



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

January 27, 2020

LICENSEE: Exelon Generation Company

FACILITY: LaSalle County Station, Units 1 and 2

SUBJECT: SUMMARY OF JANUARY 9, 2020, TELECONFERENCE MEETING WITH EXELON GENERATION COMPANY, LASALLE COUNTY STATION, UNITS 1 AND 2, ON PRE-APPLICATION TELECONFERENCE ON LICENSE AMENDMENT REQUESTS ON TECHNICAL SPECIFICATION TASK FORCE (TSTF)-505 TITLE 10 *CODE OF FEDERAL REGULATIONS* (10 CFR) 50.69 (EPID L-2019-LRM-0095)

On January 9, 2020, a Category 1 public teleconference was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Exelon Generation Company (the licensee) at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of this meeting was to discuss Exelon's plans and schedule related to the planned submittal of license amendment requests (LARs) for the LaSalle County Station, Units 1 and 2. The planned amendment would adopt TSTF-505, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b," and adopt a risk-informed 10 CFR 50.69 categorization program.

The meeting notice and agenda, dated December 23, 2019, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML19357A137. A list of attendees is provided as Enclosure 1.

The licensee presented information (see Enclosure 2) which included: license amendment development; timeline for submissions; probabilistic risk analysis (PRA) model technical adequacy; open findings and observations; PRA model uncertainties and assumptions; external hazards; and potential review efficiencies. Exelon also stated that the two applications are expected to be submitted by the end of January, 2020, and to request a 12-month completion.

The NRC staff queried the licensee about observations which included the following areas: identifying relevant differences in the boiling-water reactor (BWR)/5 design to the BWR/4 design, FLEX equipment credit in PRA, details on the Seismic Tier 2 approach, and the reviews completed for the screening analysis. The NRC staff indicated that based on its review of the LARs, it would determine whether it can support the requested completion timeline.

Exelon stated that the LARs would address the comments and concerns raised by the staff in this teleconference.

No regulatory decisions were made as a result of this teleconference.

Members of the public were in attendance. Public Meeting Feedback forms were not received.

Please direct any inquiries to [Bhalchandra.Vaidya@nrc.gov](mailto:Bhalchandra.Vaidya@nrc.gov) or contact me at 301-415-3308.

**/RA/**

Bhalchandra K. Vaidya, Project Manager  
Plant Licensing Branch III  
Division Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-373 and 50-374

Enclosures:

1. List of Attendees
2. Exelon/Lasalle Presentation

cc: Listserv

**ENCLOSURE 1**

**EXELON/LASALLE PRESENTATION**

**LIST OF ATTENDEES**

**FOR THE CATEGORY 1 PRE-APPLICATION PUBLIC TELEPHONE CONFERENCE**

**WITH EXELON/LaSALLE REGARDING**

**TSTF-505 AND 10 CFR 50.69 LICENSE AMENDMENT APPLICATIONS**

**JANUARY 9, 2020**

<b>NRC/NRR</b>	
Dan Wildrevitz, NRR/DNRL/NVIB	Khadijah West, NRR/DE/EICB
Bob Vettori, NRR/DRA/APLB	Milton Valentin, Beyond Design Basis Management (Fukushima), NRR/DORL/LPMB
Todd Hilsmeier, NRR/DRA/APLA	
<b>EXELON</b>	
Dave Gullott	Philip Tarpinian
Dwi Murray	Jason Taken
Shannon Rafferty-Czincila	Phillip Henderson
Ryan Sprengel	Ken Nicely
Gene Kelly	Patrick Johnson
<b>EPRI</b>	
Patrick O'Regan	John Richards
<b>JENSEN HUGHES</b>	
Jeff Schappaugh	Nick Sternowski
Patrick Johnson	David Passehl
CJ Standridge	
<b>AMERICAN MISSOURI, CALLAWAY ENERGY CENTER</b>	
Andrew Burgess	Bruce Huhmann
Nathan Casey	

LIST OF ATTENDEES

FOR THE CATEGORY 1 PRE-APPLICATION PUBLIC TELEPHONE CONFERENCE

WITH

LA SALLE

REGARING

TSTF-505 AND 10 CFR 50.69 APPLICATIONS

JANUARY 9, 2020

NAME	TITLE	ORGANIZATION
BEVADYA	PROJ. MGR	NRR/DORL
Robert Beaton		NRR/SNSB
Ming Li	Electronics Engr	NRR/DZ/EICB
Fred Forsaty	Engineer	NRR/OPS
Stacy Rosenberg	Branch Chief	NRR/DRA
Ed Miller	PROJ. MGR	NRR/DORL/LPLZ-1
Brett Titus	EEOB/BC	NRR/DEX/EEOB
BL Grenier	DRA	NRR/DRA/APLB
DeWesley Wn	risk analyst	NRR/DRA/APLC
Kathwa Hsu	Mechanical Engr	NRR/DE/EMIB
MALCOLM PATTERSON	RELIABILITY & RISK ANAL.	NRR/DRA/APLA
Scott L. Wall	Sr. PM	NRR/DORL
KEN SEE	SR HYDROLOGIST	NRR/DEX
Nageswara Karipineni	safety and plant systems engineer	NRR/DSS
Shilp Vasavada	Reliability & Risk Analyst	NRR/DRA
Mehdi Reisi Fard	Reliability & Risk Analyst	NRR/DRA/APLC
Adrienne Brown	Reliability & Risk Analyst	NRR/DRA/APLA
Robert Pascarella	NRR/DRA/APLA BC	BC NRR/DRA/APLA

[illegible]

**ENCLOSURE 2**

**EXELON/LASALLE PRESENTATION**

# **LaSalle RICT & 50.69 LARs NRC Pre-submittal Meeting**

Ryan Sprengel, Exelon

Nick Sternowski, Jensen Hughes

John Richards, EPRI

Phil Tarpinian, Exelon

CJ Standridge, Jensen Hughes

Gene Kelly, Exelon

January 9, 2020





# Agenda

---

- License Amendment Development
- Timeline for Submittals
- PRA Model Technical Adequacy
- Open Findings and Observations
- PRA Model Uncertainties and Assumptions
- External Hazards
- Potential Review Efficiencies

## **License Amendment Development**

- 50.69 LAR based on NEI 00-04
  - No deviation from LAR template (except seismic)
- RICT LAR based on TSTF-505-A Rev. 2
  - New TS Section 6.0
  - BWR/5 reactor design; Mark II containment
  - TS markups follow TSTF-505 for BWR/4
- Variances from TSTF-505
  - LaSalle TS are ITS
  - Variances from TSTF-505 in nomenclature/sequencing
  - TSTF-505 LCOs/Conditions not in LaSalle TS

## **Timeline for Submittals**

---

- Submittals will consist of two separate applications (RICT and 50.69)
- Submittal for both targeted by end of January 2020
- Changes to the schedule will be communicated to NRR Project Manager

## **PRA Model Technical Adequacy**

- Internal Events PRA – Peer Reviewed to RG 1.200 Rev. 1
  - Gap analysis against Rev. 2 and current version of Standard performed as part of the 2014 FPIE PRA update
  - Closure review performed
  - 5 Open F&Os
- Fire PRA – Peer Reviewed to RG 1.200 Rev. 2
  - Closure review performed
  - 3 Open F&Os
- Open findings will be addressed in 2020 update

## **Open Findings and Observations (F&Os)**

---

### **Three open fire model F&Os**

- 1-19 (Suggestion): Review of interlock & power supply notes in circuit analysis packages for potentially missed dependencies
- 4-17 (Finding): Plant-specific unavailability data for automatic FSD
- 6-11 (Finding): Cable data in Fire Safe Shutdown report (NEI-00-01)

### **Five open internal events model F&Os**

- IE-D3-01 (Finding): Documentation of sources of uncertainty in LERF
- SY-A4-01 (Suggestion): Perform plant walkdowns with system engineers / plant operators & document the walkdowns performed
- DA-C8-01 (Finding): Plant-specific data review for standby alignments
- DA-C6-01 (Suggestion): Enhance documentation of data collections
- IF-C3b-01 (Suggestion): Enhance documentation of the potential unavailability of flood barriers that may impact propagation

## **Evaluation of PRA Uncertainties and Assumptions**

Both LaSalle submittals will follow the process defined in NUREG 1855 Rev. 1, EPRI 1016737 and EPRI 1026511

- Assessment of potential sources key to respective applications; disposition/treatment for application
- Identification of internal event/flooding plant-specific sources and generic sources per EPRI 1016737
- Identification of Fire PRA plant-specific sources and generic sources per Appendix B of EPRI 1026511
- Consideration of generic Level 2 sources per EPRI 1026511 Appendix E as applicable to LERF
- Consideration of parameter & completeness uncertainties

## **External Hazards Screening Process**

---

- IPEEE Initial Screening
- Reviewed Current Hazard Information
- Updated Analysis Using Part 6 Screening Criteria of ASME/ANS PRA Standard RA-Sa-2009
- Performed conservative or bounding analyses
- RICT incorporates NEI 06-09 guidance
  - Justify exclusion of external risk sources from models based on their insignificance to the calculation of configuration risk
- 50.69 incorporates NEI 00-04 guidance
  - Figure 5-6, “Other External Hazards”
  - Seismic Tier 2 - EPRI alternative approach (3002012988)

## External Hazards - Seismic

---

- LaSalle considered a Tier 2 site
  - Moderate Seismic Hazard/Moderate Seismic Margin site
  - GMRS comparison to SSE between 1-10 Hz > Tier 1 but not high enough to be treated as Tier 3
  - GMRS is < SSE up through 6Hz; > SSE above 6 Hz.
  - NRC screened LaSalle from performing an SPRA
- IDP informed of SSC-specific seismic insights for HSS/LSS
  - Documented/presented to IDP for each system
  - Risk-Informed graded approach for a Tier 2 plant
- RICT – Will Use Seismic Penalty Approach for RICT



## High Winds Screening

---

- Section 7 of LaSalle IPEEE submittal contains a bounding analysis for high winds and tornado
- Median frequency of CDF due to tornadoes  $3E-7$ /year
- Tornado wind speed information from NUREG/CR-4461
- Demonstrably conservative estimate  $< 1E-6$ /yr. based on
  - plant design for wind pressure
  - low frequency ( $< 1E-7$ /yr) of tornadoes
- Non-missile high wind hazards screened from consideration based on EXT-C1 Criterion C of ASME/ANS RA-Sa-2009

## External Flooding Screening

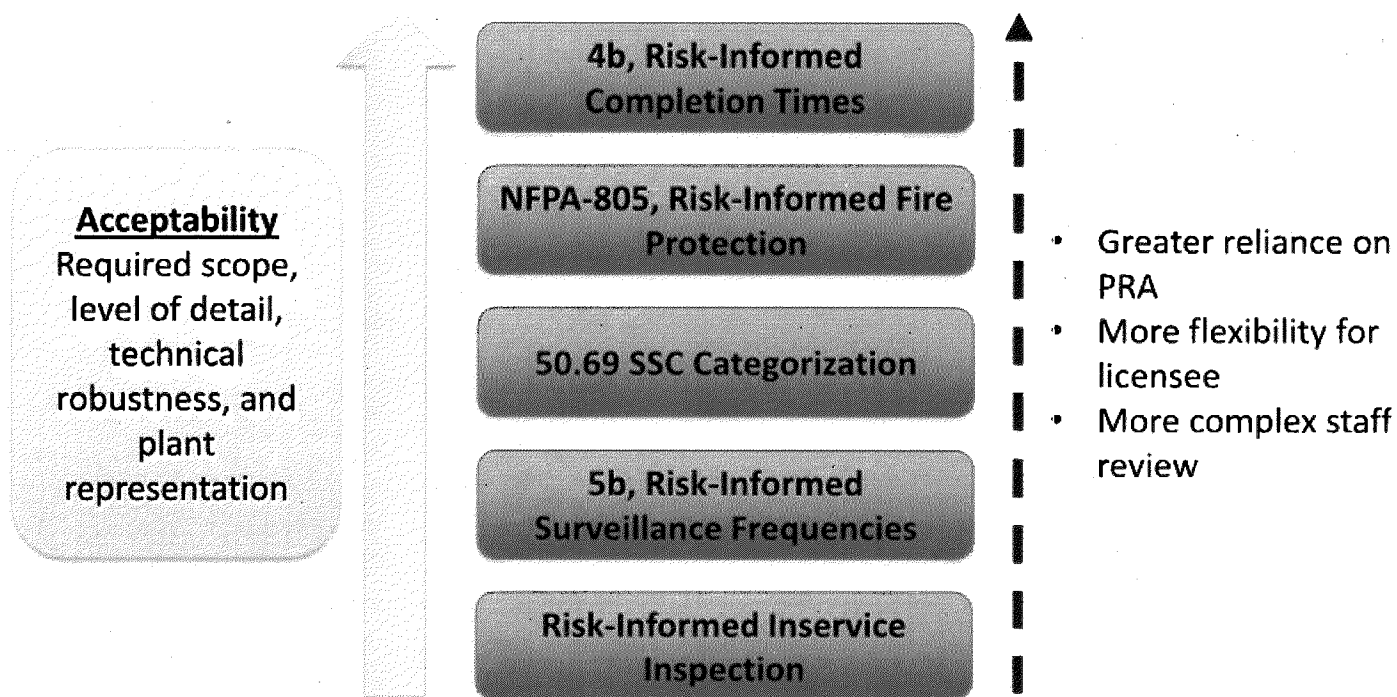
---

- External flooding hazard recently updated/submitted to NRC
- Flooding from all mechanisms except local intense precipitation (LIP) and probable maximum storm surge (PMSS) are bounded
  - LIP maximum still water elevation levels (SWELs) exceed the CLB and cause ponding to occur at exterior doors
  - Ingress is limited and available physical margin exists
- RICT: Plant able to mitigate flood-causing mechanisms with permanently installed passive flood protection (e.g. exterior doors and plant grade) that require no manual action
- 50.69: List of exterior doors credited to slow water intrusion
  - Doors treated as HSS per NEI 00-04 Figure 5-6

## Potential Review Efficiencies

Overlaps in level of PRA model acceptability

### Level of PRA Acceptability Depends on the Application



Reference: ML19064B049, NRR Presentation January 30-31, 2019

## Potential Review Efficiencies

---

- RICT - No deviation from model LAR
- 50.69 – No deviation from template (except seismic)
- PRA Models
  - PRA technical adequacy and sources of uncertainty similar for both applications
  - Application-specific insights considered
- External Hazards
  - Common screening of hazards that can be screened
  - Application-specific assessment of screening impact but related in terms of details to be considered
- Same PRA teams reviewing common information

## **Closing Remarks**

---

- Incorporated lessons learned from previous submittals
- Models meet Regulatory Guide 1.200, Rev. 2
- Sensitivity studies for key areas of uncertainty
- Loss of function TS LCO's evaluated closely
- Risk-informed graded approach Tier 2 seismic alternative

SUBJECT: SUMMARY OF JANUARY 9, 2020, TELECONFERENCE MEETING WITH  
EXELON GENERATION COMPANY, LASALLE COUNTY STATION, UNITS 1  
AND 2, ON PRE-APPLICATION TELECONFERENCE ON LICENSE  
AMENDMENT REQUESTS ON TECHNICAL SPECIFICATION TASK FORCE  
(TSTF)-505 TITLE 10 *CODE OF FEDERAL REGULATIONS* (10 CFR) 50.69  
(EPID L-2019-LRM-0095) DATED JANUARY 27, 2020

**DISTRIBUTION:**

PUBLIC

PM File Copy

RidsACRS\_MailCTR Resource

RidsNrrDorl Resource

RidsNrrDorlLpl3 Resource

RidsNrrPMLaSalle Resource

RidsNrrLASRohrer Resource

RidsRgn3MailCenter Resource

LBetancourt, NRR

RAnzalone, NRR

NRC Participants

MMcCoppin, EDO

Jessie Quichocho EDO, Region 3

**ADAMS Accession Nos.:**

**Meeting Notice – ML19357A137**

**ADAMS Accession No. Meeting Summary – ML20016A228**

OFFICE	NRR/DORL/LPL3/PM	NRR/DORL/LPL3/LA	NRR/DORL/LPL3/BC	NRR/DORL/LPL3/PM
NAME	BVaidya	SRohrer	NSalgado	BVaidya
DATE	1/16/2020	1/16/2020	1/27/2020	1/27/2020

**OFFICIAL RECORD COPY**