FENOC™
FirstEnergy Nuclear Operating Company

Perry Nuclear Power Plant
10 Center Road
Perry, Ohio 44081

Vito A. Kaminskas
Vice President

440-280-5382
Fax: 440-280-8029

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L-12-115

ATTN: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001

SUBJECT:
Perry Nuclear Power Plant
Docket No. 50-440, License No. NPF-58
ANNUAL ASSESSMENT LETTER FOR PERRY NUCLEAR POWER PLANT (REPORT 05000440/2011007)

The Nuclear Regulatory Commission (NRC) performance review of the FirstEnergy Nuclear Operating Company (FENOC), Perry Nuclear Power Plant (PNPP) for January 1, 2011, through December 31, 2011, is provided in report 05000440/2011007. The NRC determined that the performance of PNPP in the most recent quarter of the assessment period was within the Degraded Cornerstone Column of the NRC's Reactor Oversight Process Action Matrix and that Substantive Cross-Cutting Issues exist with H.1(b), Conservative Assumptions and H.2(c), Documentation/Procedures.

In the Annual Assessment Letter, the NRC requested a written response within 30 days describing the causes and corrective actions, planned and completed, for the H.1(b) and H.2(c) Substantive Cross-Cutting Issues. The PNPP written response is provided in the Attachment. Please note that the root causes and corrective actions described in the response are under internal review/approval and have not yet been finalized. Within 30 days of being finalized, a follow-up letter will be submitted detailing the causes, corrective actions, projected completion dates, and metrics PNPP will be using to determine whether sustained improvement has been achieved. The substantive cross-cutting issues and corrective actions will be discussed at the end-of-cycle public meeting.

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NRR

There are no regulatory commitments contained in this letter. If there are any questions, or if additional information is required, please contact Mr. Robert B. Coad, Manager - Regulatory Compliance, at (440) 280-5328.

Sincerely,

Vito A. Kaminskas

Attachment:
Response to ANNUAL ASSESSMENT LETTER FOR PERRY NUCLEAR POWER PLANT (REPORT 05000440/2011007)

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

Internal root cause evaluations are being performed to assess PNPP performance in human performance cross-cutting aspects H.1(b) and H.2(c). The evaluation results, causes, and corrective actions are discussed separately for each cross-cutting aspect.

H.1(b) Decision-Making, Conservative Assumptions

At the present time, PNPP has four inspection findings with cross-cutting aspect H.1(b) assigned as the most significant causal factor for the performance deficiency. The H.1(b) issues were entered in the corrective action program (Condition Report 2011-03966) and evaluated at the root cause level. The evaluation scope included the four current inspection findings in H.1(b) and five earlier findings in H.1(b). The root cause investigation is complete; however, the report has not yet received final Corrective Action Review Board (CARB) and management approval. The following root causes (RC) (excerpted from the root cause report) were identified by the H.1(b) evaluation:

RC-1 Not having a practical decision making process for management outside of the Operational Decision Making, and Problem Solving and Decision Making processes, for routine challenges of day to day decisions, has resulted in flawed risk and safety significant decisions.

RC-2 Less than adequate rigor and analysis was applied for decision making violations by the Perry management team to address violations of H.1(b) Conservative Decision-Making, due to a weakness in knowledge of the NRC ROP, obstructing the identification and resolution of actions to address and correct risk or safety significant decision making.

The following contributing causes (CC) were also identified. When addressed, they will improve processes and learning by the station for improved conservative assumptions in risk and safety significant decision making.

CC-1 Less than adequate skill set for personnel to provide effective challenges of risk and safety significant decisions has led to flawed decisions.

CC-2 Less than adequate procedures, work orders, management expectations, and guidance, influenced the less than conservative risk and safety significant decisions by both management and in the control room.

CC-3 Lack of self-assessments of risk and safety significant decisions has led to less than adequate review of risk and safety significant decisions to ensure that conservative assumptions are being made.

CC-4 Lack of goal setting and not using a performance indicator to track risk and safety significant decision making has led to not improving conservative risk and safety significant decisions.

A total of 23 corrective actions have been developed to address the causes for the adverse performance in H.1(b). The following preventive actions (PR) were identified to address the root causes:

PR-1 Incorporate the R.E.A.D.E. [Recognize, Express, Appraise, Decide, Evaluate] best practice from INPO 07-006, "HUMAN PERFORMANCE TOOLS FOR MANAGERS AND SUPERVISORS", for use by the site leadership. Create a checklist or reference card to be used when the at-risk practices from this INPO guide are realized to assist leaders in making risk or safety significant decisions under non-routine situations or when it is recognized a person is in knowledge-based space. Embed this action in a change management plan and train Perry Supervisors and above, in the use of the R.E.A.D.E. tool.

PR-2 Improve conservative decision making by increasing management oversight of conservative decisions by performing a documented quarterly snapshot self-assessment of important risk or safety significant decisions made using the R.E.A.D.E. tool for a two year period. Create a tool to record the decisions made using the R.E.A.D.E tool by Perry Supervisors and above.

PR-3 Perry Site Human Performance Advocate to work with Generation Safety to define what a risk or safety significant decision is, in a site specific Human Performance procedure. Reference the H.1 definitions of NRC Inspection Manual 0310 when creating the definitions.

Additional corrective actions involve industry benchmarking to learn best practices for conservative decision-making, procedure changes to implement process improvements with decision-making, and training so that personnel can challenge assumptions when making risk and safety significant decisions. Also, included are establishing metrics to monitor performance with decision-making and performing self-assessments of risk and safety decisions to review and assess performance.

Overall, the corrective actions are intended to improve the quality of decisions made at the plant and have been entered in the corrective action program for tracking and completion as intended. Corrective action effectiveness reviews are planned for March 2013 and March 2014.

With exception of the long-term effectiveness reviews and self-assessments, the corrective actions are scheduled to be completed by the end of 2012. Metrics established for decision-making and use of conservative assumptions include tracking and quarterly self-assessment of risk decisions, and the Operational Focus Index.

H.2(c) Resources, Documentation/Procedures

At the present time, PNPP has three inspection findings with cross-cutting aspect H.2(c) assigned as the most significant causal factor for the performance deficiency. The H.2(c) issues were entered in the corrective action program (Condition Report 2011-06246) and evaluated at the root cause level. The evaluation scope included the three current inspection findings in H.2(c) as well as four earlier findings in H.2(c). The root cause investigation is complete; however, the report has not yet received final CARB and management approval. The following root cause (excerpted from the root cause report) was identified by the H.2(c) evaluation:

RC-1 Management oversight and actions associated with performance standards and expectations of plant support functions have been less-than-adequate when compared to the regulations and the increasingly higher industry standards for procedure, documents, and work instruction quality and level of detail and usage.

The following contributing causes were indentified as being causal drivers when they occurred in conjunction with the root cause:

CC-1 Less than adequate understanding of the Reactor Oversight Process contributed to Organizational Corrective Action Process Failure by management and the organization.

CC-2 Management oversight of efforts to achieve sustained improvement in the cross-cutting aspect H.2(c), Resources, has not been fully effective.

CC-3 Less than adequate detail and/or flawed methodology in procedures, design documentation and work documents.

CC-4 Expectations of standards for administrative procedure use and adherence are not consistently recognized, performed and/or enforced in the workforce resulting in flexibility in adhering to standards.

A total of 16 corrective actions have been designated to address the causes for the adverse performance in H.2(c). The following preventive actions were identified to address the root cause:

PR-1 Establish procedure direction within NOP-LP-2001 [Corrective Action Program], or sub-tiered business practice, as appropriate to strengthen the implementation aspects of the Condition Report (CR) process. Specifically provide

- Requirements, responsibilities, and criteria for the CR pre-screening process to evaluate risk and categorization prior to Management Review Board review. Input from industry benchmarking will be used to assist in establishing this direction.
- Criteria for CR categorization based on risk assessment, including a decision-making checklist for category selection.
- Guidance to prioritize corrective actions based on risk assessment.

Revision must be accompanied by a change management plan.

PR-2 Provide written guidance to ensure proper CR categorization for violations of regulatory requirements, including examples of violations that affect the ROP Performance Indicators.

PR-3 Incorporate the results of the benchmarking of the industry for trending best practices into NOBP-LP-2010, FENOC Trend Coding, (or create a new business practice) to provide direction to section and site IPA authors on best trending practices. The procedure change must be accompanied by a change management plan.

PR-4 Develop requirements to address NRC Substantive Cross Cutting Issues, identified aspects, and SCCI precursors, and place these in NOBP-LP-4015 [Cross-Cutting Aspects of Inspection Findings] or other appropriate similar Business Practice. These requirements shall include:

A. Site responsibilities
B. Assignment of ownership
C. Recommendation for CR categorization for each
D. Expected closure milestones for issues
E. How to use OE to resolve issues
F. Thresholds for mandatory self assessments.
G. Guidance for addressing receipt of semi-annual assessment letters from the NRC based on content.

PR-5 Incorporate the R.E.A.D.E. [Recognize, Express, Appraise, Decide, Evaluate] best practice from INPO 07-006 "HUMAN PERFORMANCE TOOLS FOR MANAGERS AND SUPERVISORS" for use by the site leadership. Create a checklist or reference card to be used when the at-risk practices from this INPO guide are realized to assist leaders in making risk or safety significant decisions under non-routine situations or when it is recognized a person is in knowledge-based space.

Add expectations for conduct of pre-job briefs to conclude with a review of the following items:

- Summary of critical step(s) for the work task (What is the risk challenge, what bad or undesirable thing can happen?)

- Controls and/or barriers to be used for positive control at each critical step
- Contingencies and/or abort criteria for each critical step
- Roles and/or responsibilities associated with implementing the identified controls/barriers and contingencies/abort criteria

PR-6 Using a Team approach, develop Cross-functional Indicators in Operations, Maintenance, Engineering (Plant, Technical and Design), Radiation Protection, Chemistry, and Training for the following Monthly Performance Report (MPR) areas: Human Performance, Corrective Action Program, Field Observations, Work Management milestones, and Training. These Section level indicators should feed the higher level MPR indicator so that section personnel will be aware of their contribution to the overall station indicator goals.

Additional corrective actions involve training, industry benchmarking, procedure changes, and establishing metrics to monitor performance with decision-making. All actions have been entered in the corrective action program for tracking and completion as intended. Effectiveness reviews of the corrective actions are planned for November 2012, after completion of refueling outage 1R14, and two years from completion of the root cause evaluation in March 2014.

With exception of the long-term effectiveness reviews and self-assessments, the corrective actions are scheduled to be completed by the end of 2012. Metrics established for procedures and work orders include procedure and preventive maintenance work load, work package quality, and worker feedback forms.