



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

April 23, 2012

Mr. Michael J. Pacilio  
President and Chief Nuclear Officer  
Exelon Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 - ISSUANCE  
OF AMENDMENTS RE: REVISE ACTIONS FOR REACTOR COOLANT  
SYSTEM LEAKAGE INSTRUMENTATION (TAC NOS. ME6008 AND ME6009)

Dear Mr. Pacilio:

The U.S. Nuclear Regulatory Commission (NRC, the Commission) has issued the enclosed Amendment Nos. 283 and 286 to Renewed Facility Operating License Nos. DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station, Units 2 and 3. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated April 6, 2011. The amendments issued with this letter modify the actions to be taken when the containment atmospheric gaseous monitor is the only operable leakage detection instrument. The modified actions require additional, more frequent monitoring of other indications of Reactor Coolant System (RCS) leakage and provide appropriate time to restore another monitoring system to operable status. This change is consistent with the NRC-approved safety evaluation on Technical Specification Task Force (TSTF) Traveler, TSTF 514-A, Revision 3, "Revised [Boiling Water Reactor] BWR Operability Requirements and Actions for RCS Leakage Instrumentation." The availability of this TS improvement was announced in the *Federal Register* on December 17, 2010 (75 FR 79048).

All work is complete on TAC Nos. ME6008 and ME6009. Accordingly, these TAC numbers will be closed. A copy of our safety evaluation is enclosed and a Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink, reading "John D. Hughey".

John D. Hughey, Project Manager  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-277 and 50-278

Enclosures:

1. Amendment No. 283 to Renewed DPR-44
2. Amendment No. 286 to Renewed DPR-56
3. Safety Evaluation

cc w/enclosures: Distribution via ListServ



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

EXELON GENERATION COMPANY, LLC

PSEG NUCLEAR, LLC

DOCKET NO. 50-277

PEACH BOTTOM ATOMIC POWER STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 283  
License No. DPR-44

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Exelon Generation Company, LLC (Exelon Generation Company), and PSEG Nuclear LLC (the licensees), dated April 6, 2011, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-44 is hereby amended to read as follows:

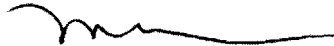
(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 283, are hereby incorporated in the license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications.

3. Implementation Requirements:

This license amendment is effective as of the date of issuance, and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Meena Khanna, Chief  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical Specifications  
and Facility Operating License

Date of Issuance: April 23, 2012

ATTACHMENT TO LICENSE AMENDMENT NO. 283

RENEWED FACILITY OPERATING LICENSE NO. DPR-44

DOCKET NO. 50-277

Replace the following page of the Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove

Insert

Page 3

Page 3

Replace the following pages of the Appendix A, Technical Specifications, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

Insert

3.4-12

3.4-12

- (5) Exelon Generation Company, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not to separate, such byproduct and special nuclear material as may be produced by operation of the facility, and such Class B and Class C low-level radioactive waste as may be produced by the operation of Limerick Generating Station, Units 1 and 2.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 of Part 50, and Section 70.32 of Part 70; all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

(1) Maximum Power Level

Exelon Generation Company is authorized to operate the Peach Bottom Atomic Power Station, Unit 2, at steady state reactor core power levels not in excess of 3514 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 283, are hereby incorporated in the license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications.

(3) Physical Protection

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans<sup>1</sup>, submitted by letter dated May 17, 2006, is entitled: "Peach Bottom Atomic Power Station Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Independent Spent Fuel Storage Installation Security Program, Revision 3." The set contains Safeguards Information protected under 10 CFR 73.21.

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Exelon Generation Company CSP was approved by License Amendment No. 283.

(4) Fire Protection

The Exelon Generation Company shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report for the facility, and as approved in the NRC Safety Evaluation Report (SER) dated May 23, 1979, and Supplements dated August 14, September 15, October 10 and November 24, 1980, and in the NRC SERs dated September 16, 1993, and August 24, 1994, subject to the following provision:

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<sup>1</sup> The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.5 RCS Leakage Detection Instrumentation

LCO 3.4.5 The following RCS leakage detection instrumentation shall be OPERABLE:

- a. Drywell sump monitoring system; and
- b. One channel of primary containment atmospheric gaseous monitoring system.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Drywell sump monitoring system inoperable.	A.1 Analyze grab samples of the primary containment atmosphere.	Once per 12 hours
	<u>AND</u>	
	A.2 Monitor RCS LEAKAGE by administrative means.	Once per 12 hours
	<u>AND</u>	
	A.3 Restore drywell sump monitoring system to OPERABLE status.	7 days
B. Required primary containment atmospheric monitoring system inoperable.	B.1 Analyze grab samples of primary containment atmosphere.	Once per 12 hours
	<u>AND</u>	
	B.2 Restore required primary containment atmospheric monitoring system to OPERABLE status.	30 days

(continued)



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

EXELON GENERATION COMPANY, LLC

PSEG NUCLEAR, LLC

DOCKET NO. 50-278

PEACH BOTTOM ATOMIC POWER STATION, UNIT 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No 286  
Renewed License No. DPR-56

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Exelon Generation Company, LLC (Exelon Generation Company), and PSEG Nuclear LLC (the licensees), dated April 6, 2011, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-56 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 286, are hereby incorporated in the license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications.

3. Implementation Requirements:

This license amendment is effective as of the date of issuance, and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Meena Khanna, Chief  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical Specifications  
and Facility Operating License

Date of Issuance: April 23, 2012



ATTACHMENT TO LICENSE AMENDMENT NO. 286

RENEWED FACILITY OPERATING LICENSE NO. DPR-56

DOCKET NO. 50-278

Replace the following page of the Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove

Insert

Page 3

Page 3

Replace the following pages of the Appendix A, Technical Specifications, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

Insert

3.4-12

3.4-12

- (5) Exelon Generation Company, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not to separate, such byproduct and special nuclear material as may be produced by operation of the facility, and such Class B and Class C low-level radioactive waste as may be produced by the operation of Limerick Generating Station, Units 1 and 2.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 of Part 50, and Section 70.32 of Part 70; all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

(1) Maximum Power Level

Exelon Generation Company is authorized to operate the Peach Bottom Atomic Power Station, Unit No. 3, at steady state reactor core power levels not in excess of 3514 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 286, are hereby incorporated in the license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications.<sup>1</sup>

(3) Physical Protection

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans<sup>2</sup>, submitted by letter dated May 17, 2006, is entitled: "Peach Bottom Atomic Power Station Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Independent Spent Fuel Storage Installation Security Program, Revision 3." The set contains Safeguards Information protected under 10 CFR 73.21.

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Exelon Generation Company CSP was approved by License Amendment No. 286.

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<sup>1</sup>Licensed power level was revised by Amendment No. 250, dated November 22, 2002, and will be implemented following the 14<sup>th</sup> refueling outage currently scheduled for Fall 2003.

<sup>2</sup>The training and Qualification Plan and Safeguards Contingency Plan and Appendices to the Security Plan.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.5 RCS Leakage Detection Instrumentation

LCO 3.4.5 The following RCS leakage detection instrumentation shall be OPERABLE:

- a. Drywell sump monitoring system; and
- b. One channel of primary containment atmospheric gaseous monitoring system.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Drywell sump monitoring system inoperable.	A.1 Analyze grab samples of the primary containment atmosphere.	Once per 12 hours
	<u>AND</u>	
	A.2 Monitor RCS LEAKAGE by administrative means.	Once per 12 hours
	<u>AND</u>	
	A.3 Restore drywell sump monitoring system to OPERABLE status.	7 days
B. Required primary containment atmospheric monitoring system inoperable.	B.1 Analyze grab samples of primary containment atmosphere.	Once per 12 hours
	<u>AND</u>	
	B.2 Restore required primary containment atmospheric monitoring system to OPERABLE status.	30 days

(continued)



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 283 TO RENEWED FACILITY

OPERATING LICENSE NO. DPR-44 AND AMENDMENT NO. 286 TO

RENEWED FACILITY OPERATING LICENSE NO. DPR-56

EXELON GENERATION COMPANY, LLC

PSEG NUCLEAR, LLC

PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3

DOCKET NOS. 50-277 AND 50-278

1.0 INTRODUCTION

By letter dated April 6, 2011, to the U.S. Nuclear Regulatory Commission (NRC, the Commission), Exelon Generation Company, LLC (EGC) submitted a request to revise the Technical Specifications (TSs) for the Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The proposed change would revise TS 3.4.5, "RCS [Reactor Coolant System] Leakage Detection Instrumentation." In the application, the licensee stated that the license amendment request is consistent with NRC-approved Revision 3 to Technical Specification Task Force (TSTF) Standard Technical Specification (STS) Change Traveler TSTF-514, "Revise BWR [boiling water reactor] Operability Requirements and Actions for RCS [Reactor Coolant System] Leakage Instrumentation." TSTF-514, Revision 3, adds a new Condition D to TS 3.4.6, "RCS Leakage Detection Instrumentation." New Condition D applies when the primary containment atmospheric gaseous radiation monitor is the only operable RCS leakage detection monitor. This condition is currently in PBAPS TS 3.4.5 as Condition A, therefore EGC proposes to modify the required actions for Condition A. The availability of this TS improvement was announced in the *Federal Register* on December 17, 2010 (75 FR 79048).

2.0 REGULATORY EVALUATION

The NRC's regulatory requirements related to the content of the TS are contained in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36. Paragraph (c)(2)(i) of 10 CFR 50.36 states that limiting conditions for operation (LCOs) are the lowest functional capability or performance levels of equipment required for safe operation of the facility. Paragraph (c)(2)(ii) of 10 CFR 50.36 lists four criteria for determining whether particular items are required to be included in the TS LCOs. Criterion 1 applies to installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary (RCPB). As described in the *Federal Register* notice associated with this

regulation (60 FR 36953, July 16, 1995), the scope of the TS includes two general classes of technical matters: (1) those related to prevention of accidents, and (2) those related to mitigation of the consequences of accidents. Criterion 1 addresses systems and process variables that alert the operator to a situation when accident initiation is more likely and supports the first of these two general classes of technical matters which are included in the TS. As specified in Paragraph (c)(2)(i) of 10 CFR 50.36, when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the condition can be met.

The NRC's guidance for the format and content of the BWR TS can be found in NUREG-1433, Revision 3.0, "Standard Technical Specifications General Electric Plants, BWR/4." STS 3.4.6, "RCS Leakage Detection Instrumentation" in NUREG-1433 contains the guidance specific to the RCS leakage detection instrumentation for BWRs.

As stated in NRC Information Notice (IN) 2005-24, "Non conservatism in Leakage Detection Sensitivity," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML051780073), the reactor coolant activity assumptions for primary containment/drywell atmosphere gaseous radioactivity monitors may be nonconservative. This means the monitors may not be able to detect a one gpm leak within one hour under all likely operating conditions.

The issue described in IN 2005-24 has raised questions regarding operability requirements for primary containment/drywell atmosphere gaseous radioactivity monitors. TSTF-514, Revision 3, includes a new TS condition for RCS leakage detection instrumentation to establish Required Actions for operation during conditions of reduced monitoring sensitivity because the gaseous radioactivity instrumentation is the only operable instrument. In addition, TSTF-514, Revision 3, revises the NUREG-1433 TS Bases to summarize the proposed TS changes and more accurately describe the contents of the facility design basis related to operability of the RCS leakage detection instrumentation. A portion of the NUREG-1433 TS Bases changes revise the specified safety function of the RCS leakage detection monitors to specify the required instrument sensitivity level.

The regulation at 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 30, "Quality of Reactor Coolant Pressure Boundary," requires means for detecting and, to the extent practical, identifying the location of the source of RCS leakage. Regulatory Guide (RG) 1.45, Revision 0, "Reactor Coolant Pressure Boundary Leakage Detection Systems," May 1973, describes acceptable methods of implementing the GDC 30 requirements with regard to the selection of leakage detection systems for the RCPB.

RG 1.45, Revision 0, Regulatory Position C.2, states:

Leakage to the primary reactor containment from unidentified sources should be collected and the flow rate monitored with an accuracy of one gallon per minute (gpm) or better.

RG 1.45, Revision 0, Regulatory Position C.3, states:

At least three separate detection methods should be employed and two of these methods should be (1) sump level and flow monitoring and (2) airborne

particulate radioactivity monitoring. The third method may be selected from the following: a. monitoring of condensate flow rate from air coolers, [or] b. monitoring of airborne gaseous radioactivity. Humidity, temperature, or pressure monitoring of the containment atmosphere should be considered as alarms or indirect indication of leakage to the containment.

RG 1.45, Revision 0, Regulatory Position C.5, states:

The sensitivity and response time of each leakage detection system in regulatory position 3 above employed for unidentified leakage should be adequate to detect a leakage rate, or its equivalent, of one gpm in less than one hour.

RG 1.45, Revision 0, Section B, "Discussion," states:

In analyzing the sensitivity of leak detection systems using airborne particulate or gaseous radioactivity, a realistic primary coolant radioactivity concentration assumption should be used. The expected values used in the plant environmental report would be acceptable.

The appropriate sensitivity of a plant's primary containment/drywell atmosphere gaseous radioactivity monitors is dependent on the design assumptions and the plant-specific licensing basis as described in the plant's updated final safety analysis report (UFSAR). The NRC staff's approval of the use of expected primary coolant radioactivity concentration values used in the environmental report creates a potential licensing conflict when a licensee is able to achieve and maintain primary coolant radioactivity concentration values lower than the value assumed in the environmental report.

RG 1.45, Revision 1, "Guidance on Monitoring and Responding to Reactor Coolant System Leakage," was issued in May 2008. RG 1.45, Revision 1, describes methods for implementing the general design criteria (GDC) 30 requirements that are different from those in RG 1.45, Revision 0, and was developed and issued to support new reactor licensing. Revision 1 allows that having two TS leakage detection methods capable of detecting a one gpm leak within one hour provides adequate leakage detection capability from a safety perspective. It recommends that other potential indicators (including the gaseous radiation monitors) be maintained even though they may not have the same detection capability. These indicators, in effect, provide additional defense-in-depth.

PBAPS UFSAR Appendix H, "Conformance to AEC [Atomic Energy Commission] (NRC) Criteria," contains an evaluation of the design bases of the nuclear facility as measured against the GDC for Nuclear Power Plant Construction Permits that were proposed to be added to 10 CFR 50 as Appendix A in July 1967. During the construction licensing process for PBAPS, the units were evaluated against the then current AEC draft of the 27 GDCs for Nuclear Power Plants (November, 1965) rather than the 70 criteria proposed in July 11, 1967 (32 FR 10213). PBAPS conforms with the intent of the AEC proposed GDC shown below:

CRITERION 9 - REACTOR COOLANT PRESSURE BOUNDARY

(CATEGORY A) The reactor coolant pressure boundary shall be designed and constructed so as to have an exceedingly low probability of gross rupture or significant leakage throughout its design lifetime.

CRITERION 10 - CONTAINMENT (CATEGORY A)

Containment shall be provided. The containment structure shall be designed to sustain the initial effects of gross equipment failures, such as a large coolant boundary break, without loss of required integrity and, together with other engineered safety features as may be necessary, to retain for as long as the situation requires the functional capability to protect the public.

CRITERION 16 - MONITORING REACTOR COOLANT PRESSURE

BOUNDARY (CATEGORY B) Means shall be provided for monitoring the reactor coolant pressure boundary to detect leakage.

CRITERION 17 - MONITORING RADIOACTIVITY RELEASES (CATEGORY B)

Means shall be provided for monitoring the containment atmosphere, the facility effluent discharge paths, and the facility environs for radioactivity that could be released from normal operations, from anticipated transients, and from accident conditions.

PBAPS UFSAR, Section 4.10.3.2, states, in part:

Unidentified leakage through the reactor coolant pressure boundary within the primary containment is detected by monitoring drywell temperatures, pressures, airborne radioactivity, and changes of volumetric discharge flow rates in the floor drain sumps.

### 3.0 TECHNICAL EVALUATION

In adopting the changes to the TS included in TSTF-514, Revision 3, the licensee proposed to revise TS 3.4.5, "RCS Leakage Detection Instrumentation," Required Actions for Condition A. Condition A applies when the primary containment atmospheric gaseous monitoring system is the only operable RCS leakage detection monitoring system. The revised Required Actions are necessary because improved fuel integrity and the resulting lower primary coolant radioactivity concentration affect the response of a plant's primary containment atmospheric gaseous radioactivity monitor to a greater extent than the response of other RCS leakage detection monitors to leakage radioactivity. The proposed Required Actions for Condition A require the licensee to analyze grab samples of the primary containment atmosphere once per 12 hours, restore the required drywell sump monitoring system to operable status within 7 days, and monitor RCS leakage by administrative means once per 12 hours.

Administrative means of monitoring RCS leakage include trending parameters that may indicate an increase in RCS leakage. There are diverse alternative methods from which appropriate indicators for identifying RCS leakage may be selected based on plant conditions. EGC will utilize the following methods considering the current plant conditions and historical or expected sources of unidentified leakage, as their TS administrative means: drywell pressure, drywell

temperature, reactor recirculation system pump seal pressure and temperature, reactor recirculation system pump motor cooler temperatures, and safety relief valve tailpipe temperature.

The NRC staff determined that the proposed Required Actions for Condition A are less restrictive than the current requirement, because current Condition A requires the restoration of the drywell sump monitoring system to operable status within 24 hours. In EGC's application they stated:

A review of past operating experience from 1/1/2006 to 2/11/2011 at PBAPS Units 2 and 3 identified that TS 3.4.5 Action A.1 was not entered during the applicable modes (1, 2, and 3). Although the proposed change to the PBAPS TS is an increase in the amount of time the plant is allowed to operate with the drywell floor drain sump flow monitoring system inoperable, the change adds both 12-hour compensatory grab samples of the primary containment atmosphere and 12-hour administrative monitoring of RCS leakage, is consistent with the approved TSTF-514-A intent, and has operating experience to suggest it will be an infrequently entered Action Statement.

The associated revised Actions and Completion Times are adequate because monitoring the RCS by administrative means, coupled with primary containment atmospheric grab samples, are sufficient to alert the operating staff to an unexpected increase in unidentified leakage. The primary containment atmospheric grab samples provide a method of detecting particulate and gaseous radioactive material in the primary containment atmosphere. However, taking frequent grab samples will ensure there is no significant loss of monitoring capability during the Required Action Completion Time. The 12-hour interval is reasonable given the availability of the primary containment atmospheric gaseous radiation monitor. Allowing 7 days to restore the drywell sump monitoring system to operable status is reasonable given (1) the operating experience shows it will be infrequently entered, (2) the diverse methods employed in the Required Actions to detect an RCS leak, and (3) the low probability of a large RCS leak during this period. The revised Required Actions of Condition A are conservative relative to the STS, sufficiently alerts the operating staff, provides a comparable ability to detect RCS leakage, and provides time intervals that are reasonable. Therefore, the NRC staff determined that the revised Required Actions for Condition A provide an adequate assurance of safety when judged against current regulatory standards.

As described in the licensee's letter dated April 6, 2011, the application included "information only" changes showing the planned revisions to the Bases for TS 3.4.5, in conjunction with the proposed TS changes. TS Bases changes are made under the control of the licensee's TS Bases control program as specified in TS 5.5.10. Hence, the NRC staff makes no judgment in this application review as to the adequacy or acceptability of the TS Bases changes submitted.

The NRC staff evaluated the licensee's proposed changes against the applicable regulatory requirements listed in Section 2 of this Safety Evaluation. The NRC staff also compared the proposed changes to the changes made to STS by TSTF-514, Revision 3. The NRC staff determined that all the proposed changes afford adequate assurance of safety when judged against current regulatory standards. Therefore, the NRC staff finds the proposed changes



acceptable. Based on the above evaluation, the NRC staff concludes that the proposed amendment is acceptable.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Pennsylvania State official was notified of the proposed issuance of the amendments. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The NRC staff has determined that the amendments change requirements with respect to installation or use of a facility's components located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (76 FR 55128). The changes discussed in this safety evaluation meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

#### 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

#### 7.0 REFERENCES

1. Exelon Generation Company, LLC, License Amendment Request to adopt Technical Specification Task Force Traveler TSTF-514, Revision 3, April 6, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML110970067).
2. TSTF-514, Revision 3, "Revise BWR Operability Requirements and Actions for RCS Leakage," November 24, 2010 (ADAMS Accession No. ML103280389).
3. TSTF-514 Federal Register Notice (75 FR 79048), Notice of Availability published on December 17, 2010 (ADAMS Accession No. ML102300733).

Principal Contributors: K. Bucholtz

Date: April 23, 2012

April 23, 2012

Mr. Michael J. Pacilio  
President and Chief Nuclear Officer  
Exelon Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 - ISSUANCE  
OF AMENDMENTS RE: REVISE ACTIONS FOR REACTOR COOLANT  
SYSTEM LEAKAGE INSTRUMENTATION (TAC NOS. ME6008 AND ME6009)

Dear Mr. Pacilio:

The U.S. Nuclear Regulatory Commission (NRC, the Commission) has issued the enclosed Amendment Nos. 283 and 286 to Renewed Facility Operating License Nos. DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated April 6, 2011. The amendments issued with this letter modify the actions to be taken when the containment atmospheric gaseous monitor is the only operable leakage detection instrument. The modified actions require additional, more frequent monitoring of other indications of Reactor Coolant System (RCS) leakage and provide appropriate time to restore another monitoring system to operable status. This change is consistent with the NRC-approved safety evaluation on Technical Specification Task Force (TSTF) Traveler, TSTF 514-A, Revision 3, "Revised [Boiling Water Reactor] BWR Operability Requirements and Actions for RCS Leakage Instrumentation." The availability of this TS improvement was announced in the *Federal Register* on December 17, 2010 (75 FR 79048).

All work is complete on TAC Nos. ME6008 and ME6009. Accordingly, these TAC numbers will be closed. A copy of our safety evaluation is enclosed and a Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,  
*/ra/*

John D. Hughey, Project Manager  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-277 and 50-278

Enclosures:

1. Amendment No. 283 to Renewed DPR-44
2. Amendment No. 286 to Renewed DPR-56
3. Safety Evaluation

cc w/enclosures: Distribution via ListServ

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