the licensee's actions had not adequately implemented DAMP Item I.3.5.

The team reviewed NOBP-LP-2007, "Condition Report Process Effectiveness Review," and confirmed that it eliminated the nominal 6 month guideline for performing effectiveness reviews and added the evaluation of corrective action effectiveness at the earliest practical opportunity. In addition, the process incorporated a corrective action effectiveness review following a challenge to a system, component, or process, sufficient to evaluate whether the corrective actions were effective.

However, the team identified that the procedure failed to address the performance of early effectiveness reviews based on, for example, negative trends. Licensee personnel generated CR 06-0080, "DAMP Items I.3.5 and I.8.4 Incomplete," to enter this issue into the corrective action program.

The team concluded that the licensee's actions had not adequately implemented DAMP Item I.3.5. The team also concluded that due to a lack of quality and attention to detail, licensee personnel failed to identify that this DAMP item had not been adequately implemented during the DAMP item review and closure process. However, since the inadequate closure of DAMP Item I.3.5 had no actual impact on the facility, the issue was of only minor significance.

# 6.0 Improve Quality of Evaluations and Corrective Actions

The following action items in the "Improve Quality of Evaluations and Corrective Actions" area of PYBP-PII-002, "Performance Improvement Initiative Detailed Action and Monitoring Plan (DAMP)," Revision 5, were reviewed:

- DAMP Item I.4.2: "Strengthen the root cause investigators training plan and qualification requirements (JFG) [Job Familiarization Guidelines]."
- DAMP Item I.4.4: "Improve implementation of FENOC NOBP-LP-2007, 'Condition Report Effectiveness Review,' to improve challenging of the adequacy of the actions taken. Utilize periodic effectiveness reviews rather than a single review at the end of completing all CAs."
- DAMP Item I.4.5: "Manager pre-job brief all apparent cause evaluations and establish scope, expected resource investment, analytical techniques and guidance for evaluation of generic implications. Ensure evaluator(s) have appropriate skill set. Identify where mentoring is required to improve critical thinking. The desired outcome is improvement in technical rigor."

To accomplish these reviews, the team reviewed selected documentation such as condition reports, corrective action program closure documentation, original and revised procedures, pre-job briefing records, and qualification records. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished.

- 6.1 <u>DAMP Item I.4.2</u>
- a. Inspection Scope

The team reviewed DAMP Item I.4.2: "Strengthen the root cause investigators training plan and qualification requirements (JFG)."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, training plans, and training attendance records. In particular, the team reviewed NOBP-TR-1111-01, "Corrective Action Program (CAP) Training Program;" Training Plan 9903, "Root Cause Evaluator;" Training Plan 9908, "Corrective Action Review Board (CARB) Member;" and the training requirements specified in CAP-RCA\_FEN, "FENOC Root Cause Evaluation Basic Training;" CAP-RCT\_FEN, "FENOC Root Cause Evaluation Basic Training;" CAP-RCT\_FEN, "FENOC Root Cause Evaluation Guide." In addition, the team interviewed Perry and FENOC training management personnel.

#### b. Observations and Findings

No findings of significance were identified; however, the team concluded that the licensee's actions had not adequately implemented DAMP Item I.4.2.

To strengthen the root cause evaluator training plan and qualification requirements, licensee personnel modified the training and certification program to require a 5 day root cause methodology-specific training course, removed the previous 2 day training course as an acceptable method for certification, and added a generic root cause training course. The generic training course also prescribed that the expectations for performing root cause evaluations be discussed.

In reviewing these changes, the team determined that the training was managed by FENOC corporate office personnel. In addition, the team determined that the generic root cause training course had not been fully developed and that the only action that had been implemented was to place a non-specific course description in the training plan. The team also determined that this revised training and certification program had been approved and implemented in December 2005.

Based on the above information, the team inquired about the controls in place to prevent the corporate office from inadvertently revising the training requirements or the content of lesson plans in a manner that would nullify the outcomes prescribed by the DAMP item. Further, because the training program required a course for which no lesson plan existed and no waivers had been granted, the team questioned the certification of individuals currently performing root cause evaluations and the certification of Corrective Action Review Board (CARB) members for root cause training.

During followup discussions, the team identified that although FENOC corporate office personnel had issued the proposed training and certification program revision to the site for review, the training organization, responsible for tracking certifications, had not been provided a copy for review. Further, no mechanism existed to ensure that the results of the implementation of DAMP items were not inadvertently nullified through the issuance of a revised business practice. This team concluded that the licensee's coordination effort did not appropriately ensure that organizations were provided the opportunity to review the changes prior to their implementation. Licensee personnel generated CR 06-00630, "No Process Exists to Prevent Inadvertent Changes to Closed PII Actions," to enter this issue into the corrective action program.

While addressing the team's question regarding individual certifications, site and FENOC corporate training personnel realized they had not adhered to site procedures or the change management plan when implementing the revised training and certification program. In an attempt to correct the situation, FENOC corporate office personnel issued a memorandum dated February 10, 2006, which stated that all individuals remained certified. However, the team identified that the memorandum was not consistent with site procedures since the granting of a waiver required the evaluation of an individual's qualification against the original and revised lesson plans and, as

previously stated, no revised lesson plan existed for the generic root cause training course.

On February 17, 2006, licensee personnel informed the team that they planned to re-implement the previous training and certification program that existed prior to the revisions. Licensee personnel also generated CR 06-00784, "Issues With Implementation of Revised CAP Training," to review the condition and review individual certifications while the revised program was in effect.

The team also noted that DAMP I.4.2 prescribed that the generic root cause training course would include "FENOC specific expectations for conduct of a root cause evaluation." However, the team identified that the course description did not specify what would be included in the training course.

The team further noted that although completion of only one of the four 5 day methodology-specific training course was required for certification as a root cause evaluator, the root cause evaluator training course description listed all four methodology-specific 5 day training courses as prerequisites for root cause evaluator certification.

The team also noted that NOBP-LP-2011, Section 4.5.3, stated, "Appropriate methodologies should be selected by the investigators and used appropriately." However, the practice did not require that the individual(s) making the determination of which method to use be qualified in the selected method.

The team concluded that DAMP Item I.4.2 had not been adequately implemented since the actions taken by licensee personnel had not strengthened the root cause investigators training plan and qualification requirements. The team also concluded that due to a lack of quality and attention to detail, licensee personnel failed to identify that this DAMP item had not been adequately implemented during the DAMP item review and closure process. However, because the inadequate closure of DAMP Item I.4.2 had no actual impact on the facility, the issue was of only minor significance.

#### 6.2 DAMP Item I.4.4

#### a. Inspection Scope

The team reviewed DAMP Item I.4.4: "Improve implementation of FENOC NOBP-LP-2007, 'Condition Report Effectiveness Review,' to improve challenging of the adequacy of the actions taken. Utilize periodic effectiveness reviews rather than a single review at the end of completing all CAs."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, and attended a CARB meeting. In particular, the team reviewed CA 05-07223-11 and NOBP-LP-2007, "Condition Report Process Effectiveness Review." In addition, team members attended a February 10, 2006

CARB meeting and observed the discussion of effectiveness reviews associated with CR 05-05260, "Closed Cooling Chemistry Out of Admin Specification."

#### b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.4.4.

The team determined that through completion of CA 05-07223-11, NOBP-LP-2007, "Condition Report Process Effectiveness Review," had been revised to prescribe interim effectiveness reviews to improve the challenging of the adequacy of actions taken. The effectiveness reviews as described in NOBP-LP-2007 prescribed an appropriate scope and were required to be completed prior to closing the subject condition report. The team also noted that condition reports that prescribed apparent cause and root cause evaluations also received a final effectiveness review. In addition, team members observed, during the February 10, 2006 CARB meeting, that managers exhibited many of the behaviors the licensee had described in its expectations for successful implementation of the corrective action program. The team also noted that the MRB reviewed the CR list weekly to identify candidates for early effectiveness reviews.

# 6.3 <u>DAMP Item I.4.5</u>

# a. Inspection Scope

The team reviewed DAMP Item I.4.5: "Manager pre-job brief all apparent cause evaluations and establish scope, expected resource investment, analytical techniques and guidance for evaluation of generic implications. Ensure evaluator(s) have appropriate skill set. Identify where mentoring is required to improve critical thinking. The desired outcome is improvement in technical rigor."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and original and revised procedures. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team reviewed PYBP-SITE-0046, "Corrective Action Program Implementation Expectations," and the "Apparent Cause Expectation" brochure.

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.4.5.

The team noted that the licensee had developed a guidance document for pre-job briefings. In reviewing the document, the team identified that the licensee had exceeded the actions prescribed in DAMP I.4.5.

During the pre-job briefing process review, the team determined that the guidance addressed when a pre-job briefing was to be conducted, and how to document the briefing for root cause evaluations; however, no written guidance existed for pre-job briefings for apparent cause evaluations. During followup discussions with licensee personnel, the team verified that pre-job briefings were being conducted for apparent cause evaluations; however, without written guidance, the long-term ability to sustain the effort was questionable.

The team also identified a discrepancy in the Closure Documentation Summary for DAMP Item 4.5. The documentation stated, "...each day at the MRB, the MRB Chairperson discusses the need for the pre-job brief with each Manager and refers them to the Apparent Cause Expectation brochure to be used in the Apparent Cause investigation pre-job brief." During followup discussions, the team was informed that the actual expectation was that the MRB Chairperson would discuss the need for a pre-job briefing on Tuesdays and any time a new apparent cause evaluation was brought before the MRB.

The team also identified that although the DAMP item stated, "Identify where mentoring is required to improve critical thinking," there was no documentation that required this to be accomplished or evidence that it had been accomplished. The team also identified that the closure package review did not identify this deficiency.

The team concluded that notwithstanding the omission of actions to address mentoring to improve critical thinking, the licensee's completed actions were sufficient to consider this DAMP item, overall, to have been adequately implemented.

The team also concluded that due to a lack of quality and attention to detail, licensee personnel failed to identify that some aspects of this DAMP item had not been implemented during the DAMP item resolution and closure process.

#### 7.0 Improve Ability to Correct Problems Early Before They Become Significant Issues

The following action items in the "Improve Ability to Correct Problems Early Before They Become Significant Issues" area of PYBP-PII-002, "Performance Improvement Initiative Detailed Action and Monitoring Plan (DAMP)," Revision 5, were reviewed:

- DAMP Item I.5.1: "Perform a focused self-assessment of the results of Integrated Performance Assessment Trending to provide feedback on quality and to identify site-wide trends."
- DAMP Item I.5.4: "Develop guidance and implement a CAP focus day to identify and eliminate lower tier CAP open items."

To accomplish these reviews, the team reviewed selected documentation such as condition reports, corrective action program closure documentation, self-assessment reports, original and revised procedures, training plans and training attendance records,

and meeting schedules and minutes. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished.

7.1 <u>DAMP Item I.5.1</u>

#### a. Inspection Scope

The team reviewed DAMP Item I.5.1: "Perform a focused self-assessment of the results of Integrated Performance Assessment Trending to provide feedback on quality and to identify site-wide trends."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and self-assessment reports. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team reviewed self-assessment FL-SA-05-05, "Self-Assessment of Integrated Performance Assessment Trending," dated December 14, 2005, and CA 05-07223-13.

#### b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.5.1.

The licensee's self-assessment identified that the overall implementation of trending activities was marginally effective and statistical trending of condition reporting data was ineffective. The self-assessment appeared to be thorough and comprehensive. Condition reports were generated to enter the issues identified in the assessment into the licensee's corrective action program.

# 7.2 <u>DAMP Item I.5.4</u>

# a. Inspection Scope

The team reviewed DAMP Item I.5.4: "Develop guidance and implement a CAP focus day to identify and eliminate lower tier CAP open items."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and meeting schedules and minutes. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. Specifically, the team reviewed a document entitled "Criteria for CAP Focus Day," and CARB meeting minutes for a CARB meeting conducted on October 27, 2005. In addition, team members attended the February 13, 2006 CAP Focus Day meeting.

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.5.4.

The CAP Focus Day was developed to review, and evaluate for elimination, any corrective actions that had not been implemented, or actions that had been assigned for implementation with a due date of greater than 360 days. The criteria developed for the CAP Focus Day was implemented at the first CAP Focus Day meeting held on October 25, 2005. Based upon the observation of the February 13, 2006, CAP Focus Day meeting, the team concluded that the licensee had established an adequate method to eliminate lower tier CAP open items through a CAP Focus Day.

# 8.0 Focus on Improving Quality of Closure Documentation

The following action items in the "Focus on Improving Quality of Closure Documentation" area of PYBP-PII-002, "Performance Improvement Initiative Detailed Action and Monitoring Plan (DAMP)," Revision 5, were reviewed:

- DAMP Item I.6.1: "Establish the Corrective Action Closure Board (CACB) as having review authority for apparent cause evaluations. Establish a quorum that requires one CARB member."
- DAMP Item I.6.2: "Provide feedback on CACB determinations to CR analysts, CARB, and managers."

To accomplish these reviews, the team reviewed selected documentation such as condition reports, corrective action program closure documentation, original and revised procedures, feedback forms, and meeting schedules and minutes. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished.

# 8.1 <u>DAMP Item I.6.1</u>

# a. Inspection Scope

The team reviewed DAMP Item I.6.1: "Establish the Corrective Action Closure Board (CACB) as having review authority for apparent cause evaluations. Establish a quorum that requires one CARB member."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, and meeting schedules and minutes. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. Specifically, the team reviewed PYBP-SITE-0042, "Corrective Action Closure Board Charter;" and the October 20, 2005 CACB meeting agenda.

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.6.1.

The team identified that the CACB had been established, and had been provided the authority to review apparent cause evaluations through the implementation of PYBP-SITE-0042, "Corrective Action Closure Board Charter." The CACB had performed this function through December 2005 when the CACB was suspended due to the unavailability of resources. Although the licensee planned to reinstate the CACB, the backlog of CAs and CRs requiring review continued to increase. At the end of the inspection, there were about 700 CAs and 270 CRs that required CACB review. In addition, there were a number of apparent cause and root cause evaluations in progress that would also require CACB review.

Although the team concluded that the DAMP item had been adequately implemented at the time the DAMP item was closed, the decision to suspend the CACB activities affected the effectiveness of the actions.

# 8.2 DAMP Item I.6.2

a. Inspection Scope

The team reviewed DAMP Item I.6.2: "Provide feedback on CACB determinations to CR analysts, CARB, and managers."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and meeting schedules and minutes. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team reviewed CACB meeting minutes and discussed CACB activities with board members and CR analysts.

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.6.2.

The team reviewed information related to feedback provided by CACB. In September 2005, feedback from CACB determinations was provided to CR analysts, CARB, and managers through CACB meeting minutes. Subsequently, CR analyst meeting minutes were provided as feedback. In November 2005, feedback was provided both verbally at CR analyst meetings as well as through e-mail correspondence. Through discussions with CR analysts, the team determined that written feedback alone frequently did not provide sufficient detail for the CR analysts to understand the basis for CACB determinations. To improve their understanding of CACB determinations, CR analysts proactively attended CACB meetings. The team noted that the CACB review and feedback process had not been formalized. The team concluded that the lack of a formal process to provide feedback on CACB determinations to CR analysts, CARB, and managers could impact the long-term effectiveness of the actions.

# 9.0 Improve Oversight of the Corrective Action Program

The following commitment and action items in the "Improve Oversight of the Corrective Action Program" area of PYBP-PII-002, "Performance Improvement Initiative Detailed Action and Monitoring Plan (DAMP)," Revision 5, were reviewed:

- Commitment 2.c/DAMP Item I.7.1: "Establish a management review process that routinely monitors the site's and section level CAP performance. Take action to improve performance when expectations are not met and hold the organization accountable for overall CAP effectiveness."
- DAMP Item I.7.2: "Focus CARB review on rigor of cause analysis and effective cause/action resolution. Ensure that actions are smart and will fix the problem. Use the FENOC fleet RCA [Root Cause Analysis] scoring sheet to drive improved performance."
- DAMP Item I.7.3: "Qualify additional managers in FENOC CARB JFG to improve ability to routinely establish quorums and hold CARB meetings as scheduled."
- DAMP Item I.7.4: "Improve the CARB/CACB feedback process to ensure lessons learned are getting to site personnel to promote continuous improvement in the CAP area."
- DAMP Item I.7.6: "Qualify additional managers in root cause to enable meeting quorum requirements."

To accomplish these reviews, the team reviewed selected documentation such as condition reports, corrective action program closure documentation, original and revised procedures, and qualification records. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished.

# 9.1 <u>Commitment 2.c/DAMP Item I.7.1</u>

# a. Inspection Scope

The team reviewed Commitment 2.c/DAMP Item I.7.1: "Establish a management review process that routinely monitors the site's and section level CAP performance. Take action to improve performance when expectations are not met and hold the organization accountable for overall CAP effectiveness."

To determine whether this commitment and DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, and meeting schedules and minutes. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team observed and reviewed meeting minutes associated with CARB meetings, CACB meetings, Management Review Committee (MRC) meetings, CR Screening meetings, Senior Leadership Team (SLT) meetings, and Monthly Performance Review (MPR) meetings. In addition, the team reviewed the Key Performance Indicators (KPIs) developed to monitor corrective action program implementation. The team also reviewed NOP-LP-2001, "Corrective Action Program;" NOBP-LP-2008, "Corrective Action Review Board;" and PYBP-SITE-0046, "Corrective Action Program Implementations."

#### b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented Commitment 2.c and DAMP Item I.7.1.

The team determined that the licensee had implemented appropriate review processes to routinely monitor corrective action program performance. In addition, corrective action program key performance indicators (KPIs) had been developed with color-coded thresholds to monitor performance. In some cases, condition reports were generated to document red and yellow KPIs and to track development and implementation of corrective actions when expectations were not met.

The team determined that some actions had been implemented to improve corrective action program performance when program performance expectations were not met. Management feedback to corrective action owners, the appointment of management sponsors for corrective action program products, and the analysis and development of a closure plan to address KPI performance gaps were all examples of actions that the licensee had implemented to address corrective action program performance issues. However, a formal mechanism to address KPI issues within the licensee's corrective action program did not exist. In particular, licensee personnel had not developed written guidance that prescribed the generation of a condition report to address declining KPIs, performance gaps between actual and expected performance, or the tracking of the success of action plans to address identified performance deficiencies. Although specific guidance did not exist, the team did not identify any declining KPIs for which appropriate corrective actions had not been implemented.

The team concluded that the lack of a formal process to address KPI issues could impact the long-term effectiveness of the actions. Licensee personnel generated CR 06-00787, "Inconsistencies With GAP Closure plans for Red/Yellow CAP KPIs," to enter this issue into the corrective action program.

# 9.2 <u>DAMP Item I.7.2</u>

# a. Inspection Scope

The team reviewed DAMP Item I.7.2: "Focus CARB review on rigor of cause analysis and effective cause/action resolution. Ensure that actions are smart and will fix the problem. Use the FENOC fleet RCA scoring sheet to drive improved performance."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, and meeting schedules and minutes. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. Specifically, the team reviewed NOBP-LP-2008, "FENOC Corrective Action Review Board," to address this DAMP item including NOBP-LP-2008-01 that contained the Root Cause Review Summary. Team members also attended a February 8, 2006, CARB meeting.

# b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.7.2.

The team noted that NOBP-LP-2008 assigned CARB the responsibility for reviewing all root cause evaluation reports, selected apparent cause evaluation reports, and the associated corrective actions. Further, the team noted that the standing CARB agenda defined that one purpose of CARB was to ensure that causes were coupled to problem statements. Team members observed that CARB meeting packages used the FENOC-wide Root Cause Review summary sheets and Apparent Cause Quality sheets, which aided in the alignment of corrective actions to root causes. In addition, the team noted that CARB assigned one of its members to interface with the organization presenting the RCE or ACE to ensure that feedback from CARB was understood.

# 9.3 DAMP Item I.7.3

# a. Inspection Scope

The team reviewed DAMP Item I.7.3: "Qualify additional managers in FENOC CARB JFG to improve ability to routinely establish quorums and hold CARB meetings as scheduled."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, and qualification records. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team reviewed the FENOC Integrated Training System (FITS) Qualification Matrices associated with root cause evaluators and CARB

members, for specific individuals who were added to the CARB roster. The team also reviewed CA 05-07223-18.

#### b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.7.3.

The team verified that two additional managers had been certified as CARB members, which improved the licensee's ability to meet CARB quorum requirements. However, the team determined that a process had not been established to maintain a specific number of qualified CARB members after this DAMP item was closed.

The team concluded that the lack of a formal process to maintain a specific number of qualified CARB members could impact the long-term effectiveness of the actions.

#### 9.4 DAMP Item I.7.4

# a. Inspection Scope

The team reviewed DAMP Item I.7.4: "Improve the CARB/CACB feedback process to ensure lessons learned are getting to site personnel to promote continuous improvement in the CAP area."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, and meeting schedules and minutes. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team reviewed NOBP-LP-2008, "Corrective Action Review Board;" the CARB review package dated November 4, 2005; CACB minutes for September and October 2005; the CACB and CARB overview from the Supervisor Brief on October 31, 2005; NOBP-SITE-0046, "Corrective Action Program Implementation Expectations;" and the Condition Report Analyst Meeting Agenda for November 3, 2005.

#### b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.7.4.

The team noted that CARB/CACB feedback was routinely provided during monthly CR analyst meetings and in certain cases, CARB/CACB meeting notes were electronically distributed to select site personnel. At times, CR analysts personally attended CARB meetings to receive feedback. The team did not identify a specific feedback process by which lessons learned were disseminated to "general site personnel" so that the corrective action program could be continuously improved.

Similar to DAMP I.6.2, the team concluded that the lack of a formal CARB/CACB feedback process could impact the long-term effectiveness of the actions.

#### 9.5 <u>DAMP Item I.7.6</u>

#### a. Inspection Scope

The team reviewed DAMP Item I.7.6: "Qualify additional managers in root cause to enable meeting quorum requirements." (Note, this item is similar to, but not the same as DAMP 7.3)

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, and qualification records. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. Specifically, the team reviewed the FITS Qualification Matrices associated with the Root Cause Evaluator position for recently certified CARB members, and CA 05-07223-21.

## b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.7.6.

The team reviewed information related to the number of root cause qualified CARB members necessary for the CARB to meet minimum quorum requirements. During the review, the team noted that three additional managers had been credited for root cause training, which provided an increased ability to meet CARB quorum requirements. The team also noted that no process was in place to maintain a specific number of root cause-trained CARB members after this DAMP item had been closed.

The team concluded that the lack of a formal process to maintain a specific number of root cause-trained CARB members could impact the long-term effectiveness of the actions.

## **10.0** Pll Phase 1 Carry Over Activities

The following Action Items in the "PII Phase 1 Carry Over Activities" area of PYBP-PII-002, "Performance Improvement Initiative Detailed Action and Monitoring Plan (DAMP)," Revision 5, were reviewed:

• DAMP Item D.8.1: "Fully Implement the Station Operating Experience (OE) coordinator and Section OE coordinator role at Perry, as established in NOP-LP-2100, by ensuring the Job Familiarization Guides (JFGs) are completed for all sections."

- DAMP Item D.8.3: "Communication will be provided to PIU/Analysts with the formality determined by the SAP conversion change management plan to understand and apply coding."
- DAMP Item D.8.4: "A method to improve the timeliness of effectiveness reviews will be established and implemented."

To accomplish these reviews, the team reviewed selected documentation such as condition reports, corrective action program closure documentation, original and revised procedures, and training plans and training attendance records. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished.

## 10.1 DAMP Item 8.1

## a. Inspection Scope

The team reviewed DAMP Item 8.1: "Fully Implement the Station Operating Experience (OE) coordinator and Section OE coordinator role at Perry, as established in NOP-LP-2100, by ensuring the Job Familiarization Guides (JFGs) are completed for all sections."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, training plans and training attendance records, and qualification records. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team reviewed CA 04-02404-08; the FITS Qualification Matrix for Section OE Coordinators; Job Familiarization Guide (JFG) GEN\_JFGSOEC\_FEN-01, "Section Operating Experience Coordinator Job Familiarization Guideline;" and NOP-LP-2100, "Operating Experience Program." In addition, the team interviewed selected OE personnel.

## b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item I.8.1.

The team noted that although completion of the JFG was not a prerequisite for the Section OE Coordinator position, it was considered by the licensee as an enhancement necessary to fully implement the station OE program. The team verified that at the time the DAMP item was closed, all original Section OE Coordinators had received the JFG training.

However, the team identified that although three replacement Section OE Coordinators had been designated since the DAMP item had been closed, these newly assigned Section OE Coordinators had not completed the JFG training. In addition, the team

identified that a process had not been established to ensure newly assigned Section OE Coordinators completed the JFG training.

The team concluded that the lack of a formal process to qualify Section OE Coordinators could impact the long-term effectiveness of the licensee's actions.

## 10.2 DAMP Item 8.3

#### a. Inspection Scope

The team reviewed DAMP Item D.8.3: "Communication will be provided to PIU/Analysts with the formality determined by the SAP conversion change management plan to understand and apply coding."

#### b. Observations and Findings

Licensee personnel reviewed and approved the removal of this DAMP item from PYBP-PII-002, "Performance Improvement Initiative Detailed Action and Monitoring Plan (DAMP)," Revision 5 prior to the inspection. As a result, the team was unable to review corrective actions implemented to address this DAMP item.

The team noted that the closure documentation associated with this DAMP item did not explicitly include a discussion of the licensee's actions to remove this item from Revision 5 of PYBP-PII-002.

10.3 DAMP Item 8.4

#### a. Inspection Scope

The team reviewed DAMP Item 8.4: "A method to improve the timeliness of effectiveness reviews will be established and implemented."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and original and revised procedures. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team reviewed NOBP-LP-2007, "Condition Report Effectiveness Review," and CA 05-07233-07.

#### b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item 8.4.

As discussed in DAMP Item 3.5 of this report, the team noted that NOBP-LP-2007, "Condition Report Process Effectiveness Review," had been revised to evaluate effectiveness at the earliest opportunity. This revision eliminated a 6 month guideline for

performance of effectiveness reviews and provided guidance on when to initiate an effectiveness review.

## 11.0 Validated/Closed Perry Phase 1 Action Items

The following validated and closed Perry Phase 1 DAMP Action Items were reviewed:

- DAMP Item D.1.6: "Perform an external assessment of the Corrective Action Program (CAP) (04-02468-46)."
- DAMP Item D.9.2: "Develop a method to assign clear, single point ownership of root cause CRs, from CR investigation through CA implementation/effectiveness review completion for each root cause CR (04-02468-69)."
- DAMP Item D.11.1: "A two-step screening process is being implemented to improve timeliness of issue entry into CAP and more accurate prioritization (04-02468-66)."

To accomplish these reviews, the team reviewed selected documentation such as condition reports, corrective action program closure documentation, original and revised procedures, and training plans and training attendance records. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished.

## 11.1 <u>DAMP Item D.1.6</u>

## a. Inspection Scope

The team reviewed DAMP Item D.1.6: "Perform an external assessment of the Corrective Action Program (CAP) (04-02468-46)."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, and self-assessment records. In addition, the team conducted interviewed cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team reviewed Self-Assessment SA 761 PYRC-2005 "Perry Corrective Action Program Self-Assessment."

## b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item D.1.6.

The team reviewed SA 761 PYRC-205, "Perry Corrective Action Program Self-Assessment," and determined that it provided a thorough assessment of the corrective action program.

However, the team could not determine whether the assessment could be considered as having been performed externally since two of the five self-assessment auditors were licensee staff members and the licensee had not defined the requirements for a self-assessment to be considered externally conducted. Licensee personnel generated CR 06-00613 "NRC Definition of External is Different Than What They Observed," to enter this issue into the corrective action program.

In addition to documentation associated with this DAMP item, the team reviewed the results of two licensee audits and a "Corrective Action Program Summit" meeting that were conducted to identify additional areas for improvement in the corrective action program. The audit results identified many of the same issues identified by the team. In some cases, corrective actions were planned, but had not been implemented prior to this inspection. Although the licensee's corrective actions to address the issues had not been implemented, these actions represented additional licensee efforts to improve the implementation of the corrective action program.

#### 11.2 DAMP Item D.9.2

## a. Inspection Scope

The team reviewed DAMP Item D.9.2: "Develop a method to assign clear, single point ownership of root cause CRs, from CR investigation through CA implementation/effectiveness review completion for each root cause CR (04-02468-69)."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports and corrective action program closure documentation. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team reviewed CA 04-02468-69 and discussed its contents with the Performance Improvement Unit (PIU) supervisor, and reviewed NOP-LP-2001, "Condition Report Process."

#### b. Observations and Findings

No findings of significance were identified; however, the team concluded that the licensee's actions had not adequately implemented DAMP Item D.9.2.

Corrective Action 04-02468-69 was generated to implement DAMP 9.2 and stated that the corrective action was to "develop a method to assign clear, single point ownership of root cause CRs..." The team determined that CR 04-02468 had been closed as an "intervention action" and a method to assign clear, single point ownership had not been developed.

The PIU supervisor informed the team that the issue of ownership had been discussed with the CARB and the MRB. The subject condition report assigned the responsibility for completing the associated corrective action to CARB and identified that this item had been added to the agenda as a standing item for the 1<sup>st</sup> Thursday of each month. The

PIU supervisor also stated the action was not proceduralized as it was an intervention action. In addition, the individual who closed CR 04-02468 stated that the issue was only applicable to a limited number of CRs and was not intended to be a long-term corrective action.

The team determined that Section 4.7.1 of NOP-LP-2001 required that the MRB validate or establish a CR condition owner. Further, if a root cause evaluation was determined to be warranted to review the issue(s) identified in the CR, the MRB was required to ensure a director level individual was designated as root cause sponsor.

The team identified that although Step 4.4.3.5 of NOP-LP-2001 prescribed the selection of a Condition Owner, the owner's responsibilities were not defined. In addition, the team was unable to identify in NOP-LP-2001 or other documents where one individual was identified with the responsibilities as prescribed by the DAMP item. In particular, the team was unable to identify any documentation that defined an individual as being a single point "owner" of root cause CRs, from CR investigation through CA implementation and effectiveness review completion for each root cause CR. Licensee personnel generated CR 06-00767, "Corrective Action Alternately Closed Without Proper Approval," to enter this issue into the corrective action program.

The team concluded that due to a lack of quality and attention to detail, licensee personnel failed to identify that this DAMP item had not been adequately implemented during the DAMP item review and closure process. However, because the inadequate closure of DAMP Item D.9.2 had no actual impact on the facility, the issue was of only minor significance.

- 11.3 DAMP Item D.11.1
- a. Inspection Scope

The team reviewed DAMP Item D.11.1: "A two-step screening process is being implemented to improve timeliness of issue entry into CAP and more accurate prioritization (04-02468-66)."

To determine whether this DAMP item had been adequately implemented, the team reviewed condition reports, corrective action program closure documentation, original and revised procedures, and meeting schedules and minutes. In addition, the team conducted interviews of cognizant licensee personnel to determine whether actions had been accomplished. In particular, the team reviewed PYBP-SITE-0045, "Initial Screening Committee," and attended a MRB meeting on February 7, 2006.

b. Observations and Findings

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item D.11.1.

By direct observation, the team determined that the licensee had implemented a two-step screening process for condition reports that improved the timeliness of issue entry and resulted in more accurate prioritization. Through this process, a condition report was sent to the Initial Screening Committee (ISC) for review and discussion, and then to the Management Review Board (MRB) for final approval. Subsequently, the MRB ensured that the condition report was appropriately screened for "Category", "Assigned Group," and "Due Date." The MRB also discussed complicated and/or significant condition reports. The ISC was instituted by procedure, with required training for its members, and was accountable to the MRB.

## 12.0 Key Performance Indicators (KPIs)

## a. Inspection Scope

The team reviewed existing corrective action program performance indicators to evaluate the quality of the indicators, the licensee's use of the corrective action program when indicators suggested a decline in corrective action program performance, and the overall performance of the corrective action program based upon the licensee's KPI data.

## b. Observations and Findings

No findings of significance were identified.

The team verified that KPIs for the corrective action program had been developed and were adequately maintained. The KPIs defined thresholds for acceptable performance for specific corrective action program functions and tracked actual numbers or percentages against the pre-defined thresholds. The performance level for each KPI were color-coded (green, white, yellow, red) to facilitate performance monitoring. Based on a review of the most recently issued KPIs, in general, the KPIs reflected an improving performance trend.

The licensee's expectation for yellow or red KPIs was that a condition report should be generated and corrective actions should be implemented to address the issue. The team reviewed a number of condition reports that had been generated to document red and yellow KPIs. The corrective action program was used to track the development and implementation of corrective actions to improve performance. The team also noted a number of actions had been implemented to improve corrective action program performance when program performance expectations were not met. Management feedback to corrective action owners, the appointment of management sponsors for corrective action program products, and the analysis and development of a closure plan to address KPI performance gaps were all examples of actions implemented to address corrective action program performance issues. However, a formal mechanism to address KPI issues within the licensee's corrective action program did not exist. In particular, licensee personnel had not developed written guidance that prescribed the generation of a condition report to address declining KPIs, performance gaps between actual and expected performance, the development of action plans to reduce the gap

between actual and expected performance, or the tracking of the success of action plans to address identified performance deficiencies. Although specific guidance did not exist, the team did not identify any declining KPIs for which appropriate corrective actions had not been implemented.

The team concluded that the lack of a formal process to address KPI issues could impact the long-term effectiveness of the actions. Licensee personnel generated CR 06-00787, "Inconsistencies With GAP Closure plans for Red/Yellow CAP KPIs," to enter this issue into the corrective action program.

## 13.0 Exit Meeting

On March 14, 2006, the team presented the inspection results to Mr. L. Pearce, Vice President, and other members of his staff, who acknowledged the findings and observations.

The team asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

- Attachments: 1. Supplemental Information
  - 2. Perry Performance Background
  - 3. Perry IP 95003 Inspection Results
  - 4. Summary of Phase 2 PII Initiatives

# SUPPLEMENTAL INFORMATION

# **KEY POINTS OF CONTACT**

## Licensee

- G. Leidich, Chief Nuclear Office, FENOC
- D. Pace, Senior Vice President, Fleet Engineering and Services, FENOC
- J. Hagan, Chief Operating Officer, FENOC
- J. Rinckel, Vice President, Oversight, FENOC
- L. Pearce, Vice President, Perry
- F. von Ahn, Plant Manager, Perry
- F. Cayia, Director, Performance Improvement, Perry
- T. Lentz, Director, Performance Improvement Initiative, Perry
- J. Shaw, Director, Engineering, Perry
- M. Wayland, Director, Maintenance, Perry
- K. Howard, Manager, Design, Perry
- J. Lausberg, Manager, Regulatory Compliance, Perry
- J. Messina, Manager, Operations, Perry

# LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None.

## LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety rather, that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

Perry Business Practices:

PYBP-PII-0006, "Process Improvement Initiative Process" PYBP-POS-1-11, "Operations Section System Ownership" PYBP-SITE-0042, "Corrective Action Closure Board Charter" PYBP-SITE-0045, "Initial Screening Committee" PYBP-SITE-0046, "Corrective Action Program Implementation Expectations"

Nuclear Operating Business Practices:

NOBP-LP-2007, "Condition Report Process Effectiveness Review"

NOBP-LP-2008, "Corrective Action Review Board"

NOBP-LP-2008-01, "Root Cause Review Summary"

NOBP-LP-2011, "FENOC Cause Analysis"

NOBP-LP-2019, "Corrective Action Program Supplemental Expectations and Guidance"

NOBP-LP-2019, Attachment 1, (Condition Report Category and Activity Tracking Descriptions),

and Attachment 2, (Condition Report Evaluation Methods).

NOBP-TR-1111-01, "Corrective Action program (CAP) Training Program"

NOBP-SITE-0046, "Corrective Action Program Implementation Expectations;"

Nuclear Operating Procedures:

NOP-LP-2001, "Corrective Action Program"

NOP-LP-2100, "Operating Experience Program"

Condition Reports:

CR 05-02725, "Substantive Cross-Cutting Issue, Problem Identification and Resolution" CR 05-03986, "Nuclear Oversight Audit PY-C-05-01" CR 05-08057, "Disposition/Tracking of Personnel Not Trained Per CAPC-200501\_PY" CR 06-00080, "DAMP Items I.3.5 & I.8.4 Incomplete" CR 06-00576, "DAMP Item I.2.2 Did Not Provide Complete Closure Documentation" CR 06-00589, "No Indicators to Track Deltas From Condition Report Categorizations" CR 06-00604, "DAMP Item I.3.3 Did Not Provide Complete Closure Documentation" CR 06-00613, "NRC's Definition of External is Different Than What They Observed" CR 06-00630, "No Process Exists to Prevent Inadvertent Changes to Closed PII Action" CR 06-00636, "DAMP Item I.3.1 Inadvertent Omission from Attachment 1 of NOBP-LP-2019" CR 06-00697, "DAMP Item I.3.4 Closed Correctly However, Reference CA Not Complete" CR 06-00767, "Corrective Action Alternately Closed Without Proper Approval" CR 06-00784, "Issues With Implementation of Revised CAP Training"

Corrective Actions: CA 04-02404-08 CA 04-02468-69 CA 05-07223-13 CA 05-07233-07 CA 05-07223-21

Self-Assessments:

Snapshot Assessment 810PII2005, "Perry Nuclear Power Plant Performance Improvement Initiative - Corrective Action Program Implementation Effectiveness,"

Self-Assessment FL-SA-05-05, "Self-Assessment of Integrated Performance Assessment Trending," dated December 14, 2005

Self-Assessment SA 761 PYRC-2005 "Perry Corrective Action Program Self-Assessment"

Training Documents:

SSC-200502\_PY-01, "Supervisory Continuing Training" Training Plan 9903, "Root Cause Evaluator" Training Plan 9908, "Corrective Action Review Board (CARB) Member" Training Requirements CAP RCA\_FEN, "FENOC Root Cause Evaluation Basic Training" Training Requirements CAP-RCT\_FEN, "FENOC Root Cause Evaluation Advanced Training" Training Requirements CAP-RCT\_FEN, "Root Cause Evaluator Job Familiarization Guide" ESPC-SYS0503\_PY, "System Walkdown Refresher Training" FITS Qualification Matrices associated with Root Cause Evaluators and CARB Members Job Familiarization Guide (JFG) GEN\_JFGSOEC\_FEN-01, "Section Operating Experience Coordinator Job Familiarization Guideline"

Other Documents:

FENOC Performance Appraisal Elements CAPC-200501-PY, "Corrective Action Program Implementation Improvement" CAP Improvement Plan: Communications Roadmap FENOC CR Initiation Guidance PESP-9, "System Walkdowns" "Apparent Cause Expectation" brochure Criteria for CAP Focus Day CARB meeting minutes, dated September 2005 and October 2005 CACB meeting agenda, dated October 20, 2005 CARB review package, dated November 4, 2005 CACB and CARB overview, dated October 31, 2005 Condition Report Analyst Meeting Agenda, dated November 3, 2005

# LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
CA	Corrective Action Closure Board
CACB	Confirmatory Action Letter
CAL	Corrective Action Program
CAP	Corrective Action Review Board
CARB	Code of Federal Regulations
CFR	Condition Report
CR	Detailed Action and Monitoring Plan
DAMP	Davis-Besse
DB	Emergency Service Water
ESW	FirstEnergy Nuclear Operating Company
FENOC	FENOC Integrated Training System
FITS	High Pressure Core Spray
HPCS	Inspection Manual Chapter
IMC	Institute for Nuclear Power Operation
INPO	Inspection Procedure
IP	Inspection Report
IR	Initial Screening Committee
ISC	Job Familiarization Guidelines
JFG	Key Performance Indicators
KPI	Low Pressure Core Spray
LPCS	Monthly Performance Review
MPR	Management Review Board
MRB	Management Review Committee
MRC	Nuclear Operating Business Practice
NOBP	Nuclear Operating Procedure
NOP	Nuclear Regulatory Commission
NRC	Operating Experience
OE	Publicly Available Records
PARS	Plant Engineering Section Policy
PESP	Performance Indicator
PI	Performance Indicator
PII	Performance Inprovement Initiative
PIU	Performance Improvement Unit
PNPP	Perry Nuclear Power Plant
PYBP	Perry Business Practice
RCA	Root Cause Analysis
RCE	Root Cause Evaluation
RHR	Residual Heat Removal
RCE	Root Cause Evaluation

## PERRY PERFORMANCE BACKGROUND

As discussed in the Perry Annual Assessment Letter dated March 4, 2004, plant performance was categorized within the Degraded Cornerstone column of the NRC's Action Matrix based on two White findings in the Mitigating Systems cornerstone. An additional White finding in the Mitigating Systems cornerstone was subsequently identified and documented by letter dated March 12, 2004.

The first finding involved the failure of the high pressure core spray (HPCS) pump to start during routine surveillance testing on October 23, 2002. An apparent violation of Technical Specification (TS) 5.4 for an inadequate breaker maintenance procedure was identified in IR 05000440/2003008. This performance issue was characterized as White in the NRC's final significance determination letter dated March 4, 2003. A supplemental inspection was performed in accordance with IP 95001 for the White finding and significant deficiencies were identified with regard to the licensee's extent of condition evaluation. Inspection Procedure 95001 was re-performed and the results of that inspection were documented in IR 05000440/2003012, which determined that the extent of condition reviews were adequate.

The second finding involved air-binding of the low pressure core spray(LPCS)/residual heat removal (RHR) 'A' waterleg pump on August 14, 2003. A special inspection was performed for this issue and the results were documented in IR 05000440/2003009. An apparent violation of TS 5.4 for an inadequate venting procedure was identified in IR 05000440/2003010. This performance issue was characterized as White in the NRC's final significance determination letter dated March 12, 2004.

The third finding involved the failure of the 'A' Emergency Service Water (ESW) pump, caused by an inadequate maintenance procedure for assembling the pump coupling that contributed to the failure of the pump on September 1, 2003. An apparent violation of TS 5.4 was documented in IR 05000440/2003006. This performance issue was characterized as White in the NRC's final significance determination letter dated January 28, 2004.

As documented in IP 95002 Supplemental Inspection Report 05000440/2004008, dated August 5, 2004, which reviewed the licensee's actions to address these issues, the NRC concluded that the corrective actions to prevent recurrence of a significant condition adverse to quality (SCAQ) were inadequate. Specifically, the same ESW pump coupling that failed on September 1, 2003, failed again on May 21, 2004. This resulted in the ESW pump White finding remaining open.

As a result, Perry entered the Multiple/Repetitive Degraded Cornerstone column for Mitigating Systems in the Reactor Safety strategic performance area for having two White inputs for five consecutive quarters. Specifically, for the third quarter of 2004, the waterleg pump finding remained open a fourth quarter while the ESW pump finding was carried open into a fifth quarter as a result of the findings of the IP 95002 supplemental inspection.

#### **PERRY IP 95003 INSPECTION RESULTS**

As a result of poor performance, the Nuclear Regulatory Commission (NRC) designated the Perry Nuclear Power Plant (PNPP), owned and operated by FirstEnergy Nuclear Operating Company, as a "Multiple/Repetitive Degraded Cornerstone Column" facility in the NRC's Action Matrix<sup>1</sup> in August 2004. Accordingly, a supplemental inspection was performed in accordance with the guidance in NRC Inspection Manual Chapter (IMC) 0305 and Inspection Procedure (IP) 95003, "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input."

In addition, the scope of the IP 95003 inspection included the review of licensee actions to address deficiencies identified during a previous IP 95002 inspection. In particular, the NRC reviewed the licensee's root cause and corrective actions to address the areas of procedure adequacy, procedure adherence, and training deficiencies identified in the previous IP 95002 inspection; as well as the problem identification, root cause review, and corrective actions to address repetitive emergency service water (ESW) pump coupling failures.

By letter dated September 30, 2004, FirstEnergy advised the NRC that actions were underway to improve plant performance. To facilitate these performance improvements, FirstEnergy developed the Perry Performance Improvement Initiative (PII). As part of the NRC's IP 95003 inspection, the team conducted a detailed review of the PII.

As documented in IP 95003 Supplemental Inspection Report 50-440/2005003, the NRC determined Perry was being operated safely. The NRC also determined that the programs and processes to identify, evaluate, and correct problems, as well as other programs and processes in the Reactor Safety strategic performance area were adequate. Notwithstanding these overall conclusions, the NRC determined that the performance deficiencies that occurred prior to and during the inspection were often the result of inadequate implementation of the corrective action program (CAP) and human performance errors.

The team identified that a number of factors contributed to CAP problems. A lack of rigor in the evaluation of problems was a major contributor to the ineffective corrective actions. For example, in the engineering area, when problems were identified, a lack of technical rigor in the evaluation of those problems at times resulted in an incorrect conclusion, which in turn affected the ability to establish appropriate corrective actions. The team also determined that corrective actions often were narrowly focused. In many cases a single barrier was established to prevent a problem from recurring. However, other barriers were also available that, if identified and implemented, would have provided a defense-in-depth against the recurrence of problems. The team also identified that problems were not always appropriately prioritized, which led to the untimely implementation of corrective actions. A number of programmatic issues were identified that have resulted in the observed CAP weaknesses. For example, the team identified a relatively high threshold for classifying deficiencies for root cause analysis. As a result, few issues were reviewed in detail. In addition, for the problems that were identified that

<sup>&</sup>lt;sup>1</sup>The NRC's Action Matrix is described in Inspection Manual Chapter 0305, "Operating Reactor Assessment Program."

required a root cause evaluation, the team found that the qualification requirements for root cause evaluators were limited and multi-disciplinary assessment teams were not required. The team also identified that a lack of independence of evaluators existed. This resulted in the same individuals repeatedly reviewing the same issues without independent and separate review. In addition, the team identified weaknesses in the trending of problems, which has hindered the ability to correct problems at an early stage before they become more significant issues. Finally, the team determined that a lack of adequate effectiveness reviews was a barrier to the identification of problems with corrective actions that had been implemented. Overall, the NRC concluded that while some limited improvements may have been realized, there has been no substantial improvement in the licensee's implementation of the corrective action program since Perry entered the Multiple/Repetitive Degraded Cornerstone column of the NRC's Action Matrix.

In the area of human performance, the team determined that a number of self-revealed findings relating to procedure adherence occurred that had a strong human performance contribution. These findings emanated from events that have resulted in an unplanned engineered safety feature actuation, a loss of shutdown cooling, an unplanned partial drain down of the suppression pool, inadvertent operation of a control rod (a reactivity event), and other configuration control errors. The team reviewed the events that occurred during the inspection and identified that the procedure adherence problems had a number of common characteristics. In a number of cases, personnel failed to properly focus on the task at hand. Although pre-job briefings were held prior to many events, and procedures were adequate to accomplish the intended activity, personnel failed to sufficiently focus on the individual procedure step being accomplished and performed an action outside of that prescribed by the procedure. In some cases, the team determined that a lack of a questioning attitude contributed to the procedure problems that occurred. Although information was available to personnel that, if fully considered, could have prevented the procedure adherence issues that occurred, that information was not sought out or was not guestioned. The presence of supervisors with the necessary standards to foster good procedure adherence could have acted as a significant barrier to prevent some of the problems that occurred. However, adequate supervisory oversight was not always available or used. Further, the team identified that available tools for assessing human and organizational performance had not been effectively used. Overall, the NRC concluded that while some limited improvements may have been realized, there has been no substantial improvement in human performance since Perry entered the Multiple/Repetitive Degraded Cornerstone column of the NRC's Action Matrix.

In the area of design, the IP 95003 inspection team concluded that the systems, as designed, built, and modified, were operable and that the design and licensing basis of the systems were sufficiently understood. Notwithstanding the overall acceptability of performance in the engineering area, the team identified common characteristics in a number of problems identified during the inspection. These characteristics included a lack of technical rigor in engineering products that resulted in an incorrect conclusion. Also, there appeared to be a lack of questioning by the licensee staff of some off-normal conditions. Finally, weaknesses in the communications between engineering and other organizations such as operations and maintenance sometimes hindered the resolution of problems.

In the area of procedure adequacy, the team determined that the licensee's procedures to safely control the design, maintenance, and operation of the plant were adequate, but warranted continued management focus and resource support. In particular, process-related vulnerabilities in areas such as periodic plant procedure reviews, procedure revisions, and use classifications were identified by the team.

In the area of equipment performance, the team acknowledged that the licensee had completed numerous recent plant modifications to improve equipment performance. In addition, improved engineering support and management oversight of equipment performance were noted. Notwithstanding the above, the team identified numerous examples that indicated that the resolution of degraded equipment problems and implementation of the CAP continued to be a challenge to the organization.

In the area of configuration control, the team identified numerous examples that indicated the resolution of configuration control issues and implementation of the CAP continued to be a challenge to the organization. The team agreed with the licensee's assessment that continuing configuration control problems were primarily the result of inappropriate implementation of procedural requirements rather than the result of configuration management procedural shortcomings. However, given the on-going errors associated with equipment alignment, as well as multiple errors associated with maintenance configuration control such as scaffolding erection, the team concluded that adequate evaluations of the root causes of configuration control errors had not been performed. The team also concluded that the licensee lacked rigor in its efforts to resolve latent configuration control issues. Several licensee-identified issues have not been corrected, and contributed to configuration control shortcomings.

In addition, in the area of emergency preparedness, the team determined that there were some performance deficiencies associated with the licensee's implementation of the Emergency Plan. A number of findings were identified in which changes to the Emergency Plan or Emergency Action Levels were made without required prior NRC approval. In addition, the results of the augmentation drill where personnel were called to report to the facility for a simulated emergency were unsatisfactory.

With regard to the NRC's review of issues associated with the previous IP 95002 inspection, the NRC determined that actions to address procedure adequacy and ESW pump failures was still in progress at the end of the IP 95003 inspection. In particular, the team identified that one of the licensee's corrective actions to address the verification of the quality of ESW pump work was inadequate. In addition, in light of the continuing problems in human performance and the impact on procedure adherence, the team concluded that actions to address procedure adherence had not been fully effective. Finally, actions to address training were also still in progress at the end of the inspection. In this case, the licensee's corrective actions to address this issue had not been timely and at the conclusion of the IP 95003 inspection, had not yet been implemented. As a result, the NRC concluded that the open White findings associated with the IP 95002 inspection would continue to remain open pending additional licensee actions and the NRC's review of those actions.

In the assessment of the licensee's performance improvements planned and implemented through the Perry PII, the team determined that the Perry PII had a broad scope and addressed

many important performance areas. The IP 95003 inspection team also observed that, although substantially completed, the PII had not resulted in significant improvement in plant performance in several areas. There were a number of reasons identified as why this occurred, one being that the PII was largely a discovery activity, and as such, many elements of the PII did not directly support improving plant performance. Instead, the problems identified through the PII reviews were entered into the CAP and the proper resolution of these problems depended upon the proper implementation of the CAP. During the IP 95003 inspection, the NRC identified that in some cases the CAP had not been implemented adequately to address the concerns identified during PII reviews. The team identified that although many PII actions have been completed, some of the more significant assessments, such as in the area of human performance, were still in progress at the end of the inspection.

Overall, based on the factors discussed above, the NRC was unable to draw any definitive conclusions regarding the overall effectiveness of the Perry PII. As a result, further reviews were deemed to be necessary to determine whether the PII was sufficient to address and resolve the specific issues identified.

# SUMMARY OF PHASE 2 PII INITIATIVES

To correct the identified declining trends in performance at Perry, the Perry Phase 2 PII was structured around the following six key improvement initiatives:

## Corrective Action Program Implementation Improvement

As described in the Phase 2 PII, the Corrective Action Program Implementation Improvement initiative was designed to drive ownership and accountability for the corrective action program (CAP) deep into the PNPP organization. The initiative was aimed at driving behavior changes to increase ownership and accountability of the corrective action program to solve plant issues. Key objectives of this initiative included improvement in the following areas:

- ownership and station focus,
- management and oversight of the corrective action program,
- prioritization of issues and resolution activities,
- trending capability,
- backlog management,
- quality of corrective actions and documentation,
- individual accountability, and
- corrective action work assignment and resource utilization.

## Excellence in Human Performance

As described in the Phase 2 PII, the Excellence in Human Performance initiative was designed to clarify standards and expectations for human performance, establish line ownership, alignment, and integration of the Institute for Nuclear Power Operation (INPO) Performance Model, and strengthen line accountability for human performance. Key objectives of this initiative included improvement in the following areas:

- performance expectations,
- line ownership, alignment, and integration, and
- line accountability of results.

## Training to Improve Performance

As described in the Phase 2 PII, the Training to Improve Performance initiative was targeted at improving both PNPP Skills Training and Operator Training Programs to improve plant and personnel performance. Key objectives of this initiative included the following:

- establish training as a dominant tool to improve station performance, and
- develop a comprehensive plan to help line and training managers return the performance of Perry's training programs to a level consistent with current industry standards.

# Effective Work Management

As described in the Phase 2 PII, the Effective Work Management initiative was designed to provide a site-wide systematic and focused effort to drive improvements in work management. The initiative was intended to implement improvements in the selection, preparation, and execution of work to achieve excellence in work management. Key objectives of this initiative included the following:

- a long range plan for equipment performance,
- contingency planning guidance and execution,
- strong use of operating experience in work packages,
- improvement in outage preparation and execution, and
- control of contract workers.

# Employee Engagement and Job Satisfaction

As described in the Phase 2 PII, the Employee Engagement and Job Satisfaction Initiative was designed to increase employee contribution to PNPP success by creating and environment in which all employees can make a meaningful contribution and feel pride and a sense of accomplishment in their work. Key objectives of this initiative included the following:

- employee involvement in Phase 2 PII activities,
- leadership behaviors and performance management,
- leadership assessment and development, and
- use of overtime.

# **Operational Focused Organization**

As described in the Phase 2 PII, the Operational Focused Organization initiative was designed to improve the operational focus of the PNPP organization to achieve a higher order of safe and reliable operation. Key objectives of this initiative included the following:

- fundamental skills and behaviors required for safe and reliable operation,
- operations-led organization,
- alignment of goals and priorities,
- strong craft ownership and engineering presence, and
- operations resources replenishment planning.