

# Exelon Generation.

10 CFR 50.54(q)(5)  
10 CFR 50.4  
10 CFR 72.44(f)

January 14, 2016

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

Peach Bottom Atomic Power Station, Units 1, 2, and 3  
Facility Operating [Possession Only] License No. DPR-12  
Renewed Facility Operating License Nos. DPR-44 and DPR-56  
NRC Docket Nos. 50-171, 50-277, 50-278, and 72-79

Subject: Exelon Nuclear Radiological Emergency Plan Revision

In accordance with 10 CFR 50.4(b)(5), "Emergency Plan and related submissions," Exelon Generation Company, LLC (EGC) is submitting an Emergency Plan Addendum revision for Peach Bottom Atomic Power Station (PBAPS) as listed in the table below.

Document	Revision	Title
EP-AA-1007, Addendum 3	2	<i>Emergency Action Levels for Peach Bottom Atomic Power Station</i>

The change to the Emergency Plan Addendum was evaluated under the requirements of 10 CFR 50.54(q) and was determined not to result in a reduction in the effectiveness of the Emergency Plan for PBAPS. This notification is being submitted within 30 days of implementation of the changes as required by 10 CFR 50.4(b)(5). The changes continue to meet the applicable planning standards established in 10 CFR 50.47(b) and 10 CFR 50, Appendix E.

Furthermore, the Emergency Plan Addendum identified in Attachment 3 of this letter is proprietary and confidential and contains trade secrets and commercial or financial information. EGC maintains this information on a confidential basis and protects it from disclosure to the general public or unauthorized individuals. EGC requests that the Emergency Plan Addendum contained in Attachment 3 be withheld from public disclosure pursuant to 10 CFR 2.390(a)(4), and has attached an affidavit for this purpose (Attachment 2). However, if the NRC intends to place any of this information in the Public Document Room or on the Agencywide Documents Access and Management System or produce it in response to a Freedom of Information Act (FOIA) request, EGC requests the opportunity to redact the materials consistent with established FOIA exemptions and precedent.

AX45  
NM5526  
NRR  
NM55

In addition, as required by 10 CFR 50.54(q)(5), this submittal includes a summary analysis of the changes to the Emergency Plan Addendum (Attachment 1).

This submittal also satisfies the reporting requirements associated with 10 CFR 72.44(f), which stipulates that within six months after any change is made to the Emergency Plan, the licensee shall submit a report containing a description of the changes to the Director, Division of Spent Fuel Storage and Transportation.

A copy of the revised Emergency Plan Addendum and supporting change summary analysis are included in the attachments to this letter.

There are no regulatory commitments in this submittal.

If you have any questions or require additional information, please contact Richard Gropp at (610) 765-5557.

Respectfully,



David P. Helker  
Manager, Licensing and Regulatory Affairs  
Exelon Generation Company, LLC

Attachments:

1. 10 CFR 50.54(q)(5) Procedure Change Summary Analysis
2. Affidavit
3. EP-AA-1007, Addendum 3, Revision 2, *"Emergency Action Levels for Peach Bottom Atomic Power Station"*

cc: w/ Attachments 1 and 2 only  
Regional Administrator - NRC Region I  
Director, NRC Division of Spent Fuel Storage and Transportation, ONMSS  
NRC Senior Resident Inspector - Peach Bottom Atomic Power Station  
NRC Project Manager, NRR - Peach Bottom Atomic Power Station  
Director, Bureau of Radiation Protection - Pennsylvania Department of Environmental Resources  
R. R. Janati, Commonwealth of Pennsylvania

**ATTACHMENT 1**

**10 CFR 50.54(q)(5) Procedure Change Summary Analysis**

## **10 CFR 50.54(g)(5) Procedure Change Summary Analysis**

### **Procedures/Titles**

Exelon Generation Company, LLC (EGC) is submitting the following Emergency Plan Addendum revision for Peach Bottom Atomic Power Station (PBAPS):

- EP-AA-1007, Addendum 3, Revision 2, "*Emergency Action Levels for Peach Bottom Atomic Power Station*"

This document contains *Exelon Confidential/Proprietary Information* and is requested to be withheld from public disclosure pursuant to 10 CFR 2.390.

### **Description of Procedure**

EP-AA-1007, Addendum 3 describes the Emergency Action Levels (EALs) implemented at PBAPS for entering Emergency Classification Levels (ECLs).

### **Description of Change**

This revision to EP-AA-1007, Addendum 3 for PBAPS incorporates the following changes:

1. Implementation of NEI 99-01, Revision 6, "*Development of Emergency Action Levels for Non-Passive Reactors,*" which involved a complete rewrite/formatting of the document.
2. Establishes EAL thresholds for the NRC pre-approved EALs RG2 and RS2 and an additional threshold for RA2 based on Spent Fuel Pool (SFP) levels.
3. Ensures that changes to EALs CT3 and MS3 were carried forward since they were made between the timeframe when the NRC endorsed the NEI 99-01, Revision 6 guidance and when the approved Revision 6 EAL schemes were implemented at PBAPS.

A more detailed description of the changes is provided below.

1. The revised EAL schemes based on NEI 99-01, Revision 6 were submitted to the NRC in a License Amendment Request (LAR) dated May 30, 2014. The NRC approved the LAR as documented in a letter and supporting Safety Evaluation Report (SER) dated July 28, 2015. Training was satisfactorily completed for the PBAPS and supporting Corporate Emergency Response Organization (ERO) personnel on the revised EAL schemes during the fourth quarter of 2015. As a result, the NRC-approved EAL schemes based on the NEI 99-01, Revision 6 guidance were implemented and this revision to EP-AA-1007, Addendum 3 reflects the changes.
2. As part of the NRC approval of the new EAL schemes, three (3) new thresholds were approved generically without specific threshold level values for the SFP being included. The levels are based on enhanced SFP level devices placed in service in accordance with the information provided in Section 1.4, of NRC Order EA-12-051. NEI 99-01, Revision 6 recommended that these EAL thresholds be implemented when the enhanced SFP level instrumentation is available for use. At PBAPS, the enhanced SFP level instruments were placed in service in accordance with a site-approved engineering

change package. For the new EALs RG2 and RS2 a "site specific level 3" threshold value is used and for RA2 there is a third threshold that uses a "site specific level 2" value. Based on the site-approved engineering change package the following thresholds were used for each of the site-specific values:

- PBAPS Emergency Operating Procedures (EOPs) include guidance that states:

*"NEI 99-01 requires the EAL value to account for Fuel Pool level instrumentation limitations. The lowest level that can be sensed by Fuel Pool level transmitter is 211 feet plant elevation which equates to 0.46 feet on LI-(2)3-19-001A(B). The instrument loop accuracy is plus or minus 0.25 feet. Therefore, the lowest possible Fuel Pool level indication could be 0.71 feet (0.46 feet plus 0.25 feet) which equates to 211 feet 3 inches plant elevation. In order to simplify the EAL threshold value, the 0.71 foot value was rounded to a 1 foot reading on LI-(2)3-19-001A(B) which equates to 211 feet 6.5 inches."*

The "site specific level 3" value is selected to be 1.00 foot as indicated on applicable level instrumentation, which is approximately at the 211'-6" elevation. This elevation equates to approximately 12 inches above the highest point of the top of the spent fuel rack (i.e., the top of the bail handle) and is indicative of the immediate need to restore SFP level, and includes the site-specific constraints and limitations specific to PBAPS as indicated above.

- The "site specific level 2" value is 10.00 feet as indicated on applicable level instrumentation, which is approximately at the 220'-6" elevation. This level is considered the SFP level that is adequate to provide substantial radiation shielding for a person standing on the SFP operating deck.
3. As a result of implementing the NEI 99-01, Revision 6 guidance, the thresholds for EALs CT3 (Primary Containment Conditions) and MS3 (Failure to Scram) were revised since the initial submittal of the LAR. The revisions to the EALs were supported by a 10 CFR 50.54(q) evaluation that was performed. The revisions were based on the addition of Heat Capacity Temperature Limit (HCTL) curve T/T-2. Changes to EALs CT3 and MG2 (now MS3) were implemented in October 2015 and were reported to the NRC, but were based on the previously approved guidance (NEI 99-01, Revision 5) adopted at PBAPS.

### **Description of How the Change Still Complies with Regulations**

This revision to the EP-AA-1007, Addendum 3 continues to satisfy the applicable Emergency Planning requirements established in 10 CFR 50.47(b)(4) and the Program Element guidance specified in NUREG-0654, Section II.D as noted below.

1. This revision to EP-AA-1007, Addendum 3 implements the EAL scheme changes reviewed and approved by the NRC as documented in its letter dated July 28, 2015. As such, the NRC has determined that this revision to the Emergency Plan Addendum is acceptable and the changes satisfy regulatory requirements and commitments.
2. Updating the threshold values for EALs RG2, RS2, and RA2 based on a site-approved engineering change package does not alter the meaning or intent of the basis for the approved EALs. The applicable emergency planning regulations and commitments continue to be met.

3. Updating the threshold values for EALs CT3 and MS3 based on an approved technical basis change does not alter the meaning or intent of the basis of the approved EAL. The applicable emergency planning regulations and commitments continue to be met.

**Description of Why the Change is Not a Reduction in Effectiveness (RIE)**

1. The change to the PBAPS EAL schemes reflects the NRC's approval of the LAR as documented in its letter and supporting SER dated July 28, 2015 (i.e., PBAPS Amendment No. 300 to Renewed Facility Operating License No. DPR-44 and Amendment No. 303 to Renewed Facility Operating License No. DPR-56).  
  
The applicable emergency planning regulations and commitments continue to be met. Therefore, this change does not result in a reduction in effectiveness of the PBAPS Emergency Plan.
2. The changes to the EAL schemes RG2, RS2, and RA2 reflect the changes as approved by the NRC as documented in its letter and supporting SER dated July 28, 2015. The approved EALs had indicated that a site-specific threshold value would be added upon installation of enhanced SFP level devices in accordance with NRC Order EA-12-051. PBAPS has subsequently installed the enhanced SFP level devices and threshold values have been established in accordance with a site-approved engineering change evaluation.

For EALs RG2 and RS2 a value of 1.00 foot as indicated on applicable level instrumentation (approximately at the 211'-6" elevation) was chosen as being indicative of the immediate need to restore SFP level. For EAL RA2, a third value of 10.00 feet as indicated on applicable level instrumentation (approximately at the 220'-6" elevation) was chosen as being the SFP level that is adequate to provide substantial radiation shielding for a person standing on the SFP operating deck.

The site-specific levels were determined in accordance with NRC Order EA-12-051 and NEI 12-02, *"Industry Guidance for Compliance with NRC Order EA-12-051, 'To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation,'" and applicable Owner's Group guidance, and have been modified to reflect site-specific constraints and limitations associated with the design and operation of instrumentation as required by the developer guidance in the NRC-endorsed NEI 99-01, Revision 6 guidance.*

Updating the EAL threshold values based on an approved technical analysis does not alter the meaning or intent of the basis of the approved EALs. The applicable emergency planning regulations and commitments continue to be met. Therefore, this change does not result in a reduction in effectiveness of the PBAPS Emergency Plan.

3. As a result of implementing the NEI 99-01, Revision 6 guidance, the thresholds for EALs CT3 and MS3 have been revised since the initial submittal of the LAR. The changes to the EALs were evaluated pursuant to 10 CFR 50.54(q). The changes to the EALs were evaluated pursuant to 10 CFR 50.54(q). Changes to EALs CT3 and MG2 (now MS3) were implemented in October 2015 and were reported to the NRC, but were based on the previously approved guidance (NEI 99-01, Revision 5) adopted at PBAPS.

The revisions to the EALs are based on the addition of HCTL curve T/T-2. The changes to the EAL thresholds reflect a change in the plant design parameter for HCTL. PBAPS EOP T-102, *"Primary Containment Control,"* has changed to reflect the additional HCTL

curve. The changes in the HCTL curve have been reviewed and deemed pertinent to EALs CT3 and MS3, and the changes are consistent with the NRC-endorsed NEI 99-01, Revision 6 guidance.

Updating the EAL threshold values based on an approved technical basis change does not alter the meaning or intent of the basis of the approved EAL. The applicable emergency planning regulations and commitments continue to be met. Therefore, this change does not result in a reduction in effectiveness of the PBAPS Emergency Plan.

**ATTACHMENT 2**

**Radiological Emergency Plan Addendum Revision**

**Affidavit**



AFFIDAVIT OF DAVID P. HELKER

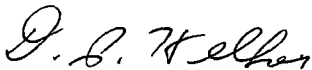
DOCKET NOS. 50-171, 50-277, 50-278, and 72-79

I, David P. Helker, Manager, Licensing and Regulatory Affairs, Exelon Generation Company, LLC, do hereby affirm and state:

1. I am Manager, Licensing and Regulatory Affairs for Exelon Generation Company, LLC (EGC), and I am authorized to execute this affidavit on behalf of EGC.
2. I am further authorized to review the documents sought to be withheld from public disclosure in connection with submittals to the Nuclear Regulatory Commission ("NRC"):
  - EP-AA-1007, Addendum 3, Revision 2, "Emergency Action Levels for Peach Bottom Atomic Power Station"
3. I am also authorized to apply to the NRC for the withholding of the aforementioned documents from public disclosure under 10 C.F.R. §§ 2.390(a)(4) and 9.17(a)(4) on the grounds that the documents contain privileged or confidential or proprietary commercial information. The documents EGC seeks to withhold from public disclosure have been marked "Proprietary" and are summarized in the attachment to my Affidavit.
4. On behalf of EGC, I request that the documents marked by EGC as "Proprietary" and described in the attached list (Appendix 1) be withheld, in their entirety, by the NRC from public disclosure.
5. In making this application for withholding of proprietary and confidential information of which EGC is the owner, EGC relies on 10 C.F.R. § 2.390(a)(4) and 10 C.F.R. 9.17(a)(4). The proprietary documents contain privileged or confidential or proprietary commercial information.
6. The proprietary information described in Appendix 1 should be withheld from disclosure by the NRC pursuant to the policy reflected in 10 C.F.R. § 2.390(a)(4), and for the following reasons to be considered pursuant to 10 CFR § 2.390(b)(4):
  - i.. The documents are each either a policy, procedure, process, technical requirements document, or other document that forms part of the Exelon Nuclear Management Model ("ENMM").
  - ii. The ENMM is a set of confidential policies and procedures that enable EGC to consistently achieve excellence in all key dimensions of its business. It documents proven ways of achieving excellence and defines how EGC executes and manages performance and assesses results. EGC expended significant resources, in terms of time and money, to develop, implement, and update the ENMM. EGC derives economic benefit from the ENMM in terms of increased efficiency and improved results as well as revenue generated from EGC's sale or licensing of the ENMM.

- iii. The documents are now, and have been, held in confidence by EGC. EGC does not customarily make these documents available to the public. EGC has not authorized making the documents available through public sources.
  - iv. EGC is providing the NRC with the documents and information in confidence.
  - v. Economic harm would come to EGC with the publication of the individual documents that form the ENMM, as it would reduce or eliminate the need for any third party to purchase or license the ENMM from EGC, and would reduce the competitive position of EGC based on the benefits that the ENMM provides to EGC in the management of its own nuclear plants. The ENMM is considered by EGC to be a very valuable part of our intellectual property and it would be very difficult, costly and time-consuming for another to duplicate it without access to these documents.
7. EGC requests that the document listed in Appendix 1 be withheld from public disclosure based on the reasons stated above in paragraph 6.i. through 6.v.

I declare under penalty of perjury that the foregoing affidavit and statements therein are true and correct to the best of my knowledge, information, and belief.



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David P. Helker  
Manager, Licensing and Regulatory Affairs  
Exelon Generation Company, LLC

Date: January 14, 2016

## Appendix 1: Information that Should Be Withheld from Public Disclosure

Date or Revision	Description of Document	Reason(s) to Withhold
Revision 2	EP-AA-1007, Addendum 3	Entire document exempt from disclosure under 10 C.F.R. § 2.390(a)(4) and 9.17(a)(4) based on paragraph 6 of the affidavit to which this Appendix 1 is attached.