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10 CFR 50
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U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Subject: Supplemental information associated with implementation of BWRVIP-25, "Core Plate Inspection and Flaw Evaluation Guidelines," related to the LaSalle County Station, Units 1 and 2, License Renewal Application (TAC Nos. MF5347 AND MF5346)"

References: 1. Letter from Michael P. Gallagher, Exelon Generation Company LLC (Exelon) to NRC Document Control Desk, dated December 9, 2014, "Application for Renewed Operating Licenses"

2. Teleconference Summary from Jeffrey S. Mitchell, USNRC, dated January 7, 2016, "Summary of Teleconference held on December 22, 2015, between the NRC and Exelon Generation Co., LLC, concerning the LaSalle County Station License Renewal Application (TAC Nos. MF5347 and MF5346)"

In Reference 1, Exelon Generation Company, LLC (Exelon) submitted the License Renewal Application (LRA) for the LaSalle County Station (LSCS), Units 1 and 2. Reference 2 summarizes a conference call that was held between NRC and Exelon staff personnel on December 22, 2015, related to information contained in the LSCS LRA associated with aging management of core plate rim hold-down bolts.

As a result of the change in status of a BWRVIP-25 Deviation Disposition for LSCS, and also as a result of feedback from NRC staff related to aging management of the core plate rim hold-down bolts, Exelon is supplementing the LRA. This Supplement updates various sections of the LRA, and includes the addition of a new Enhancement to the BWR Vessel Internals (B.2.1.9) program commitment (Commitment 9) to provide assurance that the function of the core plate rim hold-down bolts is maintained throughout the period of extended operation.

Enclosure A provides a description of this LRA Supplement.

Enclosure B contains updates to sections of the LRA (except for the License Renewal Commitment List) affected by this LRA Supplement.

Enclosure C provides an update to the License Renewal Commitment List (LRA Appendix A, Section A.5). There are no other new or revised regulatory commitments contained in this letter.

If you have any questions, please contact Mr. John Hufnagel, Licensing Lead, LaSalle License Renewal Project, at 610-765-5829.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 01-14-2016

Respectfully,

Michael P. Gallagher
Vice President - License Renewal Projects
Exelon Generation Company, LLC

Enclosures: A. Description of LSCS LRA Supplement
B. LSCS License Renewal Application Updates
C. LSCS License Renewal Commitment List Update

cc: Regional Administrator – NRC Region III
NRC Project Manager (Safety Review), NRR-DLR
NRC Project Manager (Environmental Review), NRR-DLR
NRC Project Manager, NRR-DORL- LaSalle County Station
NRC Senior Resident Inspector, LaSalle County Station
Illinois Emergency Management Agency - Division of Nuclear Safety

Enclosure A

Description of LSCS LRA Supplement Related to Core Plate Rim Hold-Down Bolts

This enclosure provides a description of an enhancement that is added to the BWR Vessel Internals (B.2.1.9) aging management program and associated revisions to the License Renewal Application (LRA).

As a result of recent change in status of a Deviation Disposition from the inspection guidance within BWRVIP-25 for LSCS Units 1 and 2, and also as a result of feedback from NRC staff related to aging management of the core plate rim hold-down bolts, Exelon is supplementing the LRA. As discussed in LRA Appendix C, Applicant Action Item BWRVIP-25 (5), Exelon had a BWRVIP Deviation Disposition in place, effective until December 31, 2015, to deviate from the inspection guidance within BWRVIP-25 for core plate rim hold-down bolts. The BWRVIP recognizes that it is not possible to implement meaningful inspections using the inspection methods recommended within BWRVIP-25. As of December 31, 2015, the BWRVIP had not developed a NRC-approved revised inspection method or other solution for aging management of the core plate rim hold-down bolts. As a result, Exelon revised the Deviation Disposition prior to December 31, 2015 to postpone inspections of the core plate rim hold-down bolts on LSCS Units 1 and 2 until revised BWRVIP guidance for core plate bolting inspection is approved by the NRC, or some other NRC-approved solution is implemented. To ensure adequate aging management of the core plate rim hold-down bolts during the period of extended operation, an enhancement is added to the BWR Vessel Internals aging management program to install core plate wedges no later than six months prior to entering the period of extended operation, or submit an inspection plan for the core plate rim hold-down bolts with supporting analysis for NRC approval at least 2 years prior to entering the period of extended operation. The installation of core plate wedges would eliminate the need to inspect core plate rim hold-down bolts.

This Supplement updates several sections of the LRA, and includes the addition of a new enhancement to the BWR Vessel Internals program commitment (Commitment 9) to provide assurance that the function of the core plate rim hold-down bolts is maintained throughout the period of extended operation.

LRA Section A.2.1.9 is revised to add the enhancement to the BWR Vessel Internals program as shown in Enclosure B. LRA Section B.2.1.9 is revised to add the enhancement to the BWR Vessel Internals program and clarify aging management of the core plate rim hold-down bolts during the period of extended operation, as shown in Enclosure B. LRA Appendix C, Applicant Action Item BWRVIP-25 (5), is revised to be consistent with the current Deviation Disposition from BWRVIP-25 inspection guidance and refer to the added enhancement, as shown in Enclosure B.

LRA Table A.5, Commitment 9 is revised to add Enhancement 4 to the BWR Vessel Internals program as shown in Enclosure C.

Enclosure B

LSCS License Renewal Application Updates
Resulting from the Supplement Associated with the Core Plate Rim Hold-Down Bolts

Note: To facilitate understanding, portions of the LRA have been repeated in this Enclosure, with revisions indicated. Previously submitted information is shown in normal font. Changes are highlighted with ***bolded italics*** for inserted text and ~~strikethroughs~~ for deleted text.

LRA Appendix A, Section A.2.1.9, starting on page A-13, is revised to add Enhancement 4, as shown below.

A.2.1.9 BWR Vessel Internals

The BWR Vessel Internals aging management program is an existing condition monitoring and mitigative program that manages the effects of cracking, loss of material, and loss of fracture toughness of reactor pressure vessel internal components through condition monitoring activities that consist of examinations that are implemented through station procedures consistent with the recommendations of the BWRVIP guidelines and ASME Code, Section XI, Table IWB-2500-1. The program also addresses aging degradation of X-750 alloy that is used for BWR vessel internal components. The program also mitigates these aging effects by managing water chemistry per the Water Chemistry (A.2.1.2) program.

The program will include aging management of reactor internal components fabricated from Cast Austenitic Stainless Steel (CASS) for loss of fracture toughness due to thermal aging and neutron embrittlement.

The BWR Vessel Internals aging management program will be enhanced to:

1. Perform an assessment of the susceptibility of reactor vessel internal components fabricated from CASS to loss of fracture toughness due to thermal aging embrittlement. If material properties cannot be determined to perform the screening, they will be assumed susceptible to thermal aging for the purposes of determining program examination requirements.

2. Perform an assessment of the susceptibility of reactor vessel internal components fabricated from CASS to loss of fracture toughness due to neutron irradiation embrittlement.

3. Specify the required periodic inspection of CASS components determined to be susceptible to loss of fracture toughness due to thermal aging and neutron irradiation embrittlement. The initial inspections will be performed either prior to or within five years after entering the period of extended operation.

4. Install core plate wedges no later than six months prior to the period of extended operation, or before the end of the last refueling outage prior to the period of extended operation, whichever occurs later; or, submit an inspection plan for the core plate rim hold-down bolts with a supporting analysis for NRC approval at least 2 years prior to entering the period of extended operation.

These enhancements will be implemented prior to the period of extended operation.

The fifth paragraph of the Program Description Section of LRA Appendix B Section B.2.1.9, on LRA page B-44, is revised as shown below.

B.2.1.9 BWR Vessel Internals

Program Description

Core Plate: ***Core plate wedges will be installed or i***~~I~~nspections ***of the core plate rim hold-down bolts will be performed in accordance with a staff-approved inspection plan. The installation of core plate wedges would eliminate the need to inspect the core plate rim hold-down bolts.*** ~~and~~ f***F***law evaluations are performed in accordance with BWRVIP-25. The repair design criteria in BWRVIP-50-A would be utilized in preparing a repair plan for the core plate.

The Enhancements subsection of LRA Appendix B, Section B.2.1.9, on LRA page B-46 is revised to add Enhancement 4, as shown below.

B.2.1.9 BWR Vessel Internals

Enhancements

Prior to the period of extended operation, the following enhancements will be implemented in the following program elements:

1. Perform an assessment of the susceptibility of reactor vessel internal components fabricated from CASS to loss of fracture toughness due to thermal aging embrittlement. If material properties cannot be determined to perform the screening, they will be assumed susceptible to thermal aging for the purposes of determining program examination requirements. **Program Elements Affected: Scope of Program (Element 1) and Acceptance Criteria (Element 6)**

2. Perform an assessment of the susceptibility of reactor vessel internal components fabricated from CASS to loss of fracture toughness due to neutron irradiation embrittlement. **Program Element Affected: Scope of Program (Element 1)**

3. Specify the required periodic inspection of CASS components determined to be susceptible to loss of fracture toughness due to thermal aging and neutron irradiation embrittlement. The initial inspection will be performed either prior to or within five years after entering the period of extended operation. **Program Elements Affected: Parameters Monitored/Inspected (Element 3), Detection of Aging Effects (Element 4), and Acceptance Criteria (Element 6)**

4. Install core plate wedges no later than six months prior to the period of extended operation, or before the end of the last refueling outage prior to the period of extended operation, whichever occurs later; or, submit an inspection plan for the core plate rim hold-down bolts with a supporting analysis for NRC approval at least 2 years prior to entering the period of extended operation. Program Element Affected: Scope of Program (Element 1)

LRA Appendix C, Applicant Action Item BWRVIP-25 (5) on LRA page C-4 is revised to update the disposition of the Applicant Action Item, as shown below.

BWRVIP-25 Core Plate Inspection and Flaw Evaluation Guidelines	
Action Item Description	**LaSalle Response**
BWRVIP-25 (4) Due to susceptibility of the rim hold-down bolts to stress relaxation, applicants referencing the BWRVIP-25 report for license renewal should identify and evaluate the projected stress relaxation as a potential TLAA issue.	Preload of the rim hold-down bolts is required to prevent lateral motion of the core plate for those plants that do not have core plate wedges installed. Stress relaxation of the RPV core plate rim hold-down bolts has been identified as a TLAA issue as evaluated in LRA Section 4.2.8.
BWRVIP-25 (5) Until such time as an expanded technical basis for not inspecting the rim hold-down bolts is approved by the staff, applicants referencing the BWRVIP-25 report for license renewal should continue to perform inspections of the rim hold-down bolts.	The BWRVIP recognizes that it is not possible to implement meaningful inspections using the inspection methods recommended in BWRVIP-25. The BWRVIP is addressing this issue and intends to develop revised guidance. The BWRVIP recommendation to document deviation from BWRVIP-25 inspection guidelines of the core plate hold down bolts is currently being implemented. A BWRVIP Deviation Disposition is in place ~~December 31, 2015, or~~ until ~~the NRC approves~~ revised ~~BWRVIP~~ guidance ***for core plate bolting inspection within BWRVIP, or some other NRC-approved solution is implemented***~~, whichever occurs first~~. ~~Therefore, inspection of the core plate rim hold down bolts will be in compliance with BWRVIP guidance prior to and through the period of extended operation.~~ ***BWR Vessel Internals aging management program Enhancement 4 requires installation of core plate wedges no later than six months prior to entering the period of extended operation, or submittal of an inspection plan for the core plate rim hold-down bolts with a supporting analysis for NRC approval at least 2 years prior to entering the period of extended operation. The installation of core plate wedges would eliminate the need to inspect the core plate rim hold-down bolts.***

Enclosure C

LSCS License Renewal Commitment List Update

This Enclosure identifies commitments made in this document and is an update to the LSCS LRA Appendix A, Table A.5 License Renewal Commitment List. Any other actions discussed in the submittal represent intended or planned actions. They are described to the NRC for the NRC's information and are not regulatory commitments.

Changes to the LSCS LRA Appendix A, Table A.5 License Renewal Commitment List are as a result of this LRA Supplement, pertaining to the core plate rim hold-down bolts.

To facilitate understanding, relevant portions of the previously submitted License Renewal Commitment List have been repeated in this Enclosure, with revisions indicated. Previously submitted information is shown in normal font. Additions due to this submittal are highlighted with ***bolded italics*** for inserted text.

LRA Table A.5, License Renewal Commitment List, Commitment 9 on page A-61, is revised to include the added commitment, as shown below.

NO.	PROGRAM OR TOPIC	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE
9	BWR Vessel Internals	BWR Vessel Internals is an existing program that will be enhanced to: 1. Perform an assessment of the susceptibility of reactor vessel internal components fabricated from CASS to loss of fracture toughness due to thermal aging embrittlement. If material properties cannot be determined to perform the screening, they will be assumed susceptible to thermal aging for the purposes of determining program examination requirements. 2. Perform an assessment of the susceptibility of reactor vessel internal components fabricated from CASS to loss of fracture toughness due to neutron irradiation embrittlement. 3. Specify the required periodic inspection of CASS components determined to be susceptible to loss of fracture toughness due to thermal aging and neutron irradiation embrittlement. The initial inspections will be performed either prior to or within five years after entering the period of extended operation. ***4. Install core plate wedges no later than six months prior to the period of extended operation, or before the end of the last refueling outage prior to the period of extended operation, whichever occurs later; or, submit an inspection plan for the core plate rim hold-down bolts with a supporting analysis for NRC approval at least 2 years prior to entering the period of extended operation.***	Program to be enhanced no later than six months prior to the period of extended operation. Additional schedule information identified in commitment.	Section A.2.1.9 ***Exelon Letter RS-16-007 01/14/2016***