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U. S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

30-Day Response to Human Performance Substantive Cross-Cutting Issue

Dear Sir or Madam:

By letter dated September 2, 2008, the Nuclear Regulatory Commission issued the Mid-Cycle Performance Review and Inspection Plan – Palisades Nuclear Plant. The letter requests that Entergy Nuclear Operations, Inc. provide a written response to the substantive cross-cutting issue in the area of human performance because the issue has been open for two consecutive assessment cycles. The requested response is contained in the enclosure.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

A handwritten signature in black ink, appearing to read "C. Schwarz", written over a horizontal line.

Christopher J. Schwarz
Site Vice President
Palisades Nuclear Plant

Enclosure (1)

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

ENCLOSURE 1
30-DAY RESPONSE TO HUMAN PERFORMANCE
SUBSTANTIVE CROSS-CUTTING ISSUE

By letter dated September 2, 2008, the Nuclear Regulatory Commission (NRC) issued the Mid-Cycle Performance Review and Inspection Plan – Palisades Nuclear Plant. The letter requests that Entergy Nuclear Operations, Inc. (ENO) provide a written response to the substantive cross-cutting issue (SCCI) in the area of human performance because the issue has been open for two consecutive assessment cycles. The requested information is provided below.

DISCUSSION OF ACTIONS TAKEN

ENO purchased the Palisades Nuclear Plant (PNP) in April 2007. Human performance was established as one of the five focus areas, with ownership under the General Manager, Plant Operations. The human performance focus plan was revised to align with ENO standards and expectations. Actions taken to improve human performance, safety, and procedure quality and adherence at the site are as follows:

- The number of individuals on the human performance improvement team was increased in November 2007. This action was intended to have more advocates of human performance and also give the management team a better understanding of the areas needing attention in each department. The departments represented at the meetings are mechanical maintenance, electrical maintenance, instrumentation and control (I&C) maintenance, Fix-it-Now (FIN) maintenance, projects maintenance, chemistry, radiation protection, operations, system engineering, design engineering, programs engineering, security, and communications. The team assembles every other week to discuss possible trends or issues being identified at the site or within their departments. Ideas are discussed to address these issues so that initiatives can be developed, if necessary. An example of an initiative developed by this team is the 100-day focus on procedure use and adherence, discussed below.
- A focused crew assessment program was implemented in July 2007. Managers have been assigned to perform cross-discipline observations of departments. The observations are conducted one day per week and focus on the use of human performance error reduction tools, ALARA, and procedure use and adherence. Feedback from observations is provided to the individuals observed, supervisors, and the department manager. Originally, the assessments were performed for maintenance and operations. Radiation protection and chemistry assessments were added in November 2007, and security assessments were added in March 2008, when it was identified that increased focus on the performance within these departments was warranted.

Managers' observations are reviewed and trended. Actions are implemented to address areas of concern. Examples include the following:

- Observing managers identified that refresher high impact training was warranted due to changes from the Nuclear Management Company, LLC (NMC, previous license holder) procedures to the ENO procedures. As a result, refresher high impact training has been provided to maintenance personnel. Refresher training for security, chemistry and radiation protection personnel is in progress.
- Observers noted inconsistency in the use of human performance tools and that many error traps were not always being identified. An action was created to revise the pre-job brief checklist to discuss the error traps that could be encountered, and what error reduction tools could be used.
- Supervisors were not always discussing human performance during morning briefs, and individual workers were not participating as expected during the briefs. Coaching was provided. Follow-up observation reports document that individuals participate as expected in briefings, and supervisors ask questions during the briefings to ensure individuals are engaged.

The focused crew assessments have demonstrated management commitment to improving performance. Feedback from individuals in the observed departments has been positive, noting that this allows them an additional opportunity to discuss issues, and that they are seeing resolution to those issues.

- High impact training was provided to maintenance, chemistry, and radiation protection personnel following a May 2007 plant trip. The plant trip was caused by a human performance error. The high impact training consisted of classroom training and dynamic learning activities to ensure the students were knowledgeable of the information presented. Training activities reinforced the use of human performance tools, and provided an interactive setting in which individuals were able to apply the human performance tools in practical situations. Focused crew assessment activities identified that the training has been effective.
- Human performance review boards were implemented to engage department individual contributors, including craft personnel, in the area of human performance. Individuals complete a form that addresses performance gaps in the areas of industrial safety, human performance, procedure use and adherence, latent organizational weaknesses, leadership effectiveness/coaching, and post-job critiques. Actions are assigned within the corrective action process to address performance gaps. Identification of these performance gaps at a low level allows the site to correct the issues before they lead to errors or events. Actions are reviewed at the next department human performance review board. Ownership of human performance at the worker level has increased.

- Implementation of the ENO human performance procedures was completed in February 2008. The procedures aligned the site with the fleet process for classification of events, errors and non-consequential errors. Using non-consequential errors for trending has allowed ENO to identify trends of lower significance so those issues can be addressed before they lead to an event.
- High impact training for supervisors was conducted. This training targeted supervisor effectiveness, performance management, and coaching for behavior change. The training reiterated the use of observations and feedback. Additional training will be developed and presented beginning in the fourth quarter 2008. This additional training is a result of feedback provided from the initial training.
- In June 2008, ENO began a 100-day focus on procedure use and adherence at PNP. This initiative has resulted in personnel identifying necessary procedure changes or enhancements that might have been overlooked previously. There were over 180 document revision requests initiated in the first 75 days of this initiative to address needed revisions or enhancements in procedures, work instructions, and work orders.
- Pre-job brief forms were revised to include a discussion regarding error traps that may be at the job site.
- High impact refresher training was developed to review the high impact training that was conducted following the May 2007 plant trip. This training included additional information on error traps for low and medium risk activities. The training was provided to all maintenance disciplines and is in the process of being conducted for chemistry, radiation protection, and security personnel.

ACTIONS PLANNED TO ADDRESS THE CONCERN

ENO conducted a root cause evaluation in April 2008 after the NRC issued the SCCI for human performance. ENO identified the following additional actions to improve human performance, safety, and procedure quality and adherence:

- As discussed above, a second high intensity training session will be developed and presented to supervisors beginning in the fourth quarter 2008. The training will include dynamic learning activities in practical situations to help supervisors reiterate the use of human performance tools with their team.

- An industrial safety culture case study has been developed for all site personnel. The study discusses a recent event at PNP in which individuals could not exit the containment due to human performance and equipment problems, and exceeded heat stress stay times. The case study also provides students an open environment to communicate concerns or issues that need to be addressed.
- Oral boards for production department supervisors are being implemented. These supervisors will be asked questions about human performance, safety, standards, and expectations to ensure they are engaged and understand how to improve performance in their department.
- Oral boards will be implemented for individual contributors in the production departments in 2009. These individuals will be asked questions about human performance, safety, standards, and expectations. The oral boards will demonstrate that individuals have internalized human performance and safety, and understand how to apply human performance to their job.
- Three union employees were provided “Train the Trainer” training and will be the advocates for training all union employees on safety hazards. The training will help individuals in the field identify hazards and better identify error traps. Once the safety hazards and error traps are identified, a decision is made as to what tool(s) will be used to ensure the job is successful.

CURRENT ASSESSMENT OF PERFORMANCE

The performance at the site continues to improve, as demonstrated by performance indicator data. In 2007, there were eight station events, thirty total errors, and an error rate of 0.16 errors per 10,000 hours worked. Through August 2008, there has been one station event, and ten total errors, with an error rate of 0.10 errors per 10,000 hours worked. In addition, ENO has implemented actions that are expected to further improve performance, such as peer-to-peer coaching, which demonstrates that individual contributors have internalized human performance, and the non-consequential error criteria, which has contributed to lowering the threshold for identification and resolution of minor issues in order to preclude events.

Although performance at PNP shows improvement, ENO recognizes that further improvement is warranted. ENO also understands that the focus on human performance improvement must be sustained. ENO maintains a human performance plan that is reviewed and assessed continually to address developing issues. The PNP management team is committed to monitoring and correcting behaviors, and reinforcing human performance standards.