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United States Nuclear Regulatory Commission
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Perry Nuclear Power Plant
Docket No. 50-440
License No. NPF-58

Subject: Response to Observations Contained in NRC Inspection Report
5000440/2006012, NRC CAL Follow up Inspection - Human
Performance Action Item Implementation

Ladies and Gentlemen:

In a letter, Subject: Perry Nuclear Power Plant Confirmatory Action Letter (CAL) Follow-up Inspection, Human Performance Action Item Implementation Inspection, NRC Inspection Report 05000440/2006012, dated July 25, 2006, you requested that FirstEnergy Nuclear Operating Company (FENOC) respond to observations regarding implementation of actions identified and discussed in the attached report. The request was to respond within 30 days of the date of receipt of the letter and describe specific actions that have been taken, or are planned, to address these observations. The letter was received by FENOC on July 28, 2006.

Attached is the requested response to the observations identified and discussed in NRC Inspection Report 05000440/2006012. There are no commitments contained in this letter. If you have any have questions or require additional information, please contact Mr. Jeffrey Lausberg, Manager, Regulatory Compliance at (440) 280-5940.

JE01

Very truly yours,

Immanuel M. Allen for LWP

Attachment: Response to Observations Contained in NRC Inspection Report
05000440/2006012

cc: NRC Region III Administrator
NRC Project Manager
NRC Resident Inspector
E. Duncan, NRC RIII

Response to Observations Contained in NRC Inspection Report 05000440/2006012

Based on the results of this inspection, no findings of significance were identified and the NRC team determined that all four of the Commitments in the Human Performance area were adequately implemented. In particular, the NRC team concluded that the roles and responsibilities of the Site Leadership Team in implementing the human performance program were adequately defined and communicated; that Site Training Advisory Committee meetings have had a strong focus on human performance; that the purpose and key activities of the human performance program have been communicated to site personnel; and that the scope and content of initial and continuing training needs on human performance fundamentals and error prevention tools were identified, and adequate training was provided to the plant staff. The NRC team also determined that all reviewed Action Items, associated with the Human Performance area, were adequately implemented.

Notwithstanding the determination that all Commitments and Action Items reviewed were adequately implemented, some observations regarding implementation of these actions were identified. The NRC requested First Energy Nuclear Operating Company (FENOC) to respond within 30 days of the date of the receipt of the letter and describe the specific actions that are planned or taken to address those observations.

FENOC has reviewed the inspection report, and observations that warrant a response have been addressed. The following provides the specific NRC observations identified in Inspection Report 2006012 followed by the FENOC's response to those observations:

SECTION 3.0 SET PERFORMANCE EXPECTATIONS

1. 3.3 - DAMP Item 1.2.3: Findings and Observations

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item 1.2.3.

The team determined that a self-assessment and benchmarking schedule had been established, which included planned visits to peer plants.

The team noted that the licensee completed an interim self-assessment of human performance in January 2006 and a self-assessment of procedure use and adherence in May 2006. The licensee included personnel from non-FENOC plants on the team that conducted the May 2006 assessment. The team noted that condition reports were generated and corrective actions were implemented as a result of these assessments. The team determined that the licensee had scheduled an additional self-assessment of human performance for September 2006. In addition, NOBP-LP-2001, "FENOC Self-

Assessment/Benchmarking," Revision 8, required the development of an annual site self-assessment schedule.

The team noted that the licensee had scheduled a benchmarking trip to a peer plant for July 2006 and determined through interviews that the licensee was actively working to establish additional trips to other peer plants. However, the team also noted that the licensee had yet to complete a formal benchmarking visit to a peer plant.

The team reviewed NOBP-LP-2001 to determine the program requirements for benchmarking and noted that Section 4.7.1.2, which addressed the scheduling of benchmarking, stated that, "focused benchmarking is typically initiated on an emergent basis when program performance gaps are identified or when significant improvement in a program or process is desired." The team concluded that this benchmarking scheduling policy appeared to be reactive in nature. Section 4.7.2 of NOBP-LP-2001, which addressed ongoing benchmarking stated, "all FENOC organizations are expected to frequently compare FENOC performance to industry peers by participating in activities such as brief visits at other sites, industry conferences, seminars, workshops, surveys, etc. Since these types of activities have pre-established objectives it is not necessary to develop benchmarking plans and checklists." Therefore, the team concluded that although a current benchmarking trip schedule existed, NOBP-LP-2001 did not specifically require that a schedule for benchmarking trips be established and did not require that benchmarking plans and checklists be established for ongoing benchmarking trips.

The team concluded that benchmarking trips to other facilities with a record of good human performance prior to the identification of training needs and the identification of other human performance related corrective actions could have served as an additional mechanism to ensure that the actions planned were thorough and comprehensive. The team also concluded that the licensee's current benchmarking plans were not specifically prescribed by policy or procedure.

FENOC RESPONSE:

FENOC acknowledges that NOBP-LP-2001 needs enhancements in areas pertaining to benchmarking and self assessments. Currently NOBP-LP-2001 paragraph 4.7.2 states that "All FENOC organizations are expected to frequently compare FENOC performance to industry peers by participating in activities such as brief visits at other sites, industry conferences, seminars, workshops, surveys, etc." Regarding planning for ongoing benchmarking, the business practice states that "since these types of activities have pre-established objectives it is not necessary to develop benchmarking plans and checklists".

FENOC acknowledges that an important aspect of benchmarking should be to compare station performance to industry peers and identify areas for improvement. Currently FENOC does not typically schedule ongoing benchmarking activities to compare station performance to other peer or top

quartile plants in the absence of performance shortfalls. This could indicate benchmarking is performed only reactively to identified performance issues.

To address the above issue Condition Report (CR) 06-02809 was initiated. FENOC will change procedure NOBP-LP-2001, "FENOC Self Assessment/Benchmarking," to reflect new proactive guidelines for benchmarking. Guidance will be added to consider benchmarking top performing plants to validate existing processes or programs. NOBP-LP-2001 will also state that a schedule for benchmarking trips will be established in order to communicate planned benchmarking activities to the site. These enhancements to NOBP-LP-2001 are currently scheduled to be completed by November 14, 2006.

In addition to the changes to NOBP-LP-2001, benchmarking is planned for plants that have recently addressed the NRC cross-cutting issue in Human Performance. Also, input from INPO was used to identify plants that are recognized as top performers in the area of Human Performance. Benchmarking visits to these top performers are currently scheduled to be completed by December 15, 2006.

FENOC acknowledges that focused benchmarking had not been conducted at top performing plants prior to the identification of training needs and identification of other human performance related corrective actions. During a self assessment of the Human Performance program this deficiency was recognized. Currently FENOC is addressing this issue in CR 06-02208. However, industry experience and learning were utilized during the creation and throughout the implementation of the Human Performance Improvement Initiative. This includes communications and process reviews from Point Beach Nuclear Plant, Susquehanna Nuclear Plant, and Nine Mile Point Nuclear Plant. This data was utilized in the gap analysis performed during the Human Performance Program Review. Additionally, the individual assigned to lead the Root Cause Evaluation conducted to evaluate the cross cutting issue of Human Performance was an individual on reverse loan from INPO with a strong Human Performance background who brought experience and knowledge from the nuclear industry. Also, during the implementation of the Performance Improvement Initiative, Perry Nuclear Power Plant (PNPP) brought on another reverse loan INPO employee as the FENOC Fleet Human Performance Manager. This individual is a recognized industry expert in the field of Human Performance. He became an integral part of the PNPP Human Performance Improvement Initiative, which included development and provision of training, coordinating industry peer communications, and overall technical guidance.

SECTION 4.0 STRENGTHEN LINE OWNERSHIP, ALIGNMENT AND INTEGRATION

1. 4.1 - DAMP Item 2.1.1.; Findings and Observations

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item 2.1.1.

The team determined that the roles and responsibilities of the Station Human Performance Advocate were expanded in NOBP-LP-2601, Revision 2, to include responsibilities for stewardship of the program's technical content. To establish a stronger line organizational presence and reporting of the Site Advocate, the reporting requirements were revised to prescribe that the Site Advocate report to the Director of Site Operations. However, the team noted that the organization chart referred to the Station Human Performance Advocate by name, not position title, which was not consistent with other organizational positions on the organization chart.

FENOC RESPONSE:

The FENOC organizational chart listed the individual filling the site "Human Performance Advocate" role as a "Senior Nuclear Specialist".

PNPP has initiated CR 06-02873 to address this issue. On 7/14/2006 the Organizational Chart was updated to identify the Perry Human Performance Advocate by FENOC Job structure. The site Advocate is now correctly labeled as "PY-Site HU Advocate".

2. 4.2 – DAMP Item 2.1.2., Findings and Observations

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item 2.1.2.

The team determined that: 1) An appropriately qualified management sponsor had been assigned to the Human Performance Team; 2) Appropriately qualified group representatives and alternates, identified as Section Advocates, had been designated to participate in the Human Performance Team; 3) Routine meetings of the Human Performance Team had been held frequently, and at least monthly; and 4) NOBP-LP-2602, "Human Performance Success Clocks," Revision 2, was implemented to identify significant human performance events and monitor the success of corrective actions.

Notwithstanding the overall adequate implementation of the actions, through interviews with Section Advocates the team identified some weaknesses that could potentially impact the long-term effectiveness of those actions. For example, the team identified that most Section Advocates dedicated about 1 hour a day to Human Performance program related activities, which appeared appropriate. However, in one case, the team identified a Section

Advocate that only dedicated about 1 hour a week to Human Performance program activities, which could adversely impact the overall effectiveness of the initiative within that group. In addition, the team identified that the Section Advocates did not generally share a common understanding of the purpose of the program, which could impact the effectiveness of their individual actions to monitor and assess human performance within their departments.

FENOC RESPONSE:

FENOC recognizes that the Human Performance Section Advocates did not generally share a common understanding their purpose in the program. During the inspection advocates that where interviewed did not correctly understand their role, or purpose. Advocates have requested training to better understand their role. Also, it was identified that there is no readily available roster of Human Performance Section advocates available to the station staff. The site can improve alignment of the Human Performances advocates by addressing these issues.

PNPP has documented the issues in CR 06-02871. Currently actions are being taken to develop Job Familiarization Guide for the advocates. This would help in giving them the training that they need in order to understand their role. The station Human Performance Advocate is planning to meet with the section advocates at their monthly meeting, and to clarify in detail their roles and responsibilities. Also, a discussion will be held to discuss the expected time spent by section advocates for Human performance program activities. A current roster of Human Performance Section Advocates will also be made available directly to the site. The above actions are currently scheduled to be completed by October 27, 2006.

SECTION 8.0 "PERRY PHASE 1 DAMP ACTION ITEMS

1. 8.1 DAMP Item B1.10/DAMP Item B1.10.1

No findings of significance were identified and the team concluded that the licensee's actions adequately implemented DAMP Item B1.10 and DAMP Item B1.10.1.

The Human Performance Program required quarterly snapshot self-assessments using NOBP-LP-2001 "FENOC Self-assessment/Benchmarking" Revision 8.

The team determined that although PYBP-PII-0006 "Performance Improvement Initiative Business Practice" Revision 2 required a first-quarter 2006 snapshot self-assessment this required assessment was not performed. Licensee personnel generated CR 06-02722 to identify this missed assessment.

FENOC RESPONSE

A self assessment had not been completed for first quarter 2006, CR 06-02722 was generated to track this issue.

Corrective actions generated required the performance of an assessment of the Performance Improvement Initiative project's overall effectiveness in accordance with PYBP-PII-0006 "Performance Improvement Initiative Business Practice", section 4.7.1. The assessment was to include information from the first and second quarters of 2006.

The assessment was performed and documented in Snapshot Assessment Report 901-PII-2006. The corrective action was closed on August 7, 2006.

SECTION 10.0 "SNAPSHOT" EFFECTIVENESS REVIEW

1. Observations and Findings

The team determined that for the activities observed, human performance error prevention tools were routinely utilized. In addition, the team noted that some maintenance work orders included steps to discuss the use of applicable human performance error prevention tools. The team also observed some pre-job briefings in which the primary maintenance workers performed the pre-job briefing, instead of the first line supervisor. This practice appeared to foster increased dialog and interaction among workers, which the team viewed as beneficial.

However, two issues were identified by the licensee during the inspection period in which the use of error prevention tools was not effective:

- During the performance of SVI-C51T5351, "Local Power Range Monitor Calibration," an error in the calculation of instrument gain factor occurred. As a result of this error, the gain for both the 'A' and 'E' average power rate monitors (APRMs) were improperly adjusted until the error was self-identified and corrected. Licensee personnel generated CR 06-02706 to enter this issue into the corrective action program.
- During performance of SOI-R43, "Division 1 and 2 Diesel Generator System," licensee personnel identified that an independent verification of the Division 1 EDG starting-air lineup was not performed, as required. Licensee personnel generated CR 06-02789 to enter this issue into the corrective action program.

For these two activities, the team reviewed the associated CRs, related work packages, the results of the licensee investigations, and the associated success clock reset evaluations. The team also interviewed personnel involved in the events. Because the process included several opportunities for self-checking and multiple requirements for independent verification, the team concluded that the events resulted from the ineffective implementation of error prevention tools. The team also determined that since both events were non-consequential, they were considered to be minor in nature.

During surveillance SOI-R43, the team observed the use of procedures which contained symbols instead of words to designate component positions such as Closed, Open and Auto. In another procedure, the team noted that the symbol "\$" was used to represent Technical Specifications. Use of these types of symbols appeared to be inconsistent with PAP-0500, "Perry Technical Procedure Writer's Guide," which stated, "Avoid using symbols in work steps. Errors in interpretation may result." Licensee personnel contacted by the team were unable to describe any value associated with the use of symbols rather than words in procedures.

FENOC RESPONSE:

In response to CR 06-02706 – "LPRM Calibration Human Error During SVI-C51-T5351", three corrective actions were initiated. A section and site human performance success clock reset evaluation was performed, and the section clock was reset. The Maintenance and Instrumentation and Controls (I&C) Superintendents have discussed and reinforced the expectation and requirements in the use of human performance tools to the workers. Also, procedure SVI-C51-T5351, Attachment 1 (LPRM Calibration Data Sheet), Step 6 (calibrator current calculation) will be revised to enhance the presentation of the calculation step. Revisions to this procedure are currently scheduled to be completed by September 30, 2006.

In response to CR 06-02789 – "Missed Independent Verification" a Human Performance section clock reset was performed. Also, the issue was discussed during an I&C morning brief discussing the short comings of not checking the procedure requirements for independent verification and the possible consequences of these types of errors. This item was also discussed at the I&C Curriculum Review Committee for possible training needs.

CR 06-02811 was initiated to address the issue with use of symbols in site procedures. The use of the symbols questioned during the inspection have been in use since the early 1980's, specifically the use of "\$" is described and approved in administrative procedures PAP-0500 "PERRY TECHNICAL PROCEDURE WRITER'S GUIDE". PAP-0500 states, "Dollar Sign (\$) - Indicates instruction steps or data used to satisfy all or part of a Technical Specification or Relocated Requirement." Also, other symbols such as "X" and "O", symbolize

closed and open valves respectively and these are prescribed in OAI-0503 "Preparation of Operations Section Lineup Instructions".

A review of the corrective action program for past instances of performance errors due to the misinterpretation of a symbol found no issues. A human factors engineer was also consulted in the use of symbols and the results indicated that eliminating the use of these symbols may have a detrimental impact on work performance.

The use of these particular symbols has been extensively evaluated, and at this time no further action is planned to be taken.