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

August 28, 2015

LICENSEE: Exelon Generation Co., LLC

FACILITY: LaSalle County Station, Units 1 and 2

SUBJECT: SUMMARY OF TELECON HELD ON JUNE 23, 2015, BETWEEN THE NRC AND EXELON GENERATION CO., LLC, CONCERNING REQUEST FOR ADDITIONAL INFORMATION SET 6 PERTAINING TO THE LASALLE COUNTY STATION LICENSE RENEWAL APPLICATION (TAC NOS. MF5347 AND MF5346)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Exelon Generation Co., LLC (Exelon or the applicant) held a telephone conference call on June 23, 2015, to discuss and clarify the staff's draft requests for additional information (DRAIs) provided in Enclosure 2 concerning the LaSalle County Station, Units 1 and 2, license renewal application. The telephone conference call was useful in clarifying the intent of the staff's DRAIs.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains the DRAIs discussed with the applicant, including a brief description on the status of the items.

The applicant had an opportunity to comment on this summary.

Sincerely,

/RA/

Jeffrey S. Mitchell, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-373 and 50-374

Enclosures:
1. List of Participants
2. Summary of Telephone Conference Call

cc: Listserv

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DATE	8/ 19 /15	8/ 25 /15	8/ 26 /15	8/ 28 /15	8/ 28 /15

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Memo to Exelon Generation Co. from J. Mitchell dated August 28, 2015

SUBJECT: SUMMARY OF TELECON HELD ON JUNE 23, 2015, BETWEEN THE NRC AND EXELON GENERATION CO., LLC, CONCERNING REQUEST FOR ADDITIONAL INFORMATION SET 6 PERTAINING TO THE LASALLE COUNTY STATION LICENSE RENEWAL APPLICATION (TAC NOS. MF5347 AND MF5346)

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TELEPHONE CONFERENCE CALL
LASALLE COUNTY STATION, UNITS 1 AND 2
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS
JUNE 23, 2015

PARTICIPANTS	AFFILIATION
Jeff Mitchell	U.S. Nuclear Regulatory Commission (NRC)
Mark Yoo	NRC
Paul Cervenka	Exelon Generation Co., LLC (Exelon)
Shannon Rafferty-Czincila	Exelon
Michael Guthrie	Exelon
Jim Jordan	Exelon
Cortney Scheidt	Exelon

ENCLOSURE 1

SUMMARY OF TELEPHONE CONFERENCE CALL
LASALLE COUNTY STATION, UNITS 1 AND 2
LICENSE RENEWAL APPLICATION
JUNE 23, 2015

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Exelon Generation Co., LLC (Exelon or the applicant) held a telephone conference call on June 23, 2015, to discuss and clarify the following draft requests for additional information (DRAIs) concerning the LaSalle County Station, Units 1 and 2 license renewal application (LRA).

DRAI B.1.24-1

Background:

Generic Aging Lessons Learned (GALL) Report aging management program (AMP) XI.M36, "External Surfaces Monitoring of Mechanical Components," as modified by License Renewal Interim Staff Guidance (LR-ISG) LR-ISG-2012-02, "Aging Management of Internal Surfaces, Fire Water Systems, Atmospheric Storage Tanks, and Corrosion Under Insulation," program element 4, "Detection of Aging Effects," recommends that "[t]ightly adhering insulation is considered to be a separate population from the remainder of insulation installed on in-scope components. The entire population of in-scope piping that has tightly adhering insulation is visually inspected for damage to the moisture barrier with the same frequency as for other types of insulation inspections."

License renewal application (LRA) Section B.1.24 states in the Program Description section that "the program does not require removal of tightly-adhering insulation that is impermeable to moisture unless there is evidence of damage to the moisture barrier. Instead, the program includes visual inspection of the entire accessible population of piping and components during each 10-year period of the period of extended operation."

Issue:

The staff has identified a difference between the GALL AMP and the applicant's program. The applicant's program states that it will inspect the "entire accessible population" of the "tightly-adhering insulation" components, instead of the "entire population" as stated in the GALL AMP. It is not clear to the staff what criteria were used to identify components as "accessible" and the basis for the acceptability of not inspecting inaccessible insulation. In addition, the staff lacks sufficient information to complete its review of this issue because it does not know the material type and environment (e.g., radiation, UV) of the tightly adhering insulation in inaccessible locations.

Request:

Explain the criteria used in establishing categories of the "accessible" population and justify program adequacy if only the "accessible" population is inspected. In addition, state the insulation material type and environment for the inaccessible insulation.

Teleconference Summary:

The staff agreed to correct the numbering on this RAI from "RAI B.1.24-1" to "RAI B.2.1.24-1" in the final RAI. The applicant did not have any other questions on this RAI.

DRAI B.1.24-2

Background:

GALL Report AMP XI.M36, as modified by LR-ISG-2012-02, program element 4, "Detection of Aging Effects," recommends that "[f]or all outdoor components (except tanks) and any indoor components exposed to condensation (because the in-scope component is operated below the dew point), inspections are conducted of each material type (e.g., steel, stainless steel, copper alloy, aluminum) and environment (e.g., air-outdoor, moist air, air accompanied by leakage) where condensation or moisture on the surfaces of the component could occur routinely or seasonally."

LRA Section B.1.24 states in the Program Description section that "[i]nspections are conducted for each external environment where condensation or moisture on the surfaces of the component could occur routinely or seasonally."

Issue:

It is not clear to the staff that "each external environment" will include each material type and environment as provided in the GALL Report AMP.

Request:

Explain what "each external environment" refers to. Provide an exception with justification if any material/environment combination will be exempted.

Teleconference Summary:

The staff agreed to correct the numbering on this RAI from "RAI B.1.24-2" to "RAI B.2.1.24-2" in the final RAI. The applicant did not have any other questions on this RAI.

DRAI 4.3.2-1

Background:

LRA Section 4.3.2 describes two categories of license renewal systems that were designed in accordance with American Society of Mechanical Engineers (ASME) Section III, Class 2 or 3 or American National Standards Institute (ANSI) B31.1 requirements:

1. systems that are attached to ASME Section III, Class 1 piping and are affected by the same thermal and pressure transients as the Class 1 systems
2. systems that are affected by different thermal and pressure cycles related to their specific operations

The first category includes the portions of the following systems: Residual Heat Removal, High Pressure Core Spray, Low Pressure Core Spray, Reactor Core Isolation Cooling, Reactor Water Cleanup, Control Rod Drive, Main Steam, Feedwater, and Condenser and Air Removal. The systems in the second category include portions of the Reactor Core Isolation Cooling, Fire Protection, and Diesel Generator and Auxiliary systems.

For both groups of non-Class 1 piping, the applicant states that the 60-year projections for the transients will not exceed 7,000 cycles, and therefore, the stress range factors originally selected for the components within these systems remain applicable for the period of extended operation. These allowable stress calculations meet the requirements for a TLAA, and the applicant dispositioned them in accordance with 10 CFR 54.21(c)(1)(i).

Issue:

The applicant provided the 60-year cycle projections for the transients associated with the Class 2 and 3 and ANSI B31.1 piping in the Reactor Coolant System and Auxiliary Systems. However, the applicant did not specify which specific transients are applicable for each system. The applicant also did not provide the applicable transient information for the Auxiliary Feedwater, Emergency Diesel Generator, Fire Protection, Heating Water and Heating Steam System, and Service Water Systems. The staff requires additional clarification on the transients and 60-year projections to verify that the cycle limits and the original allowable stress calculations will remain valid for the period of extended operation.

Request:

For each of the following systems: Residual Heat Removal, High Pressure Core Spray, Low Pressure Core Spray, Reactor Core Isolation Cooling, Reactor Water Cleanup, Control Rod Drive, Main Steam, Feedwater, Condenser and Air Removal, Fire Protection, and Diesel Generator and Auxiliary systems;

a) provide the transients used in the allowable stress calculations,

b) provide the projected 60 year cycle count for each of these transients, and

c) justify that the TLAA remains valid for the period of extended operation in accordance with 10 CFR 54.21(c)(1)(i).

Teleconference Summary:

The applicant noted that the list of systems in the RAI was incomplete. The staff clarified the specific tables for the systems referenced in the RAI, and agreed to revise the RAI to refer to the category of the systems and request that the applicant identify those systems within the category in their response.

DRAI 4.3.3-1

Background:

LRA Section 4.3.3 states that for each Class 1 piping system or subsystem in the environmental fatigue evaluation, the applicant determined the most limiting location for each wetted material type based on the location with the highest ASME CUF value. The LRA further states that, in some cases, one Class 1 piping location was evaluated because the analysis represents another piping location that is bounded. The applicant defined the criteria for determining a bounded location as: a) must be affected by the same transients as the analyzed location, b) must have a lower ASME CUF than the analyzed location, and c) must be made from the same material or, if of a different material, the bounded material must have a lower F_{en} value than the bounding material.

LRA Table 4.3.3-3, Note 12 states that stainless steel location 376IJ in the N7 Head Spray Nozzle bounds the carbon steel location 10A in the Reactor Core Isolation Cooling piping system for Unit 1.

Issue:

The staff noted that in order to have a meaningful comparison of CUF values to determine the most limiting component (or leading location) by using the highest CUF value, it is important that the CUFs were assessed similarly (e.g., amount of rigor in calculating CUF) and used the same fatigue curves in ASME Code, Section III, Appendix I. The staff noted that through the course of plant operation it is possible that CUF values for specific components were possibly re-evaluated as part of power uprates, generic letters, bulletins, etc. to different editions of ASME Code, Section III and with varying levels of rigor when compared to the fatigue evaluations performed for the plant's original design.

The staff also noted that LRA Table 4.3.3-3, Note 12 states that environmental fatigue analysis for the stainless steel location 376IJ is provided in LRA Table 4.3.3-1. The staff noted that location 376IJ is provided in LRA Table 4.3.3-2, which provides the environmental fatigue analysis results for Unit 2. The staff is unclear on either: a) which component in LRA Table 4.3.3-1 the note is referencing, or b) how a component in Unit 2 can bound a piping component in Unit 1 for consideration of environmentally-assisted fatigue.

Requests:

1. Confirm that the CUFs that were compared with each other in a system to identify the location with the highest CUF value were assessed similarly (e.g., amount of rigor in calculating CUF) and used the same fatigue curves in ASME Code Section III Appendix I to provide a meaningful comparison. If not, provide the basis for ranking or comparing the CUFs to one another to provide an appropriate method for screening and determining a leading/limiting location.
2. Clarify which reactor pressure vessel component bounds the carbon steel location 10A from LRA Table 4.3.3-3. If the bounding component is a component in Unit 2, justify how a component or piping component can be used to bound components in different units for consideration for environmentally-assisted fatigue.

3. Identify any additional locations where a different material type was bounded by the limiting location(s) within a system and provide the system, locations, and materials that have been compared and bounded. For the carbon steel location 10A in LRA Table 4.3.3-3 and any additional locations, justify that this comparison of environmentally-adjusted CUF values between different materials within a reactor pressure vessel component or piping system for the consideration of environmentally assisted fatigue is appropriate or valid.

Teleconference Summary:

The applicant clarified that there was an error in the labeling of a node in the LRA, and agreed to correct the error in the response. The applicant did not have any questions regarding this RAI.

DRAI 4.3.3-2

Background:

LRA Table 4.3.3-1 shows the results of the applicant's environmental fatigue calculations for the reactor pressure vessel components at LaSalle County Station, Unit 1. These tables include components that do not include an associated node, material, 60-year 6909 CUF, 6909 F_{en}, and/or 60-year CUF_{en} value. The LRA states that these components are either "Exempt in Design Stress Report" or "Not Analyzed for Cyclic Operation in Stress Report."

Issue:

The staff requires further clarification why these reactor pressure vessel components were not analyzed for the effects of environmentally assisted fatigue. The staff is unclear how the applicant determined that these components were exempted from this evaluation based on design stress reports.

Request:

For the following components, provide further justification why the components were not evaluated for the effects of environmentally assisted fatigue and the pertinent information in LRA Table 4.3.3-1 was not provided:

a) N12, N13, and N14 Instrument Nozzles

b) N15 Drain Nozzle

c) N17 Seal Leak Detection Nozzle

d) N18 Spare Nozzle

e) N20 In-Core Instrument Nozzle

Teleconference Summary:

The applicant provided the location in the LRA where the information requested is provided. The staff noted that this information resolves the question in the RAI, and this RAI will be deleted in the final letter.