

Exelon Nuclear  
Peach Bottom Atomic Power Station  
1848 Lay Road  
Delta, PA 17314-9032

Telephone 717 456 7014  
www.exeloncorp.com

10 CFR 2.201

December 19, 2002

U. S. Nuclear Regulatory Commission  
Attn.: Document Control Desk  
Washington, DC 20555-0001

Peach Bottom Atomic Power Station, Units 2 and 3  
Facility Operating License Nos. DPR-44 and DPR-56  
NRC Docket Nos. 50-277 and 50-278

Subject: Reply to a Notice of Violation (EA-02-142) involving emergency classification

Reference: Letter from H. J. Miller (USNRC) to John L. Skolds (Exelon) dated November 26, 2002

Gentlemen:

The referenced letter transmitted a Notice of Violation (NOV) concerning an undue delay (8 minutes) of an emergency classification that occurred at Peach Bottom Atomic Power Station (PBAPS) on June 2, 2002. The attachment to this letter provides our response to the subject NOV.

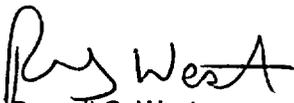
Exelon acknowledges the performance deficiency in the classification delay and has taken appropriate corrective actions to improve performance in this area.

In working through this issue, we have become more aware that the Emergency Preparedness Significance Determination Process seems to overcharacterize the significance of findings as compared to other cornerstone Significance Determination Processes.

We will continue to work through NEI and with the NRC staff to improve the Emergency Preparedness Significance Determination Process so that determinations made through this process are commensurate with the safety significance of the issue and are consistent with the determinations made in other cornerstone Significance Determination Processes.

In accordance with NEI 99-04, the regulatory commitment contained in this correspondence is to assure compliance with the regulations. The specific methods that are planned to maintain compliance are discussed in the attachment.

If you have any questions or desire additional information, please do not hesitate to contact us.



Russell G. West  
Vice President – Peach Bottom Atomic Power Station

Attachment

cc: H. J. Miller, Administrator, Region I, USNRC  
A. C. McMurtray, USNRC Senior Resident Inspector, PBAPS

CCN 02-14079

TE#4  
A045

*Reply to Notice of Violation EA-02-142*

December 19, 2002

bcc: PSEG, Financial Controls and Co-Owner Affairs  
P.O. Box 236, MC N-7  
Hancocks Bridge, NJ 08038

R. I. McLean, State of Maryland  
Department of Natural Resources  
Tidewater Administration  
Tawes State Office Building  
Annapolis, MD 21401

A. F. Kirby, III, Atlantic City Electric Company  
External Operations-Nuclear  
Atlantic City Electric Company  
P.O. Box 6066  
Newark, DE 19714

R. R. Janati, Commonwealth of Pennsylvania  
Bureau of Radiation Protection  
Department of Environmental Resources  
P.O. Box 2063  
Harrisburg, PA 17120

C. G. Pardee – KSA 3-N  
Jeff Benjamin - Cantera  
C. P Lewis - KSB 3-2  
G. L. Johnston - PB, A4-1S  
B. C. Hanson – PB, A4-1S  
E. J. Eilola – PB, SMB3-2A  
P. J. Davison - PB, A2-1S  
J. P. Grimes - KSA 2-N  
J. P. Armstrong - KSA 3-N  
R. A. Kankus - KSB 3-S  
A. J. Sherwood – PB, TC  
S. C. Beck - PB, A4-5S  
M. P. Gallagher – KSA 3-E  
D. P. Helker - KSA 3-E  
D. R. Tailleart – KSA 3-N  
T. Coppa – PB-EP  
W.M. Eckman - PB, SMB4-6  
Commitment Coordinator - KSA 3-E  
Site Commitment Coordinator – A4-5S  
Correspondence Control Desk - KSA 1-N-1  
DAC - KSA 1-N-1

Exelon Nuclear  
Peach Bottom Atomic Power Station

REPLY TO NOTICE OF VIOLATION EA-02-142

**Restatement of Violation**

10 CFR 50.54(q) requires, in part, that a licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b). 10 CFR 50.47(b)(2) requires, in part, that on-shift facility licensee responsibilities for emergency response are unambiguously defined, and adequate staffing to provide initial facility accident response is maintained at all times. 10 CFR 50.47(b)(4) requires, in part, that a standard emergency classification and action level scheme is in use by the nuclear facility licensee.

The Exelon Nuclear Emergency Plan for Peach Bottom sets forth, among other things, on-shift facility licensee responsibilities for emergency response (in accordance with 10 CFR 50.47(b)(2)), and delineates the standard emergency classification and action level scheme in use by the licensee (in accordance with 10 CFR 50.47(b)(4)). Section 2.0 of this Emergency Response Plan states, in part, that the classification system provided in Emergency Response Procedure (ERP)-101, provides for implementation of certain actions immediately applicable to a specific condition, and indicates that the Emergency Director determines the emergency classification and the actions to be taken.

Emergency Response Procedure (ERP)-101, "Classification of Emergencies," delineates licensee emergency response responsibilities in accordance with 10 CFR 50.47(b)(2), as well [as] the emergency action level scheme in accordance with 10CFR 50.47(b)(4). Sections 1.0 and 2.0, require, in part, that shift management recognize and classify an event or condition, and assume the duties of Emergency Director who shall: (1) select categories appropriate for station events or conditions; (2) review emergency action levels for categories selected; and (3) classify the event based on selected categories and most severe emergency action levels. Section 8.2.2.b specifies that an ALERT emergency action level is met when there is report or detection of 1) toxic gases within Plant Vital Structures (Table 8-1) in concentrations that will be life threatening to plant personnel; OR 2) flammable gases within Plant Vital Structures (Table 8-1) in concentrations affecting safe operation of the plant. Table 8-1 lists the Diesel Generator Enclosure as a Plant Vital Structure.

Contrary to the above, on June 2, 2002, the standard emergency classification and action level scheme was not properly used by the operations crew. Specifically, at 12:31 a.m., a condition occurred that warranted an ALERT declaration in accordance with ERP-101 when the fire suppression system inadvertently discharged carbon dioxide, a life threatening gas, into the No. 3 emergency diesel generator room, a plant vital structure. After the shift manager completed actions to assure safe plant conditions and personnel accountability, the shift manager did not then carry out his responsibility to review emergency action levels, classify the event and assume the duties of Emergency Director. In particular, between 12:39 am and 12:47 am, the shift manager was engaged in non-emergency response related activities implementing an administrative procedure for calling the licensee's corporate duty officer in order to inform licensee senior management of plant conditions. As a result, there was an undue delay in properly classifying the event and the ALERT classification was not made until 1:02 am.

This violation is associated with a WHITE significance determination process finding.

**Reasons For The Violation**

As stated in the Notice of Violation, it took 31 minutes (i.e., from 12:31 am to 1:02 am) to make an ALERT emergency declaration when carbon dioxide injected into the E-3 Emergency Diesel Generator (EDG) bay. The following chart illustrates the results of our investigation into the timeliness of actions performed by control room personnel for this event:

	Time Frame	Duration	Actions	Assessment
1	12.32 am – 12.39 am	8 minutes	Assure personnel safety	Appropriate action
2	12.40 am – 12.47 am	8 minutes	Shift Manager (SM) performs internal notifications	Actions should have been deferred until after EAL reviews
3	12:48 am – 12.50 am	3 minutes	SM reviews Emergency Action Levels (EALs)	Appropriate action
4	12 51 am – 12.58 am	8 minutes	SM reviews EAL Bases	Appropriate action but lack of clarity in documents
5	12.59 am – 1:02 am	4 minutes	Based on additional information, SM declares ALERT and begins activation process	Appropriate action

As can be seen from the above chart, control room personnel appropriately performed actions to ensure personnel safety at the onset of this event. However, the Shift Manager (SM) proceeded to perform internal event reporting notifications in lieu of reviewing the emergency classification procedures (ERP-101) for potential emergency declarations. During the internal notification process, there were several issues that prolonged this process. It was the SM's intent to briefly make the internal event reports to management and then return to oversight of the event. The management reporting was initiated to communicate the carbon dioxide injection and mobilize support for the plant. As a result, the SM was unavailable to review the Emergency Action Levels (EALs) for approximately 8 minutes due to making these phone calls. The Control Room Supervisor (CRS) and the Shift Technical Advisor (STA) were involved with performing plant actions and were not initially available to review the emergency classification procedure.

The delays in not promptly declaring an emergency classification (i.e. ALERT) when carbon dioxide spuriously injected into the E-3 Emergency Diesel Generator (EDG) bay is primarily based on the following reason:

- Training learning objectives for licensed operators who need to potentially make emergency declarations were not adequate.

Training for EAL recognition consisted of an EAL classification training session that included a lecture, tabletop exercises and testing. However, the training objectives did not require strict memorization of the types of occurrences that could lead to an EAL or otherwise ensure prompt recognition of events. The objectives of the lesson plan required the trainee to be able to “discuss the Emergency Classification System” by “classifying various emergency conditions when provided with a brief scenario and a copy of the EALs”. This objective did not require recalling EALs or otherwise test the ability to recognize an EAL based on a plant event without having a prompt to consider EALs.

Contributing reasons for the violation are as follows:

*Reply to Notice of Violation EA-02-142*

- The shift crew (including the Shift Technical Advisor) was not immediately focused on the emergency declaration thresholds for this event.

When the event occurred, the Shift Technical Advisor (STA) promptly reported to the Control Room. When the STA reported to the Control Room, Shift Management dispatched him to the EDG building. This action was discussed between the Shift Manager, Control Room Supervisor (CRS) and STA and it was agreed that this was the appropriate action to take in light of the potential for personnel injury at the EDG building. Therefore, the STA was not immediately available to perform support duties in the Control Room. Had the STA been available to remain in the Control Room, it is possible that the EAL entry requirement would have been detected earlier.

- The emergency classification procedure (ERP-101) in existence at that time was ambiguous as to whether carbon dioxide in one or multiple EDG bays would constitute a threshold for an emergency declaration.

The emergency classification procedure (ERP-101) and associated Bases were confusing whether one or all the EDG bays would need to be uninhabitable to result in an ALERT. Approximately 8 minutes were spent in reviewing the ERP-101 Bases to determine if an emergency declaration was required. The EAL called for an ALERT if there was a report or detection of toxic gases within Plant Vital Structures in concentrations that would be life threatening to plant personnel. The bases discussed the fact that the concern involved operator access to safety systems; however, it was not clear if the carbon dioxide injection into a single EDG bay would fall into this category. There were no clarifying examples in the bases.

**Corrective Steps That Have Been Taken And The Results Achieved**

Corrective actions that have been taken include the following:

The EAL training program was revised to ensure that conditions warranting an emergency declaration are immediately recognizable by licensed operators and that emergency declarations are promptly performed. This training includes initial and continuing training.

Training was administered to individuals required to make emergency declarations. Training included classroom and practical exercises to ensure that emergency declaration thresholds are promptly recognizable.

STA roles and responsibilities were evaluated and staffing changes were made to ensure that the STAs have the ability to promptly review emergency declaration thresholds. Additionally, expectations were reinforced to ensure STAs maintain appropriate oversight of events including entry into appropriate emergency procedures.

The emergency declaration procedure and bases were revised. This corrective action clarified when carbon dioxide injections would require an emergency declaration. Other emergency action level thresholds were reviewed and revised to ensure that clear intent exists within the emergency declaration procedure.

The local evacuation procedure was revised to provide reminders to consider entry into appropriate Emergency Action Level classifications. Since this procedure would be used for situations involving toxic gas events in the plant, this procedural reminder will provide a secondary barrier to ensure that appropriate emergency declarations would be recognized

*Reply to Notice of Violation EA-02-142*

and performed. Additionally, other procedures exist to provide appropriate prompting for consideration of other emergency action level entries.

**Corrective Steps That Will Be Taken To Avoid Further Violations**

Corrective actions described above have already been taken to avoid further violations.

**Date When Full Compliance Will Be Achieved**

Training was promptly performed by 6/15/02 to ensure personnel required to perform EAL declarations are capable of recognizing plant conditions constituting an entry into an EAL. More extensive training was performed prior to implementation of the Exelon Standard Emergency Preparedness Plan on 8/30/02. Full compliance was achieved by 10/3/02 when the training program was revised to ensure a systematic method exists for ensuring the ability of licensed operators to recognize and declare EALs without undue delay.