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U. S. Nuclear Regulatory Commission
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10 CFR 2.202

**SUSQUEHANNA STEAM ELECTRIC STATION
REPORT OF FULL COMPLIANCE FOR UNIT 2 WITH
MARCH 12, 2012 COMMISSION ORDER MODIFYING
LICENSES WITH REGARD TO REQUIREMENTS FOR
MITIGATION STRATEGIES FOR BEYOND-DESIGN-
BASIS EXTERNAL EVENTS (NRC ORDER EA-12-049)
PLA-7610**

Docket No. 50-388

- References:
1. NRC Order EA-12-049, "Order Modifying 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. PPL Letter (PLA-6923), "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 29, 2012
 5. PPL Letter (PLA-6981), "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 (NRC Order EA-12-049)," dated February 28, 2013
 6. PPL Letter (PLA-7072), "Request for Implementation Date Relief in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (NRC Order EA-12-049)," dated August 26, 2013
 7. NRC Order EA-13-109, "Order to Modify Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation under Severe Accident Conditions," dated June 6, 2013
 8. PPL Letter (PLA-7071), "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 26, 2013
 9. PPL Letter (PLA-7134), "Request for Relaxation from NRC Order EA-12-049, 'Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events,'" dated February 20, 2014

10. *NRC Letter from J. S. Bowen to T. S. Rausch, "Susquehanna Steam Electric Station, Units 1 and 2-Interim Staff Evaluation Relating To Overall Integrated Plan In Response To Order EA-12-049 (Mitigation Strategies) (TAC NOS. MF0888 and MF0889)," dated January 24, 2014 (ADAMS #ML13339A764)*
11. *PPL Letter (PLA-7137), "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 (NRC Order EA-12-049)," dated February 28, 2014*
12. *NRC Letter from E. J. Leeds to T. S. Rausch, "Susquehanna Steam Electric Station Units 1 and 2 – Relaxation of Certain Schedule Requirements for Order EA-12-049 'Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design Basis External Events,'" dated April 15, 2014 (ML14065A028)*
13. *PPL Letter (PLA-7204), "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 (NRC Order EA-12-049)," dated August 28, 2014*
14. *PPL Letter (PLA-7295), "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 (NRC Order EA-12-049)," dated February 25, 2015*
15. *Talen Letter (PLA-7377), "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 (NRC Order EA-12-049)," dated August 26, 2015*
16. *Talen Letter (PLA-7438), "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 (NRC Order EA-12-049)," dated February 18, 2016*
17. *Talen Letter (PLA-7513), "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 (NRC Order EA-12-049)," dated August 19, 2016.*
18. *Talen Letter PLA-7570, "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 (NRC Order EA-12-049)," dated February 9, 2017*
19. *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*
20. *PPL Letter (PLA-7283), "Revision 1 to Fukushima Phase 2 Staffing Assessment," dated February 4, 2015*

The purpose of this letter is to provide Susquehanna Nuclear, LLC's (Susquehanna) Unit 2 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 (NRC ORDER EA-12-049, Reference 1). This report is being submitted pursuant to Section IV, Condition C.3, of Reference 1, that required Susquehanna to submit this report upon Unit 2 achieving completion of implementing the requirements of Reference 1. Unit 1 will not be in full compliance with Reference 1 until the EA-13-109 Phase 1 wetwell hardened containment vent system is installed in 2018. A full site compliance report and Final Integrated Plan will be submitted after the Unit 1 work is complete. Enclosure 1 provides an update of milestone accomplishments since the last status report (Reference 18), including any changes to the compliance method, schedule, or need for relief and the basis, if any.

On March 12, 2012, the Nuclear Regulatory Commission ("NRC" or "Commission") issued an order (Reference 1) to Susquehanna. Reference 1 was immediately effective and directs Susquehanna to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment cooling, 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 Susquehanna's initial status report regarding Mitigation Strategies. Reference 5 provided Susquehanna's initial Mitigation Strategies Overall Integrated Plan.

Reference 1 requires submission of status reports at six-month intervals following submittal of the Overall Integrated Plan until full compliance is achieved for all units at a site. Reference 3 provides direction regarding the content of the status reports. References 8, 11, 13, 14, 15, 16, 17, and 18 provided the 6 month status reports for Unit 2 while implementing the Mitigation Strategies.

The Request for Relaxation contained in Reference 9 supersedes the Request for Relief made in Reference 6. The Request for Relaxation is based on NRC mandated changes to the Hardened Containment Vent System implementation dates that impact the Mitigation Strategy Overall Integrated Plan. Specifically, the change in implementation dates for the Hardened Containment Vent Order (NRC Order EA-12-050 was rescinded and superseded by NRC Order EA-13-109) impacts the Mitigation Strategy Overall Integrated Plan and implementation timeline. The NRC approved this relaxation in Reference 12.

The NRC Order EA-12-049 Compliance Elements Summary provided below and Enclosure 1 to this letter document that Susquehanna Unit 2 has developed, implemented and will maintain the guidance and strategies to maintain core cooling, containment, and spent fuel pool cooling capabilities in the event of a Beyond Design Basis External Event and is now in full compliance with the requirements of NRC Order EA-12-049 (Reference 1).

Enclosure 1 to this letter also documents that Susquehanna Unit 1 has developed, implemented and will maintain the guidance and strategies to maintain core cooling, containment, and spent fuel pool cooling capabilities in the event of a Beyond Design Basis External Event and is now in full compliance with the requirements of NRC Order EA-12-049 (Reference 1), except for the

NRC approved Request for Relaxation (Reference 12) regarding implementation of a Severe Accident Capable Hardened Containment Vent System per NRC Order EA-13-109.

NRC ORDER EA-12-049 COMPLIANCE ELEMENTS SUMMARY

The elements identified below for Susquehanna Unit 2 as well as the site OIP response submittal (Reference 5 and as updated by the Six-Month Status Reports), the Six-Month Status Reports (References 8, 11, 13, 14, 15, 16, 17, and 18), and any additional referenced docketed correspondence, demonstrate compliance with Order EA-12-049.

Strategies - Complete

Susquehanna Unit 2's Mitigation 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 Susquehanna Final Integrated Plan for Mitigation Strategies will be provided after full compliance for Susquehanna Unit 1 is achieved (Spring 2018).

Modifications - Complete

The modifications required to support the FLEX Mitigation Strategies for Susquehanna 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 Mitigation Strategies for Susquehanna Unit 2 has been procured in accordance with NEI 12-06, Sections 11.1 and 11.2. The equipment has been received at Susquehanna Unit 2. The equipment was tested and 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 Susquehanna Preventative Maintenance program.

Protected Storage – Complete

The FLEX Storage Building that houses most of the equipment required to implement the strategies for Susquehanna Unit 2 has been completed and provides protection from the applicable site hazards. The equipment required to implement the FLEX Mitigation Strategies for Susquehanna Unit 2 is stored in its protected configuration.

Procedures – Complete

FLEX Support Guidelines (FSGs) for Susquehanna 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 Susquehanna 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 Assessment for Susquehanna has been completed in accordance with 10 CFR 50.54(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 19). Susquehanna's Staffing Assessment report is documented in Reference 20.

National SAFER Response Center –Complete

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

Validation – Complete

Susquehanna Unit 2 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 - Complete

Susquehanna has developed a FLEX and SFPI Program Document in accordance with the requirements of NEI 12-06.

Therefore, Susquehanna Unit 2 has now completed all required actions to be in full compliance with NRC Order EA-12-049.

This letter contains no new or revised regulatory commitments.

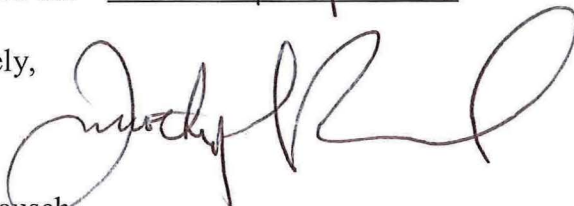
If you have any questions regarding this report, please contact Mr. Jason Jennings, Manager – Nuclear Regulatory Affairs, at (570) 542-3155.

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

Executed on: _____

5/30/2017

Sincerely,



T. S. Rausch

Enclosure 1: Susquehanna Nuclear, LLC's Unit 2 Full Compliance Report for the Implementation of NRC Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events

Copy: NRC Region I

Ms. T. Hood, NRC Project Manager

Ms. Jessica A. Kratchman, NRR/JLD/PMB, NRC

Ms. L. H. Micewski, NRC Sr. Resident Inspector

Mr. M. Shields, PA DEP/BRP

Enclosure 1 to PLA-7610

**Susquehanna Nuclear, LLC's Unit 2 Full
Compliance Report for the Implementation of
NRC Order EA-12-049, Order Modifying
Licenses with Regard to Requirements for
Mitigation Strategies for Beyond-Design-Basis
External Events**

Susquehanna Nuclear, LLC's Unit 2 Full Compliance Report for the Implementation of NRC Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events

1. Introduction

Susquehanna Nuclear, LLC (Susquehanna) developed an Overall Integrated Plan (Reference 8.1) documenting the diverse and flexible strategies (FLEX), in response to Reference 8.2. This Unit 2 Full Compliance Report provides an update of milestone accomplishments since submittal of the Eighth Six Month Status Report (Reference 8.18) related to the Overall Integrated Plan, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

[NOTE: References cited in this enclosure are contained in Section 8.]

2. Milestone Accomplishments

The following milestone(s) have been completed since the development of the Overall Integrated Plan (Reference 8.1), and are current as of April 30, 2017.

- Completed the Unit 2 Severe Accident Capable Hardened Containment Vent System (Phase 1 Wetwell Vent) modification process and all associated actions to make the U2 HCVs fully functional on April 4, 2017. This includes all required testing, procedure development and training. Unit 2 began startup from the refueling outage on April 7, 2017.

3. Milestone Schedule Status

The following table provides an update to Attachment 2, Milestone Schedule, 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.

The revised milestone target completion dates do not impact the Order implementation date at this time. The Interim Staff Evaluation (ISE) from the NRC (Reference 8.9) was received in time to support implementation of the Mitigation Strategies. The Open Item and Confirmatory Items identified in the ISE were addressed by the Regulatory Audit Process. The NRC performed the Mitigation Strategies and Spent Fuel Pool Level Instrumentation Audit at Susquehanna the week of December 8th, 2014. During the Audit Exit meeting the NRC considered all Mitigation Strategies related items to be closed. The NRC's Audit Report documented the closure status of the Mitigation Strategies issues.

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Submit 60 Day Status Report	October 2012	Complete	
Submit Overall Integrated Plan	February 2013	Complete	
Expected receipt of draft SER from NRC (or ISE)	September 2013	Complete	January 2014
Submit 6 Month Updates:			
Update 1	August 2013	Complete	
Update 2	February 2014	Complete	
Update 3	August 2014	Complete	
Update 4	February 2015	Complete	
Update 5	August 2015	Complete	
Update 6	February 2016	Complete	
Update 7	August 2016	Complete	
Update 8	February 2017	Complete	
Update 9	August 2017	Not Started	
Update 10	February 2018	Not Started	
FLEX Strategy Evaluation Unit 2	April 2015	Complete	May 2015
FLEX Strategy Evaluation Unit 1	April 2016	Complete	
Validation by Walk-throughs or Demonstration(s):			
Walk-throughs or Demonstrations Unit 2	April 2015	Complete	May 2015
Walk-throughs or Demonstrations Unit 1	April 2016	Complete	
Perform Staffing Analysis	October 2014	Complete	
Modifications:			
Modifications Evaluation	June 2015	Complete	August 2015
Unit 2 Design Engineering - Issue Unit 2 Design Change Documents (for all Phases)	June 2014	Complete	

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Unit 2 Implementation Outage	April 2015	Complete	May 2015
Unit 1 Design Engineering - Issue Unit 1 Design Change Documents (for all Phases)	June 2015	Complete (except HCVS, see Ref. 8.11)	August 2015
Unit 1 Implementation Outage	March 2016	Complete	April 2016
Storage:			
Storage Design Engineering	May 2014	Complete	
Storage Implementation - Equipment storage (reasonable protection) ready for operation with required FLEX equipment available for use	April 2015	Complete	May 2015
FLEX Equipment:			
Procure On-Site Equipment	April 2015	Complete	May 2015
Contract with Vendor for National SAFER Response Center (NSRCs) established	March 2013	Complete	
Develop Strategies with NSRC	April 2015	Complete	Feb 2015
Establish offsite staging location [Install Off-Site Delivery Station (if Necessary)]	May 2015	Complete	
National SAFER Response Centers in service for Susquehanna	December 2014	Complete	Feb 2015
Procedures:			
BWROG issue Emergency Procedure and Severe Accident Guidelines (EPGs/SAGs) Rev. 3	February 2013	Complete	

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Procedures Complete Unit 2 FLEX Implementation (including FSGs and maintenance)	April 2015	Complete	May 2015
Procedures Complete Unit 1 FLEX Implementation (including FSGs and maintenance)	April 2016	Complete (except HCVS, see Ref. 8.11)	
Training:			
Develop Training Plan	May 2014	Complete	
Training Complete	February 2016	Complete (except U1 HCVS, see Ref. 8.11)	April 2016
Unit 2 FLEX Implementation	April 2015	Complete	May 2015, April 2017
Unit 1 FLEX Implementation	April 2016	Complete (except HCVS, see Ref. 8.11)	
Full Site FLEX Implementation (except HCVS)	April 2016	Complete (except U1 HCVS, see Ref. 8.11)	
Unit 2 Severe Accident Capable Hardened Containment Vent System Phase 1	April 2017	Complete*	
Unit 1 Severe Accident Capable Hardened Containment Vent System Phase 1	April 2018	Design Started*(non-outage complete, outage in-progress), Non- Outage Installation Started	

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Unit 1 Severe Accident Capable Hardened Containment Vent System Phase 2	April 2018	Design Started*, Implementation Not Started	
Unit 2 Severe Accident Capable Hardened Containment Vent System Phase 2	April 2019	Design Started*, Implementation Not Started	
Submit Completion Report	August 2019 (after HCVS Order actions are complete per Ref 8.11)*	Not Started	
* Revised since the six month update submitted February 9, 2017 (Reference 8.18)			

4. **Changes to Compliance Method**

NRC Order EA-12-049 requires implementation of Mitigation Strategies to include procedures, guidance, training, and acquisition, staging, or installing of equipment needed for the strategies.

Reference 8.1 provided Susquehanna's response to the NRC Order EA-12-049. The cover letter identifies that delays in implementing the Hardened Containment Vent System as required by NRC Order EA-12-050 will affect implementation of the Mitigation Strategies NRC Order EA-12-049 actions.

The Reference 8.1 enclosure describes Susquehanna's Mitigation Strategies that are based on venting the containment using the Hardened Containment Vent System. It also describes that a modification is required to install a Hardened Containment Vent System.

Thus the Susquehanna response to NRC Order EA-12-049 provided in Reference 8.1 was premised on installation and use of a Hardened Containment Vent System as required by NRC Order EA-12-050.

Upon issuance of NRC Order EA-13-109, the NRC staff changed technical and schedule requirements applicable to the Hardened Containment Vent System and rescinded the requirements of the NRC Order EA-12-050.

As a result, full compliance to the Mitigation Strategies required by NRC Order EA-12-049 and described in Reference 8.1 for Susquehanna Units 1 and 2 will not be achieved until compliance with NRC Order EA-13-109 is achieved as described in Reference 8.8. This relaxation was granted in Reference 8.11.

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

Susquehanna expects to comply with NRC Order EA-12-049, but needs relaxation of the implementation dates. The specific details have been submitted in a separate document (Reference 8.8).

NRC Order EA-12-049 requires implementation of Mitigation Strategies to include procedures, guidance, training, and acquisition, staging, or installing of equipment needed for the strategies.

Reference 8.1 provided Susquehanna's response to the NRC Order EA-12-049. The cover letter identifies that delays in implementing the Hardened Containment Vent System as required by NRC Order EA-12-050 will also affect implementation of the Mitigation Strategies NRC Order EA-12-049 actions.

The Reference 8.1 enclosure describes the Susquehanna Mitigation Strategies that is based on venting the containment using the Hardened Containment Vent System. It also describes that a modification to install a Hardened Containment Vent System is required.

Thus Susquehanna's NRC Order EA-12-049 response provided in Reference 8.1 was premised on installation and use of a Hardened Containment Vent System as required by NRC Order EA-12-050.

Upon issuance of NRC Order EA-13-109, the NRC staff changed technical and schedule requirements applicable to the Hardened Containment Vent System and rescinded the requirements of the NRC Order EA-12-050.

As a result, full compliance to the Mitigation Strategies required by NRC Order EA-12-049 and described in Reference 8.1 for Susquehanna Units 1 and 2 will not be achieved until compliance with NRC Order EA-13-109 is achieved.

Relaxation of the NRC Order EA-12-049 IV.A.2 requirements is required and has been requested (Reference 8.8). This relaxation was granted in Reference 8.11.

6. Open Items from Overall Integrated Plan and Draft Safety Evaluation

The following table and Section 7 provide a summary and status of the open items documented in the Overall Integrated Plan and ISE. The Open Item and Confirmatory Items identified in the ISE were addressed by the Regulatory Audit Process. The NRC performed the Mitigation Strategies and Spent Fuel Pool Level Instrumentation Audit at Susquehanna the week of December 8th, 2014. During the Audit Exit meeting the NRC considered all Mitigation Strategies related items to be closed. The NRC's Audit Report documented the closure status of the Mitigation Strategies issues (Reference 8.15).

Overall Integrated Plan Open Item	Status
1. Phase 3 Shutdown Cooling Capability	Complete
2. EOP changes required to support Mitigation Strategies.	Complete
3. Develop SSES "Response Plan" for use of the National SAFER Response Centers (NSRC).	Complete
4. FLEX Equipment Storage	Complete
5. Review GEH Report NEDC 33771P, GEH Evaluation of FLEX Implementation Guidelines and identify exceptions to the report as required in Attachment 1B.	Complete
6. Determine appropriate use of RCIC or FLEX pump mitigation strategy if ELAP occurs when operating in Mode 4 and when transitioning to mode 3.	Complete
7. Evaluate the impact of RCIC pump seal failures. EC-050-1034, Rev. 0 approved 12/13/2013	Complete
8. Evaluate potential RCIC pump modifications.	Complete
9. Establish method of venting the Refuel Floor. EC-012-6122, Rev 0 approved on 4/29/2014.	Complete
10. Evaluate means to assure continued long term gas supply for ADS/SRVs.	Complete

Overall Integrated Plan Open Item	Status
11. Evaluate means to transfer diesel fuel oil from storage tanks to the diesel fueled equipment.	Complete
12. Evaluate the effects of injecting Spray Pond water (UHS) to the RPV over a long period of time of 72 hours or longer.	Complete
13. The calculation EC-030-1006, Rev 14, Control Structure Temperature Response to a Station Blackout or Fire Induced Loss of Control Structure HVAC was performed. However, final review and approval of the calculation EC-030-1006, Rev 14, have not been performed. The calculation has now been reviewed and approved.	Complete
14. The calculation EC-SBOR-0504, Rev 6, Reactor Building Heatup Analysis during Station Blackout was performed. However, final review and approval of the calculation EC-SBOR-0504, Rev 6 have not been performed. Revision 7 of this calculation was approved on 3/20/2014. Appendix O was added to identify and evaluate mitigating measures that could be implemented to enhance Switchgear and Load Center Room cooling, as needed, for time > 72 hours.	Complete
15. Fuel consumption and refuel intervals will be determined during the procurement process for the 4160VAC generators.	Complete
* Revised since the six month update submitted February 9, 2017 (Reference 8.18)	

7. Potential Draft Safety Evaluation Impacts

None - Susquehanna received the ISE and closed the Open Item and Confirmatory Items via the audit process. The NRC performed the Mitigation Strategies and Spent Fuel Pool Level Instrumentation Audit at Susquehanna the week of December 8th, 2014. During the Audit Exit meeting the NRC considered all Mitigation Strategies related items to be closed. The NRC's Audit Report documented the closure status of the Mitigation Strategies issues (Reference 8.15).

8. References

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

- 8.1 PLA-6981, "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 (NRC Order EA-12-049)," dated February 28, 2013.
- 8.2 NRC Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012.
- 8.3 NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide," Revision 0, dated August, 2012.
- 8.4 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.
- 8.5 PLA-7072, "Request for Implementation Date Relief in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (NRC Order EA-12-049)," dated August 26, 2013.
- 8.6 NRC Order EA-13-109, "Order to Modify Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," dated June 6, 2013.
- 8.7 PLA-7071, "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 26, 2013.
- 8.8 PLA-7134, "Request for Relaxation from NRC Order EA-12-049, 'Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events'" dated February 20, 2014.
- 8.9 NRC Letter from J. S. Bowen to T. S. Rausch, "Susquehanna Steam Electric Station, Units 1 And 2 –Interim Staff Evaluation Relating To Overall Integrated Plan In Response To Order EA-12-049 (Mitigation Strategies) (TAC NOS. MF0888 and MF0889)," dated January 24, 2014 (ADAMS # ML13339A764).
- 8.10 PLA-7137, "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 (NRC Order EA-12-049)," dated February 28, 2014.

- 8.11 NRC Letter from E. J. Leeds to T. S. Rausch, "Susquehanna Steam Electric Station Units 1 and 2 – Relaxation of Certain Schedule Requirements for Order EA-12-049 'Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design Basis External Events,'" dated April 15, 2014 (ML14065A028).
- 8.12 PLA-7204, "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 (NRC Order EA-12-049)," dated August 28, 2014.
- 8.13 PLA-7295, "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 (NRC Order EA-12-049)," dated February 25, 2015.
- 8.14 PLA-7377, "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 (NRC Order EA-12-049)," dated August 26, 2015.
- 8.15 NRC Letter from John D. Hughey to T. S. Rausch, "Susquehanna Steam Electric Station, Units 1 and 2 – Report for the Audit Regarding Implementation of Mitigating Strategies and Reliable Spent Fuel Pool Instrumentation Related to Orders EA-12-049 and EA-12-12-051 (TAC NOS. MF0888, MF0889, MF0890 and MF0891)" dated April 13, 2015 (ML15089A123).
- 8.16 PLA-7438, "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 (NRC Order EA-12-049)," dated February 18, 2016.
- 8.17 PLA-7513, "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 (NRC Order EA-12-049)," dated August 19, 2016.
- 8.18 PLA-7570, "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 (NRC Order EA-12-049)," dated February 9, 2017.