

May 3, 2002

Mr. Guy Campbell
Vice President - Nuclear, Perry
FirstEnergy Nuclear Operating Company
P. O. Box 97, A200
Perry, OH 44081

SUBJECT: PERRY NUCLEAR POWER PLANT, UNIT 1
NRC INSPECTION REPORT 50-440/02-03(DRS)

Dear Mr. G. Campbell:

On April 12, 2002, the NRC completed an inspection at your Perry Nuclear Power Plant, Unit 1. The enclosed report documents the inspection findings, which were discussed on April 11, 2002, with you and members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. Specifically, this inspection focused on emergency preparedness, including your staff's determinations of performance indicators for the Emergency Preparedness Cornerstone.

Based on the results of this inspection, the inspectors identified one issue of very low safety significance (Green). No associated violations were identified.

In accordance with 10 CFR Part 2.790 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 NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

/RA by Steven Orth Acting For/

Kenneth R. Riemer, Chief
Plant Support Branch
Division of Reactor Safety

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

Enclosure: Inspection Report 50-440/02-03(DRS)

See Attached Distribution

cc w/encl: B. Saunders, President - FENOC
T. Rausch, Director, Nuclear
Maintenance Department
G. Dunn, Manager, Regulatory Affairs
K. Ostrowski, Director, Nuclear
Services Department
J. Powers, Director, Nuclear
Engineering Department
W. Kanda, General Manager,
Nuclear Power Plant Department
Public Utilities Commission of Ohio
Ohio State Liaison Officer
R. Owen, Ohio Department of Health
W. Curtis, FEMA, Region V

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-440/02-03(DRS)

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Perry Nuclear Power Plant, Unit 1

Location: P. O. Box 97, A200
Perry, OH 44081

Dates: April 8 through 12, 2002

Inspectors: T. Ploski, Senior Emergency Preparedness Inspector
R. Jickling, Emergency Preparedness Inspector
S. Orth, Senior Radiation Specialist
R. Powell, Senior Resident Inspector

Observer: R. Alexander, Radiation Protection Inspector

Approved by: Kenneth R. Riemer, Chief
Plant Support Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000440-02-03(DRS), on 04/08-04/12/2002, FirstEnergy Nuclear Operating Company, Perry Nuclear Power Plant, Unit 1. Exercise Evaluation.

The report covers a one week baseline inspection by two regional emergency preparedness inspectors, a senior radiation protection inspector, and a senior resident inspector. The inspection focused on the Reactor Safety, Emergency Preparedness Cornerstone, including the biennial emergency preparedness exercise and a review of records related to the three emergency preparedness performance indicators for the period ending December 31, 2001. During this inspection, one finding of very low safety significance (Green) was identified.

The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609 "Significance Determination Process" (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www/nrc.gov/NRR/OVERSIGHT/index.html>. Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violations.

A. Inspector Identified Findings

Cornerstone: Emergency Preparedness

Green. The licensee's exercise critique did not identify inappropriate exercise controller interactions with some participants who were involved in Operations Support Center (OSC) activities. Specifically, on multiple occasions various participants were given information by a licensee exercise controller during the exercise before they had opportunities to demonstrate how they would either earn such information or how they could identify and correct mis-information. Also, the licensee's critique did not identify a few instances of exercise participants' failure to implement adequate protective measures associated with OSC activities.

Using the Emergency Preparedness Significance Determination Process, the NRC has determined that the above finding on the inadequate critique of certain OSC controller and exercise participants' performances was of very low safety significance (Green). In accordance with NRC's Enforcement Policy, the critique issue is not a violation of NRC requirements since it was associated with an exercise, rather than with an actual emergency response (Section 1EP1.b).

B. Licensee Identified Violations

None.

Report Details

Summary of Plant Status

The plant was at approximately 100 percent power throughout the inspection period.

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

1EP1 Exercise Evaluation (71114.01)

a. Inspection Scope

The inspectors reviewed the April 2002 exercise's objectives and the scenario manual to ensure that the exercise would acceptably test major elements of the licensee's emergency plan and to verify that the exercise's simulated problems provided an acceptable framework to support demonstration of the licensee's capability to implement its plan. The inspectors also reviewed records of a practice drill, which was conducted in March 2002, to determine whether the associated accident scenario was sufficiently different from the scenario used in the April 9, 2002 exercise.

The inspectors evaluated the licensee's exercise performance, focusing on the risk-significant activities of emergency classification, notification, and protective action decision making, as well as implementation of accident mitigation strategies in the following emergency response facilities:

- Control Room Simulator
- Technical Support Center (TSC)
- Operations Support Center (OSC)
- Emergency Operations Facility (EOF)

The inspectors also assessed the licensee's recognition of abnormal plant conditions, transfer of responsibilities between facilities, internal communications, interfaces with offsite officials, readiness of emergency facilities and equipment, and overall implementation of the licensee's emergency plan.

The inspectors attended post-exercise critiques in the TSC, OSC, and EOF to evaluate the licensee's initial assessments of its exercise performance. The inspectors later met with the licensee's lead exercise evaluators to assess the licensee's presentation of its refined critique of its exercise performance. The licensee's refined critique of its exercise performance was then compared with the inspectors' independent observations and assessments.

b. Findings

One Green finding was identified for the failure of the licensee's exercise critique to identify a number of instances of inappropriate controller actions and instances of

participants' failure to demonstrate adequate protective measures due to the simulated abnormal in-plant radiological conditions that were postulated by the exercise scenario.

Specifically, inspectors, who were in the OSC, identified a number of instances during which a licensee exercise controller inappropriately provided unearned information to exercise participants. As a result, participants were not given sufficient opportunities to demonstrate their capabilities. The inspectors also identified several instances during which exercise participants did not demonstrate adequate radiation protection practices in response to the simulated, abnormal in-plant radiological conditions. The licensee's critique of its exercise performance failed to identify either of these instances of inappropriate controller actions or the instances of participants' demonstrating inadequate radiation protection practices.

Examples of an exercise controller providing unearned information to participants, which were not identified in the licensee's critique, included the following:

- A controller provided specific radiation survey results for a simulated, contaminated injured worker before a radiation protection technician completed surveying this victim and had the opportunity to brief onscene medical care providers of the contamination survey's results.
- A controller corrected a participant's mis-statement about this worker's simulated injury, rather than allow participants to self-identify and correct their actions resulting from this mis-statement.
- On three occasions, a controller, rather than an exercise participant, briefed technicians on simulated inplant radiation levels that they would encounter after departing the OSC. In doing so, the controller provided information that was not available within the OSC and that should have been earned by the participants in the field. As a result, one team of technicians chose not to dispatch from the OSC, while another team did not obtain and demonstrate the use of a radiation survey instrument after they dispatched from the OSC.
- On two occasions, a controller participated in debriefings in the OSC by providing erroneous information on what the teams had accomplished. Specifically, a controller indicated that one team performed radiation survey measurements, while the other team posted the boundaries of a simulated high radiation area. In both cases, team members had not performed these actions.

The inspectors observed the following examples of inadequate demonstration of protective measures for inplant personnel that were not identified in the licensee's critique:

- A team was deployed to attempt to terminate a simulated steam leak that would have included radioiodine associated with an undetermined percent of fuel clad damage. However, no consideration was given to team members' respiratory protection equipment needs.

- No contamination control boundaries were established and no habitability surveys were performed in the OSC area, even though some teams were returning to the OSC from inplant locations where they could have been contaminated had scenario events been real.

Appendix B to NRC Manual Chapter (MC) 0610* includes criteria for determining whether a finding has sufficient significance to warrant further analysis and documentation. Using these criteria, the inspectors determined that the failure of the licensee's critique to identify the aforementioned examples of inappropriate controller performance and inadequate protective measures resulted in an issue that had a credible impact on safety and that could, if left uncorrected, under the same conditions become a more significant safety concern. This inadequate critique issue was evaluated as such because a basic reason for conducting emergency preparedness drills and exercises is to identify performance concerns so that corrective actions can be taken before these concerns may occur during an actual emergency and may have an adverse impact on health and safety.

Appendix B to MC 0609 categories the sixteen emergency planning standards of 10 CFR 50.47(b) as either risk significant or other planning standards. With respect to the aforementioned issue of the inadequate critique of certain OSC controller actions and certain onsite protective measures, MC 0609 states that the relevant planning standard 10 CFR 50.47(b)(11) is not risk significant. As a result, this issue has very low safety significance (Green). In accordance with NRC's Enforcement Policy, as published in NUREG 1600, the issue is not a violation of NRC requirements since it was associated with an emergency preparedness exercise, rather than with an actual emergency response (FIN 50-440/02-03-01).

4. **OTHER ACTIVITIES**

4OA1 Performance Indicator (PI) Verification (71151)

a. Inspection Scope

The inspectors reviewed the licensee's records related to each of the three emergency preparedness PIs to verify that the licensee's program was implemented consistent with the industry guidelines in Nuclear Energy Institute publication No. 99-02 and related licensee procedures. Specifically, licensee records related to the performance of the Alert and Notification System (ANS), key Emergency Response Organization (ERO) members' drill participation, and Drill and Exercise Performance (DEP) were reviewed to verify the accuracy and completeness of the data submitted to NRC for the period from July 2001 through December 2001.

b. Findings

No findings of significance were identified.

4OA6 Meetings

a. Exit Meeting

The inspectors presented the inspection results to Mr. G. Campbell and other members of licensee management and staff on April 11, 2002. The licensee acknowledged the information presented. No proprietary information was identified.

b. Other Meeting

On April 12, 2002, an inspector made a presentation on NRC's preliminary assessments of the exercise inspection at a public and media briefing hosted by the staff of the Federal Emergency Management Agency in Mentor, Ohio.

KEY POINTS OF CONTACT

Licensee

D. Bauguess, Emergency Planner
B. Boles, Operations Manager
G. Campbell, Vice President
D. Cleavenger, Emergency Planner
R. Coad, Radiation Protection Manager
G. Dunn, Regulatory Affairs Manager
D. Gudger, Compliance Unit Supervisor
R. Hayes, Manager
H. Hegrat, Quality Assurance Manager
V. Higaki, Emergency Planning Unit Supervisor
C. Jenkins, Public Information Coordinator
W. Kanda, Plant Manager
T. Lentz, Design Manager
J. Lynch, Instructor
R. Matthys, Quality Control Supervisor
K. Ostrowski, Services Director
B. Richardson, Emergency Planner
K. Russell, Compliance Engineer
L. Schlauch, Administrative Assistant
L. Zerr, Quality Assurance

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed During this Inspection

50-440/02-03-01	FIN	Inadequate critique of certain exercise controller and participant actions in the OSC (Section 1EP1)
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LIST OF ACRONYMS USED

ANS	Alert and Notification System
CFR	Code of Federal Regulations
DEP	Drill and Exercise Performance
DRS	Division of Reactor Safety
EOF	Emergency Operations Facility
EPI	Emergency Planning Instruction
ERO	Emergency Response Organization
FENOC	FirstEnergy Nuclear Operating Company
FIN	Finding
IR	Inspection Report
MC	NRC Manual Chapter
NEI	Nuclear Engineering Instruction
NRC	Nuclear Regulatory Commission
NUREG	Nuclear Regulatory Guide
OSC	Operations Support Center
PI	Performance Indicator
TSC	Technical Support Center

LIST OF DOCUMENTS REVIEWED

1EP1 Exercise Evaluation

EPI-A1	Emergency Action Levels	Revision 6
EPI-A2	Emergency Actions Based on Event Classification	Revision 7
EPI-A6	TSC Activation	Revision 10
EPI-A7	OSC Activation	Revision 9
EPI-A8	EOF Activation	Revision 9
EPI-A10	Re-Entry/Recovery	Revision 4
EPI-B1	Emergency Notification System	Revision 10
EPI-B3	Radiological Surveys for Emergencies	Revision 8
EPI-B4	First Aid and Medical Care	Revision 9
EPI-B5	Personnel Accountability/Site Evacuation	Revision 6
EPI-B7a	Automated Offsite Dose Calculations	Revision 7
EPI-B8	Protective Actions and Guides	Revision 8
EPI-B11	Emergency Dosimetry Issue	Revision 5
	Perry Nuclear Plant Emergency Plan	Revision 15
	April 2002 Emergency Exercise Manual	

March 2002 Drill Scenario Summary
April Exercise Draft Critique Summary

4OA1 Performance Indicator Verification

NEI-0951	Prompt Alert System	Revision 3
	ANS Reliability	Revisions 2 and 3
	Performance Indicator Desktop Guideline	Revision 1
	Monthly ANS Test Results, July 2001 through December 2001	
	Drill Attendance Records, July 2001 through December 2001	
	DEP Data Review Sheets, July 2001 through December 2001	
	Simulator Examination Summary Sheets, July 2001 through December 2001	