Exelon Generation.

Order No. EA-12-049

RS-16-146

August 26, 2016

U.S. Nuclear Regulatory Commission
ATTN: 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: Seventh Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)

References:

1. NRC Order Number EA-12-049, "Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012
2. NRC Interim Staff Guidance JLD-ISG-2012-01, "Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," Revision 0, dated August 29, 2012
3. NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide," Revision 0, dated August 2012
4. Exelon Generation Company, LLC's Initial Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated October 25, 2012
5. Exelon Generation Company, LLC Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated February 28, 2013 (RS-13-021)
6. Exelon Generation Company, LLC First Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated August 28, 2013 (RS-13-121)
7. Exelon Generation Company, LLC Second Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated February 28, 2014 (RS-14-011)

8. Exelon Generation Company, LLC Third Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated August 28, 2014 (RS-14-209)
9. Exelon Generation Company, LLC Fourth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated February 27, 2015 (RS-15-020)
10. Exelon Generation Company, LLC Fifth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated August 28, 2015 (RS-15-211)
11. Exelon Generation Company, LLC Sixth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated February 26, 2016 (RS-16-023)
12. NRC letter to Exelon Generation Company, LLC, LaSalle County Station, Units 1 and 2 – Interim Staff Evaluation Relating to Overall Integrated Plan in Response to Order EA-12-049 (Mitigation Strategies) (TAC Nos. MF1121 and MF1122), dated February 21, 2014
13. NRC letter to Exelon Generation Company, LLC, LaSalle County Station, Units 1 and 2 – Report for the Onsite Audit Regarding Implementation of Mitigating Strategies and Reliable Spent Fuel Pool Instrumentation Related to Orders EA-12-049 and EA-12-051 (TAC Nos. MF1119, MF1120, MF1121, and MF1122), dated March 23, 2015

On March 12, 2012, the Nuclear Regulatory Commission ("NRC" or "Commission") issued an order (Reference 1) to Exelon Generation Company, LLC (EGC). Reference 1 was immediately effective and directs EGC to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities in the event of a beyond-design-basis external event. Specific requirements are outlined in Attachment 2 of Reference 1.

Reference 1 required submission of an initial status report 60 days following issuance of the final interim staff guidance (Reference 2) and an overall integrated plan pursuant to Section IV, Condition C. Reference 2 endorses industry guidance document NEI 12-06, Revision 0 (Reference 3) with clarifications and exceptions identified in Reference 2. Reference 4 provided the EGC initial status report regarding mitigation strategies. Reference 5 provided the LaSalle County Station, Units 1 and 2 Overall Integrated Plan.

Reference 1 requires submission of a status report at six-month intervals following submittal of the Overall Integrated Plan. Reference 3 provides direction regarding the content of the status reports. References 6, 7, 8, 9, 10, and 11 provided the first, second, third, fourth, fifth, and sixth six-month status reports, respectively, pursuant to Section IV, Condition C.2, of Reference 1 for LaSalle County Station. The purpose of this letter is to provide the seventh six-month status report pursuant to Section IV, Condition C.2, of Reference 1, that delineates progress made in implementing the requirements of Reference 1. The enclosed report provides an update of milestone accomplishments since the last status report, including any changes to the compliance method, schedule, or need for relief and the basis, if any. The enclosed report also

addresses the NRC Interim Staff Evaluation Open and Confirmatory Items contained in Reference 12, and any NRC Audit Report open items contained in Reference 13.

This letter contains no new regulatory commitments. If you have any questions regarding this report, please contact David P. Helker at 610-765-5525.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 26th day of August 2016.

Respectfully submitted,

for

Glen T. Kaegi
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Enclosure:

1. LaSalle County Station, Units 1 and 2 Seventh Six-Month Status Report for the Implementation of Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events

cc: NRC Regional Administrator - Region III
NRC Senior Resident Inspector – LaSalle County Station
NRC Project Manager, NRR – LaSalle County Station
Mr. John P. Boska, NRR/JLD/JOMB, NRC
Illinois Emergency Management Agency - Division of Nuclear Safety

Enclosure

LaSalle County Station, Units 1 and 2

Seventh Six-Month Status Report for the Implementation of Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events

(20 pages)

LaSalle County Station, Units 1 and 2
Seventh Six Month Status Report for the Implementation of FLEX

Enclosure

1 Introduction

LaSalle County Station, Units 1 and 2 developed an Overall Integrated Plan (Reference 1), documenting the diverse and flexible strategies (FLEX), in response to Reference 2. This enclosure provides an update of milestone accomplishments since submittal of the Overall Integrated Plan, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

NOTE: The "Status" indicated in this document is as of July 26, 2016. This date was chosen to support the development, review, approval and submittal of this report by the required August 26, 2016 due date.

2 Milestone Accomplishments

- The Sixth 6-Month Update was submitted in February 2016.
- Unit 1 modification implementation is complete.

3 Milestone Schedule Status

The following provides an update to Attachment 2 of the Overall Integrated Plan. It provides the activity status of each item, and whether the expected completion date has changed. The dates are planning dates subject to change as design and implementation details are developed.

Activity	Target Completion Date	Activity Status	Revised Target Completion Date
Submit 60 Day Status Report	Oct 2012	Complete	
Submit Overall Integrated Plan	Feb 2013	Complete	
Contract with National SAFER Response Center (NSRC)		Complete	
Submit 6 Month Updates:			
Update 1	Aug 2013	Complete	
Update 2	Feb 2014	Complete	
Update 3	Aug 2014	Complete	
Update 4	Feb 2015	Complete	
Update 5	Aug 2015	Complete	
Update 6	Feb 2016	Complete	
Update 7	Aug 2016	Complete with this submittal	
Submit Completion Report	Sep 2017	Not Started	May 2018 See Section 5 of this enclosure

Activity	Target Completion Date	Activity Status	Revised Target Completion Date
Modification Development & Implementation:			
Unit 1 Modification Development (All FLEX Phases)	Jan 2015	Complete	Jan 2016
Unit 1 Modification Implementation (All FLEX Phases)	Mar 2016	Complete	
Unit 2 Modification Development (All FLEX Phases)	Jan 2014	Complete	Jan 2015
Unit 2 Modification Implementation (All FLEX Phases)	Feb 2015	Complete	
Procedures:			
Create Site-Specific Procedures	Feb 2015	Complete	Mar 2016
Validate Procedures (NEI 12-06, Sect. 11.4.3)	Feb 2015	Complete	Mar 2016
Create Maintenance Procedures	Feb 2015	Complete	Mar 2016
Perform Staffing Analysis	Oct 2014	Complete	
Storage Plan and Construction	Feb 2015	Complete	
FLEX Equipment Acquisition	Feb 2015	Complete	Mar 2016

Activity	Target Completion Date	Activity Status	Revised Target Completion Date
Training Completion	Feb 2015	Complete	Mar 2016
National SAFER Response Center Operational	Dec 2014	Complete	Feb 2015
Unit 1 FLEX Implementation	Mar 2016	Started	Mar 2018 See Section 5 of this enclosure
Unit 2 FLEX Implementation	Feb 2015	Started	Feb 2017 See Section 5 of this enclosure
Full Site FLEX Implementation	Mar 2016	Started	Mar 2018 See Section 5 of this enclosure

4 Changes to Compliance Method

LaSalle Station proposes an alternate approach to NEI 12-06, Revision 0 for protection of FLEX equipment as stated in Section 5.3.1 (seismic-protection of FLEX equipment), Section 7.3.1 (severe storms with high winds - protection of FLEX equipment), and Section 8.3.1 (impact of snow, ice and extreme cold - protection of FLEX equipment). This alternate approach is to store "N" sets of equipment in a fully robust building and selected +1 equipment in a commercial building. Note that for LaSalle, most of the +1 equipment is stored in a fully robust building. For all hazards scoped in for the site, the FLEX equipment is stored in a configuration such that no one external event can reasonably fail the site FLEX capability (N).

To ensure that no one external event will reasonably fail the site FLEX capability (N), LaSalle Station will ensure that N equipment is protected in the robust building. To accomplish this, LaSalle Station has developed procedures to address the unavailability allowance as stated in NEI 12-06, Revision 0, Section 11.5.3., (see Maintenance and Testing section below for further details). This section allows for a 90-day period of unavailability. If a piece of FLEX equipment stored in the robust building were to become or were found to be unavailable, LaSalle Station will impose a shorter allowed outage time of 45 days. For portable equipment that is expected to be unavailable for more than 45 days, actions will be initiated within 24 hours of this determination to restore the site FLEX capability (N) in the robust storage location and implement compensatory measures (e.g., move the +1 piece of equipment into the robust building) within 72 hours where the total unavailability time is not to exceed 45 days. Once the site FLEX capability (N) is restored in the robust storage location, LaSalle Station will enter the 90-day allowed out of service time for the unavailable piece of equipment with an entry date and time from the discovery date and time.

MAINTENANCE AND TESTING

1. The unavailability of equipment and applicable connections that directly performs a FLEX mitigation strategy for core, containment, and SFP should be managed such that risk to mitigating strategy capability is minimized.

    a. The unavailability of plant equipment is controlled by existing plant processes such as the Technical Specifications. When plant equipment which supports FLEX strategies becomes unavailable, then the FLEX strategy affected by this unavailability does not need to be maintained during the unavailability.
    b. The required FLEX equipment may be unavailable for 90 days provided that the site FLEX capability (N) is met. If the site FLEX (N) capability is met but not protected for all of the site's applicable hazards, then the allowed unavailability is reduced to 45 days.[1]
    c. The duration of FLEX equipment unavailability, discussed above, does not constitute a loss of reasonable protection from a diverse storage location protection strategy perspective.
    d. If FLEX equipment or connections become unavailable such that the site FLEX capability (N) is not maintained, initiate actions within 24 hours to restore the site FLEX capability (N) and implement compensatory measures (e.g., use of alternate suitable equipment or supplemental personnel) within 72 hours.
    e. If FLEX equipment or connections to permanent plant equipment required for FLEX strategies are unavailable for greater than 45/90 days, restore the FLEX capability or implement compensatory measures (e.g., use of alternate suitable equipment or supplemental personnel) prior to exceedance of the 45/90 days.

For Section 5, seismic hazard, LaSalle Station will also incorporate these actions:

1. Large portable FLEX equipment such as pumps and power supplies will be secured as appropriate to protect them during a seismic event (i.e., Safe Shutdown Earthquake (SSE) level).
2. Stored equipment and structures will be evaluated and protected from seismic interactions to ensure that unsecured and/or non-seismic components do not damage the equipment.

For Section 7, severe storms with high winds, LaSalle Station will also incorporate this action:

- (N+1) of on-site FLEX equipment are required. The plant screens in per Sections 5 through 9 for seismic, wind (both tornado and hurricane), snow, ice and extreme cold, and high temperatures. To meet Section 7.3.1.1.a, either of the following is acceptable:
    - All equipment (N+1) in a structure(s) that meets the plant's design basis for high wind hazards, or
    - (N) equipment in a structure(s) that meets the plant's design basis for high wind hazards and (+1) equipment stored in a location not protected for a high wind hazard.

[1]The spare FLEX equipment is not required for the FLEX capability to be met. The allowance of 90-day unavailability is based on a normal plant work cycle of 12 weeks. In cases where the remaining N equipment is not fully protected for the applicable site hazards, the unavailability allowance is reduced to 45 days to match a 6-week short cycle work period. Aligning the unavailability to the site work management program is important to keep maintenance of spare FLEX equipment from inappropriately superseding other more risk significant work activities.

For Section 8, impact of snow, ice and extreme cold, LaSalle Station will also incorporate this action:

- Storage of FLEX equipment should account for the fact that the equipment will need to function in a timely manner. The equipment should be maintained at a temperature within a range to ensure its likely function when called upon. For example, by storage in a heated enclosure or by direct heating (e.g., jacket water, battery, engine block heater, etc.).

LaSalle Station will meet all of the requirements in NEI 12-06, Revision 0 for Section 6.2.3.1 for external flood hazard and Section 9.3.1 for impact of high temperatures.

5 Need for Relief/Relaxation and Basis for the Relief /Relaxation

Previously, by letter dated February 27, 2014 (Ref. 3), LaSalle County Station requested relaxation from certain schedule requirements of Order EA-12-049 (Ref. 2) related to installation of the severe accident capable containment vent required by Order EA-13-109(Ref. 6). The NRC granted that schedule relief via letter dated April 15, 2014 (Ref. 4). No additional need for relief/relaxation relative to Order EA-12-049 has been identified at this time.

6 Open Items from Overall Integrated Plan and Interim Staff Evaluation

The following tables provide a summary of the open items documented in the Overall Integrated Plan and the Interim Staff Evaluation (ISE) (Ref. 5), and the status of each item.

NOTE: The "Status" indicated below is as of July 26, 2016. This date was chosen to support the development, review, approval and submittal of this report by the required August 26, 2016 due date.

Section Reference	Overall Integrated Plan Open Item	Status
Sequence of Events (p.5)	The times to complete actions in the Events Timeline are based on operating judgment, conceptual designs, and current supporting analyses. The final timeline will be time validated once detailed designs are completed and procedures developed.	COMPLETED
Sequence of Events (p.10)	Initial evaluations were used to determine the fuel pool timelines. Formal calculations will be performed to validate this information during development of the spent fuel pool cooling strategy detailed design.	COMPLETED LaSalle Station determined that the initial evaluations that were performed are sufficient.
Sequence of Events (p.10)	Analysis of deviations between Exelon's engineering analyses and the analyses contained in BWROG Document NEDC-33771P,"GEH Evaluation of	COMPLETED Reference 8 contains the analysis.

Section Reference	Overall Integrated Plan Open Item	Status
	FLEX Implementation Guidelines and documentation of results on Att. IB, "NSSS Significant Reference Analysis Deviation Table." Planned to be completed and submitted with August 2013 Six Month Update.	
Strategy Deployment (p.11)	Transportation routes will be developed from the equipment storage area to the FLEX staging areas. An administrative program will be developed to ensure pathways remain clear or compensatory actions will be implemented to ensure all strategies can be deployed during all modes of operation. Identification of storage areas and creation of the administrative program are open items.	COMPLETED LOA-FSG-012, "FLEX Deployment Path Debris Removal," identifies the deployment routes for the FLEX equipment from the FLEX storage areas. Procedure LOS-FSG-SRI, "FLEX Equipment Surveillance," contains a monthly verification that the FLEX equipment deployment paths are unobstructed. The LaSalle Station Snow Removal Plan has been updated to ensure these paths are cleared in a timely manner.
Programmatic Controls (p.12)	An administrative program for FLEX to establish responsibilities, and testing & maintenance requirements will be implemented.	COMPLETED Procedure CC-LA-118-1001, "Site Implementation of Diverse and Flexible Coping Strategies (FLEX) and Spent Fuel Pool Instrumentation Program," has been issued.

Section Reference	Overall Integrated Plan Open Item	Status
Core Cooling Phase 1 (p.17)	Additional work will be performed during detailed design development to ensure Suppression Pool temperature will support RCIC operation, in accordance with approved BWROG analysis, throughout the event.	COMPLETED Evaluation documented in EC 399297, Rev. 0.
Fuel Pool Cooling Phase 1 (p.35)	Complete an evaluation of the spent fuel pool area for steam and condensation.	COMPLETED Evaluation documented in Calculation L-003968, Rev. 0.
Safety Functions Support Phase 1 (p.44)	Evaluate the habitability conditions for the Main Control Room and develop a strategy to maintain habitability.	COMPLETED Evaluation documented in Calculation L-003969 Rev. 0. Strategy defined in LOA-FSG-005, "Area Ventilation."
Safety Functions Support Phase 1 (p.44)	Evaluate the habitability conditions for the Auxiliary Electric Equipment Room (AEER) and develop a strategy to maintain habitability.	COMPLETED Evaluation documented in Calculation L-003969 Rev. 0. Strategy defined in LOA-FSG-005, "Area Ventilation."
Safety Functions Support Phase 2 (p.48)	Develop a procedure to prop open battery room doors upon energizing the battery chargers to prevent a buildup of hydrogen in the battery rooms.	COMPLETED LOA-FSG-005, "Area Ventilation," addresses propping open the applicable battery room doors.

Interim Staff Evaluation Open and Confirmatory Items		
	Open Items	
Item Number	**Description**	**Status**
3.2.3.A	Verify the modifications associated with Order EA 13-109 on a Hardened Containment Vent System support the sequence of events and actions associated with the LSCS mitigating strategies.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). From 8/28/14 update, ML14248A239: The modifications associated with Order EA 13-109 are scheduled to complete installation at LSCS in 2017 (Unit 2) and 2018 (Unit 1). The modifications will be designed to support the LSCS mitigating strategies.
	Confirmatory Items	
Item Number	**Description**	**Status**
3.1.1.2.A	Confirm that soil liquefaction will not prevent movement of equipment along transportation paths.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). While on site the NRC staff reviewed LaSalle Station Design Analysis L-004000, "Evaluation of Liquefaction Potential for BDBEE [beyond-design-basis external event] FLEX Staging Area and Equipment Deployment Paths." The review focused on whether the licensee's planned deployment and storage location are susceptible to seismically-induced soil

Interim Staff Evaluation Open and Confirmatory Items		
		liquefaction to a degree that will adversely affect the implementation of FLEX strategies following a seismic event. The calculation concludes that all haul path areas are not susceptible to liquefaction with the exception of one localized area near the deployment path associated with the 60X90 FLEX building inside the PA. The calculation stated that the vertical settlement resulting from liquefaction would be approximately 2 inches. The licensee stated that the mobile FLEX equipment vehicles have more than sufficient capacity to traverse 2-inch localized roadway depressions, should they appear following a seismic event. The staff had no further questions regarding liquefaction potential of the FLEX deployment paths.
3.1.1.2.B	Confirm that the egress path for personnel to reach the FLEX storage building is seismically robust, or multiple egress paths that are not seismically robust are identified.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). While on site the NRC staff reviewed and walked down egress and ingress paths for personnel to reach the FLEX storage buildings. The review focused on whether

Interim Staff Evaluation Open and Confirmatory Items		
		ingress/egress paths are seismically robust and, if not, are multiple paths available. The licensee stated that paths for personnel responding to FLEX equipment storage buildings are partially seismically robust (portions inside seismic structures) and there are multiple paths available for personnel to leave the power block. The staff had no further questions regarding ingress or egress paths for FLEX implementation.
3.1.1.4.A	Confirm that the logistics for equipment transportation, area set up, and other needs for ensuring the equipment and commodities to sustain the site's coping strategies are available from offsite resources.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). AREVA Document No. 51-9233422, "LaSalle County Nuclear Generating Station SAFER Response Plan," Rev. 0, 12/19/14, showed that Staging Area C is the Pontiac Municipal Airport, Pontiac, IL, and the alternate to that (Staging Area D) was the Illinois Valley Regional Airport. LaSalle specific procedure CC-LA-118-1002, "SAFER Response Plan for LaSalle County Generating Station," 38-9233758, Revision 1 has changed the Staging Area D to the Braidwood Station owner controlled area. Staging Area B is the plant contractor parking lot. Exelon Procedure EP-AA-112-400-F-04, "EOF Logistics Manager Checklist," Rev. L, Section 3.7, includes coordination

Interim Staff Evaluation Open and Confirmatory Items		
		for the SAFER Response Plan, including notifying the facility managers for Staging Areas C and D, obtaining road conditions, becoming the single point of contact for SAFER, and preparing for the arrival of SAFER personnel. Croman Corporation has filed a helicopter flight plan for the route from Pontiac airport to LaSalle. The State of Illinois Plan for Radiological Accidents (IPRA) shows that the State will cooperate with Exelon to provide law enforcement escorts for SAFER vehicles and provide helicopters (if available).
3.1.3.1.A	If the licensee credits separation of storage sites to address tornado threats, confirm that the axis of separation and distance between storage locations will provide assurance that a single tornado would not impact all locations if the licensee relies on NEI 12-06, Section 7.3.1, configurations I.b or I.c for protection of the portable equipment from the high winds hazard.	COMPLETED Per Ref. 13 this ISE/Audit Item remains open as it relates to use of a commercial (non- robust) FLEX building for storage of the N+1 equipment. LaSalle Station is proposing the use of an alternate approach in Section 4 of this document. Therefore, response to this item is complete.
3.2.1.1.A	Confirm that benchmarks are identified and discussed that demonstrate that the Modular Accident Analysis Program (MAAP) is an appropriate code for the simulation of an ELAP event at LSCS.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). See LS-MISC-025 Rev. 1

Interim Staff Evaluation Open and Confirmatory Items		
		submitted with ML 14248A239.
3.2.1.1.B	Confirm that the collapsed level remains above Top of Active Fuel (TAP) and the cool down rate remains within technical specification limits for MAAP analyses.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). See LS-MISC-025 Rev. 1 submitted with ML 14248A239.
3.2.1.1.C	Confirm that MAAP is used in accordance with Sections 4.1, 4.2, 4.3, 4.4, and 4.5 of the June 2013 position paper (ADAMS Accession No. ML13190A201).	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). See LS-MISC-025 Rev 1 submitted with ML 14248A239.
3.2.1.1.D	Confirm that the licensee identifies and justifies the subset of key modeling parameters cited from Tables 4-1 through 4-6 of the "MAAP Application Guidance, Desktop Reference for Using MAAP Software, Revision 2" (Electric Power Research Institute Report 1020236). This should include response at a plant specific level regarding specific modeling options and parameter choices for key models that would be expected to substantially affect the ELAP analysis performed for that licensee's plant.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). See LS-MISC-025 Rev 1 submitted with ML 14248A239.
3.2.1.1.E	Confirm that the specific MAAP analysis case that was used to validate the timing of mitigating strategies in the Integrated Plan is identified and is appropriate for LSCS. Alternately, a comparable level of information may be included in the supplemental response.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). See LS-MISC-025 Rev.1 submitted with ML 14248A239.
3.2.1.2.A	Confirm adequacy of the technical basis for the assumptions made regarding the leakage rate through the recirculation pump seals and other sources. The analysis should include the assumed pressure-dependence of the leakage rate, and whether the leakage was determined or assumed to	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13).

Interim Staff Evaluation Open and Confirmatory Items		
	be single-phase liquid, two-phase mixture, or steam at the donor cell, and how mixing the leakage flow with the drywell atmosphere is modeled.	See LS-MISC-025 Rev 1 submitted with ML 14248A239.
3.2.1.3.A	Confirm that taking readings from a standpipe which is not safety related or seismic does not make the CST level instrumentation inadequate for the automatic swap or informing the operators of CST loss so that they may respond with manual action using the control switches located in the main control room.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). With a potential loss of the CST Standpipe, which is located inside of the Turbine Building, the water would no longer be present to indicate high level; therefore, because the level instruments are seismically qualified, they will remain adequate to support the automatic suction source swap.
3.2.1.4.A	Confirm that pump sizing results consider required water flow rates, the portable/FLEX pump complete head/flow characteristics, suction and discharge losses, system backpressure, elevation differences and piping losses to allow verification that this will be a successful strategy.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). While on site the NRC staff reviewed calculation L-003961 "FLEX Pump Sizing Hydraulic Calculation," FSG-TP-00141, Test Procedure IP4000DIM-TCL Pump Performance, and walked down pump deployment locations and hose deployment routes. The licensee's calculation and pump performance test show that the licensee's planned FLEX pumps should have the capability to provide water to each

Interim Staff Evaluation Open and Confirmatory Items		
		designated location with the proper flow and pressure. The Staff had no further questions regarding the FLEX hydraulic analysis.
3.2.1.4.B	Confirm the generator sizing results consider appropriate electrical loads and adequate capacity of portable/FLEX electrical generators planned for use during Phase 2 and Phase 3.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). While on site the NRC staff reviewed Design Consideration Summary (DCS) - EC 396069 Rev. 001: FLEX Primary Strategy - Electrical (sections 4.1.35 Electrical Requirements) Reviewed TODI: SEAG 14-000042 (FLEX Electrical Loads - FLEX Primary Strategy LaSalle NPS U2) Reviewed procedure LOA-FSG-002, Rev. 0: Flex Electrical Strategy Phase rotation checks are complete and cables are color coded. Licensee plans to cope with Phase 2 FLEX equipment. The licensee will utilize the Phase 3 480VAC FLEX DG if necessary. LaSalle does not plan to use the Phase 3 4160VAC FLEX DG.
3.2.2.A	Confirm completion of the evaluation of the SFP area for steam and condensation and implementation of a vent path strategy, if needed.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13).

Interim Staff Evaluation Open and Confirmatory Items		
		While onsite the NRC staff reviewed the licensee's plan for deploying FLEX hoses to the SFP and walked down the SFP area. The licensee plans to deploy hoses for SFP cooling before the onset of bulk boiling. Ventilation procedure LOA-FSG-005 provides the requirements for implementation of the vent path strategy.
3.2.4.1.A	Confirm that operation of RCIC with suction temperatures above 200°F is acceptable.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). The LaSalle RCIC system was evaluated in EC 399297 Rev. 000 for the conditions during an ELAP. As shown in the study, the RCIC system can remain functional for a minimum of 13 hours following a BDBEE. This accounts for the peak suppression pool maximum temperature of 234°F.
3.2.4.2.A	Confirm that the licensee provides acceptable hydrogen gas ventilation.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). NRC performed walkdown of vital battery rooms (125 and 250), Div. I and Div. 2

Interim Staff Evaluation Open and Confirmatory Items		
		switchgear rooms. NRC reviewed procedure: LOA-FSG-005, Rev. 0: Area Ventilation. Licensee will open doors and use forced ventilation. NRC reviewed calculation: VX-09, Rev. 12C: Battery Rooms Hydrogen Concentration, Hydrogen concentration less than 2% during ELAP.
3.2.4.4.A	Confirm that the upgrades to the plant communication systems discussed in the licensee communications assessment (ADAMS Accession Nos. ML12306A199 and ML13056A135) in response to the March 12, 2012 50.54(f) request for information letter for Limerick (sic) and, as documented in the staff analysis (ADAMS Accession No. ML13114A067) have been completed.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). UPDATED LOA-FSG-010, "FLEX Communications," addresses the use of sound-powered phones and handheld radios in the talk-around mode. The total number of available radios has been increased to more than 70 radios ready for event response. 14 radios are stored in the FLEX 60'X90' protected building and the remainder are available to on-shift personnel. It was previously reported that 48 would be available, 10 with on-shift personnel and 38 stored in the FLEX 60'X90' protected building. Spare batteries are available (normal on-shift charging/storage plus additional batteries/charging in the 60'X90' FLEX building).

Interim Staff Evaluation Open and Confirmatory Items		
		Portable EDGs are available (stored in 60'X90' and 30'X40' protected FLEX buildings) to power the battery chargers. Spare fuel is provided for the portable EDGs as part of the FLEX equipment fueling plan (LOA-FSG-009). Sound-powered phone kits (headsets/extension cords) will be stored in the Aux Bldg/Control Room Area as well as other designated / protected storage areas in the plant. Suggested patching sequences will be captured in the applicable FSGs to enable communication between key operating areas.
3.2.4.6.A	Confirm that the proceduralized "toolbox" approach can ensure vital area habitability and confirm the proper staging and protection of any equipment to implement this approach..	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). See LOA-FSG-005, Area Ventilation and Calculation L-003968 Rev. 0 "Temperature & Humidity Transient In The Reactor Building 843'-6" Operating Floor Following a BDBEE For Flex."
3.2.4.7.A	Confirm that the design of the FLEX pump suctions will prevent introducing excessive amounts of entrained debris as a result of extreme external hazards (e.g., suspended solids especially from high wind debris) in the cooling water from the Lake Screen House/Lake.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). The FLEX pump has 2 submersible pumps to supply the main pump suction, powered from the FLEX pump diesel; either can provide full flow

Interim Staff Evaluation Open and Confirmatory Items		
		capability. Both have ¼ inch perforated screen with 11.2 ft^2 free surface area. The main pump will be discharging through RHR LPCI directly inside the core shroud. Pumps will be available at 6 hrs, but do not plan to inject until RCIC fails. The water is from a man-made lake and suction is downstream of the chad screens. Additionally, the submersible pumps float at least 34 inches below the surface of the water and at least 10 inches above the bottom of the lake.
3.2.4.10.A	Confirm that the high/low temperature analysis (i.e., temperatures above/below those currently assumed in the sizing calculations) shows no adverse effects on expected battery life.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). The NRC performed walkdown of vital battery rooms (125 and 250), Div.I and Div. 2 switchgear room NRC reviewed procedure: LOA-FSG-005, Rev. 0: Area Ventilation NRC reviewed calculation: L-003969, Rev. 0: U1/U2 Transient Heat-Up Analysis for the Control Room, AEERs, Div. 1 and Div. 2 Switchgear Rooms following a BDBEE (opening doors in

Interim Staff Evaluation Open and Confirmatory Items		
		switchgear rooms and forced ventilation (fans), exhaust path through roof of the DG building).
3.4.A And 3.1.1.4.A	Confirm conformance to considerations 2 through 10 of NEI 12-06, Section 12.2 for the use of offsite resources or that an acceptable alternate is developed.	COMPLETED Item Closed During Onsite NRC Audit (Ref. 13). NRC's endorsement of the NEI white paper on this topic is ML14265A107. The SAFER Response Plan for LaSalle has been issued by SAFER and is documented in Procedure CC-LA-118-1002.

7 Potential Draft Safety Evaluation Impacts

The changes related to the FLEX strategies described in this update have the potential to impact the pending Safety Evaluation.

8 References

The following references support the updates to the Overall Integrated Plan described in this enclosure.

1. LaSalle County Station's Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated February 28, 2013 (ADAMS Accession No. ML13060A421).
2. NRC Order Number EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012.
3. Exelon/LaSalle Request for Relaxation from NRC Order EA-12-049, dated February 27, 2014 (ADAMS Accession No. ML14059A076).
4. NRC Approval of Exelon/LaSalle Request for Relaxation from NRC Order EA-12-049, dated April 15, 2014 (ADAMS Accession No. ML14071A455).
5. LaSalle County Station, Units 1 and 2 - Interim Staff Evaluation Relating to Overall Integrated Plan in Response to Order EA-12-049 (Mitigation Strategies), dated February 21, 2014 (ADAMS Accession No. ML14030A220).
6. NRC Order Number EA-13-109, "Order Modifying Licenses With Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," dated June 6, 2013.

7. LaSalle County Station, Units 1 and 2, First Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated August 28, 2013 (ADAMS Accession No. ML13241A283).

8. LaSalle County Station, Units 1 and 2 Second Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated February 28, 2014 (ADAMS Accession No. ML14059A431).

9. LaSalle County Station, Units 1 and 2, Third Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated August 28, 2014 (ADAMS Accession No. ML14248A239).

10. LaSalle County Station, Units 1 and 2, Fourth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated February 27, 2015 (ADAMS Accession No. ML15061A424).

11. LaSalle County Station, Units 1 and 2, Fifth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated August 28, 2015 (ADAMS Accession No. ML15240A308).

12. LaSalle County Station, Units 1 and 2, Sixth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated February 26, 2016 (ADAMS Accession No. ML16057A217)

13. LaSalle County Station, Units 1 and 2 - Report for the Onsite Audit Regarding Implementation of Mitigation Strategies and Reliable Spent Fuel Pool Instrumentation Related to Orders EA-12-049 and EA-12-051 (TAC NOS. MF1119, MF1120, MF1121, and MF1122), dated March 23, 2015 (ADAMS Accession No. ML15061A054).

9 Attachments

None.