

December 23, 2004

EA-04-214

Mr. Richard L. Anderson  
Vice President - Nuclear, Perry  
FirstEnergy Nuclear Operating Company  
P. O. Box 97, A210  
10 Center Road  
Perry, OH 44081

SUBJECT: PERRY NUCLEAR POWER PLANT  
NRC INSPECTION REPORT 05000440/2004016  
PRELIMINARY WHITE FINDING

Dear Mr. Anderson:

On November 19, 2004, the U.S. Nuclear Regulatory Commission (NRC) completed the preliminary review of the July 20, 2004, Alert at your Perry Nuclear Power Plant. The results of the preliminary review were discussed on November 19, 2004, with Mr. Fred von Ahn, General Manager, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Specifically, this inspection focused on your staff's activities associated with the Alert declared on July 20, 2004. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report discusses a finding that appears to have a low to moderate safety significance (White). The finding, as described in Section 4OA5 of this report, relates to an Alert declaration on July 20, 2004, during which your staff failed to obtain an emergency dose assessment within 15 minutes as required by your emergency plan. This finding was assessed using the Emergency Preparedness Significance Determination Process and was preliminarily determined to be White, (i.e, a finding with some increased importance to safety, which may require additional NRC inspection). This finding was also determined to be an apparent violation of NRC requirements. Specifically, 10 CFR 50.47(b)(4) requires that the licensee use a standard scheme of emergency classification and action levels. The emergency plan required performance of a Computer Aided Dose Assessment Program (CADAP) run within 15 minutes in order to classify this event. Contrary to this requirement, no CADAP run was provided until 2 hours and 40 minutes after the Alert declaration.

The apparent violation of NRC requirements is being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. The current Enforcement Policy is included on the NRC's Web site at [www.nrc.gov](http://www.nrc.gov).

We believe that sufficient information was considered to make the preliminary significance determinations. However, before we make a final decision on these issues, we are providing you an opportunity to present to the NRC your perspectives on the facts and assumptions used by the NRC to arrive at the findings and their significance at a Regulatory Conference or by a written submittal. If you choose to request a Regulatory Conference, it should be held within 30 days of the receipt of this letter and we encourage you to submit supporting documentation at least one week prior to the conference in an effort to make the conference more efficient and effective. If a Regulatory Conference is held, it will be open for public observation. If you decide to submit only a written response, such submittal should be sent to the NRC within 30 days of the receipt of this letter.

Please contact Kenneth Riemer of the Division of Reactor Safety, Plant Support Branch, at 630-829-9757 within 10 business days of your receipt of this letter to notify the NRC of your intentions with respect to this issue. If we have not heard from you within 10 days, we will continue with our significance determinations and enforcement decisions and you will be advised by separate correspondence of the results of our deliberations on these matters.

Since the NRC has not made final determinations in these matters, no Notices of Violation are being issued for these inspection findings at this time. In addition, please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review.

In accordance with 10 CFR 2.390 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/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

Steven A. Reynolds, Deputy Director  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000440/2004016  
w/Attachment: Supplemental Information

See Attached Distribution

R. Anderson

-3-

cc w/encl: G. Leidich, President - FENOC  
J. Hagan, Senior Vice President Engineering and Services, FENOC  
F. von Ahn, Plant Manager, Nuclear Power Plant Department  
W. O'Malley, Manager, Maintenance Department  
J. Lausberg, Manager, Regulatory Compliance  
J. Messina, Director, Performance Improvement  
T. Lentz, Director, Nuclear Engineering Department  
M. O'Reilly, Attorney, First Energy  
Public Utilities Commission of Ohio  
Ohio State Liaison Officer  
R. Owen, Ohio Department of Health

We believe that sufficient information was considered to make the preliminary significance determinations. However, before we make a final decision on these issues, we are providing you an opportunity to present to the NRC your perspectives on the facts and assumptions used by the NRC to arrive at the findings and their significance at a Regulatory Conference or by a written submittal. If you choose to request a Regulatory Conference, it should be held within 30 days of the receipt of this letter and we encourage you to submit supporting documentation at least one week prior to the conference in an effort to make the conference more efficient and effective. If a Regulatory Conference is held, it will be open for public observation. If you decide to submit only a written response, such submittal should be sent to the NRC within 30 days of the receipt of this letter.

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Steven A. Reynolds, Deputy Director  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000440/2004016  
w/Attachment: Supplemental Information

See Attached Distribution

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**\*See Previous Concurrence**

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cc w/encl: G. Leidich, President - FENOC  
J. Hagan, Senior Vice President Engineering and Services, FENOC  
F. von Ahn, Plant Manager, Nuclear Power Plant Department  
W. O'Malley, Manager, Maintenance Department  
J. Lausberg, Manager, Regulatory Compliance  
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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 05000440/2004016

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Perry Nuclear Power Plant, Unit 1

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

Dates: **October 4 through November 19, 2004**

Inspectors: R. Powell, Senior Resident Inspector  
J. Ellegood, Resident Inspector  
R. Jickling, Emergency Preparedness Analyst

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

Enclosure

## SUMMARY OF FINDINGS

IR 05000440/2004016; 10/04/2004 - 11/19/2004; Perry Nuclear Power Plant; Other Activities.

The report covered followup inspection activities on emergency preparedness. The inspection was conducted by a Region III emergency preparedness inspector and the resident inspectors. This inspection identified a preliminary White finding and associated apparent violation (AV). The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

### **A. NRC-Identified and Self-Revealed Findings**

#### **Cornerstone: Emergency Preparedness**

- To Be Determined. The inspectors identified an apparent violation having preliminarily low-to-moderate safety significance when the licensee failed to follow the requirements of the Perry Emergency Plan during an Alert level event declared on July 20, 2004. During this event, the licensee staff failed to perform a Computer Aided Dose Assessment Program (CADAP) run within 15 minutes of the Alert declaration as required by the licensee's Emergency Plan.

The finding was determined to be greater than minor because it affected the Emergency Preparedness Cornerstone objective of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Specifically, the issue was more than minor because it represented a failure to implement a regulatory requirement during a real event which could have prevented the correct emergency classification. The finding was preliminarily determined to be of low to moderate safety significance because the licensee failed to implement a risk significant planning standard (10 CFR 50.47(b)(4)) during an actual Alert emergency. (Section 4OA5)

### **B. Licensee-Identified Violations**

No findings of significance were identified.

## REPORT DETAILS

### 4. OTHER ACTIVITIES

#### **Cornerstones: Emergency Preparedness**

#### 4OA5 Other Activities

(Closed) URI 05000440/2004013-07: Alert Due to Indicated Off-Gas System High Gas Radiation Levels.

Introduction: A preliminary White finding and an associated apparent violation were identified for failure to follow the requirements of the Perry Emergency Plan during an Alert event on July 20, 2004, when the off-gas vent pipe gas effluent monitor indicated off-scale high. At 3:44 a.m. the shift manager declared an Alert due to meeting the entry conditions for emergency action level (EAL) HA1, (any unplanned release of gaseous radioactivity to the environment that exceeds 200 times the Offsite Dose Calculation Manual (ODCM) control limit for 15 minutes or greater).

Description: At 3:29 a.m. on July 20, 2004, the off-gas vent pipe gas effluent monitor indicated off-scale high. At 3:44 a.m. the shift manager declared an Alert due to meeting the entry conditions for EAL HA1. All other radiation monitors remained stable with normal readings. Grab sample results of the off-gas vent were provided at 4:03 a.m. which did not identify any radioactive release. At 9:01 a.m. after confirming that no release had occurred and that the site no longer met the criteria for an Alert, the licensee exited the Alert condition.

The Perry Nuclear Power Plant Emergency Plan, Section 4.0 provided an emergency classification system which included Emergency Action Levels (EALs) EAL HA1 required, in part, that when entered, an emergency dose assessment (CADAP) run using the appropriate source term determined at the time of the event must be performed within 15 minutes concurrently with ODCM calculations to determine if a Site Area Emergency entry criteria has been met. Specifically, the licensee's Emergency Plan Section 6.8, Category 4, initiating condition HA1 included the following note: "...an emergency dose assessment (CADAP) run using the appropriate source term, determined at the time of the event, must be performed within 15 minutes concurrently with ODCM calculations to determine if a Site Area Emergency entry criteria has been met."

During the event, the inspectors noted that the licensee failed to perform an emergency dose assessment using the Computer-Aided Dose Assessment Program (CADAP) within 15 minutes as required by their EAL. This assessment was not provided until 2 hours and 40 minutes after the Alert was declared. Per the licensee's sequence of events, aside from the off-gas building vent pipe radiation monitor, no other indications of a release existed.

Following the event, interviews by the inspectors determined that on-shift personnel during the event were not aware that the EALs required performance of a CADAP



analysis. Consequently, even after a staff member was available to perform the CADAP analysis, no direction was provided to perform the analysis until the Technical Support Center was activated. The licensee performed the first analysis at 5:32 a.m. and reported it to the control room at 6:24 a.m. two hours and forty minutes after alert declaration. The CADAP model indicated there was no detectable release.

After the event, the licensee established measures to ensure that grab sampling and CADAP analysis could be completed within 15 minutes. The licensee validated its ability to meet the 15-minute commitments and maintains additional staff to perform these actions. Also, the licensee informed appropriate personnel that “chemistry sample analysis methods” were not limited to just “grab” samples. The high range off-gas vent pipe instrumentation could also be used to confirm within 15 minutes that effluent levels were less than 200 times ODCM Control limits.

Analysis: The inspectors evaluated this issue in accordance with IMC 0612. The inspectors concluded that the finding was more than minor because it represented a failure to implement a regulatory requirement during a declared event which could have prevented the correct emergency classification. The correct emergency classification is the trigger for ensuring that emergency response personnel and equipment are quickly in place if it becomes necessary to implement actions to protect the public health and safety. Specifically the licensee failed to implement a requirement of EAL HA1 to perform a CADAP run within 15 minutes during an Alert to determine if entry into a Site Area Emergency was warranted. Based on this result, the inspectors performed further evaluation in accordance with IMC 0609 appendix B, Emergency Preparedness Significance Determination Process.

In accordance with this appendix, the inspectors evaluated the finding under both Branches of the EP SDP- “Failure to Comply “ and “Actual Event Implementation Problem.” Based on this evaluation, the inspectors concluded that the “Actual Event Implementation Problem” resulted in the most severe finding. The implementation problem occurred during a declared Alert. IMC 0609 appendix B, “Emergency Preparedness Significance Determination Process,” defines a risk-significant planning standard (RSPS) as any of the following four Planning Standards defined in 10 CFR 50.47(b); 10 CFR 50.47(b)(4),(5),(9), or (10). The inspectors determined that the licensee failed to implement a RSPS. Specifically, 10 CFR 50.47(b)(4) requires that the licensee use a standard scheme of emergency classification and action levels. The emergency plan required performance of a CADAP run within 15 minutes in order to classify this event (...to determine if a Site Area Emergency entry criteria had been met). Contrary to this requirement, no CADAP run was provided to the control room until 2 hours and 40 minutes after Alert declaration. In accordance with Section 3.2 of IMC 0609, Appendix B, the inspectors reviewed licensee performance during an actual event and determined that licensee did not comply with emergency plan commitments. Therefore, the inspectors concluded that the finding was of White safety significance.

Enforcement: Title 10 CFR 50.54(q) requires, in part, that a licensee authorized to operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in Section 50.47(b). Title 10 CFR 50.47(b)(4) states, in part, that a standard emergency classification and action level scheme is in use by the nuclear facility licensee, and State and local response plans call for reliance on

information provided by facility licensees for determinations of minimum initial offsite response measures. The Perry Nuclear Power Plant Emergency Plan, Section 4.0 provided an emergency classification system which includes Emergency Action Levels. EAL HA1 required, in part, that when entered, an emergency dose assessment (CADAP) run using the appropriate source term, determined at the time of the event must be performed within 15 minutes concurrently with ODCM calculations to determine if a Site Area Emergency entry criteria has been met.

Contrary to the above, the licensee failed to implement the requirement to perform a CADAP run within 15 minutes. Specifically, at 3:29 a.m. on July 20, the licensee received an off-gas vent pipe gas alarm due to the alarm reading off-scale high. At 3:44 a.m., the licensee declared an Alert for EAL HA1. The control room did not receive a CADAP run report until 6:24 a.m., two hours and 40 minutes after Alert declaration. As a result, the licensee failed to meet the requirements of their emergency plan during a declared Alert. This is considered an apparent violation (AV 05000440/2004016-01).

#### 4OA6 Meetings

##### .1 Exit Meeting

Kenneth Riemer presented the inspection results, by telephone, to Mr. F. von Ahn, General Manager, and other members of licensee management on November 19, 2004.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee

F. von Ahn, Plant Manager  
G. Bell, Onsite Emergency Planner  
N. Bonner, Manager  
P. Bordley, Operations Superintendent  
L. Burgwald, Onsite Emergency Planner  
D. Cleavenger, Onsite Emergency Planner  
B. Dicola, Shift Manager  
J. Duffield, Training Manager  
J. Heintz, Quality Assurance Supervisor  
T. Henderson, Emergency Planning Unit Supervisor  
V. Higaki, Emergency Planning Manager  
G. Huston, Quality Assurance Auditor  
B. Kidder, Operations Superintendent  
J. Lansing, Regulatory Compliance Manager  
J. Lynch, Emergency Planning Trainer  
M. McFarland, Operations Staff Superintendent  
K. Meads, Regulatory Compliance Supervisor  
P. Roney, Shift Engineer  
K. Russell, Compliance Engineer  
L. Schlauch, Onsite Emergency Planner  
T. Shega, Special Projects Manager  
S. Williams, Chemistry Technician

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

#### Opened

05000440/2004016-01	AV	Failure to Perform Emergency Dose Assessment During an Alert Within 15 Minutes Required by EAL HA1 (Section 4OA5)
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#### Closed

05000440/2004013-07	URI	Alert Due to Indicated Off-Gas System High Gas Radiation Levels (Section 4OA5)
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## LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

### 4OA5 Other Activities

Perry Emergency Plan, Section 4.0; Emergency Conditions; Revision 20

Perry Emergency Plan, Section 5.0; Organizational Control of Emergencies; Revision 20

EPI-A1; Emergency Action Levels; Revision 10

EPI-B1; Emergency Notification System; Revision 12

OAI-1702; Plant Narrative Logs; dated July 20, 2004

July 20, 2004 - Perry Plant Alert Critique Summary

Emergency Planning Unit Compilation of Issues From the Alert on July 20, 2004

Chemistry Standing Order 04-015; Noble Gas Sampling For Out of Range High Noble Gas Radiation Monitor Indication; dated July 23, 2004

Letter From Centerior Energy To NRC; Response to Request For Additional Information on Emergency Action Levels (TAC No. M94800); dated September 27, 1996

CR 04-03757; Off Gas Vent Pipe Radiation Monitor Indicates Off Scale High; dated July 20, 2004

CR 04-03779; Alert Declared - EAL HA1; dated July 20, 2004

CR 04-03815; Lessons Learned From Alert EAL - HA1 July 20, 2004; dated July 20, 2004

CR 04-03862; Control Room Staff Critique EP Comments To July 20, 2004 Alert; dated July 23, 2004

CR 04-04563; Document Maintenance Rule Failure of Unit 1 Plant Vent; dated September 2, 2004

CR 04-04986; ERDS Activation Not Completed Within Required Time; dated September 17, 2004

## LIST OF ACRONYMS USED

AV	Apparent Violation
CADAP	Computer-Aided Dose Assessment Program
CFR	Code of Federal Regulations
CR	Condition Report
EAL	Emergency Action Level
EPI	Emergency Plan Instruction
IMC	Inspection Manual Chapter
ODCM	Off-Site Dose Calculation Manual
RSPS	Risk Significant Planning Standard
SDP	Significance Determination Process
URI	Unresolved Item