

June 8, 2004

Mr. L. William Pearce
Site Vice President
FirstEnergy Nuclear Operating Company
Beaver Valley Power Station
Post Office Box 4
Shippingport, Pennsylvania 15077

SUBJECT: BEAVER VALLEY POWER STATION - NRC EVALUATED EMERGENCY
PREPAREDNESS EXERCISE - INSPECTION REPORT NOS.
05000334/2004008 and 05000412/2004008

Dear Mr. Pearce:

On May 11, 2004, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Beaver Valley Power Station. The enclosed inspection report documents the inspection findings, which were discussed on May 13, 2004, with yourself and other 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.

Based on the results of this inspection, the inspectors identified one issue of very low safety significance (green). This issue did not present an immediate safety concern and was determined to involve a violation of NRC requirements. However, because of the very low safety significance and because it was entered into your corrective action program, the NRC is treating this issue as a Non-Cited violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you contest this non-cited violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Region I, the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Beaver Valley facility.

In accordance with 10CFR2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure and your response (if any) will be available electronically for public inspection in the

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Sincerely,

/RA/

Richard J. Conte, Chief
Operational Safety Branch
Division of Reactor Safety

Docket Nos. 50-334 and 412
License Nos. DPR-66 and NPF-73

Enclosure: Inspection Report No. 05000334/2004008 and 05000412/2004008
w/Attachment: Supplemental Information

cc w/encl:

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V. Kaminskis, Director, Nuclear Maintenance
R. Mende, Director, Nuclear Work Management
T. Cosgrove, Director, Nuclear Engineering/Projects
L. Freeland, Manager, Nuclear Regulatory Affairs/Performance Improvement
M. Clancy, Mayor, Shippingport, PA
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C. O'Claire, State Liaison to the NRC, State of Ohio
D. Hill, Chief, Radiological Health Program, State of West Virginia
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U. S. NUCLEAR REGULATORY COMMISSION REGION I

REGION I

Docket Nos: 50-334 and 50-412

License Nos: DPR-66 and NPF-73

Report Nos: 05000334/2004008 and 05000412/2004008

Licensee: FirstEnergy Nuclear Operating Company

Facility: Beaver Valley Power Station

Location: Shippingport, Pennsylvania

Dates: May 11 - 13, 2004

Inspectors: D. Silk, Sr. Emergency Preparedness Inspector, Division of Reactor
Safety (DRS), (Lead)
J. McFadden, Health Physicist, DRS
D. Jackson, Operations Engineer, DRS
P. Cataldo, Beaver Valley Senior Resident Inspector, Division of Reactor
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Observers: M. Davis, Reactor Engineer, DRS

Approved by: Richard J. Conte, Chief
Operational Safety Branch
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000334/2004008 and 05000412/2004008; 05/11-13/2004; Beaver Valley Power Station. Emergency Preparedness Exercise.

This inspection was conducted by region-based inspectors and the resident inspector. One finding of green significance was identified using IMC 0609, Significance Determination Process (SDP). 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 Findings

Cornerstone: Emergency Preparedness

Green. A non-cited violation against 10 CFR 50 Appendix E Section IV.F.2.g was identified when the licensee's critique did not identify an invalid release duration time used in dose projections during the May 11, 2004, exercise.

This finding is more than minor because it affects the emergency response organization performance attribute of the emergency preparedness cornerstone. Failing to identify and correct an invalid radiological release duration time could impact the EP cornerstone objective of ensuring that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Because the performance problem occurred with a protective action recommendation developed in association with a successful Drill and Exercise Performance (DEP) Performance Indicator (PI) opportunity, it is not considered to be a loss of planning standard function of 10 CFR 50.47(b)(14) and therefore is of very low safety significance. The licensee has entered this issue into their corrective action program. (Section 1EP1.b)

B. Licensee-Identified Findings

None.

Report Details

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

1EP1 Exercise Evaluation (71114.01)

a. Inspection Scope

Prior to the exercise, an in-office review was conducted of the exercise objectives and scenario submitted to the NRC to determine if the exercise would test major elements of the emergency plan as required by 10 CFR 50.47(b)(14). This inspection activity represents the completion of one sample on a biennial cycle.

The onsite inspection consisted of the following review and assessment:

- The adequacy of FENOC's performance in the biennial full-participation exercise regarding the implementation of the risk-significant planning standards (RSPS) in 10 CFR 50.47 (b) (4), (5), (9) & (10) which are emergency classification, offsite notification, radiological assessment, and protective action recommendations, respectively.
- The overall adequacy of FENOC's emergency response facilities with regard to NUREG-0696, "Functional Criteria for Emergency Response Facilities" and Emergency Plan commitments. The facilities assessed were the simulator, Technical Support Center (TSC), Operations Support Center (OSC), Emergency Operations Facility (EOF), and the media center.
- Other performance areas besides the RSPS, such as the emergency response organization's (ERO) recognition of abnormal plant conditions, command and control, intra- and inter-facility communications, prioritization of mitigation activities, utilization of repair and field monitoring teams, interface with offsite agencies, and the overall implementation of the emergency plan and its implementing procedures.
- Past performance issues from NRC inspection reports and FENOC's drill reports to determine effectiveness of corrective actions as demonstrated during this exercise to ensure compliance with 10CFR50.47(b)(14).
- The post-exercise critique to evaluate FENOC's self-assessment of its ERO performance during the exercise and to ensure compliance with 10CFR50 Appendix E.IV.F.2.g.

The inspectors reviewed various documents which are listed in Attachment 1 to this report.

b. Findings

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Introduction

A non-cited violation of green significance was identified when the licensee's critique did not identify an invalid release duration time for projected doses during the May 11, 2004, exercise.

Description

During the May 11, 2004, exercise, dose assessment players were performing dose projection calculations using a one hour release duration time. The one hour release duration time was based upon the following analysis: after a design basis loss of coolant accident with at least one full train of containment spray available, containment pressure would be brought back to sub-atmospheric pressure (and thus terminate the release) within one hour. However, in this exercise, due to loss of electrical busses and other mechanical failures, there was less than one full train of containment spray available to depress containment pressure. Key players were aware that there was less than one full train of containment spray available because they used this information in making the general emergency declaration based upon EAL 1.3.2. (In post-exercise discussions, it was determined that dose assessment personnel were unaware of the degraded containment spray capability during the exercise and that they also did not know the basis for the one hour release time.) Although dose assessment personnel were aware throughout the exercise of releases and release rates via the radiation monitors, they were using an invalid release duration time in the dose projections, and this issue was not identified by the licensee during the critique.

Using an invalid release duration time did not impact the PARs in the May 11, 2004, scenario. However, under other circumstances (i.e., higher release rates and / or different meteorological conditions) in which a degraded containment spray condition existed, a release duration time of greater than one hour would be appropriate (e.g., two hours). Thus, the PAR could be impacted (i.e., evacuate beyond 5 miles versus evacuating 0-5 miles).

Analysis

This performance deficiency, the failure to identify an EP implementation problem during an exercise critique, is considered to be more than minor because it affects the emergency response organization performance attribute of the emergency preparedness cornerstone. Failing to identify and correct an invalid radiological release duration time could impact the EP cornerstone objective of ensuring that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency (because this issue is related to the development of the PAR). IMC 0609 Appendix B, Emergency Preparedness Significance Determination Process, Sheet 1, was used to evaluate this issue. The failure of a critique to identify a weakness is in non-compliance with 10 CFR 50 Appendix E Section IV.F.2.g which states in part that exercises shall provide for formal critiques in order to identify weak or deficient areas that need correction. The licensee's critique process failed to identify a performance problem associated with the PAR

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development, but it occurred in association with a successful Drill and Exercise Performance (DEP) Performance Indication (PI) opportunity (IMC 0609, Appendix B, Section 4.14.2.1). Accordingly, the performance deficiency is not considered to be a loss of planning standard 10 CFR 50.47(b)(14) and is of very low significance (green).

Enforcement

This issue is not subject to traditional enforcement. 10 CFR 50 Appendix E Section IV.F.2.g which states in part that exercises shall provide for formal critiques in order to identify weak or deficient areas that need correction. Contrary to the above, during the May 11, 2004, exercise, a performance deficiency in the area of PAR development was not identified by the licensee in its critique on May 13, 2004. There was no immediate consequence to this issue because it occurred during an exercise. This issue was determined to be of very low safety significance (green) based upon the EP SDP. This issue is being treated as a Non-Cited Violation (NCV), consistent with Section VI.A. of the NRC Enforcement Policy. This issue was documented in Condition Report 04-04232. **(NCV 05000334 & 05000412/2004008-01)**

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator (PI) Verification (71151)

a. Inspection Scope

The inspectors reviewed the licensee's procedure for developing the data for the EP PIs which are: (1) Drill and Exercise Performance (DEP); (2) ERO Drill Participation; and (3) ANS Reliability. The inspector reviewed supporting documentation from drills in 2003 and 2004 drill and ANS testing data to verify the accuracy of the reported data. Data generated since the March 2003 EP PI verification was reviewed during this inspection. The review of these performance indicators was conducted in accordance with NRC Inspection Procedure 71151. The acceptance criteria used for the review were 10 CFR 50.9 and NEI 99-02, Revision 2, Regulatory Assessment Performance Indicator Guidelines.

b. Findings

No findings of significance were identified.

40A2 Identification and Resolution of Problems (71152: PI&R Sample)a. Inspection Scope

The inspectors reviewed FENOC's critique findings as documented in condition reports from 2002 through 2004. This review was conducted to determine if significant performance trends exist and to determine the effectiveness of licensee corrective actions based upon ERO performance during this exercise. The inspectors verified that issues identified during this exercise were entered into FENOC's corrective action program and are listed in an attachment to this report. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 01; 10 CFR 50.47(b)(14); and Appendix E IV.F.2.g were used as reference criteria

b. Findings and Observations

No findings of significance were identified.

40A6 Meetings, Including Exit

The inspectors presented the inspection results to Mr. L. W. Pearce, Site Vice President, and other members of the licensee's staff at the conclusion of the inspection on May 13, 2004. The licensee had no objections to the NRC findings or observations. No proprietary information was provided to the inspectors during this inspection.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

H. Szklinski, Senior Nuclear Technician (EPP)
S. Viccine, Emergency Preparedness Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000334, 412/2004008-01 NCV A performance deficiency in the area of PAR development was not identified by the licensee in its critique (Section 1EP1.b)

LIST OF DOCUMENTS REVIEWED

Section 1EP1: Exercise Evaluation

Beaver Valley Power Station Emergency Plan
Emergency Plan Implementing Procedures

Section 40A1: Performance Indicator Verification

½-ADM-1111, NRC EPP Performance Indicator Instructions, Rev 1

Section 40A2: Identification and Resolution of Problems

04039 Outdated REOPS found in OSC cabinet
04040 RFA security tailgating during declared site emergencies
04041 Non-functioning head set telephone in OSC
04042 Area access by RP tech at intake structure
04043 RP-OSC failed to fill rad tech position
04045 Operations role/responsibilities in OSC during EPP drill
04046 ERF security door propped open
04049 Radiation monitor value discrepancy on SPDS computer displays
04052 KI authorization not communicated to onsite CR crew
04053 Vehicle problems cause 76 minute offsite monitoring delay
04054 Lack of radmonitor display capability at TSC-RCC assistant desk
04056 Communication from TSC to shift manager and crew
04057 Expedite briefing process for higher priority repair teams
04058 OSC/EPP assignment sheet was consistently not completed
04060 Errors occurred using CDAM during exercise
04061 Procedural guidance when power restored for transfer to recirculation
04063 Recognition of equipment failure
04064 Lack of emphasis for general emergency at JPIC

- 04065 Operations headset circuit issues
- 04070 EOPs require chemistry sampling that can not be completed
- 04074 Clarification needed for simulated site accountability during drills
- 04075 Unit 2 simulator RM-11 programming issue
- 04076 EADP personnel should use alternate sources of RMS data
- 04078 ERO support request to security during the evaluated exercise
- 04081 Logic in initial PAR did not meet procedural requirements
- 04084 Failed objective (B.8) for offsite notification during exercise
- 04086 Failed objective (K.2) during exercise
- 04088 RFA - Clarification of KI distribution
- 04089 Assessment needed for EPP follow up notification communications
- 04094 Areas not authorized for rad pro entry
- 04097 Keys in TSC key box not in order expected by TSC personnel
- 04099 Miscellaneous JPIC observations
- 04100 General facility comments - OSC
- 04101 NRC Form 361 expectations need clarified
- 04106 ½-EPP/IP 4.1 review needed (development of PAR)
- 04107 General facility comments - TSC
- 04108 EPP notification form inconsistencies
- 04109 General facility comments - EOF
- 04110 Site water inventor during EPP condition

Note: All CRs have a pre-fix of "CR-04."

LIST OF ACRONYMS

ANS	Alert and Notification System
CFR	Code of Federal Regulations
EAL	Emergency Action Level
ERO	Emergency Response Organization
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
OSC	Operations Support Center
PI	Performance Indicator
RSPS	Risk Significant Planning Standard
TSC	Technical Support Center