



Order No. EA-12-049

RS-17-040

April 4, 2017

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

LaSalle County Station, Unit 2
Renewed Facility Operating License No. NPF-18
NRC Docket No. 50-374

Subject: Report of Full Compliance with 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. Exelon Generation Company, LLC 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), dated August 26, 2016 (RS-16-146)
13. Exelon Generation Company, LLC Eighth 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, 2017 (RS-17-019)
14. 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
15. NRC Letter, Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident, dated March 12, 2012
16. Exelon Generation Company, LLC letter to USNRC, Response to March 12, 2012, Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident, Enclosure 5, Recommendation 9.3, Emergency Preparedness – Staffing, Requested Information Items 1, 2, and 6 - Phase 2 Staffing Assessment, dated September 25, 2014 (RS-14-187)
17. 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, MF1122), dated March 23, 2015

On March 12, 2012, the Nuclear Regulatory Commission (“NRC” or “Commission”) issued Order EA-12-049, “Order Modifying Licenses with Regard to Requirements For Mitigation Strategies For Beyond-Design-Basis External Events,” (Reference 1) to Exelon Generation Company, LLC (EGC). Reference 1 was immediately effective and directed 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 (OIP) pursuant to Section IV, Condition C. Reference 2 endorsed 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, Unit 2 OIP.

Reference 1 required submission of a status report at six-month intervals following submittal of the OIP. References 6, 7, 8, 9, 10, 11, 12, and 13 provided the first, second, third, fourth, fifth, sixth, seventh, and eighth six-month status reports, respectively, pursuant to Section IV, Condition C.2, of Reference 1 for LaSalle County Station, Unit 2.

The purpose of this letter is to provide the report of full compliance with the 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) (Reference 1) pursuant to Section IV, Condition C.3 of the Order for LaSalle County Station, Unit 2.

LaSalle County Station, Unit 2 has developed, implemented, and will maintain the 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 in response to Order EA-12-049. The information provided herein documents full compliance for LaSalle County Station, Unit 2 with Reference 1.

OIP open items have been addressed and closed as documented in References 6, 8, 9, 10, 12, and 13 and are considered complete pending NRC closure. EGC’s response to the NRC Interim Staff Evaluation (ISE) open and confirmatory items identified in Reference 14 have been addressed and closed as documented in References 8, 10, 12, and 13, and are considered closed. EGC’s response to the NRC ISE confirmatory item identified as open in Reference 17 is addressed in References 10 and 13, and is considered complete pending NRC closure. EGC’s response to the NRC audit questions and additional audit open items have been addressed and closed as documented in References 10 and 13, and are considered complete pending NRC closure. The following tables provide completion references for each OIP open item and NRC ISE open or confirmatory item, and NRC Audit Report open items.

Overall Integrated Plan Open Items

Section Reference	Overall Integrated Plan Open Item	Completion Response Reference
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.	References 10 and 13
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.	References 8, 12, and 13
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 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.	References 6, 8, and 13
Strategy Deployment (p.11)	<p>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.</p> <p>Identification of storage areas and creation of the administrative program are open items.</p>	References 10, 12, and 13
Programmatic Controls (p.12)	An administrative program for FLEX to establish responsibilities, and testing & maintenance requirements will be implemented.	References 10 and 13
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.	References 9, 12, and 13

Section Reference	Overall Integrated Plan Open Item	Completion Response Reference
Fuel Pool Cooling Phase 1 (p.35)	Complete an evaluation of the spent fuel pool area for steam and condensation.	References 9, 12, and 13
Safety Functions Support Phase 1 (p.44)	Evaluate the habitability conditions for the Main Control Room and develop a strategy to maintain habitability.	References 10 and 13
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.	References 10 and 13
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.	References 10 and 13

Interim Staff Evaluation Open Items

Open Item	Completion Response Reference
Item No. 3.2.3.A	References 8, 10, and 13

Interim Staff Evaluation Confirmatory Items

Confirmatory Item	Completion Response Reference
Item No. 3.1.1.2.A	References 10 and 13
Item No. 3.1.1.2.B	References 10 and 13
Item No. 3.1.1.4.A	References 10 and 13
Item No. 3.1.3.1.A	References 10 and 13
Item No. 3.2.1.1.A	References 8, 12, and 13
Item No. 3.2.1.1.B	References 8, 12, and 13
Item No. 3.2.1.1.C	References 8, 12, and 13
Item No. 3.2.1.1.D	References 8, 12, and 13
Item No. 3.2.1.1.E	References 8, 12, and 13
Item No. 3.2.1.2.A	References 8, 12, and 13
Item No. 3.2.1.3.A	References 8, 12, and 13
Item No. 3.2.1.4.A	References 10 and 13
Item No. 3.2.1.4.B	References 10 and 13
Item No. 3.2.2.A	References 10 and 13
Item No. 3.2.4.1.A	References 10 and 13
Item No. 3.2.4.2.A	References 10 and 13
Item No. 3.2.4.4.A	References 10 and 13

Confirmatory Item	Completion Response Reference
Item No. 3.2.4.6.A	References 10 and 13
Item No. 3.2.4.7.A	References 10 and 13
Item No. 3.2.4.10.A	References 10 and 13
Item No. 3.4.A and 3.1.1.4.A	References 10 and 13

NRC Audit Report Open Items

Audit Open Item	Completion Response Reference
ISE CI 3.1.3.1.A	References 10 and 13

MILESTONE SCHEDULE – ITEMS COMPLETE

Milestone	Completion Date
Submit 60 Day Status Report	October 25, 2012
Submit Overall Integrated Plan	February 28, 2013
Contract with National SAFER Response Center	November 29, 2012
Submit 6 Month Updates:	
Update 1	August 28, 2013
Update 2	February 28, 2014
Update 3	August 28, 2014
Update 4	February 27, 2015
Update 5	August 28, 2015
Update 6	February 26, 2016
Update 7	August 26, 2016
Update 8	February 28, 2017
Modification Development:	
Phases 1 and 2 modifications	January 30, 2015
National SAFER Response Center Operational	February 10, 2015
Procedure Development:	
Strategy procedures	March 08, 2017
Validate Procedures (NEI 12-06, Sect. 11.4.3)	March 08, 2017
Maintenance procedures	March 08, 2017
Staffing analysis	September 25, 2014
Modification Implementation:	
Phases 1 and 2 modifications	March 08, 2017
Storage plan and construction	March 08, 2017
FLEX equipment acquisition	March 08, 2017
Training completion	March 08, 2017
Unit 2 implementation date	March 08, 2017

ORDER EA-12-049 COMPLIANCE ELEMENTS SUMMARY

The elements identified below for LaSalle County Station, Unit 2 as well as the site OIP response submittal (Reference 5), the 6-Month Status Reports (References 6, 7, 8, 9, 10, 11, 12, and 13), and any additional docketed correspondence, demonstrate compliance with Order EA-12-049.

Strategies - Complete

LaSalle County Station, Unit 2 strategies are in compliance with Order EA-12-049. There are no strategy related Open Items, Confirmatory Items, or Audit Questions/Audit Report Open Items. The LaSalle County Station, Units 1 and 2, Final Integrated Plan for mitigating strategies will be provided upon full compliance for LaSalle County Station, Unit 1 (Spring 2018).

Modifications - Complete

The modifications required to support the FLEX strategies for LaSalle County Station, Unit 2 have been fully implemented in accordance with the station design control process.

Equipment – Procured and Maintenance & Testing – Complete

The equipment required to implement the FLEX strategies for LaSalle County Station, Unit 2 has been procured in accordance with NEI 12-06, Sections 11.1 and 11.2, and has been received at LaSalle County Station, Unit 2; and initially tested/performance verified as identified in NEI 12-06, Section 11.5, and is available for use.

Periodic maintenance and testing will be conducted through the use of the LaSalle County Station, Unit 2 Preventative Maintenance program such that equipment reliability is achieved.

Protected Storage – Complete

The storage facilities required to implement the FLEX strategies for LaSalle County Station, Unit 2 have been completed and provide protection from the applicable site hazards. The equipment required to implement the FLEX strategies for LaSalle County Station, Unit 2 is stored in its protected configuration.

Procedures – Complete

FLEX Support Guidelines (FSGs) for LaSalle County Station, Unit 2 have been developed and integrated with existing procedures. The FSGs and affected existing procedures have been verified and are available for use in accordance with the site procedure control program.

Training – Complete

Training for LaSalle County Station, Unit 2 has been completed in accordance with an accepted training process as recommended in NEI 12-06, Section 11.6.

Staffing – Complete

The Phase 2 staffing study for LaSalle County Station, Unit 2 has been completed in accordance with 10CFR50.54(f), "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," Recommendation 9.3, dated March 12, 2012 (Reference 15), as documented in Reference 16.

National SAFER Response Center – Complete

EGC has established a contract with Pooled Equipment Inventory Company (PEICo) and has joined the Strategic Alliance for FLEX Emergency Response (SAFER) Team Equipment Committee for off-site facility coordination. It has been confirmed that PEICo is ready to support LaSalle County Station, Unit 2 with Phase 3 equipment stored in the National SAFER Response Centers in accordance with the site specific SAFER Response Plan.

Validation – Complete

EGC has completed the performance of validation in accordance with industry developed guidance to assure required tasks, manual actions and decisions for FLEX strategies are feasible and may be executed within the constraints identified in the Overall Integrated Plan (OIP) for Order EA-12-049.

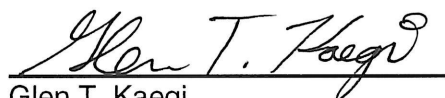
FLEX Program Document - Established

The LaSalle County Station, Unit 2 FLEX Program Document has been developed in accordance with the requirements of NEI 12-06.

This letter contains no new regulatory commitments. If you have any questions regarding this report, please contact David J. Distel at 610-765-5517.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 4th day of April 2017.

Respectfully submitted,



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

cc: Director, Office of Nuclear Reactor Regulation
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