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Subject: Response to NRC Inspection Procedure 95003 Supplemental Inspection, Inspection  
Report 05000440/2005003

Ladies and Gentlemen:

This letter provides the FirstEnergy Nuclear Operating Company (FENOC) response to the NRC Inspection Report 05000440/2005003 for the Perry Nuclear Power Plant (PNPP).

FENOC is committed to improving performance at PNPP through implementation of the Performance Improvement Initiative (PII). As early as 2003, the PNPP staff recognized the need to address performance issues. In 2004 the PNPP staff developed the PII, which included six improvement initiatives that addressed key issues identified during internal and external assessments, NRC inspections (i.e., Inspection Procedures (IP) 95001 and 95002), as well as lessons learned from the Davis-Besse reactor pressure vessel head degradation event.

The focus of the PII was to identify the specific issues that contributed to the declining performance, implement immediate compensatory measures, and identify necessary longer-term corrective actions. As a result, many positive actions have already been taken to address those issues, including the actions to be taken described herein.

FENOC strengthened the PNPP management team by hiring a new PNPP vice-president and several new managers with industry experience. Formal assessments were performed on PNPP managers and supervisors to ensure appropriate skills and attributes are in place to achieve performance improvements. On the corporate level, the FENOC Fleet Management Team is staffed with experienced managers. In addition, FENOC established a Performance Overview Panel, staffed with industry experts, to advise the FENOC executive and plant leadership teams concerning the implementation of the PII.

During the tenth refueling outage (RFO10) at PNPP in 2005, FENOC invested significant resources to improve plant reliability. This included upgrading the design of the emergency service water pumps, installing a state-of-the-art digital feedwater control system, eliminating active components in the diesel generator exhaust system, refurbishing a significant population of electrical circuit breakers, and implementing actions to improve nuclear fuel reliability. Additionally, all operability determinations that were open prior to RFO10 were closed prior to startup. In aggregate, these actions reinforced high standards for material condition expected of the FENOC nuclear units that comprise the FENOC Fleet.

During the past few months, the PNPP leadership team reviewed the achievements realized by the initial PII, the NRC IP 95003 inspection, and the conclusions from various assessments and developed updates to the PII Plan. The leadership team restructured the PII (Phase 2 PII) into six initiatives that are listed below and described in more detail in Attachment 1.

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

The purpose of the Phase 2 PII is to implement lasting actions to improve the overall performance of the PNPP. Self-assessments and effectiveness reviews will be used to monitor these initiatives (and modify as necessary) to assure objectives are met and significant and continuous improvement is achieved. Sustainability will be measure through the use of FENOC performance indicators.

Attachment 1 contains an overview of the Phase 2 PII. Attachment 2 provides our response to the key issues identified in the IP 95003 inspection report. The summary of regulatory commitments is provided in Attachment 3.

Under a separate letter, FENOC will provide response for two (2) non-cited violations (NCV): 1) NCV 05000440/2005003-14, "Design basis requirements related to Emergency Diesel Generator response to a loss of off-site power signal had not been correctly translated into the design" and 2) NCV 05000440/2005003-26, "Licensee implemented changes to the Emergency Plan to allow the dual assignment of the shift HP Technician as the interim OSCC, which decreased the effectiveness of the Emergency Plan." The basis of our contention is provided in that letter. Therefore, FENOC respectfully requests the NRC Staff to reconsider the NCVs identified in the above reference inspection report.

If you have questions or require additional information, please contact Mr. Jeffrey Lausberg – Manager, Regulatory Compliance at (440) 280-5940.

Very truly yours,



#### Attachments

cc: NRC Region III Administrator  
NRC Project Manager  
NRC Resident Inspector

*Attachment 1*

**Phase 2 Perry Performance Improvement Initiative (PII)**

## **Phase 2 Perry Performance Improvement Initiative (PII)**

In early 2004, FENOC took an integrated and comprehensive approach to performance improvement at PNPP with the development and implementation of the Perry Performance Improvement Initiative (PII) to respond to a decline in performance. A key factor in the decline was the lack of reinforcing existing expectations by management and supervision, *which resulted in missed opportunities to correct these problems*. Senior level management changes were made at PNPP and the template for comprehensive discovery and action was developed.

The PII, which incorporated certain aspects of the Davis-Besse recovery model, was initially structured to address known issues and to identify additional performance improvement opportunities. FENOC reviewed the results of actions taken from the PII implementation effort, the results of other internal/external assessments, and the results of the NRC IP 95003 inspection to prioritize the necessary remaining actions that are required to achieve continuous improvement at PNPP. Based on this review, the PNPP leadership team restructured the PII (Phase 2 PII) into six key initiatives:

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

The purpose of the Phase 2 PII is to implement lasting actions to improve the overall performance of PNPP. The purpose and the objective for each of the Phase 2 PII initiatives are discussed below. *Additionally, the Phase 2 PII addresses the crosscutting issues of problem identification and resolution and human performance that were raised in the NRC Annual Assessment Letter. These crosscutting issues are addressed in the "Corrective Action Program Implementation Improvement" and "Excellence in Human Performance" initiatives.*

### **I. Corrective Action Program Implementation Improvement**

This initiative is designed to drive ownership and accountability for the corrective action program (CAP) deep into the PNPP organization. The initiative is aimed at driving behavior changes to increase ownership and accountability of the corrective action program to solve plant issues. Clear expectations for implementation of the FENOC fleet CAP, which is focused on desired behaviors, will exist for critical attributes. Training will be used to ensure understanding of expectations, obtain alignment, and to obtain commitment from the organization to improve station performance through the use of CAP.

Key objectives of the initiative include improvement of:

- ownership and station focus,
- management oversight of 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.

## **II. Excellence in Human Performance**

This initiative is designed to clarify standards and expectations for human performance, establish line ownership, alignment, and integration of the INPO Performance Model, and strengthen line accountability for human performance. This will be accomplished through policy and program enhancements, fundamentals and role specific training, and upgrading accountability elements within the performance management system. The Human Performance Team will be revitalized to promote and sustain advocacy of the need for improved human performance at all levels of the organization.

Key objectives of the initiative include improvement of:

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

## **III. Training to Improve Performance**

This initiative is targeted at improving both the PNPP Skills Training and Operator Training Programs to improve plant and personnel performance. Additionally, a strong self-assessment program will ensure PNPP training programs are consistent with current fleet and industry practices.

Key objectives of the initiative include:

- 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.

## **IV. Effective Work Management**

The initiative is designed to provide a site-wide systematic and focused effort to drive improvements in work management. This initiative will implement improvements in the selection, preparation, and execution of work to achieve excellence in work management. Expected results of this initiative will be improvement in human performance and a higher level of equipment reliability.

Key objectives of the plan include:

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

## **V. Employee Engagement and Job Satisfaction**

This initiative is designed to increase employee contribution to PNPP's success by creating an environment in which every employee can make meaningful contributions and feel pride

and a sense of accomplishment in their work. The initiative will drive involvement and decision-making to the appropriate levels in the organization.

Employee panels will be created that will provide input to the initiative owners and to the management team on actions for incorporation into the Phase 2 PII. This will include actions that should be modified or discontinued and methods to execute the actions. The panels will also identify opportunities for the creation of employee high-impact teams to address significant or long-standing plant issues. Leadership behavior and performance will be improved through training. Reinforcement of these skills will facilitate fair, consistent, and professional treatment of employees. Future supervisors and managers will be assessed to assure the right skills, technical competencies and behaviors are in place and routinely demonstrated.

Key objectives of the initiative include:

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

#### **VI. Operational Focused Organization**

This initiative is designed to improve the operational focus of the PNPP organization to achieve a higher order of safe and reliable operation. Actions to align the organization to common goals and priorities will improve material condition of the plant and support safe and reliable operation. The attitudes and behaviors of personnel, along with the framework of policies and procedures, will ensure that nuclear safety is an integral part of every operational decision. Operations will lead the organization that includes strong craft ownership of the equipment supported by a strong engineering presence. A long-term Operations staffing plan is being implemented to ensure a robust "pipeline" is available for future licensed and non-licensed operators.

Key objectives of the initiative include:

- 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.

## Attachment 2

### Actions to Address Key Issues Identified in the IP 95003 Inspection Report

## **Actions to Address Key Issues Identified in the IP 95003 Inspection Report**

NRC Inspection Report (IR) 2005003, "Perry Nuclear Power Plant – Inspection Procedure 95003 Supplemental Inspection," identifies a number of issues regarding: 1) implementation of corrective action program (CAP); 2) human performance; 3) effectiveness of the Performance Improvement Initiative (PII); and 4) other issues. This attachment summarizes the key issues identified in the IR and the actions that FENOC has taken and plans to take to address those issues.

### **I. Implementation of the Corrective Action Program**

#### **A. Issues Identified in NRC Inspection Report 2005003**

The NRC Inspection Procedure 95003 team observed that, overall, the PNPP CAP was adequate. Nonetheless, it also identified a number of problems concerning implementation of the CAP, particularly in the areas of identification and implementation of corrective actions. As described below, FENOC has grouped the CAP implementation problems identified by the NRC team into six "issues." This section of Attachment 2 describes each of the six issues, the actions FENOC has taken and plans to take to address those issues, the due date for the actions not yet completed, and the corresponding method of verification. The performance indicators to be used in monitoring the CAP implementation are described later in this attachment. An improving trend in the key performance indicators in aggregate will be used to determine effectiveness.

- Issue 1**
- a) Lack of rigor in the evaluation of problems was a major contributor to the ineffective corrective actions.
  - b) Corrective actions often were narrowly focused; in many cases single barrier was established to prevent a problem from recurring.

#### **Actions Taken or To Be Taken:**

- 1) Provide training to Engineers and select Operations personnel on technical rigor and critical thinking. [Complete]
- 2) Revise procedure NOP-LP-2001, "Corrective Action Program," to include specific guidance for performing assessment when issues were not self-identified or resolved before it manifested and revealed itself. [Complete]
- 3) Revise procedure NOP-LP-2001 to include specific guidance for maintaining independence within the composition of the root cause evaluation team and include guidance for interdisciplinary review when comprehensive investigation is performed (i.e., evaluations of significant condition adverse to quality issues) [Complete].
- 4) Provide skills training for apparent and common cause investigators [Complete]
- 5) Train supervisors, managers and work groups on how the CAP must be used to drive improvement in station performance. [Due fourth quarter 2005]



- 6) Provide training to root cause evaluators to expand the depth of their skill (i.e., Mort, KT, streaming). [Due first quarter 2006]
- 7) Strengthen the root cause investigators training plan and qualification requirements [Due fourth quarter 2005]
- 8) Provide guidance for performing periodic effectiveness reviews to challenge the adequacy of CAs taken (i.e., rather than performing one (1) effectiveness review when the entire CAs for the CR is complete). [Due fourth quarter 2004]
- 9) Provide training to root cause evaluators on appropriate methodology for performing extent of condition and extent of cause reviews.

Verification Method: (See Endnotes for KPI definitions)

- 1) For Action 4 above, Key Performance Indicators (KPI)-02, 03, 05, 06.
- 2) For Action 5 above, KPI-01 and 12.
- 3) For Action 6 above, KPI-03, 06, and 16
- 4) For Action 8 above, KPI 03, 06 and 16.
- 5) For Action 9 above, self-assessment to determine effectiveness of implementation.
- 6) For Action 10 above, self-assessment to determine effectiveness of implementation.
- 7) For Action 11 above, self-assessment to determine effectiveness of implementation.

- Issue 2**
- a) Problems were not always appropriately prioritized, which led to the untimely implementation of corrective actions.
  - b) Relatively high threshold for classifying deficiencies for root cause analysis as a result few issues were reviewed in detail.

Actions Taken or To Be Taken:

- 1) Revise procedure NOBP-LP-2018, "Integrated Performance Assessment/Trending" 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 negative trend, repeat issues, and adverse trend). [Complete]
- 2) Improve timeliness of issue resolution (e.g., action implementation, investigation, and issue resolution). [Due first quarter 2006]
- 3) Implement a two-step screening process to improve objectivity, consistency, and cognitive trending of new condition reports. Also include assignment of due dates will be based on risk significance of the issue [Due third quarter 2005]
- 4) 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 not to be effective. [Due fourth quarter 2005]

Verification Method:

- 1) For Action 1 above, KPI-01
- 2) For Action 2 above, Management Performance Review (MPR)-01 thru 05.
- 3) For Action 3 above, self-assessment to determine effectiveness of implementation.
- 4) For Action 5 above, KPI-16

**Issue 3** Qualification requirements for root cause evaluators were limited and multi-disciplinary assessment teams were not required.

Actions Taken or To Be Taken:

- 1) Provide skills training for apparent/common cause evaluators. [Complete]
- 2) Revise procedure NOP-LP-2001 to include guidance for requiring independence for composition of the root cause team and guidance for maintaining interdisciplinary membership for performing comprehensive investigation of significant condition adverse to quality issues. [Complete]
- 3) Strengthen the root cause investigator training plan and qualification requirements. [Due fourth quarter 2005]
- 4) Provide additional training for root cause evaluators to expand the depth of their skill (i.e., Mort, KT, streaming). [Due first quarter 2006]
- 5) Provide training to cause evaluators on performing evaluations for extent of condition and extent of cause. [Due first quarter 2006]

Verification Method:

- 1) For Action 1, 2 and 4 above, KPI-03, 06, and 16.
- 2) For Action 5 above, KPI 03 and 06.

**Issue 4** Lack of independence of evaluators resulted in the same individuals repeatedly reviewing the same issues without independent and separate review.

Actions Taken or To Be Taken

- 1) Revise procedure NOP-LP-2001 to include guidance for requiring independence for composition of the root cause team and guidance for maintaining interdisciplinary membership for performing comprehensive investigation of significant condition adverse to quality issues. [Complete]

Verification Method

For Action above, KPI-03, 06, and 16.

**Issue 5** Weakness in trending of problems hindered the ability to correct problems at an early stage before they become more significant issues.

Actions Taken or To Be Taken:

- 1) Establish a consistent process for CAP trending by implementing procedure NOBP-LP-2018, "Integrated Performance Assessment/Trending." [Complete]
- 2) Train CAP Analyst to trending techniques. [Due first quarter 2006]
- 3) Upgrade CAP trending codes to include trend information for field observation data and NEI coding of human performance model. [Due first quarter 2006]

Verification Method:

- 1) For Action 1 and 2 above, self-assessment to determine effectiveness of implementation.

**Issue 6** Lack of effectiveness review was a barrier to the identification of problems with corrective actions that had been implemented.

Actions Taken or To Be Taken:

- 1) 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 not to be effective. [Due fourth quarter 2005]

Verification Method:

- 1) For Action 1, KPI 16.

**B. Other CAP-Related Issues**

In addition to the actions FENOC is taking to address the issues identified in the NRC's IR 2005003, FENOC is also taking actions to address other self-identified issues. For example, the Phase 2 PII for Corrective Action Program Implementation Improvement describes the corrective actions FENOC has taken and plans to take to address the findings and observations identified in the IP 95003 IR and in FENOC's root cause report for condition report (CR) 05-03986, "Corrective Action Program Implementation Effectiveness." In addition, the Phase 2 PII also includes the uncompleted corrective actions described in the Phase 1 PII for Corrective Action Program Implementation Effectiveness.

In the Root Cause Report for CR 05-03986, FENOC concluded that although the programmatic aspects of the PNPP CAP are adequate, the behaviors necessary for its effective implementation are not. Specifically, the analysis identified the following root and contributing causes as the main contributors:

### Root Causes

1. The PNPP management team has not owned the CAP and has not used the program to effectively solve problems and improve station performance.
2. Management has not established adequate expectations to ensure the CAP is effectively implemented at all levels in the organization.

### Contributing Causes

1. The PNPP organization has not accepted using the CAP to identify and solve problems in a timely manner.
2. PNPP management has not consistently monitored CAP health and effectively taken intervention actions to drive improvement in the CAP.

The root cause report for CR 05-03986 describes three corrective actions to address these root causes:

1. Develop expectations necessary for successful implementation of the corrective action program (CAP). Train the site to the expectations and accountability methods that will be used to improve implementation of the CAP. [Due fourth quarter 2005]
2. Implement management controls to improve line ownership and accountability at the individual level for successful implementation of the CAP. [Due third quarter 2005]
3. 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. [Due third quarter 2005]

In sum, FENOC has taken and plans to take corrective actions that will address the CAP-related issues identified by the NRC and FENOC.

## **II. Human Performance**

### **A. Issues Identified in NRC Inspection Report 2005003**

The NRC identified additional human performance problems within the IP 95003 Supplemental Inspection Report that centered on procedure adherence. As described below, FENOC has grouped these procedural problems into three "issues." This section of Attachment 2 describes each of the three issues, the actions FENOC has taken and plans to take to address those issues, the due date for the actions not yet completed, and the corresponding method of verification.

- Issue 1** a) Procedure adherence problems had a number of common characteristics, i.e., personnel failed to properly focus on the task at

hand, personnel failed to sufficiently focus on the individual procedure step being accomplished, and personnel performed an action outside of that prescribed by the procedure.

- b) Lack of questioning attitude contributed to the procedure problems that occurred.

The following actions have been taken:

- Procedure adherence expectations were set by the PNPP vice president during meetings conducted in April 2005. Signed letters acknowledging an understanding and commitment to these expectations were received from attending employees.
- A root cause analysis was conducted to evaluate the human performance crosscutting finding of procedure adherence and attention to detail. Corrective actions from this analysis are being integrated into our Excellence in Human Performance initiative.
- A Human Performance Program Review was completed as part of the Phase I Performance Improvement discovery phase. Corrective actions from this review are being integrated into our Excellence in Human Performance initiative.
- Expectations and priority for improving Human Performance were reiterated at outage restart readiness review meetings. Peer reviewers were assigned for critical startup tasks. Augmented, on shift control room oversight and intrusive peer checking were initiated during startup from RFO10 that included: 1) senior management challenge calls on critical tests; major plant changes and test plateaus; 2) operations shift peer evaluators; and, 3) operations oversight managers.

**Issue 2** 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.

FENOC is taking the following action to address this finding:

- Supervisors will be trained on the expectations for conducting and documenting effective field observations. This training will stress how to observe human performance behaviors, such as procedure adherence and attention to detail. Parallel observations (managers teamed with direct report supervisors) will be conducted to ensure consistent quality of observations. The intent of this corrective action is to improve supervisors' abilities to coach workers on expected behaviors, correcting inappropriate behaviors and reinforcing desired behaviors.

These actions will be completed by first quarter 2006. Improving trends in management field observations will measure their effectiveness.

**Issue 3** Available tools for assessing human and organizational performance had not been effectively used.

FENOC, through the Corrective Action Program Implementation Improvement initiative, is addressing use of existing tools by:

- Adopting controls to assure proper thresholds are set for human and organizational performance issues and prevent splitting and relegating these issues to lower classifications (e.g., "significant condition adverse to quality" to "condition adverse to quality").

This action will be completed by fourth quarter 2005. Improved categorization and depth of investigation commensurate with safety significance as reflected by a decrease in repeat events (CAP KPI 10) will measure the effectiveness of this corrective action.

#### **B. Other Human Performance-Related Issues**

FENOC believes that "less than adequate management ownership and engagement of the human performance program at appropriate levels throughout the organization" is the root cause of the procedure adherence issues and "less than adequate accountability and expectations" is a contributing cause to procedure adherence issues. FENOC is taking the following actions to address these:

- roles and responsibilities of the site leadership team in implementing the human performance program will be defined and communicated [Fourth quarter 2005],
- approximately monthly Site Training Advisory Committee and department / section Training Review Committee meetings have been held and will continue to be conducted with a strong focus on human performance through fourth quarter 2005 [Fourth quarter 2005],
- the purpose and key activities of the human performance program will be communicated to PNPP personnel [Fourth quarter 2005], and
- group-specific needs analyses will be performed by training committees to determine the scope and content of initial and continuing training needs on human performance fundamentals and error prevention tools and training will be provided [First quarter 2006].

These actions are summary level description of the corrective actions identified in root cause analysis for CR 05-02517. In sum, these actions will be completed by first quarter 2006. Improving trends in the Human Performance Site Success Clock (12 month rolling average days between site success clock resets) will measure their effectiveness.

### **III. Performance Improvement Initiatives (PII)**

The revision to the PII will include the following actions to address the NRC's concerns in Inspection Report 2005003:

- The Revised PII Focuses on Improvement Actions – The discovery activities in the 2004 PII have largely been completed. As shown in Attachment 1, the 2005 PII focuses on actions to improve performance.

- Resolution of Problems – If a PII action item identifies a significant issue, then that action item will not be closed until corrective action for the issue is complete. The necessary actions have been taken to improve the quality of the PII closure packages and this has been independently verified and will continue to be verified by PNPP Performance Oversight Panel.
- Schedule for PII Action Items – The revised PII includes controls to restrict extensions of time for completing action items. These controls will be included in the newly developed Perry Business Practice, which is the governing document for the PII. This process provides the appropriate direction, administrative controls, and details necessary to complete associated activities from the development of the six initiatives to closure of action items. This process will provide the necessary structure for the line organization as the owners and drivers of the new initiatives compared to the previous approach of an independent PII organization as the advocates of the initiative.

#### **IV. IP 95002 Inspection Follow-up Issues**

The following provides a brief summary of actions taken or to be taken to address the IP 95002 follow-up issues (i.e., procedure adequacy, training, and verification of the quality of emergency service water (ESW) pump work):

- Procedural Adequacy – The purpose of the Maintenance Procedure Upgrade Project is to assure the critical maintenance procedures are technically adequate and accurate, have critical steps identified, and have both human factors and place-keeping incorporated. The scope of this project included those maintenance procedures that are directly or indirectly associated with select critical components at PNPP. These critical components include both the high safety-significant components, those having a risk achievement worth (RAW) of greater than 2.0 and a Risk Reduction Worth (RRW) of greater than 1.005, and other risk-significant components, including the ESW pumps. Also, the scope included those additional maintenance procedures that the senior leadership team considered to be important based on their significance and other select multi-use maintenance procedures. To date, one hundred eight (108) of the one hundred nineteen (119) procedures have been updated and issued. The remaining maintenance procedures have been updated and are currently going through the owner's review and acceptance review process. The remaining procedures are scheduled in third quarter 2005.
- Training – The issue relates to a discovery of a concern while investigating the NRC 95002 inspection issues. At the time of the investigation, CR 04-03020 was generated to evaluate whether the training provided is producing the desired results of error prevention to preclude events from occurring. Interviews of select personnel were conducted as part of this investigation. From these interviews it was discovered that barriers put in place were sometimes being removed at the time when they were most needed. For example, at times of stress, personnel were sometimes given direction by individuals with authority to take actions that may not be consistent with the training that workers received. Interviews further indicated that when management personnel make a suggestion, that suggestion can be

misconstrued as an acceptable overriding order that may be contrary to workers' learned knowledge and skills. CR 04-04059 was generated to document this issue.

The results of the independent safety culture assessment and the earlier issues raised during the interviews were reviewed by the senior leadership team at PNPP. Based on the review, two follow-up corrective actions were deemed necessary: (1) development of proper planning for work management to ensure strict compliance of job planning to eliminate misdirection during conduct of the job; and (2) plant manager to discuss "push back" in the daily plant updates. This discussion will promote a challenging attitude from the employees. Further, new human performance tools have been rolled out which reinforce use of human performance during stressful times. These tools are discussed in the following human performance procedures: (1) NOP-LP-2601, "Human Performance Program"; (2) NOBP-LP-2603, "Human Performance Tools and Verification Practices"; (3) NOBP-LP-2604, "Job Briefs"; and, (4) NOP-LP-2601, "Procedure Use and Adherence." This issue is identified as NCV 05000440/2005003-16.

- Verification of the Quality of ESW Pump Work – During the IP 95003 inspection, the NRC team reviewed the work documentation for ESW 'A' and 'B' pumps to determine if adequate Quality Control (QC) inspections were performed. The review determined that necessary and appropriate QC inspection occurred during the manufacturing, receipt and other preparatory activities for the ESW pump assembly. However, there was not sufficient inspection specific to pump coupling re-assembly. During the inspection, CR 05-03655 was generated to address this concern. This issue is identified as NCV 05000440/2005003-17.

Corrective actions have been developed in CR 05-03655 to address the above issues. Specifically, CA 05-03655-01 is to revise Nuclear Quality Assurance Instruction NQI-1001, "QC Inspection Program Control," to specify a method by which classification can be established for additional inspection attention items that have experienced repeat failures. This method will include consideration of failure analysis, the risk-significance of the item, and the probability of failure occurrence in determining the extent of inspection activity. CA 05-03655-03 is to revise Generic Mechanical Instructions GMI-0039, "Disassembly/Re-assembly of Divisions I and II Emergency Service Water Pumps," and GMI-040, "Disassembly/Re-assembly of Division III Emergency Service Water Pump," to include QC inspection points for work activities associated with pump shaft couplings, as specified by QC. These actions are scheduled for third quarter 2005.

## **V. Emergency Planning**

Additionally, the following provides a summary of recent emergency planning (EP) issues, including those identified in NRC Inspection Report 2005003, and the actions taken or actions to be taken to address those issues.

- White Finding During July 2004 Alert Event. During an Alert event on July 20, 2004, PNPP EP staff failed to perform a Computer-Aided Dose Assessment Program (CADAP) analysis within 15 minutes of the Alert declaration as required by the PNPP EP. The NRC ultimately classified this as a White Significance Determination



Process finding. The requirement to perform that CADAP analysis was embedded in a note within Emergency Plan Implementing Instruction Emergency Action Level HA1. Placing this action in that note created confusion among the EP staff, which delayed performance of the analysis for more than two and a half hours.

To address this deficiency, FENOC took a number of timely corrective actions. For example, the EP, Emergency Plan Instruction A1, and Plant Support Instruction 0019 were revised in several aspects, including the need to emphasize that an event assessment must continue following declaration of an Alert to ensure that the criteria for entering a Site Area Emergency have not been satisfied. FENOC also trained emergency coordinators and senior reactor operators regarding the indications needed to determine Emergency Action Level (EAL) entry conditions. Finally, FENOC evaluated each EAL and revised applicable EP training plans and training schedules. A training schedule has been developed to cover all EALs during the 2005 licensed operator requalification sessions.

- 2004 Self-Assessment. In late 2004 FENOC conducted a review of the PNPP EP Program as part of the PNPP Programs/Procedures Performance Improvement Initiative. The review identified a number of potential issues concerning changes to the EP Plan that may have decreased its effectiveness. The review was comprehensive and compared the emergency plan in effect in December 2004 to the original Emergency Plan approved in an NRC Safety Evaluation Report in 1986. The review additionally evaluated the EAL (for emergency plan event classification) in effect in late 2004 compared to the initial submittal with licensing correspondence for the EAL change aligning to NUMARC NESP-007 entitled, "Methodology of Development of Emergency Action Levels." in 1996.

This comprehensive review also identified several corrective actions to examine interfacing plant processes that have a potential affect on the emergency plan. This examination is also being extended to a fleet level where common processes are implemented. Examples of interfacing processes include the Security Plan and Design Change Program.

The Emergency Plan and implementing procedures have been revised to address the identified issues.

- Augmentation Response Times. On May 19, 2005, PNPP conducted an off-hours, unannounced drill. At least four personnel did not report to their assigned stations within the required times because of confusion created over the use of a pager message that was identical to the one routinely used for the routine weekly communication test of Emergency Response Organization (ERO) pagers and the quarterly off-hours augmentation call-in test. Because ERO members are not required to report to their assigned facilities during these routine tests, several personnel mistakenly thought the page was for one of those routine tests rather than for an actual drill. Consequently, these personnel either reported late or not at all to their assigned facility.

To address this deficiency, FENOC has changed the pager message for EP drills to ensure that personnel realize it is not a routine test and that they should respond to the page and determine if they are required to report to their assigned stations.

- Organization Changes. To elevate the significance of Emergency Preparedness, FENOC has decided to elevate it, fleet-wide, within the organization, by upgrading the supervisor position to a manager who reports directly to the director of *performance improvement*.
- Addition of Qualified Responders. FENOC is expanding the population of qualified EP responders by approximately 125 persons to increase the depth of the *emergency response organization*.
- Additional Drills. The conduct of drills and exercises is also being examined based upon the lessons learned from off-hour augmentation drills. Additional drills will be conducted to demonstrate *appropriate emergency response organization response times*. The emergency response unit will also review methods for additional drills to provide appropriate simulation and challenges.

### Endnotes

1. KPI-01: Adverse to Quality CRs Initiated per Month
2. KPI-02: % Timely Root Cause Investigations by Procedurally Required Due Date
3. KPI-03: % CARB Approval Rate for Root Cause Investigation
4. KPI-05: % Timely Apparent Cause Investigations by Procedurally Required Due Date
5. KPI-06: % CARB Approval Rate for Apparent Cause Investigation
6. KPI-10: %Repeat Root Cause Events
7. KPI-12: Condition Reports Self-Identified by an Individual or Supervision/Management, not an Oversight Group
8. KPI-16: % of Effectiveness Reviews that conclude Ineffective Corrective Actions to Prevent Recurrence
9. MPR-01: % Timely Corrective Action Program Items by Procedurally Required Due Date
10. MPR-02: % CARB Approval Rate for All Cause Investigation
11. MPR-03: Open Corrective Action Programs Items Work-off Rates
12. MPR-04: Condition Report Process Efficiency (Represents Rework of CAP Items)
13. MPR-05: Median Age of All CRs (CR Initiation Date to CA Closure, during the month) in Days

**Attachment 3**

**Summary of Regulatory Commitments**

### COMMITMENT LIST

The following list identifies those actions committed to by FirstEnergy Nuclear Operating Company (FENOC) in this document. Any other actions discussed in the submittal represent intended or planned actions by FENOC. They are described only for information and are not regulatory commitments. Please notify the Jeff Lausberg, Manager – Regulatory Compliance at 440-280-5940 of any questions regarding this document or any associated regulatory commitments.

ITEM NO.	COMMITMENTS	DUE DATE
1	<p><u>IP 95002 Inspection Follow-up Issues</u></p> <p>a) To date, one hundred eight (108) of the one hundred nineteen (119) procedures have been updated and issued. The remaining maintenance procedures have been updated and are currently going through the owner's review and acceptance review process.</p> <p>b) CA 05-03655-01 is to revise Nuclear Quality Assurance Instruction NQI-1001, "QC Inspection Program Control," to specify a method by which classification can be established for additional inspection attention items that have experienced repeat failures. This method will include consideration of failure analysis, the risk-significance of the item, and the probability of failure occurrence in determining the extent of inspection activity.</p> <p>c) CA 05-03655-03 is to revise Generic Mechanical Instructions (GMI)-0039, "Disassembly/Re-assembly of Divisions I and II Emergency Service Water Pumps," and GMI-040, "Disassembly/Re-assembly of Division III Emergency Service Water Pump," to include QC inspection points for work activities associated with pump shaft couplings, as specified by QC.</p>	<p>Third Quarter 2005</p> <p>Third Quarter 2005</p> <p>Third Quarter 2005</p>
2	<p><u>Corrective Action Program Implementation Improvement</u></p> <p>a) Develop expectations necessary for successful implementation of the corrective action program (CAP). Train the site to the expectations and accountability methods that will be used to improve implementation of the CAP.</p> <p>b) Implement management controls to improve line ownership and accountability at the individual level for successful implementation of the CAP.</p> <p>c) 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.</p> <p>d) Perform a self-assessment that evaluates the overall health of the CAP, including an aggregate assessment of key performance indicator trends. Assess whether substantial progress has been made in CAP performance.</p>	<p>Fourth Quarter 2005</p> <p>Third Quarter 2005</p> <p>Third Quarter 2005</p> <p>Fourth Quarter 2006</p>

ITEM NO.	COMMITMENTS	DUE DATE
3	<p><u>Excellence in Human Performance</u></p> <ul style="list-style-type: none"> <li>a) Roles and responsibilities of the Site Leadership Team in implementing the human performance program will be defined and communicated.</li> <li>b) Approximately monthly Site Training Advisory Committee and department / section Training Review Committee meetings have been held and will continue to be conducted with a strong focus on human performance through fourth quarter 2005.</li> <li>c) The purpose and key activities of the Human Performance Program will be communicated to Perry Nuclear Power Plant (PNPP) personnel.</li> <li>d) Group-specific needs analyses will be performed by training committees to determine the scope and content of initial and continuing training needs on human performance fundamentals and error prevention tools and training will be provided.</li> </ul>	<p>Fourth Quarter 2005</p> <p>Fourth Quarter 2005</p> <p>Fourth Quarter 2005</p> <p>First Quarter 2006</p>
4	<p><u>Emergency Preparedness</u></p> <ul style="list-style-type: none"> <li>a) FENOC is expanding the population of qualified EP responders by approximately 125 persons to increase the depth of the emergency response organization.</li> <li>b) Additional drills will be conducted to demonstrate appropriate emergency response organization response times.</li> </ul>	<p>Fourth Quarter 2005</p> <p>Fourth Quarter 2005</p>