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NRC Order No. EA-12-049

RS-15-054

February 20, 2015

U.S. Nuclear Regulatory Commission
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Calvert Cliffs Nuclear Power Plant, Units 1 and 2
Renewed Facility Operating License Nos. DPR-53 and DPR-69
Docket Nos. 50-317 and 50-318

Subject: February 2015 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)

Reference: 1. 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 (ML12054A735)

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Order EA 12-049 (Reference 1) to Constellation Energy Nuclear Group, LLC (CENG) for Calvert Cliffs Nuclear Power Plant, LLC (CCNPP), Units 1 and 2. Reference 1 requires submission of a status report at six-month intervals following submittal of the Overall Integrated Plan. The attachment to this letter provides the February 2015 six-month status report for CCNPP pursuant to Section IV, Condition C.2, of Reference 1. The report updates the milestone accomplishments since the submittal of the last status report, including any changes to the compliance method.

Regarding changes in schedule or need for relief and the basis, on February 20, 2015, Exelon Generation Company, LLC.(EGC) submitted a request to relax the requirement for the schedule of compliance implementation of CCNPP Unit 2, as prescribed in Section IV.A.2 of the Order. Presently, the Unit 2 FLEX Order compliance date is prior to restart from the CC2R21 refueling outage. EGC requested a relaxation of the CCNPP Unit 2 FLEX compliance date to no later than 60 days following restart from the CC2R21 refueling outage.

This letter contains no new regulatory commitments.

If you have any questions regarding this submittal, please contact Mr. Michael J. Fick, Acting Regulatory Assurance Manager, at (410) 495-6714.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 20th day of February, 2015.

Respectfully,

Mary G. Korsnick

MGK/GGM

Attachment: Six-Month Status Report (February 2015) for Mitigation Strategies for Beyond-Design-Basis External Events

cc: Regional Administrator, Region I, USNRC
NRC Project Manager, NRR – Calvert Cliffs Nuclear Power Plant
NRC Senior Resident Inspector – Calvert Cliffs Nuclear Power Plant
S. Gray, MD-DNR

ATTACHMENT

SIX-MONTH STATUS REPORT (FEBRUARY 2015)

FOR MITIGATION STRATEGIES FOR

BEYOND-DESIGN-BASIS EXTERNAL EVENTS

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC
February 20, 2015

ATTACHMENT
CCNPP SIX-MONTH STATUS REPORT (FEBRUARY 2015)
FOR MITIGATION STRATEGIES FOR BEYOND-DESIGN-BASIS EXTERNAL EVENTS

1 Introduction

The Calvert Cliffs Nuclear Power Plant, LLC (CCNPP) Overall Integrated Plan (OIP) was submitted to the Nuclear Regulatory Commission (NRC) in February 2013 (Reference 1), documenting the diverse and flexible strategies (FLEX) in response to NRC Order Number EA-12-049 (Reference 2). Subsequently, a supplement to the CCNPP OIP for FLEX was submitted to the NRC in March 2013 (Reference 3). This attachment provides an update of milestone accomplishments since the last status report, including any changes to the compliance method.

Regarding schedule, or need for relief/relaxation and associated basis, on February 20, 2015 Exelon Generation Company, LLC. (EGC) formally requested relaxation (Reference 10) of the scheduler requirements of Order EA-12-049 (Reference 2) for Unit 2. This relief request was based on the negative impact on the FLEX Storage Robust Building (FSRB) construction progress caused by the flaws found in the poured concrete walls, the necessary repairs, the continuation with the planned construction activities, and the possibility of further delays caused by inclement winter weather. As indicated in Table 1, the Unit 2 FLEX Order compliance date is prior to restart from the CC2R21 refueling outage in March 2015. EGC requested a relaxation of the CCNPP Unit 2 FLEX compliance date to no later than 60 days following restart from the CC2R21 (Spring 2015) refueling outage. The Unit 1 implementation date remains the Spring 2016 outage.

A commitment was made in Reference 4 to include the status of the implementing actions identified in Section 4.12 of CCNPP's communications assessment as part of the six-month status reports prepared pursuant to Section IV.C.2 of NRC Order EA-12-049. This commitment was rescinded in the August 2014 six-month status report transmittal letter (Reference 9). Consequently, this six-month status report and subsequent ones will not provide an update of communications assessment interim actions.

Since the submittal of the last three status reports in August 2013 (Reference 6), February 2014 (Reference 8), and August 2014 (Reference 9), CCNPP FLEX has progressed with equipment acquisition, engineering analyses and calculations, design and implementation of modifications that support the mitigation strategies, procedure development and training, start of construction of the FLEX robust storage building (FRSB), and selection of the FLEX commercial storage building (FCSB) location. Significant progress has been made in validation of time sensitive actions that are identified as time constraints in the sequence of events timeline of the OIP. The development of the maintenance and testing program is well underway. Work to formalize agreements to utilize local spaces as staging areas is complete with the establishment of Northern High School in Owings, MD, as Staging Area C. No significant changes to the mitigation strategies or planned modifications in support of the mitigation strategies have occurred.

By letter dated December 17, 2013, the NRC issued to CENG the Calvert Cliffs Nuclear Power Plant, Units 1 and 2 – Interim Staff Evaluation Relating to Overall Integrated Plan in Response to Order EA-12-049 (Mitigation Strategies) (TAC Nos. MF 1142 and MF 1143) (Reference 7). The Interim Staff Evaluation (ISE) contains open and confirmatory items for which Exelon, the CCNPP licensee, has begun to provide clarifying or additional information in the February 2014, the August 2014, and this six-month status reports in order for the NRC to determine that the

issues are on a path to satisfactory resolution. This information and the item status are given in Table 3.

2 Milestone Accomplishments

The following milestones have been completed since the development of the OIP (References 1 and 3), and are current as of February 16, 2015:

- Performed exploratory fluid system walk downs in support of pending modifications for FLEX strategies during Spring 2013 Refueling Outage (RFO). (8/2013)
- Performed exploratory electrical system walk downs in support of pending modifications for FLEX strategies during Spring 2013 RFO. (8/2013)
- Performed preliminary site walk downs in support of FLEX equipment deployment and storage strategies. (8/2013)
- Submitted the first six-month FLEX status report in August 2013. (8/2013).
- Submitted the second six-month FLEX status report in February 2014. (2/2014)
- Submitted the third six-month FLEX status report in August 2014. (8/2014)
- Developed Strategies/Contract with the National SAFER Response Center. (NSRC), (8/2014)
- Submitted the Phase 2 Onsite Staffing Assessment in October 2014. (2/2015)

3 Milestone Schedule Status

Table 1 provides an update to Attachment 2-1 of the CCNPP OIP (Attachment 4 - References 1 and 3). 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. Any changes to the indicated target completion dates will be reflected in subsequent 6-month status reports.

Walk-throughs or demonstrations encompassing all FLEX equipment points of connection/tie-ins for Phase 2 and Phase 3 strategies have begun.

The following milestone target completion dates have been updated or added since the previous six-month status report. Changes in the completion dates do not impact the Order compliance date.

Table 1
Status of CCNPP FLEX OIP Milestones

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date

Table 1
Status of CCNPP FLEX OIP Milestones

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	
Commence Engineering and Design	November 2013	Complete	U-2: October 2013 U-1: October 2014
Commence Procurement of Equipment	June 2015	Complete	U-2: June 2014 U-1: January 2015
Commence Installation of Equipment	December 2014	Started	December 2014
Submit 6-Month Status Report	August 2013	Complete	
Develop Modifications	October 2013	Started	U-2: September 2014 U-1: July 2015
Develop Strategies/Contract with the National SAFER Response Center (NSRC)	November 2013	Complete	
Perform Staffing Analysis	January 2014	Complete	October 2014
Submit 6-Month Status Report	February 2014	Complete	
Complete Engineering and Design	March 2014	Started	U-2: February 2015 U-1: August 2015
Create Maintenance and Testing Procedures	June 2014	Started	February 2015
Submit 6-Month Status Report	August 2014	Complete	
Procedure Changes Training Material Complete	September 2014	Complete	January 2015

Table 1
Status of CCNPP FLEX OIP Milestones

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Develop Training Plan	November 2014	Complete	April 2014
Submit 6-Month Status Report	February 2015	Complete	
Issue FLEX Support Guidelines (FSG)	March 2015	Not Started	U-2: March 2015 U-1: March 2016
Unit 2 Modification Implementation Outage	April 2015	Started	March 2015
Walk-throughs or Demonstrations	Unit 2: March 2015 Unit 1: March 2016	Started	
Implement Training	June 2015	Started	U-2: February 2015 U-1: February 2016
Submit 6-Month Status Report	August 2015	Not Started	
Complete Procurement of Equipment	August 2015	Started	U-2: February2015 U-1: February 2016
Issue Unit 2 FLEX Compliance Letter	May 2015	Not Started	
Submit 6-Month Status Report	February 2016	Not Started	
Unit 1 Modification Implementation Outage	April 2016	Not Started	March 2016
Issue Unit 1 FLEX Compliance Letter	May 2016	Not Started	

Table 1
Status of CCNPP FLEX OIP Milestones

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Submit 6-Month Status Report	August 2016	Not Started	
Full compliance with EA-12-049 is achieved	November 2016	Not Started	
Submit Final Integrated Plan (FIP)	December 2016	Not Started	

4 Changes to Compliance Method

Exelon Generation Company (EGC) has implemented an alternative to the compliance method as documented in the Overall Integrated Plan (Reference 1) and Nuclear Energy Institute (NEI) 12-06 (Reference 5). In Section 3.2.2, Minimum Baseline Capabilities, NEI 12-06 states:

> *In order to assure reliability and availability of the FLEX equipment required to meet these capabilities, the site should have sufficient equipment to address all functions at all units on-site, plus one additional spare, i.e., an N+1 capability, where "N" is the number of units on-site. Thus, a two-unit site would nominally have at least three portable pumps, three sets of portable ac/dc power supplies, three sets of hoses & cables, etc.*

The following is a discussion of the deviation to NEI 12-06 and of the alternate approach:

Reason for Change:

CCNPP is taking an alternate approach to the N+1 requirement applicable to hoses as stated in Section 3.2.2 of NEI 12-06.

Change:

NEI 12-06 currently requires N+1 sets of hoses. As an alternative, the spare quantity of hoses is adequate if it meets either of the two methods described below:

Method 1: Provide additional hoses equivalent to 10% of the total length of each type/size of hose or cable necessary for the "N" capability. For each type/size of hose needed for the "N" capability, at least 1 spare of the longest single section/length must be provided.

Example 1-1: An installation requiring 5,000 ft. of 5 in. diameter fire hose consisting of 100 50 ft. sections would require 500 ft. of 5 in. diameter spare fire hose (i.e., ten 50 ft. sections).

Example 1-2: A pump requires a single 20 ft. suction hose of 4 in. diameter, its discharge is connected to a flanged hard pipe connection. One spare 4 in. diameter 20 ft. suction hose would be required.

Method 2: Provide spare cabling and hose of sufficient length and sizing to replace the single longest run needed to support any single FLEX strategy.

Example 2-1 – A FLEX strategy for a two unit site requires 8 runs each of 500 ft. of 5 in. diameter hose (4000 ft. per unit). The total length of 5 in. diameter hose required for the site is 8000 ft. with the longest run of 500 ft. Using this method, 500 ft. of 5 in. diameter spare hose would be required.

For either alternate method, both the N sets of hoses and the spare set of hoses would all be kept in a location that meets the reasonable protection requirements for the site.

Basis for an alternate approach:

Hoses are passive devices unlikely to fail provided they are appropriately inspected and maintained. The most likely cause of failure is mechanical damage during handling provided that the hoses are stored in areas with suitable environmental conditions. The hoses for the FLEX strategies will be stored and maintained in accordance with manufacturers' recommendations including any shelf life requirements. Initial inspections and periodic inspections or testing will be incorporated in the site's maintenance and testing program implemented in accordance with Section 11.5 of NEI 12-06.

Therefore, the probability of a failure occurring during storage is minimal, resulting in the only likely failure occurring during implementation. Mechanical damage will likely occur in a single section versus a complete set of hose. Therefore, the N+1 alternative addresses the longest individual section/length of hose.

Providing either a spare hose of a length of 10% of the total length necessary for the "N" capability or alternatively providing spare cabling or hose of sufficient length and sizing to replace the single longest run needed to support any single FLEX strategy is sufficient to ensure a strategy can be implemented. Mechanical damage during implementation can be compensated for by having enough spares to replace any damaged sections with margin. It is reasonable to expect that an entire set of hoses would not be damaged provided they have been reasonably protected.

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

NRC Order EA-12-049 requires the development, implementation, and maintenance of 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. Per Order EA-12-049, Calvert Cliffs Nuclear Power Plant Unit 2 end of its second refueling outage and full completion date is March 2015.

EGC's work in developing, implementing, and maintaining guidance and strategies to maintain or restore core cooling, containment cooling, and spent fuel pool cooling was performed following the NRC-endorsed guidance in Nuclear Energy Institute (NEI) 12-06 (Reference 5), including the selection of type and location of the FSRB presently under construction. As described in the February 2014 six-month status report (Reference 8), the FSRB will be of reinforced concrete approximately 60' wide x 140' long x 21' high and located outside of the

Protected Area. The FSRB has been designed for seismic, wind, tornado and tornado missiles and flooding conditions.

Construction of the FSRB began in August 2014. With a 6-month construction timeline, the building was scheduled to be completed in February 2015. Following the first concrete wall pour and removal of the frames in December 2014, it was discovered that there were readily visible voids (flaws) in the concrete. The construction company notified EGC and brought in a concrete consulting firm who performed Ultrasonic Pulse Velocity (UPV) testing on the concrete walls. The UPV testing results revealed that there were internal flaws in the poured concrete.

Recovery efforts were initiated in order to perform the extensive repairs, re-test the affected areas of the concrete, and complete the building on or as close to the original schedule as possible. The cumulative impact of the concrete repair work became critical path and prevented other activities that are dependent on the finished concrete work, such as installation of the tornado-resistant doors, from being completed.

Based on the negative impact on the FSRB construction progress by the flaws found in the poured concrete walls, the necessary repairs, the continuation with the planned construction activities, and the possibility of further delays caused by inclement winter weather, on February 20, 2015 EGC formally requested relaxation (Reference 10) of the scheduler requirements of Order EA-12-049 for Unit 2. Presently, the Unit 2 FLEX Order compliance date is prior to restart from the CC2R21 refueling outage. EGC requested a relaxation of the CCNPP Unit 2 FLEX compliance date to no later than 60 days following restart from the CC2R21 (Spring 2015) refueling outage.

The Unit 1 implementation date remains the Spring 2016 outage.

6 Open Items from Overall Integrated Plan and Draft Safety Evaluation

Table 2 provides a summary of the open items documented in the OIP and those added in a subsequent six-month status report, and the status of each item.

Table 3 provides a summary of the open items and confirmatory items documented in the NRC's CCNPP ISE (Reference 7) and the status of each item.

Table 2
Status of CCNPP FLEX OIP Open Items

	CCNPP OIP Open Items	Status
1.	Add margin to design FLEX components and hard connection points to address future requirements as re-evaluation warrants. Portable FLEX components will be procured commercially	Complete No additional margin is required and all design is being performed to the existing design basis for FLEX equipment, as outlined in Evaluation No. 2014-06418, Design Criteria CCNPP Fukushima Daiichi Tier 1 Requirement Implementation of Diverse and Flexible Coping Strategies (FLEX). Specifically sections 5.4 and 5.9 address seismic margin requirements As part of the 10CFR 50.54(f) request for information on Recommendation 2.1 regarding seismic issues, the following information is provided. The governing guidance for this process is Seismic Evaluation Guide, EPRI 3002000704, Augmented Approach for Resolution of the Fukushima Near Term Task Force Recommendation 2.1 Seismic. Currently, referred to as the Expedited Seismic Evaluation Process (ESEP), the ESEP provided guidance, which has been used to evaluate the seismic survivability of all primary success path, permanently installed FLEX components and connection points, up to the new Ground Motion Response Spectra (GMRS). These components have been evaluated up to 0.175g loading, which is 17.5% greater than that the existing Safe Shutdown Earthquake value of 0.15g. There are only three hard connection points consisting of pipe tees with manual valves. This configuration was exempt from inclusion in the ESEP. These hard points are also alternate success path connections, which also makes them exempt from the ESEP. There are no hard electrical connection points. All other portable FLEX equipment is commercial grade or considered a tool and is exempt from any requirement to add design margin.
2.	Implement a design change to install permanent protected FLEX equipment connection points	Started. (Notification provided in Reference 8)

CCNPP OIP Open Items	Status
3. Evaluate deployment strategies and deployment routes to ensure they are assessed for and address applicable hazards impact.	Complete Onsite FLEX deployment locations have been marked with painted areas and parking curbs to define areas which must be kept clear for FLEX equipment. Debris removal equipment will be stored in the FLEX Storage Robust Structure, a structure designed to withstand the external event without damaging the equipment. Exelon Generation and SAFER have developed the Standard Response Plan for the Calvert Cliffs site, also defined as the site playbook. The document describes the primary and alternate driving pathways from the National SAFER Response Center (NSRC) to "C" and "D" Staging Areas and then to the onsite Staging Areas. In addition to the driving pathways, helicopter routes and contacts are identified in the playbook.
4. Develop a process for implementation of exceptions for the site security plan or other (license/site specific – 10CFR50.54(x)) requirements of a nature requiring NRC approval will be communicated in a future 6 month update following identification.)	Complete. During an ELAP, conditions may evolve to such an extent that the plant is beyond the bounds of the design and licensing basis and extraordinary measures will be required to maintain the facility in a safe condition and allow for a rapid response to developing conditions. In light of these potential conditions, FSG-5, Initial Assessment and FLEX Equipment Staging, recognizes that there may be a need to depart from license conditions or technical specifications in order to protect public health and safety in accordance with 10CFR50.54(x). The authority to invoke 10CFR50.54(x) is given to a senior control room operator.
5. Define implementation routes upon finalizing a location or locations for FLEX equipment storage location(s).	Started. (Notification provided in Reference 6)

CCNPP OIP Open Items	Status
6. Evaluate requirements, options, and develop strategies to provide reasonably protected storage on site for the FLEX portable equipment.	Complete. Requirements and options to provide reasonably protected onsite storage of FLEX portable equipment have been evaluated, resulting in the selection of FLEX equipment storage building types and locations that meet the specific protection requirements described in NEI 12-06. One robust storage building and one commercial building will be constructed at CCNPP. The robust building, the FLEX Storage Robust Building (FSRB), will be of reinforced concrete approximately 60' wide x 140' long x 21' high and located outside of the Protected Area to the west. The commercial building, the Flex Storage Commercial Building (FSCB), will be a pre-engineered building approximately 60' wide x 60' long x 18' high. It will be located outside of the Protected Area to the south. The distance between the two buildings is 2,130 feet.
7. Design and build a protected storage location or locations for the FLEX equipment. Ensure the design meets the requirements of NEI 12-06.	Started. (Notification provided in Reference 6)
8. Identify analysis needed to develop or support mitigating strategies.	Complete. Analyses needed to develop or support FLEX mitigation strategies have been identified andcompleted. All Exelon documents, drawings, sketches, calculations, analyses, procedures/guidance and evaluations related to CCNPP mitigation strategies will be controlled and maintained in accordance with the plant configuration control program.

CCNPP OIP Open Items	Status
9. Provide an administrative program governing the FLEX deployment strategy, marking of setup locations, including primary and alternate pathways, maintaining the pathways clear, and clearing the pathways.	Complete. The Program Document, CC-CA-118, will contain the administrative program governing the FLEX deployment strategy, marking of setup locations, including primary and alternate pathways, maintaining the pathways clear, and clearing the pathways. Although the program has not yet been documented in the Program Document, which is under development, some of its elements have either been implemented or been planned. For example, onsite FLEX deployment locations have been marked with painted areas and parking curbs to define areas which must be kept clear for FLEX equipment. Debris removal equipment are planned to be stored in the FLEX Storage Robust Structure, a structure designed to withstand the external event without damaging the equipment.
10. Determine the location of the CCNPP local staging area, primary and alternate delivery routes, and delivery methods to the proposed onsite laydown areas.	Complete. (Addressed in Reference 8)
11. Determine schedule for when RRCs will be fully operational.	Complete. (Addressed in Reference 6)
12. Define criteria for the local staging area by June 2013.	Complete. (Addressed in Reference 8)
13. Establish a suitable local staging area for portable FLEX equipment to be delivered from the RRC to the site.	Complete. The following staging areas for portable FLEX equipment to be delivered from the National SAFER Response Center (NSRC) to CCNPP were selected: • West Road at CCNPP • Owner Controlled Area parking lot • Northern High School, 2950 Chaneyville Road, Owings, Maryland. • Baltimore-Washington International (BWI) Airport

CCNPP OIP Open Items	Status
14. Develop site specific SAFER Response Plan (playbook) for delivery of portable FLEX equipment from the RRC to the site.	Complete. The SAFER team conducted a two-day on-site visit to CCNPP on December 3 and 4, 2013. The visit included an orientation on the SAFER FLEX Phase 3 program, the expected interfaces with the nuclear station, and Rehearsal of Concept (ROC) presentation, which reviewed the expected challenges of a Beyond Design Basis External Event (BDBEE). These activities provided an opportunity to review the site-specific Fukushima Integrated Plan. The SAFER Response Plan is presently in draft form, awaiting implementation at CCNPP as site procedure CC-AA-118-1001, "CCNPP SAFER Response Plan".
15. Original open item text: Implement a design change to replace the 1 ft. diameter wheel with a 3 ft. wheel on each Atmospheric Dump Valve (ADV) chain operator. Modified open item text: Implement a design change to improve mechanical advantage on each Atmospheric Dump Valve (ADV) chain operator.	Complete. The modification consisted in installing both a larger hand wheel and an enhanced gear assembly which result in the capability to operate the system in a single operator evolution.(Notification provided in Reference 8)
16. Evaluate the feasibility of the WCAP-17601-P recommendation to install a remotely operated RCP CBO return line isolation valve.	Deleted. (Addressed in Reference 6)
17. Develop a procedure or FSG to perform an early cooldown and depressurization as recommended by WCAP-17601-P.	Complete. CCNPP Emergency Operating Procedure, EOP-7, Station Blackout, has been revised to include the early cooldown and depressurization in accordance with the PWROG FLEX Support Guidelines and WCAP-17601-P.
18. Perform engineering analyses to confirm that CCNPP maintains an adequate level of Shutdown Margin (SDM) for an RCS cooldown to 350°F, to cover a period of at least 72 hours.	Complete. (Addressed in Reference 8)
19. Implement a design change to re-power the [Safety Injection Tank] SIT level and pressure indicators from a vital 120 VAC instrument bus.	Started. (Notification provided in Reference 8)
20. Implement a design change to install new leak-tight SIT vent Solenoid Valves (SV) that will allow the vent line pipe caps to remain off.	Deleted. (Addressed in Reference 6)

CCNPP OIP Open Items	Status
21. Original open item text: Implement design changes to install "plug and play" protected hose connections for the portable alternate [Auxiliary Feedwater] AFW pump to AFW on the exterior of the Auxiliary Building west wall with piping run to the 27 ft. East penetration Rooms to connect to the AFW to S/G headers. Modified open item text: Utilize flexible hose to connect a FLEX pump to a newly installed, dedicated hose connections (one per unit) located on the motor driven AFW pump cross-connect lines on the 5 ft. elevation of the Auxiliary Building.	Started. (Notification provided in Reference 8)
22. Implement a design change to install reliable local level indicators on all of the water storage tanks located in the 11, 12 and 21 CSTs, 11 DWST, and 11 and 12 PWSTs.	Deleted. (Addressed in Reference 8)
23. Perform an analysis to determine the necessary scope of the DC load shedding strategy.	Complete. The scope of the DC load shedding strategy has been determined. This was followed by the performance of the load shedding analyses. The load shedding analysis results in terms of extended battery life and other related information are reported in the responses to Items 25, 26 and 38.
24. Original open item text: Implement a design change to clearly identify the set of DC load breakers that will either be left energized or load shed by identifying the selected breakers by their unique numbers and load title. Modified open item text: Clearly identify (label) the DC load breakers that will be opened to extend battery life.	Started. (Notification provided in Reference 8)
25. Implement a procedure or FSG to perform the DC load shedding.	Started. FSG-4, ELAP DC Bus Load Shed and Management, provides actions to remove loads from the 125 VDC batteries to extend battery life during an ELAP and repowering load centers and motor control centers with FLEX equipment.

CCNPP OIP Open Items	Status
26. Complete a time-motion study to validate that DC load shedding can be accomplished on each unit in one (1) hour.	Complete. FSG-4, ELAP DC Bus Load Shed and Management, provides actions to remove loads from the 125 VDC batteries to extend battery life during an ELAP and repowering load centers and motor control centers with FLEX equipment. A time-motion study was conducted to validate that DC load shedding can be accomplished on each unit in one hour using the FLEX Support Guideline. The time-motion study for both units was conducted showing that deep load shed can be accomplished in 50 minutes using one operator. It is worthy to note that the test demonstrated the task could be accomplished by one operator for both units in 50 minutes, less than the one hour required for one unit.
27. Original open item text: Implement a design change to install an 8-hour Uninterruptible Power Supply (UPS) on the Mansell RCS Level Monitoring System. Modified open item text: Implement a design change to connect a portable diesel generator to the Mansell RCS Level Monitoring System.	Complete. During lower modes of operation, the Reactor Coolant System (RCS) level can be monitored via the Mansell Level Monitoring System. The Mansell RCS Level Monitoring System (RLMS) currently has a backup uninterruptible power supply (UPS); however, it is only rated for 30 minutes of backup power. ECP-14-000024 was prepared to repower certain instruments from a vital source to satisfy the requirement to ensure they are operational during an Extended Loss of AC Power (ELAP) event. It also provides for backup power to the Mansell RLMS to ensure that the RCS level can be adequately monitored during an ELAP event with the plant in refueling mode and the reactor head removed. ECP-14-000024 will provide the Mansell cart with reliable 120VAC power from a portable diesel generator. This will ensure that the Mansell Cart will continue to have backup power during an ELAP event for as long as required. The provisions for providing reliable 120VAC power to the Mansell RLMS from a portable diesel generator have been installed.

CCNPP OIP Open Items	Status
28. Perform engineering analyses and develop strategies for providing RCS make-up and core cooling while in Modes 5 and 6, for all possible RCS conditions, following an ELAP. The analysis should determine the FLEX pump capacity needed to provide adequate flow in all RCS conditions.	Complete. Calculation CA08576, "Hydraulic analysis of Reactor Coolant System (RCS) Makeup FLEX Portable pump and hose connections" has been completed. The analysis identified multiple sources of water and the required total discharge head to ensure flow to the RCS via the FLEX pump and hoses. CCNPP also incorporated all PWROG guidance for shutdown modes into the FLEX Support Guidelines, as FSG-14, Shutdown RCS Makeup.
29. Perform an analysis to determine that there is sufficient decay heat generated for TDAFW operation 36 hours after shutdown.	Complete. (Addressed in Reference 8)
30. Implement a design change to provide dedicated hose connections and piping to the Safety Injection System.	Started. (Notification provided in Reference 8)
31. Develop a procedure or FSG to mimic the AFW makeup strategy described in ERPIP-611, Attachment 1.	Started. (Notification provided in Reference 6)
32. Install a design change to add makeup and pump suction hose connections for FLEX pump connection to 12 CST.	Deleted. (Addressed in Reference 8)
33. Install a design change to replace the 2-½ inch hose connections with 4 inch hose connections at 11 and 21 CSTs, 11 DWST, and 11 and 12 PWSTs.	Deleted. (Addressed in Reference 6)
34. Install a design change to add hose connections at 11 and 21 Refueling Water Storage Tanks (RWT) for makeup and suction for the FLEX pumps.	Started. (Notification provided in Reference 8)
35. Install design change to add 4" hose connections to the Reactor Coolant Waste Receiver Tanks (RCWRTs) and Reactor Coolant Waste Monitor Tanks (RCWMTs).	Deleted. (Addressed in Reference 8)

CCNPP OIP Open Items	Status
36. Perform an analysis to determine the survivability of the wells as a long-term source of make-up water. Analysis should include any modifications needed to improve the survivability of the associated Well Water System piping and to provide 480 VAC power to the well pumps.	Complete. An analysis to determine the survivability of the well as a long-term source of make-up water has been performed. The results indicate that the well will not survive a wind-driven missile event without additional protection. A concrete and steel barrier protection system modification to improve the survivability of the Well Water System piping has been implemented. Regarding providing power to the well pumps, the strategy is to deploy a 480 VAC portable DG to repower the 11 well pump motor.
37. Perform an analysis to determine the long-term effect on the S/Gs from use of water from the [Ultimate Heat Sink] UHS as a cooling medium.	Complete. Calculation CA10021, Raw Water Analysis for FLEX Cooling has been completed. The conclusion is that the maximum fouling thickness in the S/Gs is <2% at 72 hours, which does not impact the relatively low estimated flow rate through the secondary side. The other raw water source, 11 Well Pump water, has been analyzed and found to have better water quality. As such, the Chesapeake Bay water steam generator fouling analysis would bound that for the well water. Therefore, the 11 Well Pump water will also be an effective cooling medium. The impact on the secondary side of the S/Gs from Chesapeake Bay water degrades the heat transfer effectiveness of the tubesheet <10% up to 72 hours.
38. Perform an analysis to determine station battery coping time with DC load shedding. Analysis should consider battery age, battery performance without battery room ventilation, and load and load duration prior to completion of DC load shedding.	Started.
39. Track the completion of ECP-11-000293 and -000294, the Reserve Battery distribution system modification that is currently in progress.	Complete. The Reserve Battery distribution system modifications have been completed. The system is functional.
40. Develop and implement procedures to supply power to critical instrumentation using primary and alternate methods.	Complete. FSG-7, Loss of Vital Instrument and Control Power, has been drafted.

CCNPP OIP Open Items	Status
41. Perform an analysis to determine that the assumed load capacity of the FLEX 480 VAC DG is sufficient to provide power to the selected loads.	Complete. (Addressed in Reference 9)
42. Implement a design change to connect a FLEX 480 VAC Diesel generator to either of the A or B train 480 VAC load centers on each unit to provide power to the battery chargers and other critical AC equipment.	Started. (Notification provided in Reference 8)
43. Implement a design change to provide direct connection of a portable 100 kW diesel generator to reactor [Motor Control Centers] MCCs 104 or 114 and 204 or 214 to provide power to the inverter backup bus (which can power the 120VAC vital bus), the SIT Outlet [Motor Operated Valves] MOVs, and the AFW Pump Room Vent Fans.	Started. (Notification provided in Reference 8)
44. Implement a design change to install connection points, conduit, cabling, and transfer switches locally at battery chargers to provide for direct connection from the FLEX 480 VAC DGs.	Deleted. (Addressed in Reference 6)
45. Perform an analysis to determine the feasibility of the S/G “batch” feeding strategy.	Complete. The PWR Owners Group (PWROG) evaluated the feasibility of the S/G "batch" feeding strategy and provided guidance for batch feeding in FLEX Support Guideline FSG-9, "Low Decay Heat Temperature Control." FSG-9 provides actions to stop an excessive RCS cooldown due to decay heat levels being too low to allow continuous operation of the Turbine Driven Auxiliary Feedwater (TDAFW) pump during an extended loss of AC power (ELAP) event that occurs when the steam generators are in service. Guidance is provided for cycling the TDAFW pump to maintain steam generator levels while controlling RCS temperature. Calvert Cliffs is preparingFSG-5, "Low Decay Heat Temperature Control" to implement this guidance.
46. Implement a procedure to connect a 4160 VAC RRC DG to either of the A or B Train 1E 4160 VAC Buses on each unit to provide power for Phase 3.	Started. (Notification provided in Reference 8)
47. Develop procedures or FSGs for repower vital 4160 VAC Class 1E buses from RRC FLEX 4KV DGs.	Started. (Notification provided in Reference 8)

CCNPP OIP Open Items	Status
48. Provide modified 4160 VAC breakers for direct RRC DG connection for use in place of the normal 4160 VAC breakers in service for LPSI Pump and SW Pump power supplies.	Deleted. (Addressed in Reference 8)
49. Implement a design change to power containment dome and reactor cavity temperatures instrumentation from a vital 120 VAC instrument bus.	Started. (Notification provided in Reference 8)
50. Perform an analysis to determine containment temperature and pressure response over a period of 72 hours. Perform analysis with and without RCS cooldown and with and without restoration of containment air cooling.	Complete. (Addressed in Reference 6—See response to ISE Confirmatory Item 3.2.3.A)
51. Implement a design change to install a hose connection on the A-Train and B-Train [Containment Spray] CS headers in the Auxiliary Building.	Deleted. (Addressed in Reference 6)
52. Purchase additional special check valve bonnets and store them inside each [Emergency Core Cooling System] ECCS Pump Room.	Deleted. (Addressed in Reference 9)
53. Perform an analysis to determine the feasibility of providing Containment cooling with CAC Units using an alternate cooling water strategy.	Complete. Calculation CA09991, "Hydraulic Analysis of the FLEX Pump Connection to the Salt Water System", verified that with the use of a booster pump to take water from the plant intake or discharge, sufficient flow to the Service Water Heat Exchanger is provided to support the containment air cooling. An engineering evaluation, "Analysis of Containment Response to ELAP", concluded containment air coolers (CAC) reduce the peak pressure to 4 psig inside Containment following an ELAP just by service water flow through the CACs.
54. Install hose connections on the Service Water (SRW) supply and return lines to the CAC for connection to a RRC portable heat exchanger.	Deleted. (Addressed in Reference 8)
55. Implement a design change to install reliable wide range spent fuel pool (SFP) level instrumentation in accordance with NRC Order EA-12-051.	Complete. A reliable, wide-range spent fuel pool level instrumentation system has been installed in accordance with NRC Order EA-12-051.
56. Implement a design change to provide a 6" hose connection to each RWT.	Started. (Notification provided in Reference 8)

CCNPP OIP Open Items	Status
57. Original open item text: Implement a design change to provide dedicated hose connections to the SFP Cooling system. Modifed open item text: Provide the necessary means (i.e. temporary equipment, tools and procedures) to supply makeup water to the SFP via the SFP cooling system.	Started. (Notification provided in Reference 8)
58. Develop and implement procedures or FSGs that include the SFP Cooling FLEX makeup flow path.	Started. (Notification provided in Reference 6)
59. Develop procedures or FSGs that mimic the ERPIP-612 sections for SFP makeup and SFP spray.	Started. (Notification provided in Reference 6)
60. Implement a design change to install reliable wide range SFP fuel pool level instrumentation in accordance with NRC Order EA-12-051	Duplicate Open Item. See Open Item # 55
61. Perform an analysis to determine the Control Room temperature response over a period of 72 hours.	Complete. (Addressed in Reference 9)
62. Perform an analysis to confirm that TDAFW Pump room air temperature remains acceptable over 72 hours of pump operation.	Complete. (Addressed in Reference 9)
63. Develop primary and alternate strategies for ventilating the TDAFW Pump Room.	Complete. (Addressed in Reference 6)
64. Perform an analysis to confirm the [Probable Maximum Precipitation] PMP event maximum flood height will not impact the operation of TDAFW or preclude access to the room.	Complete. (Addressed in Reference 6)
65. Perform an analysis to determine the possible effects of Beyond Design Basis External Events (BDBEEs) on the Turbine Building structure and the potential effect on access to the TDAFW Pump Room.	Complete. (Addressed in Reference 9)
66. Develop an alternate access strategy for access into the TDAFW Pump Room.	Complete. (Addressed in Reference 9)
67. Perform an analysis to determine the temperature profile over 72 hours in the area around ADV enclosures.	Complete. (Addressed in Reference 9)
68. Perform an analysis to determine the Cable Spreading Room temperature response over a period of 72 hours.	Complete. (Addressed in Reference 9)

CCNPP OIP Open Items	Status
69. Investigate changing Appendix R lighting batteries to a longer life battery or new battery technology to lengthen the duration of lighting available in vital areas of the plant.	Deleted. (Addressed in Reference 8)
70. Procure battery operated hardhat mounted lights ("miners" lights) for on-shift and Emergency Response Organization (ERO) personnel.	Complete 100 battery-operated hardhat mounted lights ("miners" lights) have been purchased for use by on-shift and Emergency Response Organization (ERO) personnel.
71. Procure a sufficient quantity of hand-held battery operated lanterns for on-shift and ERO personnel.	Complete 24 hand-held magnetic equipment lights have been purchased for use by on-shift and ERO personnel.
72. Procure six (6) portable diesel generator powered exterior lighting units with 30 ft. masts and a minimum 400,000 lumens.	Complete. (Addressed in Reference 8)
73. Change Appendix R lighting from incandescent to LED to lengthen the duration of lighting available in vital areas of the plant.	Deleted. (Addressed in Reference 8)
74. Implement a design change to install a protected, backup power supply capable of 24 hours of operation, for the Plant Public Address system. This includes backup power for the individual building speaker network amplifiers.	Deleted. With Calvert Cliffs' integration into the Exelon fleet, the strategy for FLEX communications changed to use of bullhorns by site personnel to make announcements versus a permanently installed backup power supply for the individual building speaker network amplifiers. Consequently, a design change to install a protected, backup power supply capable of 24 hours of operation, for the Plant Public Address system will not be implemented.
75. Implement a design change to modify the 800 MHz Radio System to provide protection from external hazards, transmitter and antennas protected from seismic, wind, and wind-driven missiles, including back-up power supply capable of 24 hours operation for the system and repeaters, or install an alternative communication system in lieu of the 800 MHz Radio system.	Complete. With Calvert Cliffs' integration into the Exelon fleet, the strategy for FLEX communications changed to use of a common 800 MHz system. The system employs handsets in the "talk-around" mode for line-of-sight communications. A test verified the effectiveness of the handsets to communicate to all FLEX storage and deployment locations. Battery backups for 24 hours of operation have been procured and will be stored in the communications trailer in the fully protected FLEX Storage Robust Building.

CCNPP OIP Open Items	Status
76. Implement a design change to modify the Fixed Dedicated Satellite Phone System to provide protection from external hazards, and transmitter and antennas protected from seismic, wind, and wind-driven missiles, including back-up power supply capable of 24 hours operation for the system.	Started. (Notification provided in Reference 8)
77. Purchase one wheeled and one tracked vehicle with bucket/blade and grapple of sufficient size and load handling capacity to remove debris.	Complete. (Addressed in Reference 8)
78. Purchase the portable equipment needed to outfit CCNPP Fire Engine 171 for debris removal.	Deleted. (Addressed in Reference 6)
79. Implement a design change to install a protected alternate means of accessing the UHS for all BDBEEs, including installing necessary modifications to meet required deployment times. The strategy must also address how debris in the UHS will be filtered / strained and how the resulting debris will effect core cooling.	Complete. The strategy has been adapted to provide a two-step approach to debris filtering. The submersible pump to be placed near the intake structure bay contains a floating mesh strainer on its inlet to prevent debris > 3/8" from entering the pump suction. While the submersible pump is in operation, an equipment operator watch will be posted to ensure large debris does not foul the pump. This will ensure sufficient water flow to the pump even if a significant amount of larger debris is inside the intake structure bay. Calculation CA10021, Raw Water Analysis for FLEX Cooling has been completed. The conclusion is that the impact on the secondary side of the S/Gs from Chesapeake Bay water degrades the heat transfer effectiveness of the tubesheet <10% up to 72 hours. The maximum fouling thickness in the S/Gs is <2% at 72 hours, which does not impact the relatively low estimated flow rate through the secondary side.
80. Develop strategies for use of the Control Room and Cable Spreading Room Appendix R Ventilation System during an ELAP.	Deleted. (Addressed in Reference 9)
81. Perform an analysis to evaluate hydrogen buildup in the battery rooms during charging and the long term room temperature profiles.	Complete. (Addressed in Reference 9)
82. Perform an analysis to determine the Switchgear Room temperature response under the above scenario and assuming various 480 VAC load center and 4160 VAC bus loadings over a period of 72 hours.	Complete. (Addressed in Reference 9)

CCNPP OIP Open Items	Status
83. Perform an analysis to verify the above strategy will provide sufficient air flow to vent steam from the SFP Area.	Complete. (Addressed in Reference 9)
84. Evaluate the cost of draining 21 Fuel Oil Storage Tank (FOST) and 1A DG FOST and refilling with ultra-low sulfur (<15 ppm) diesel fuel oil.	Deleted. Estimating the cost of draining the 21 Fuel Oil Storage Tank (FOST) and refilling with ultra-low sulfur diesel fuel oil is no longer necessary. The fuel oil usage calculation verified that sufficient storage for ultra-low sulfur (<15 ppm) diesel fuel oil was available up to 72 hours. Calvert Cliffs has FLEX equipment that uses non-ultra-low sulfur fuel, thus allowing the existing fuel oil in the 21 FOST to be used.
85. Original open item text: Implement a design change to install dedicated FLEX hose connections on 21 FOST, 1A DG FOST, and the 1B, 2A, and 2B DG fuel oil Y-strainers. Modified open item text: Implement a design change to install dedicated FLEX hose connections on the 21 FOST.	Deleted. The initial intent was to provide hose connections on the 21 FOST (fuel oil storage tank), the 1A DG FOST, and the 1B, 2A, and the 2B DG fuel oil Y-strainers. This was later changed to only include the 21 FOST. The 21 FOST has been modified to accommodate connections to take fuel for FLEX equipment through an air-driven pump that has been mounted inside the enclosure. Existing connections to the 21 FOST allow for the tank to be connected to the new pump during an ELAP to extract the fuel oil. As a result, there is no longer a need to install dedicated FLEX hose connections on the 21 FOST.
86. Provide a permanent, fully protected diesel FOST for refueling the FLEX diesel-driven equipment.	Deleted. (Addressed in Reference 9)
87. Perform an analysis of the fuel consumption rate for all of the FLEX equipment that could be in operation during an ELAP for a period of 72 hours to determine a conservative refueling interval.	Complete. Calculation CA09986, Rev. 0000, FLEX Fuel Oil Consumption Rate Analysis 6, determined the diesel fuel needs for all Diverse and Flexible Coping Strategies (FLEX) equipment that could be in operation during a Beyond Design Basis External Event (BDBEE) for a period of 72 hours. The results of the analysis will be used to determine a conservative refueling strategy to support FLEX equipment. (See ISE CI 3.2.4.9.A)

CCNPP OIP Open Items	Status
88. Develop strategies to reduce the transport time for fuel oil loading and delivery.	Complete. Calvert Cliffs has purchased two 2800-gallon fuel oil tanker trucks to transport the fuel oil to the FLEX equipment. The trucks have an onboard fuel transfer pump. In addition, the F350 FLEX vehicle has a 100-gallon fuel oil tank to fill the smaller components. The following are elements of the CCNPP fuel transport and refueling strategy: 1. All equipment will be full at the start of ELAP which prevents the need to fuel in Phase 1 and provides moisture control. 2. Equipment has been purchased with fuel tanks of sufficient size to prevent the need to refuel in Phase 1 and through early Phase 2 and avoid fuel cavitation requiring lengthy priming. 3. Refueling needs for operator-controlled equipment would utilize designated FLEX communication equipment to schedule delivery. 4. Initially, two tankers trucks will be stored with 2800 gallons each of ultra-low sulfur fuel (ULSF). One tanker truck will be used until empty. It will then be fueled with diesel fuel from 21 FOST as needed for non-Tier 4 equipment. The other tanker will be held back, and deployed as needed for Tier 4 equipment needs. The F350 truck with a stored 100 gal tank will be deployed to fill light towers, small 5500w generators and other small equipment. 5. For non-Tier 4 equipment, fuel for refueling the tanker will come from the protected 21 Fuel Oil Storage Tank (FOST), which is safety-related. 6. Refueling will be managed at approximately 50% of the designed consumption rate not to exceed 75% to prevent engine starvation and to allow margin for other priorities. 7. Installation of a small exposed (un-protected) maintenance tank (4000 gallons filled with ULSF) for equipment preventive maintenance and training. No credit is taken for this tank in the refueling strategy.

CCNPP OIP Open Items	Status
89. Purchase the consumables that should be stocked to support at least 24 hours of site operation independent of offsite support.	Complete. The following consumables have been purchased and are stored in the CCNPP warehouse: • Case of 30 - 16.9 oz. bottles of water - 122 gallons per site • 422 power bars • 61 Trailhead Cots military style X steel frame • 122 Calgary cold weather sleeping bags • 4 Porta-John folding portable toilets unfolded • Personal portable toilets • 122 personal hygiene kits
90. Provide a procedure governing the maintenance and distribution of the consumables that will be stocked to support at least 24 hours of site operation independent of offsite support.	Started.
91. Develop a strategy to protect onsite consumables for use after a BDBEE.	Started.
92. Develop equipment operating procedures or FSGs, considering vendor technical manual operating procedures, for each of the pieces of portable FLEX equipment that will be procured.	Started. (Notification provided in Reference 8)
93. Install connection points on Class 1E 4KV Buses for the RRC 4KV portable DG.	Deleted. (Addressed in Reference 8)
94. Develop procedures or FSG for each of the RRC based strategies and for operation of the equipment provided by the RRC.	Complete. CCNPP FLEX Support Guidelines (FSGs) provide operators with guidance and detailed instructions on the purpose, connection, and use of the National SAFER Response Center (NSRC) equipment. Where maintenance support activities are required to connect the components, detailed instructions are included with the FSG as appendices. SAFER personnel will provide "just in time" training on equipment operation to site equipment operators. Station personnel will then be responsible for extended operation of the NSRC equipment.

Table 3
Status of CCNPP Interim Staff Evaluation (ISE) Open and Confirmatory Items

ISE Open Items	Status
1. **ISE Open Item 3.2.1.1.A** – The licensee will need to perform a plant specific analysis of RCS cooling and inventory control. If the CENTS code is used, the value of flow quality at the upper region of [Steam Generator] SG tubes for the condition when the RCS makeup pump is required to inject water into the RCS will also need to be submitted, and the licensee should confirm that CENTS is not used outside of any ranges of applicability discussed in the white paper addressing the use of CENTS (e.g., prior to the reflux boiling initiation). If other codes are used for the ELAP analysis, the licensee will need to justify the acceptance of the codes for this use.	Complete. CCNPP completed a plant specific analysis of RCS cooling and inventory control. Using the CENTS code, the value of flow quality in the upper region of SG tubes for the condition when the RCS makeup pump is required to inject water into the RCS confirmed that CENTS is not used outside of any ranges of applicability discussed in PWROG LTR-TDA-13-20-P, "Westinghouse Response to NRC Generic Request for Additional Information on CENTS Code in Support of Pressurized Water Reactor Owner's Group." CCNPP also confirmed the Sulzer-Bingham low leakage RCP seals are conservatively accounted for by the assumed seal leakage identified in the plant-specific analysis.
2. **ISE Open Item 3.2.1.1.B** – The licensee's plan for analysis for core and containment cooling is still under development and CENG will identify additional analysis to support the mitigating strategies. The subjects of the analyses are: maintaining core cooling (e.g., confirm shutdown margin during cooldown, DC load shedding, and adequate steam pressure for TDAFW pump operation), containment temperature and pressure response for containment cooling, and various safety functions regarding ventilation and cooling systems (e.g., for the main control room, TDAFW pump room, cable spreading room, battery rooms, switchgear rooms and the SFP area). Review of these analyses is needed to confirm acceptability of the mitigating strategies.	Complete. (Addressed in Reference 9)
3. **ISE Open Item 3.2.1.8.A** – During the audit process, the licensee informed the NRC staff of its intent to abide by the Pressurized-Water Reactor Owners Group (PWROG) generic approach regarding boric acid mixing discussed in Section 3.2.1.8 of this report; however,	Complete. Westinghouse Letter LTR-LIS-14-79, dated February 12, 2014, stated that for Combustion Engineering plants such as CCNPP the analysis and evaluations supporting the OIP demonstrate that the implementation of the FLEX RCS make-up pump to

ISE Open Items	Status
the NRC staff concluded that the August 15, 2013, position paper was not adequately justified and that further information is required.	avoid reflux cooling is one hour before the loop flow rate in two-phase natural circulation decreases below the loop flow rate corresponding to single-phase natural circulation. This met Condition (2) b of the NRC letter (Jack Davis-NRC to Jack Stringfellow-PWROG), dated January 8, 2014, accepting the industry position on the boron mixing model during an ELAP event.

ISE Confirmatory Items	Status
1. **ISE Confirmatory Item 3.1.1.1.A** – On page 8 of the Integrated Plan, the licensee specified that Phase 2 FLEX components will be stored at the site in a location or locations such that they are reasonably protected and that no one external event can reasonably fail the site FLEX capability. Provision will be made for multiple sets of portable on-site equipment stored in diverse locations or through storage in structures designed to reasonably protect from applicable external events. FLEX equipment storage location(s) have not been selected.	Complete. FLEX equipment storage locations have been selected. One robust storage building and one commercial building will be constructed at CCNPP. The robust building, the FLEX Storage Robust Building (FSRB), will be of reinforced concrete approximately 60' wide x 140' long x 21' high and located outside of the Protected Area to the west. The FSRB has been designed for seismic, wind, tornado and tornado missiles and flooding conditions. The building will be equipped with HVAC units for internal environmental control. The stored equipment will be secured to prevent seismic interaction. The commercial building, the Flex Storage Commercial Building (FSCB), will be a pre-engineered building approximately 60' wide x 60' long x 18' high. Its location has been determined. The distance between the two buildings is 2,130 feet.
2. **ISE Confirmatory Item 3.1.1.1.B** – The licensee will provide the specific protection requirements described in NEI 12-06 for the applicable hazard.	Complete. Requirements and options to provide reasonably protected onsite storage of FLEX portable equipment have been evaluated, resulting in the selection of FLEX equipment storage building types and locations that meet the specific protection requirements described in NEI 12-06. One robust storage building and one commercial building will be constructed at CCNPP. The robust building, the FLEX Storage Robust Building (FSRB), will be of reinforced concrete approximately 60' wide x 140' long x 21' high and located outside of the Protected Area to the west. The FSRB has been designed for seismic,

ISE Confirmatory Items	Status
	wind, tornado and tornado missiles and flooding conditions. The building will be equipped with HVAC units for internal environmental control. The stored equipment will be secured to prevent seismic interaction. The commercial building, the Flex Storage Commercial Building (FSCB), will be a pre-engineered building approximately 60' wide x 60' long x 18' high. It will be located outside of the Protected Area to the south. The distance between the two buildings is 2,130 feet.
3. **ISE Confirmatory Item 3.1.1.4.A** – The licensee has not yet identified the local staging area or described the methods to be used to deliver the equipment to the site for all hazards. The licensee will develop a playbook which will provide the detail necessary to ensure the successful delivery of the portable FLEX equipment from the RRC to the local staging area and from the local staging area to the site.	Complete. Exelon Generation and SAFER have developed the Standard Response Plan for the site, also referred to as the site playbook. The document describes the primary and alternate driving pathways from the National SAFER Response Center (NSRC) to "C" and "D" Staging Areas and then to the onsite Staging Areas. In addition to the driving pathways, helicopter routes and contacts are identified in the playbook. Exelon Generation has arranged with the Maryland State Police for assistance in police escort for clear passage to the site as defined in the Exelon Generation Fixed Nuclear Facility Contingency Plan. SAFER has also obtained from the Federal Aviation Administration a Special Congested Area Flight Plan from the "C" and "D" Staging Areas to the site. Onsite Staging Areas are the main parking lot (Staging Area "B") for onsite equipment receipt and preparations and the deployment areas (Staging Area "A") along the west Road plus north and south of the Turbine Building. For onsite equipment deployment, three pickup trucks are available with pintle hitches and towing capability beyond the weight of all equipment.
4. **ISE Confirmatory Item 3.1.2.2.A** – The licensee identified two open items; one regarding evaluating deployment strategies and deployment routes to ensure they are assessed for and address applicable hazards impact. The second was to provide an administrative program governing the FLEX	Complete. An analysis of likely hazards and debris that could be created by a beyond design basis external event identified specific hazards that could be mitigated. One of those hazards is the road blockage that might be created by fallen trees. The 55 largest trees adjacent to deployment routes and access pathways

ISE Confirmatory Items	Status
deployment strategy, marking of setup locations, including primary and alternate pathways, maintaining the pathways clear, and clearing the pathways.	have been cleared from the site, minimizing the risk that these trees would block passage. Snow removal plans now include the FLEX deployment routes and locations. A soil liquefaction study of the deployment pathways concluded access should be available on primary and three alternate routes from storage locations to the Protected Area. The site program document describes all other potential hazards as well as the vehicles and the tools available to remove the debris to ensure passage along the identified pathways. Four paths exist onsite from the FLEX Storage Robust Building (FSRB) to inside the Protected Area where FLEX Equipment will be operated. Alternate pathways are to be chosen based on the least impacted pathway from debris generated by the beyond design basis external event. Support vehicles are stored in the FSRB to facilitate removing debris and/ or ensuring passage via station security features. In the case of downed 500kV high-lines, operators have guidance, personal protective equipment, and tools to ensure safe passage. If the lines remain energized, Path 4 does not cross the lines. • Path 1: (Preferred) Calvert Cliffs Parkway to Camp Canoy Road south along road west of switchyard, then east to restored manual gate in Protected Area fence west of the Outage Control Center building. • Path 2: (Alternate) Calvert Cliffs Parkway to Camp Canoy Road south along road west of switchyard past all parking lots to the Independent Spent Fuel Storage Installation (ISFSI) Haul Route. This pathway enters Protected Area through sallyport at the Nuclear Security Facility. • Path 3: (Alternate) Calvert Cliffs Parkway to western leg of Camp Canoy Road then along ISFSI Haul Route. This alternate path can enter Protected Area via sally port or restored fence

ISE Confirmatory Items	Status
	gate. • Path 4: (Alternate) Calvert Cliffs Parkway to North Road, straight through intersection west of Main Entrance Facility, to normally locked north gate. The site program document contains deployment path maintenance and availability requirements for periodic review, compensatory actions if a path is blocked, FLEX requirements within the site snow removal plan, and descriptions of available debris removal vehicles, tools, and equipment. Onsite FLEX deployment locations have been marked with painted areas and parking curbs to define areas which must be kept clear for FLEX equipment. Debris removal equipment will be stored in the FLEX Storage Robust Structure, a structure designed to withstand the external event without damaging the equipment. The site program document contains configuration management controls to ensure these deployment locations remain clear for FLEX deployment.
5. **ISE Confirmatory Item 3.1.2.2.B** – Regarding the open items noted in 3.1.2.2.A, evaluations are needed to assure that connection points for portable equipment remain viable for the flooded condition, and that the effects of the maximum storm surge or probable maximum hurricane should be considered in evaluating the adequacy of the baseline deployment strategies.	Complete. The Calvert Cliffs flooding mechanisms beyond current design basis that were identified in the Flood Hazard Reevaluation Report submitted in March 2013 (ML13078A010) are a Local Intense Precipitation (LIP) and Probable Maximum Storm Surge (PMSS) events. In both events, the transient nature of the flooding does not impact the sequence of events to implement the FLEX Mitigating Strategies. The LIP event poses a 20 minute flood on the West Road; station interim actions require placing Floodstop barriers to prevent water intrusion from impacting plant equipment. Thus the flood waters would recede well before the required 7 hour time for placement of the FLEX equipment in the area. The PMSS flood event impacts the east side of the station, where access for the FLEX equipment is not required for the first 72 hours following the ELAP event.

ISE Confirmatory Items	Status
6. **ISE Confirmatory Item 3.1.2.2.C** – The licensee specified that primary access to the UHS is via the openings in the [Circulating Water] CW Discharge Structure (plant outfall). An alternate UHS location has not been established; however the licensee has identified an open item to implement a design change to install a protected alternate means of accessing the UHS for all BDBEEs, including installing necessary modifications to meet required deployment times. The strategy must also address how debris in the UHS will be filtered and/or strained and how the resulting debris will affect core cooling.	Complete. The plant outfall is the primary location for cooling water intake during Phase 2 because the booster pump suction fits there. During Phase 3, the intake structure is the alternate location because of its adequate size for UHS access. Calculation CA10021, Raw Water Analysis for FLEX Cooling has been completed. The conclusion is that the maximum fouling thickness in the S/Gs is <2% at 72 hours, which does not impact the relatively low estimated flow rate through the secondary side. The other raw water source, 11 Well Pump, has water quality which is bounded by the Chesapeake Bay water. Therefore the 11 Well Pump water will also be an effective cooling medium. The strategy has been adapted to provide a two-step approach to debris filtering. The submersible pump to be placed near the intake structure bay contains a floating mesh strainer on its inlet to prevent debris > 3/8" from entering the pump suction. While the submersible pump is in operation, an equipment operator watch will be posted to ensure large debris does not foul the pump. This will ensure sufficient water flow to the pump even if a significant amount of larger debris is inside the intake structure bay. The impact on the secondary side of the S/Gs from Chesapeake Bay water degrades the heat transfer effectiveness of the tubesheet <10% up to 72 hours.
7. **ISE Confirmatory Item 3.1.3.2.A** – The licensee specified that CCNPP currently has a varied array of wheeled vehicles, e.g., forklifts, small tractors, and a backhoe, that could be used for debris removal. However, the licensee did not specify if this equipment would be protected from high wind and other hazards.	Complete. (Notification provided in Reference 9)
8. **ISE Confirmatory Item 3.1.4.2.A** – The licensee did not address procurement requirements to ensure that the FLEX equipment can be operated in extreme hot or cold temperature environments or how hot or cold temperatures will affect manual actions.	Complete. (Notification provided in Reference 9)

ISE Confirmatory Items	Status
9. **ISE Confirmatory Item 3.1.4.2.B** – Deployment of FLEX equipment has not been addressed for conditions of snow, ice and extreme cold. The current screening omits a discussion of deployment of FLEX equipment for hazards due to ice blockage or formation of frazil ice on the UHS.	Complete. (Notification provided in Reference 9)
10. **ISE Confirmatory Item 3.2.1.2.A** – The RCP seal initial maximum leakage rate should be greater than or equal to the upper bound expectation for the seal leakage rate for the ELAP event discussed in the PWROG white paper addressing the RCP seal leakage for CE plants. If the RCP seal leakage rate used in the plant-specific ELAP analysis is less than upper bound expectation for the seal leakage rate discussed in the white paper, justification should be provided.	Complete. (Notification provided in Reference 9)
11. **ISE Confirmatory Item 3.2.1.5.A** – The licensee has not provided sufficient analyses to confirm instruments are reliable and accurate in the containment harsh conditions with high moisture levels, temperature and pressure during the ELAP event.	Complete. (Notification provided in Reference 9)
12. **ISE Confirmatory Item 3.2.1.6.A** – The following references used as basis for several sequence of events (SOE) Action Time constraints were not available for review: CCN0012-17-STUDY-001, and CCNPP FLEX Strategy Table Top.	Complete. (Notification provided in Reference 9)
13. **ISE Confirmatory Item 3.2.1.6.B** – The licensee has not completed final analysis regarding validation of the action times reported in the Sequence of Events, including any SOE changes that may result from ongoing evaluations for; RCP seal leakage, plant specific CENTS analysis, and any revised battery load shed analysis.	Started. (Notification provided in Reference 8)

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14. **ISE Confirmatory Item 3.2.1.7.A** –The Generic Concern related to the shutdown and refueling modes, required clarification of CCNPP's approach to demonstrate that the strategies can be implemented in all modes. During the audit, the licensee informed the NRC of their plans to abide by this generic resolution. The implementation of these plans is identified as Confirmatory Item 3.2.1.7.A.	Complete. (Notification provided in Reference 9)
15. **ISE Confirmatory Item 3.2.1.9.C** – During the audit process, the licensee stated that it will provide revised analyses as detailed engineering evaluations are performed for each Phase 3 FLEX component and modification strategy.	Complete. (Notification provided in Reference 9)
16. **ISE Confirmatory Item 3.2.1.9.D** – The licensee provided an open item, to perform engineering analysis to determine that there is sufficient decay heat generated for TDAFW operation 36-hours after shutdown and that the TDAFW pumps can operate reliably provided there is greater than 65 psia steam pressure in one of the SGs.	Complete. (Addressed in Reference 8)
17. **ISE Confirmatory Item 3.2.2.A** – The licensee did not discuss the impacts of salt/brackish water on the structures and components of the SFP system, and the fuel. During the audit process the licensee specified that they will perform an analysis to determine the effects of salt/brackish water on the structures and components (including instrumentation) of the SFP system and the stored fuel.	Complete. (Notification provided in Reference 9)
18. **ISE Confirmatory Item 3.2.2.B** – The licensee will perform an analysis to verify that the proposed strategy for SFP ventilation will provide sufficient air flow to vent steam from the SFP area, in order to determine whether natural air circulation is sufficient, or forced ventilation provided by FLEX equipment will be required.	Complete. Calculation CA08253 was performed to analyze the temperature response of auxiliary and turbine building areas in response to the loss of forced ventilation (HVAC) during an Extended Loss of A/C Power (ELAP) event. The purpose of this analysis is to establish the necessary compensatory actions and required timing of those actions to ensure survivability of coping equipment and the operator's ability to perform the required mitigating actions in a safe and

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	timely manner. The analysis concluded that natural air circulation along with compensatory actions would be sufficient to provide sufficient air flow to vent steam from the SFP area during ELAP.
19. **ISE Confirmatory Item 3.2.3.A** – The licensee specified that an analysis of the Containment response during the ELAP event indicated that the Containment would not require additional cooling. During the audit, the licensee provided a document entitled "CCNPP Containment Analysis" that was based on the GOTHIC code, however, the tabulated results did not match those transmitted in the August 2013 6-month update.	Complete. CA07961, "Analysis of Containment Response to Extended Loss of AC Power (ELAP)," evaluated the containment response to an ELAP. It supersedes any previous analysis. Fifteen cases were evaluated, seven of which involved an early Reactor Coolant System (RCS) cooldown and eight cases did not credit an early RCS cooldown. Calvert Cliffs' strategy for responding to an ELAP includes an RCS cooldown utilizing the atmospheric dump valves (ADVs) and the turbine driven auxiliary feedwater (TDAFW) pumps. Consistent with WCAP-17601-P, an early RCS cooldown will be commenced at no later than hour two into the ELAP with a target RCS temperature of 350°F reached as early as hour four. The strategy also accommodates a possible RCS leak of 71 gpm, at full system pressure, consistent with WCAP-17601-P. Case D1 evaluates the containment response assuming an RCS cooldown and a "High" RCS leak and only credits passive heat sinks. Therefore, Case D1 is most representative of the Calvert Cliffs ELAP strategy in Phases 1 and 2 (i.e. prior to establishing a means of active containment cooling) and should be used to define the timing and nature of the Phase 3 actions to control the containment environment. As shown in Case D1, containment pressure, vapor temperature and shell pressure remain well below containment design pressure and temperature, 50 psig and 276 °F for at least 72 hours following the ELAP. The Case D1 results are consistent with the response given in the August 2013 six-month update.
20. **ISE Confirmatory Item 3.2.4.1.A** – Charging Pump Room ventilation is provided by the non-safety related Auxiliary Building Supply and Exhaust Ventilation System. An evaluation will be performed to determine if the Charging Pumps can meet their mission	Complete. (Notification provided in Reference 9)

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time without room ventilation.	
21. **ISE Confirmatory Item 3.2.4.2.A** – The licensee identified an open item to perform an analysis to determine the Control Room temperature response over a period of 72 hours.	Complete. (Notification provided in Reference 9)
22. **ISE Confirmatory Item 3.2.4.2.B** – The licensee identified an open item to develop strategies for use of the Control Room and Cable Spreading Room Appendix R Ventilation System during an ELAP.	Deleted. (Notification provided in Reference 9)
23. **ISE Confirmatory Item 3.2.4.2.C** – The licensee identified an open item to perform an analysis to evaluate hydrogen buildup in the battery rooms during charging and room temperature profiles.	Complete. (Notification provided in Reference 9)
24. **ISE Confirmatory Item 3.2.4.2.D** – The licensee identified an open item to perform an analysis to determine the Switchgear Room temperature response following the reenergizing of buses and assuming various 480 VAC load center and 4160 VAC bus loadings over a period of 72 hours.	Complete. (Notification provided in Reference 9)
25. **ISE Confirmatory Item 3.2.4.2.E** – The West Electrical Penetration Rooms will begin to heat up after the Reactor motor control centers (MCC) are re-energized from the FLEX 480 VAC DGs, therefore, they will need to be evaluated for limiting temperatures for equipment survivability.	Complete. (Notification provided in Reference 9)
26. **ISE Confirmatory Item 3.2.4.4.A** – On page 56 of the Integrated Plan, the licensee identified five open items to; 1) investigate changing Appendix R lighting batteries to a longer life battery or new battery technology to lengthen the duration of lighting available in vital areas of the plant, 2) procure battery operated hardhat mounted lights ("miners" lights) for on-shift and emergency response organization (ERO) personnel, 3) to procure a sufficient quantity of hand-held battery operated hardhat lanterns for on-shift and ERO personnel, 4) to procure six (6) portable	Complete. (Notification provided in Reference 9)

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diesel generator powered exterior lighting units with 30 ft. masts and a minimum 400,000 lumens, and 5) to change Appendix R lighting from incandescent to LED to lengthen the duration of lighting available in vital areas of the plant.	
27. **ISE Confirmatory Item 3.2.4.4.B** – The NRC staff reviewed the licensee communications assessment and has determined that the assessment for communications is reasonable, and the analyzed existing systems, proposed enhancements, and interim measures will help to ensure that communications are maintained. Confirmation that upgrades to the site's communications systems have been completed will be accomplished at a later date.	Complete. (Notification provided in Reference 9)
28. **ISE Confirmatory Item 3.2.4.5.A** – The licensee has not completed its evaluation of the primary and alternate access points	Complete. An analysis of likely hazards and debris that could be created by a beyond design basis external event identified specific hazards that could be mitigated. One of those hazards is the road blockage that might be created by fallen trees. The 55 largest trees adjacent to deployment routes and access pathways have been cleared from the site, minimizing the risk that these trees would block passage. Snow removal plans now include the FLEX deployment routes and locations. A soil liquefaction study of the deployment pathways concluded access should be available on primary and three alternate routes from storage locations to the Protected Area. The site program document describes all other potential hazards as well as the vehicles and the tools available to remove the debris to ensure passage along the identified pathways. Four paths exist onsite from the FLEX Storage Robust Building (FSRB) to inside the Protected Area where FLEX Equipment will be operated. Alternate pathways are to be chosen based on the least impacted pathway from debris generated by the

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	beyond design basis external event. Support vehicles are stored in the FSRB to facilitate removing debris and/ or ensuring passage via station security features. In the case of downed 500kV high-lines, operators have guidance, personal protective equipment, and tools to ensure safe passage. If the lines remain energized, Path 4 does not cross the lines. • Path 1: (Preferred) Calvert Cliffs Parkway to Camp Canoy Road south along road west of switchyard, then east to restored manual gate in Protected Area fence west of the Outage Control Center building. • Path 2: (Alternate) Calvert Cliffs Parkway to Camp Canoy Road south along road west of switchyard past all parking lots to the Independent Spent Fuel Storage Installation (ISFSI) Haul Route. This pathway enters Protected Area through sallyport at the Nuclear Security Facility. • Path 3: (Alternate) Calvert Cliffs Parkway to western leg of Camp Canoy Road then along ISFSI Haul Route. This alternate path can enter Protected Area via sally port or restored fence gate. • Path 4: (Alternate) Calvert Cliffs Parkway to North Road, straight through intersection west of Main Entrance Facility, to normally locked north gate. The site program document contains deployment path maintenance and availability requirements for periodic review, compensatory actions if a path is blocked, FLEX requirements within the site snow removal plan, and descriptions of available debris removal vehicles, tools, and equipment. Onsite FLEX deployment locations have been marked with painted areas and parking curbs to define areas which must be kept clear for FLEX equipment. Debris removal equipment will be stored in the FLEX Storage Robust Structure, a structure designed to withstand the external event without damaging the equipment.

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	The site program document contains configuration management controls to ensure these deployment locations remain clear for FLEX deployment.
29. **ISE Confirmatory Item 3.2.4.6.A** – The licensee has identified an open item to perform an analysis to determine the temperature profile over 72 hours in the area around the Atmospheric Dump Valve enclosures.	Complete. (Notification provided in Reference 9)
30. **ISE Confirmatory Item 3.2.4.6.B** – The licensee identified an open item to perform an analysis to determine the Cable Spreading Room temperature response over a period of 72 hours.	Complete. (Notification provided in Reference 9)
31. **ISE Confirmatory Item 3.2.4.6.C** – The licensee identified two open items to perform an analysis to determine the possible effects of BDBEE on the Turbine Building structure and the potential effect on access to the TDAFW Pump Room, and to develop an alternate access strategy for access into the TDAFW Pump Room.	Complete. (Notification provided in Reference 9)
32. **ISE Confirmatory Item 3.2.4.8.A** – The medium voltage 4160VAC generators and the low voltage 480VAC 800kW generators that will arrive from the RRC will have protective devices as specified in AREVA document 51-9199717-000. An evaluation will be performed to verify the internal protection is adequate to protect the 1E buses.	Complete. ECP 14-000153 evaluated the protective devices for the 4160 VAC NSRC diesel generators and their connection to the CCNPP buses.

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33. **ISE Confirmatory Item 3.2.4.8.B** – One 480VAC/675KVA diesel generator set will be deployed for each unit to connect to one vital 480 VAC Load Center on that unit. The 480VAC/125KVA diesel generators are intended as an alternate strategy to connect to one of two vital reactor MCCs on each unit. The supplied reactor MCC can be cross-connected to the redundant train reactor MCC on that unit. An evaluation to validate the intended use of these diesel generators is pending.	Complete. Two calculations were prepared for CCNPP FLEX DG connections strategies. A. Calculation CA08800 determined the adequacy of the 500kW/625kVA portable diesel generators (DG) used in support of the FLEX Phase 2 strategies at Calvert Cliffs Nuclear Power Plant (CCNPP) during a Beyond Design Basis External Event (BDBEE). The results of this calculation confirmed the size of the DG used for the FLEX Phase 2 primary connection strategies for both units of CCNPP. The calculation verified the adequacy of the diesel generator to power the FLEX Phase 2 critical equipment during start up and maximum steady-state loads as well as confirmation that each load will start, accelerate, and continue to operate despite an expected voltage drop. B. Calculation CA08801 determined the adequacy of the 100kW/125kVA portable diesel generators (DGs) used in support of the FLEX Phase 2 strategies at CCNPP during a BDBEE. The results of this calculation confirm the size of the DG used for the FLEX Phase 2 alternate connection strategies for both units of CCNPP. The calculation verified the adequacy of the diesel generator to power the FLEX Phase 2 critical equipment during starting and maximum steady state loads as well as confirmation that each load will start, accelerate, and continue to operate despite an expected voltage drop.
34. **ISE Confirmatory Item 3.2.4.9.A** – The licensee identified Open items to perform an analysis of the fuel consumption rate for all of the FLEX equipment that could be in operation during an ELAP for a period of 72 hours to determine a conservative refueling interval, and to develop strategies to reduce the transport time for fuel oil loading and delivery.	Complete. Calculation CA09986, Rev. 0000, FLEX Fuel Oil Consumption Rate Analysis 6, determined the diesel fuel needs for all Diverse and Flexible Coping Strategies (FLEX) equipment that could be in operation during a Beyond Design Basis External Event (BDBEE) for a period of 72 hours. The results of the analysis will be used to determine a conservative refueling strategy to support FLEX equipment.

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35. **ISE Confirmatory Item 3.2.4.10.A** – On page 19 of the Integrated Plan, the licensee identified Open Items: to implement a design change to clearly identify the set of [DC] load breakers that will either be left energized or load shed by identifying the selected breakers by their unique numbers and load title; to implement a procedure or FSG to perform the [DC} load shedding; and to complete a time-motion study to validate that DC load shedding can be accomplished on each unit in one hour.	Started. (Notification provided in current update)
36. **ISE Confirmatory Item 3.2.4.10.B** – Maintenance of vital 125 VDC power will include aligning the Reserve Battery to one of the four vital 125 VDC buses via bus work and disconnects that are currently being installed under an existing plant modification. This action will extend the coping time for one vital 125 VDC bus to greater than 20 hours. The licensee needs to provide a copy of the analysis/calculations which shows aligning the Reserve Battery to one of the four 125VDC buses can extend the coping time for one vital 125 VDC bus to greater than 20 hours.	Complete. (Notification provided in Reference 9)

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37. **ISE Confirmatory Item 3.4.A** – The licensee's plans for the use of off-site resources conform to the minimum capabilities specified in NEI 12-06 Section 12.2, with regard to the capability to obtain equipment and commodities to sustain and backup the site's coping strategies. The licensee did not address the remaining minimum capabilities of Section 12.2.	Complete. All licensees, including Exelon Generation Corporation, relying on SAFER and the National SAFER Response Centers, have executed contractual agreements with Pooled Equipment Inventory Company (PEICo), which allows for the capabilities (considerations) in Section 12.2 of NEI 12-06. The NRC staff evaluated the NSRCs and the SAFER program, plans, and procedures against these 10 capabilities (considerations) from NEI 12-06, Section 12.2. The NRC audit results concluded that the NSRCs, the SAFER plans and procedures conform to the guidance described by the 10 capabilities (considerations) of NEI 12-06, Section 12.2. The NRC findings are documented in a letter from the NRC (Jack R. Davis) to the Nuclear Energy Institute (Joseph E. Pollock), Staff Assessment of National Safer Response Centers Established in Response to Order EA-12-049, dated September 26, 2014 (ML14265A107).

7 Potential Draft Safety Evaluation Impacts

There are no potential impacts to the Draft Safety Evaluation identified at this time.

8 References

The following references support the updates to the OIP described in this attachment.

1. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), Overall Integrated Plan for Mitigation Strategies for Beyond-Design-Basis External Events, dated February 28, 2013.
2. NRC Order Number EA-12-049, Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, dated March 12, 2012.
3. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), Supplement to Overall Integrated Plan for Mitigation Strategies for Beyond-Design-Basis External Events, dated March 8, 2013.
4. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), Response to NRC Letter on Technical Issues for Resolution Regarding Communication Submittals Associated with Near-Term Task Force Recommendation 9.3, dated February 22, 2013.
5. NEI 12-06, Diverse and Flexible Coping Strategies (FLEX) Implementation Guide, dated August 2012.

6. Letter from E. D. Dean (CENG) to Document Control Desk (NRC), Calvert Cliffs Nuclear Power Plant, Units 1 and 2- 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 27, 2013 (ADAMS Accession No. ML 13254A278)
7. Letter from J. S. Bowen (NRC) to J. A. Spina (CENG), Calvert Cliffs Nuclear Power Plant, Units 1 and 2 – Interim Staff Evaluation Relating to Overall Integrated Plan in Response to Order EA-12-049 (Mitigation Strategies) (TAC Nos. MF 1142 and MF 1143), dated December 17, 2013.
8. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), February 2014 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, 2014 (ADAMS Accession No. ML 14069A318)
9. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), August 2014 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, 2014 (ADAMS Accession No. ML14241A379)
10. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), Request for Schedule Relaxation from Nuclear Regulatory Commission Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events", dated February 20, 2015