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

December 7, 2011

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

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2, ISSUANCE OF AMENDMENTS REGARDING TECHNICAL SPECIFICATIONS TASK FORCE (TSTF) TRAVELER TSTF-475, REVISION 3, "REVISE BOILING WATER REACTORS OPERABILITY REQUIREMENTS AND ACTIONS FOR REACTOR COOLANT SYSTEM LEAKAGE INSTRUMENTATION" (TAC NOS. ME5978 AND ME5979)

Dear Mr. Pacilio:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 204 to Facility Operating License (FOL) No. NPF-11 and Amendment No. 191 to FOL No. NPF-18 for the LaSalle County Station (LSCS), Units 1 and 2, respectively. The amendments are in response to your application dated April 4, 2011, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML110960216) as supplemented by letter dated August 15, 2011, (ADAMS Accession No. ML112280281).

The amendments revise LSCS Technical Specification (TSs) to define a new time limit for restoring inoperable reactor coolant system (RCS) leakage detection instrumentation to operable status; and establish alternate methods of monitoring RCS leakage when one or more required monitors are inoperable.

The application also makes TS Bases changes which reflect the proposed changes and more accurately reflect the contents of the facility design basis related to operability of the RCS leakage detection instrumentation.

These changes are consistent with the NRC-approved Revision 3 to Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler TSTF-514, "Revise BWR [boiling-water reactor] Operability Requirements and Actions for RCS Leakage Instrumentation." TSTF-514 was made available by the NRC on, December 17, 2010, (75 FR 79048), as part of the consolidated line item improvement process.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

Araceli T. Billoch Colón

Araceli T. Billoch Colón, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-373 and 50-374

Enclosures:
1. Amendment No. 204 to NPF-11
2. Amendment No. 191 to NPF-18
3. Safety Evaluation

cc w/encls: Distribution via ListServ

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

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-373

LASALLE COUNTY STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 204
License No. NPF-11

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment filed by the Exelon Generation Company, LLC (the licensee), dated April 4, 2011, as supplemented by letter dated August 15, 2011, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 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 set forth in 10 CFR Chapter I;

   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 the Facility Operating License No. NPF-11 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 204 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Jacob I. Zimmerman, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications and Facility Operating License

Date of Issuance: December 7, 2011

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

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-374

LASALLE COUNTY STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 191
License No. NPF-18

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment filed by the Exelon Generation Company, LLC (the licensee), dated April 4, 2011, as supplemented by letter dated August 15, 2011, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 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 set forth in 10 CFR Chapter I;

   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 enclosure to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-18 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 191 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Jacob I. Zimmerman, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications and Facility Operating License

Date of Issuance: December 7, 2011

ATTACHMENT TO LICENSE AMENDMENT NOS. 204 AND 191

FACILITY OPERATING LICENSE NOS. NPF-11 AND NPF-18

DOCKET NOS. 50-373 AND 50-374

Replace the following pages of the Facility Operating Licenses and Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
License NPF-11	License NPF-11
Page 3	Page 3
License NPF-18	License NPF-18
Page 3	Page 3
TSs	TSs
3.4.7-2	3.4.7-2
3.4.7-3	3.4.7-3
3.4.7-4	3.4.7-4

(4) Exelon Generation Company, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(5) Exelon Generation Company, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of LaSalle County Station, Units 1 and 2, and such byproduct materials as may be produced by the operation of Braidwood Station, Units 1 and 2, Byron Station, Unit Nos. 1 and 2, and Clinton Power Station, Unit 1.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

Am. 198
09/16/10

(1) Maximum Power Level

The licensee is authorized to operate the facility at reactor core power levels not in excess of full power (3546 megawatts thermal).

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 204, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan. |

Am. 194
08/28/09

(3) DELETED

Am. 194
08/28/09

(4) DELETED

Am. 194
08/28/09

(5) DELETED

Am. 194
08/28/09

(6) DELETED

Am. 194
08/28/09

(7) DELETED

(5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70 possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of LaSalle County Station Units 1 and 2, and such byproduct materials as may be produced by the operation of Braidwood Station, Units 1 and 2, Byron Station, Unit Nos. 1 and 2, and Clinton Power Station, Unit 1.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at reactor core power levels not in excess of full power (3546 megawatts thermal). Items in Attachment 1 shall be completed as specified. Attachment 1 is hereby incorporated into this license.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 191, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

Am. 181 08/28/09 (3) DELETED

Am. 181 08/28/09 (4) DELETED

Am. 181 08/28/09 (5) DELETED

Am. 181 08/28/09 (6) DELETED

Am. 181 08/28/09 (7) DELETED

Am. 181 08/28/09 (8) DELETED

Am. 181 08/28/09 (9) DELETED

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. Drywell air cooler condensate flow rate monitoring system inoperable.	----------NOTE---------- Not applicable when the required drywell atmospheric monitoring system is inoperable. ----------		
	C.1	Perform SR 3.4.7.1.	Once per 8 hours
----------NOTE---------- Only applicable when the drywell atmospheric gaseous radiation monitor is the only OPERABLE monitor. ---------- D. Drywell floor drain sump flow monitoring system inoperable. AND Drywell air cooler condensate flow rate monitoring system inoperable.	D.1	Analyze grab samples of the drywell atmosphere.	Once per 12 hours
	AND		
	D.2	Monitor RCS LEAKAGE by administrative means.	Once per 12 hours
	AND		
	D.3.1	Restore drywell floor drain sump flow monitoring system to OPERABLE status.	7 days
		OR	
	D.3.2	Restore drywell air cooler condensate flow rate monitoring system to OPERABLE status.	7 days

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required drywell atmospheric monitoring system inoperable. AND Drywell air cooler condensate flow rate monitoring system inoperable.	E.1 Restore required drywell atmospheric monitoring system to OPERABLE status. OR E.2 Restore drywell air cooler condensate flow rate monitoring system to OPERABLE status.	30 days 30 days
F. Required Action and associated Completion Time of Condition A, B, C, D, or E not met.	F.1 Be in MODE 3. AND F.2 Be in MODE 4.	12 hours 36 hours
G. All required leakage detection systems inoperable.	G.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

----------NOTE----------
When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided the other required leakage detection instrumentation is OPERABLE.

SURVEILLANCE		FREQUENCY
SR 3.4.7.1	Perform CHANNEL CHECK of required drywell atmospheric monitoring system.	In accordance with the Surveillance Frequency Control Program
SR 3.4.7.2	Perform CHANNEL FUNCTIONAL TEST of required leakage detection instrumentation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.7.3	Perform CHANNEL CALIBRATION of required leakage detection instrumentation.	In accordance with the Surveillance Frequency Control Program

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 204 TO FACILITY OPERATING LICENSE NO. NPF-11

AND AMENDMENT NO. 191 TO FACILITY OPERATING LICENSE NO. NPF-18

EXELON GENERATION COMPANY, LLC

LASALLE COUNTY STATION, UNITS 1 AND 2

DOCKET NOS. 50-373 AND 50-374

1.0 INTRODUCTION

By letter to the U.S. Nuclear Regulatory Commission (NRC, the Commission) dated April 4, 2011, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML110960216) as supplemented by a letter dated August 15, 2011 (ADAMS Accession No. ML112280281), Exelon Generation Company, LLC (EGC, the licensee), requested changes to the Technical Specifications (TSs) for the LaSalle County Station (LSCS), Units 1 and 2. The proposed changes revise TS 3.4.7, "RCS [reactor coolant system] Leakage Detection Instrumentation," and include TS Bases changes that summarize and clarify the purpose of the TS and the specified safety function of the leakage detection monitors.

The licensee requested to amend the LSCS TSs to define a new time limit for restoring inoperable RCS leakage detection instrumentation to operable status; and establish alternate methods of monitoring RCS leakage when one or more required monitors are inoperable.

The application also makes TS Bases changes which reflect the proposed changes and more accurately reflect the contents of the facility design basis related to operability of the RCS leakage detection instrumentation.

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 Leakage Instrumentation," (ADAMS Accession No. ML103280389). The availability of this TS improvement was announced in the *Federal Register* on December 17, 2010 (75 FR 79048; ADAMS Accession No. ML102300733), as part of the consolidated line item improvement process.

The August 15, 2011, supplement, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's initial proposed no significant hazards consideration, as published in the *Federal Register*.

2.0 REGULATORY EVALUATION

The NRC's regulatory requirements related to the content of the TSs are contained in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36, "Technical specifications." Pursuant to 10 CFR 50.36, TSs are required to include items in the following five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements; (4) design features; and (5) administrative controls. The rule does not specify the particular requirements to be included in a plant's TSs. The regulations in 10 CFR 50.26(c)(2)(i), "Limiting conditions for operations," state, in part, that

> Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.

The regulations in 10 CFR 50.36(c)(2)(ii) list four criteria for determining whether particular items are required to be included in the TS LCOs. Criterion 1 applies to "[i]nstalled 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 TSs 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.

The NRC's guidance for the format and content of the BWR TSs can be found in NUREG-1434, Revision 3, "Standard Technical Specifications [STS] General Electric Plants, BWR/6," dated June 2004 (ADAMS Accession No. ML041910204). STS 3.4.7, "RCS Leakage Detection Instrumentation," in NUREG-1434 Revision 3, contains the guidance specific to the RCS leakage detection instrumentation for BWRs.

The Bases for STS 3.4.7 contained in NUREG-1434, Revision 3, provide background information, the applicable safety analyses, a description of the LCO, the applicability for the RCS leakage detection instrumentation TS, and describe the Actions and Surveillance Requirements. The TS Bases provide the purpose or reason for the TS, which are derived from the analyses and evaluation included in the safety analysis report, including RCS leakage detection instrumentation design assumptions and licensing basis for the LSCS.

As stated in NRC Information Notice (IN) 2005-24, "Non conservatism in Leakage Detection Sensitivity," dated August 5, 2005, (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 gallon per minute (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, revises the 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. The TS Bases changes revise the specified safety function of the RCS leakage detection monitors to specify the required instrument sensitivity level. In addition, 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.

The regulations in 10 CFR Part 50, Appendix A, General Design Criterion (GDC)-30, "Quality of Reactor Coolant Pressure Boundary," require means for detecting and, to the extent practical, identifying the location of the source of RCS leakage. NRC 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 that:

> 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, it states that,

> 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, "Detector Response Time," states, in part, that

> 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.

The RG 1.45, Revision 1, "Guidance on Monitoring and Responding to Reactor Coolant System Leakage," was issued in May 2008 (ADAMS Accession No. ML073200271). RG 1.45, Revision 1, describes methods for implementing the GDC-30 requirements that are different from those in the 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.

The LSCS UFSAR, Section 5.2.5.2, "Leak Detection Devices Within Primary Containment," provides a description of the LSCS primary methods for detecting leaks as stated below:

- Drywell Floor Drain Sump Measurement:

  The normal design leakage collected in the floor drain sump consists of leakage from the control rod drives, valve flange leakage, valve stem packing leakage floor drains, chilled cooling water system, and drywell cooling unit drains.

- Drywell Equipment Drain Sump:

  The equipment drain sump collects only identified leakage. This sump receives condensate drainage from pump seal leakoff, reactor vessel heat flange vent drain, and valve packing leakoff. Collection in excess of background leakage would indicate reactor coolant leakage.

- Drywell Cooler Drain:

  Condensate from the drywell coolers is routed to the floor drain sump and is monitored by use of a flow transmitter mounted locally while having indicating and alarm instrumentation in the control room. An adjustable alarm is set to annunciate on the condensate flow rate approaching the technical specification limit.

- Drywell Pressure Measurement:

  The drywell is at a slightly positive pressure during reactor operation. The pressure fluctuates slightly as a result of barometric pressure changes and outleakage. A pressure rise above the normally indicated values will indicate the presence of a leak within the drywell.

- Drywell Temperature Measurement:

  The drywell cooling system circulates the drywell atmosphere through heat exchangers (air coolers) to maintain the drywell at its designed operating temperature and also provides cooling water to the air coolers. An increase in drywell atmosphere temperature would increase the temperature rise in the chilled cooling water passing through the coils of the air coolers. Thus, an increase in the chilled cooling water temperature difference between inlet and outlet to the air coolers will indicate the presence of reactor coolant or steam leakage. Also, a drywell ambient temperature rise will indicate the presence of reactor coolant or steam leakage. A temperature rise in the drywell is detected by monitoring the drywell temperature at various elevations, the inlet and outlet air to the coolers, and the chilled cooling water temperature increase between inlet and outlet to the coolers.

- Drywell Air Sampling

  The drywell air sampling system is used to supplement the temperature, pressure and flow variation method (described previously) and to detect leaks in the nuclear system process barrier. The system continuously monitors the drywell atmosphere for airborne radioactivity. The sample is drawn from the drywell. A sudden increase of activity, which may be attributed to steam or reactor water leakage, is annunciated in the control room.

- Reactor Vessel Head Closure

  The reactor vessel head closure is provided with double seals with a leakoff connection between seals that is piped through a normally closed manual valve to the equipment drain sump. Leakage through the first seal is annunciated in the control room. When pressure between the seals increases, an alarm in the control room is actuated. The second seal then operates to contain the vessel pressure.

- Reactor Water Recirculation Pump Seal

  Reactor water recirculation pump seal leaks are detected by monitoring the drain line. Leakage, indicated by high flow rate, alarms in the control room. Leakage is piped to the equipment drain sump.

- Safety/Relief Valves

  Temperature sensors connected to a multipoint recorder are provided to detect safety/relief valve leakage during reactor operation. Safety/relief valve temperature elements are mounted, using a thermowell, in the safety/relief valve discharge piping several feet from the valve body. Temperature rise above ambient is annunciated in the main control room.

- Valve Packing Leakage

  Valve stem packing leaks of certain power-operated valves in the nuclear boiler system, reactor water cleanup system, residual heat removal system, and recirculation system are detected by monitoring packing leakoff for high temperature and are annunciated by an alarm in the control room.

The LSCS UFSAR, Section 3.1.2.4.1, "Evaluation against Criterion 30 – Quality of Reactor Coolant Pressure Boundary," provides a discussion of the criterion and LSCS's design conformance to GDC 30 of 10 CFR 50, Appendix A. The RCPB and its leak detection system are designed to meet the requirements of GDC-30.

As discussed in Appendix B of the LSCS UFSAR, LSCS is committed to NRC RG 1.45, Revision 0. RG 1.45 describes methods acceptable to the NRC to assure that leakage detection and collection systems provide maximum practical identification of leaks within the reactor coolant pressure boundary. The LSCS RCS leakage detection systems are consistent with the recommendations of RG 1.45, Revision 0.

Note that LSCS is not committed to RG 1.45, Revision 1, "Guidance on Monitoring and Responding to Reactor Coolant System Leakage," issued on May 2008.

3.0 TECHNICAL EVALUATION

In adopting the changes to the TS included in TSTF-514, Revision 3, the licensee proposed to revise TS 3.4.7, "RCS Leakage Detection Instrumentation," Conditions, and Required Actions. The licensee proposed adding new Condition D to TS 3.4.7. New Condition D would be applicable when the drywell atmospheric gaseous radiation monitor is the only operable RCS leakage detection monitor. This new Condition is necessary because improved fuel integrity and the resulting lower primary coolant radioactivity concentration affect the response of the LSCS drywell atmospheric gaseous radioactivity monitor to a greater extent than the response of the other RCS leakage detection monitors to leakage radioactivity. The proposed Required Actions for new Condition D require the licensee to analyze grab samples of the drywell atmosphere once per 12 hours, restore either the drywell air cooler condensate flow rate monitoring system or the required drywell floor drain sump monitoring system to Operable status within seven 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. The licensee will utilize the following methods considering the current plant conditions and historical or expected sources of unidentified leakage, as their TS administrative means: drywell floor drain sump measurement, drywell equipment drain sump, drywell cooler drain flow, drywell pressure measurement, drywell temperature measurement, drywell air sampling, reactor vessel head closure seal annulus pressure, reactor water recirculation pump seal flow rate, safety/relief valve discharge piping temperature, valve packing leakage, component cooling water system outlet temperatures, component cooling water system makeup, reactor recirculation system pump seal pressure and temperature, reactor recirculation system pump motor cooler temperatures, drywell cooling fan outlet temperatures, reactor building chiller amperage, and control rod drive system flange temperatures.

The NRC staff determined that the proposed Condition D is more restrictive than the licensee's current TS requirements, because there is no current TS condition for the plant condition of the drywell atmospheric gaseous radioactivity monitor being the only operable RCS leakage detection monitor. The associated proposed Actions and Completion Times are adequate because monitoring the RCS by administrative means, coupled with drywell atmospheric grab samples, are sufficient to alert the operating staff to an unexpected increase in unidentified leakage. The drywell atmospheric grab samples are comparable to the atmospheric particulate radiation monitor with respect to the ability to detect RCS leakage. 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 drywell atmospheric gaseous radiation monitor. Allowing seven days to restore another RCS leakage monitor to operable status is reasonable given the diverse methods employed in the Required Actions to detect an RCS leak and the low probability of a large RCS leak during this period. Proposed Condition D is 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 proposed Condition D provides an adequate assurance of safety when judged against current regulatory standards and is, therefore, acceptable.

The licensee also proposes minor changes to ensure continuity of the TS format. These changes include re-lettering current Condition D, which applies when the drywell floor drain sump monitoring system is the only operable RCS leakage detection instrument, to Condition E, current Condition E, which applies when the required action and the associated Completion Time are not satisfied, to Condition F, and current Condition F, which applies when all required leakage detection systems are inoperable, to Condition G. Similar changes were made to the associated Required Actions. The NRC staff determines that these changes are editorial, and therefore acceptable.

In adopting TSTF-514, Revision 3, the licensee proposed changes that would revise the Bases for TS 3.4.7 to reflect the proposed TS changes and more accurately describe the contents of the facility design basis related to operability of the RCS leakage detection instrumentation and reflect the proposed TS changes. The regulation at 10 CFR 50.36(a)(1) requires a summary statement of the TS Bases or reasons for such specifications be included with the application. The proposed TS Bases changes related to operability of the RCS leakage detection instrumentation are acceptable because they are consistent with the design basis of the facility and provide: background information, applicable safety analyses, a description of the limiting condition for operation, and the applicability for the RCS leakage detection instrumentation TS.

These instruments satisfy Criterion 1 of 10 CFR 50.36(c)(2)(ii) in that they are installed instrumentation that is used to detect and indicate in the control room a significant abnormal degradation of the RCPB.

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.

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves 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 amendment involves no significant hazards consideration, and there has been no public comment on such finding, which was published in the *Federal Register* on May 17, 2011 (76 FR 28473). Accordingly, the amendment meets 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 amendment.

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 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, March 30, 2011. (ADAMS Accession No. ML110960216)

2. TSTF-514, Revision 3, "Revise BWR Operability Requirements and Actions for RCS Leakage," November 24, 2010. (ADAMS Accession No. ML103280389)

3. *Federal Register* Notice, Notice of Availability published on December 17, 2010. (ADAMS Accession No. ML102300733)

4. Exelon Generation Company, LLC, Supplemental Information Related to License Amendment Request to adopt Technical Specification Task Force (TSTF) Traveler TSTF-514, Revision 3, August 15, 2011. (ADAMS Accession No. ML112280281)

Principal Contributor: K Bucholtz

Date of issuance: December 7, 2011

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Araceli T. Billoch Colón, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-373 and 50-374

Enclosures:
1. Amendment No. 204 to NPF-11
2. Amendment No. 191 to NPF-18
3. Safety Evaluation

cc w/encls: Distribution via ListServ

DISTRIBUTION:
PUBLIC LPL3-2 R/F
RidsOgcRp Resource
RidsRgn3MailCenter Resource
RidsNrrLASRohrer Resource
RidsAcrsAcnw_MailCTR Resource
RidsNrrPMLaSalle Resource
RidsNrrDirsItsb Resource
RidsNrrDorlLpl3-2 Resource
RidsNrrDorlDpr Resource

ADAMS Accession no. ML112580401 NRR-058 *SE Memo Date

OFFICE	LPL3-2/PM	LPL3-2/LA	DIRS/ITSB*	OGC(NLO)	LPL3-2/BC	LPL3-2
NAME	ABillochColon	SRohrer	RElliot	CKanatas	JZimmerman	ABillochColon
DATE	12 /06/2011	12/ 06/2011	9/8/2011	11/28/2011	12/07/2011	12/07/11

OFFICIAL RECORD COPY