Exelon Generation®

Order No. EA-12-049

RS-15-219

August 28, 2015

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

Nine Mile Point Nuclear Station, Unit 2
Renewed Facility Operating License No. NPF-69
NRC Docket No. 50-410

Subject: Fifth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)

References:

1. NRC Order Number EA-12-049, "Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012
2. NRC Interim Staff Guidance JLD-ISG-2012-01, "Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," Revision 0, dated August 29, 2012
3. NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide," Revision 0, dated August 2012
4. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), 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 26, 2012
5. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated February 28, 2013
6. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), Supplement to Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated March 8, 2013
7. Letter from E. D. Dean (CENG) to Document Control Desk (NRC), Nine Mile Point Nuclear Station, 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

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 (Nine Mile Point Nuclear Station, Units 1 and 2)
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 (Nine Mile Point Nuclear Station, Units 1 and 2)
10. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC) – 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), dated February 19, 2015 (RS-15-057) (Nine Mile Point Nuclear Station, Units 1 and 2)
11. Letter from J. S. Bowen (NRC) to J. A. Spina (CENG), Nine Mile Point Nuclear Station, Units 1 and 2 – Interim Staff Evaluation Relating to Overall Integrated Plan in Response to Order EA-12-049, (Mitigation Strategies) (TAC Nos. MF1129 and MF1130), dated December 19, 2013
12. Letter from J. Paige (NRC) to P. M. Orphanos (EGC), Nine Mile Point Nuclear 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-12-051 (TAC Nos. MF1129, MF1130, MF1131, and MF1132), dated April 28, 2015

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

Reference 1 required submission of an initial status report 60 days following issuance of the final interim staff guidance (Reference 2) and an overall integrated plan pursuant to Section IV, Condition C. Reference 2 endorses industry guidance document NEI 12-06, Revision 0 (Reference 3) with clarifications and exceptions identified in Reference 2. Reference 4 provided the EGC initial status report regarding mitigation strategies. References 5 and 6 provided the Nine Mile Point Nuclear Station, Unit 2 overall integrated plan.

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

addresses the NRC Interim Staff Evaluation Open and Confirmatory Items contained in Reference 11, and the NRC Audit Report open items contained in Reference 12.

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

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 28th day of August 2015.

Respectfully submitted,

James Barstow
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Enclosure:

Nine Mile Point Nuclear Station, Unit 2 Fifth Six-Month Status Report for the Implementation of Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events

cc: Director, Office of Nuclear Reactor Regulation
NRC Regional Administrator - Region I
NRC Senior Resident Inspector – Nine Mile Point Nuclear Station
NRC Project Manager, NRR – Nine Mile Point Nuclear Station
Ms. Jessica A. Kratchman, NRR/JLD/JPSB, NRC
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Enclosure

Nine Mile Point Nuclear Station, Unit 2

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

(23 pages)

1 Introduction

The Nine Mile Point Unit 2 (NMP2) 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 NMP2 OIP for FLEX was submitted to the NRC in March 2013 (Reference 3). This enclosure provides an update of milestone accomplishments since submittal of the last status report including any changes to the compliance method, schedule, or need for relief/relaxation and the basis (if applicable).

Since the submittal of the last status report in February 2015 (Reference 12), NMP2 has progressed with engineering analysis, calculations, procedures and other activities that support the mitigating strategies, and the modification concepts have been refined. Some changes to the mitigation strategies and planned modifications in support of the mitigation strategies have occurred and are explained within this document. Work with the Strategic Alliance for FLEX Emergency Response (SAFER) was completed for NMP2 for FLEX Phase 3 and the site specific SAFER Response Plan (SRP) was issued.

By letter dated December 19, 2013, the NRC issued to Exelon Generation Company, LLC (previously Constellation Energy Nuclear Group, LLC) the Nine Mile Point Nuclear Station, Units 1 and 2 – Interim Staff Evaluation Relating to Overall Integrated Plan in Response to Order EA-12-049 (Mitigation Strategies) (TAC Nos. MF1129 and MF1130) (Reference 7). The Interim Staff Evaluation (ISE) contains open and confirmatory items for which NMP will provide clarifying or additional information in Six Month Status Reports in order for the NRC to determine that the issues are satisfactorily resolved.

2 Milestone Accomplishments

The following milestone(s) have been completed since the development of the OIP (Reference 3), and are current as of July 15, 2015.

- Six Month Integrated Plan Progress Report submitted (8/2013)
- Six Month Integrated Plan Progress Report submitted (2/2014)
- Refueling Outage (RFO), including walk downs in support of pending modifications for installation for FLEX strategies (8/2014)
- Six Month Integrated Plan Progress Report submitted (8/2014)
- Six Month Integrated Plan Progress Report submitted (2/2015)
- Engineering and Design Completion – Equipment Storage Facility (3/2015)

3 Milestone Schedule Status

Table 1 provides an update to Attachment 2 of the NMP2 OIP (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 following target completion dates will be reflected in subsequent Six Month Status Reports.

The revised milestone target completion dates do not impact the order implementation date.

Table 1
Status of NMP2 FLEX OIP Milestones

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Submit 60 Day Status Report	October 2012	Complete	
Submit Overall Integrated Implementation Plan	February 2013	Complete	
Six Month Integrated Plan Progress Report	August 2013	Complete	
Engineering and Design Completion – Equipment Storage Facility	November 2014	Complete	
Six Month Integrated Plan Progress Report	February 2014	Complete	
Refueling Outage	April 2014	Complete	
Six Month Integrated Plan Progress Report	August 2014	Complete	
Engineering and Design Completion – Portable Equipment Connections	November 2014	Complete	
Six Month Integrated Plan Progress Report	February 2015	Complete	
Equipment Storage Facility installation	May 2015	Complete	
Six Month Integrated Plan Progress Report	August 2015	Completed upon submittal of this report	
Non-Outage Installation – Portable Equipment Connection	January 2016	Not Started	
Six Month Integrated Plan Progress Report	February 2016	Not Started	
Validation Walkdowns Complete	February 2016	Not Started	
Portable Equipment Procedures Changes	March 2016	Started	
FLEX Training	March 2016	Not Started	

Table 1
Status of NMP2 FLEX OIP Milestones (cont'd)

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Refueling Outage	April 2016	Not Started	
Outage Installation – Portable Equipment Connections	May 2016	Not Started	
Final Implementation Notification to USNRC	July 2016	Not Started	

4 Changes to Compliance Method

Changes were made to the information provided in the OIP that do not change the compliance method with Nuclear Energy Institute (NEI) 12-06 (Reference 5) and were provided in the last Six Month Status Report. NMP has incorporated the supplemental guidance provided in the NEI position paper entitled "Shutdown / Refueling Modes" to enhance the shutdown risk process and procedures (References 9 and 10).

No significant coping strategy changes have occurred since the previous Six Month Status Update provided on February 19, 2015 (Reference 12).

Remaining design specifications and requirements and strategy revisions will be determined upon completion of the final design.

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

NMP2 expects to comply with the order implementation date and no relief/relaxation is required at this time.

6 Open Items from Overall Integrated Plan and Draft Safety Evaluation

Table 2 below provides a summary of the open items documented in the OIP and those added in any subsequent Six Month Status Reports and the status of each item.

The following is a list of the open items from the OIP that have been added, deleted or completed since the last Six Month Status Report with an explanation of the changes:

1. **General Integrated Plan Elements – BWR**

   Open Item # 3: Evaluate requirements and options and develop strategies related to the storage on site of the FLEX portable equipment (including lighting tools such as flashlights and batteries) in accordance with the requirements of NEI 12-06

   This item is **complete**.

   The Nine Mile Point Nuclear Station has constructed a robust FLEX Storage Building (hereafter referred to as the 'FLEX building'). The FLEX building design meets or exceeds the most restrictive plant design requirements on site for external hazards. Thus, the FLEX building meets the structural requirements in NEI 12-06 Revision 0, Sections 5.3.1.1.a, 6.2.3.1.1.a, 7.3.1.1.a, 8.3.1.1.a and temperature requirements specified in NEI 12-06 Section 9.3.1 for equipment protection.

   The site's FLEX building consists of one robust FLEX building. The site's "N" equipment and "+1" equipment not pre-staged in the station, is stored in the robust FLEX building. Evaluation of storage space available in the FLEX building determined that an additional "+1" FLEX storage building is not required to meet the FLEX equipment storage requirements.

   FLEX portable diesel driven pumps and generators, as well as the refueling equipment for these vehicles, are stored in the FLEX building. In addition, support equipment necessary for FLEX deployment is stored in the FLEX building including debris removal equipment and tow vehicles for FLEX portable diesel driven pumps and generators.

   NMP Operations maintains an inventoried supply of flashlights and batteries that can be used in an emergency in the plant until the FLEX building equipment is retrieved. For example, firefighting cabinets that include flashlights are located in multiple strategic locations in the plant as well as in Emergency Operating Procedure (EOP) tool boxes in the NMP1 and NMP2 MCRs, each containing five (5) flashlights. FLEX building storage includes flashlights, headlamps, batteries and other lighting tools routinely used by operators. The FLEX building also contains a quantity of rechargeable LED battle lanterns to be used by operators within the plant when other lighting is insufficient. Periodic inventories of all equipment will ensure adequate amounts are maintained.

   The FLEX building is utilized to store other items deemed appropriate and necessary to respond to a beyond-design basis (BDB) event. Examples of these items include (this is a partial list for illustration only and does not include all material to be stored in the FLEX Storage Building):

   - Tool boxes with general tools such as hammers, wrenches, and screw drivers
   - Extension cords (multiple lengths and sizes)
   - Heavy duty cold weather gear (coats, boots, hats, gloves)

- Personal Protective Equipment (safety glasses, hearing protection)
- Ice shelters and heaters
- Drinking water (small amount to be used for initial deployment staff)

Open Item # 18: Develop site specific SAFER Response Plan (playbook) for delivery of portable FLEX equipment from RRC to the site.

This item is **complete**.

CC-NM-118-1001, SAFER Response Plan for Nine Mile Point Nuclear Station, was issued on 03/24/2015.

Open Item # 19: Develop and implement a program and/or procedures to keep FLEX equipment deployment pathways clear or identify actions to clear the pathways.

This item is **complete**.

At Nine Mile Point, Site Buildings and Grounds personnel are tasked with keeping roadways clear of snow and ice and do so using their "Snow and Ice Removal Plan & Winter Contingency Plan". They have been provided with a site map showing the Primary and Alternate FLEX deployment paths. These paths are currently included in the site Snow and Ice Removal Plan.

In addition, new BDB No Parking signs have been placed throughout the NMP deployment paths advising personnel that these areas must be kept clear. This was completed 3/31/2015.

In addition, CC-NM-118-101 Beyond Design Basis Administrative Controls, Attachment 5 Site Deployment Paths and Assessment Criteria, describes requirements for ensuring deployment pathways are maintained clear and it defines how the routes will be posted and maintained. This procedure was issued on 4/02/2015.

Open Item # 21: Evaluate and implement procedures that direct immediate deployment of Phase 2 equipment during Refueling conditions.

This item is **complete**.

Per NEI Shutdown/Refueling Position Paper (Reference 9) endorsed by the NRC (Reference 10), pre-staging of FLEX equipment can be credited for some predictable hazards, but cannot be credited for all hazards per the guideline of NEI 12-06 because of the diverse scope and various configurations which occur in a plant outage. Therefore a systematic approach to shutdown safety risk management is the most effective way to maintain safety and manage risk. When high risk evolutions are identified, contingency plans are used to direct actions that minimize the likelihood for a loss of cooling but also direct actions to take in response to such an event. Exelon procedure OU-AA-103 Shutdown Safety Management Program outlines actions under Section 4.7 Contingency Plans to consider the use of FLEX equipment including when it may be appropriate to pre-stage FLEX equipment, which

implements the guidance in the NEI Shutdown/Refueling Position Paper. Deployment of portable FLEX pumps to supply injection flow would commence immediately from the time of the event onset. This is possible because more personnel are on site during outages to provide the necessary resources. NMP procedure CC-NM-118-101 provides guidance and criteria so that sufficient area and haul paths are maintained in order to ensure FLEX deployment capability is maintained during all modes of operation.

2. **Maintain Core Cooling**

Open Item # 26: Implement a design change to Reactor Core Isolation Cooling (RCIC) that will support operation of the system at elevated Suppression Pool temperatures as identified in GEH 000-0155-1545 (BWROG RCIC Pump and Turbine Durability Evaluation – Pinch Point Study)

This item is **deleted**.

A NMP specific RCIC Equipment Survivability Review has been completed that indicates that without modifications RCIC equipment would have reasonable expectations to operate at least 9 hours at elevated Suppression Pool temperatures up to 240°F. With no modifications and Primary Containment venting, RCIC will survive to at least 15 hours. Therefore, RCIC would survive long enough to support FLEX pump deployment time for RPV injection of less than 8 hours and, therefore, modifications to the RCIC system and equipment are not required.

In addition, the assessment performed by the BWROG as documented in Technical Paper TP-14-018 (Reference 13) determined that RCIC functionality will be maintained for Suppression Pool temperatures up to 250°F but RCIC may experience some degradation in performance and long-term reliability.

3. **Maintain Containment Integrity**

Open Item # 33: Evaluate NMP2 containment integrity for Phases 1 through 3 and update calculations.

This item is **complete.**

Nine Mile Point Unit 2 containment integrity has been evaluated for FLEX Phases 1, 2, & 3 by performing analysis utilizing MAAP 4.0.6 computer code and documented in report N2-2015-004 Rev 3 'MAAP 4.0.6 Analysis of Nine Mile Point Unit 2 Loss of AC Power Scenario with Successful FLEX Short Term – Cases 1F19a, 1F20a, 1F23a'. This analysis demonstrates that the primary containment parameters (average temperature, pressure, level) remain at acceptable levels for greater than 72 hours following an ELAP by venting the Suppression Pool air space to atmosphere. At the end of the analysis period, these parameters are relatively stable and are not expected to rise significantly beyond 72 hours. Increases in Drywell average air temperature and pressure and Suppression Pool air space pressure and temperature are continuing at a decreasing rate after 72 hours, with substantial overall margin remaining to limits. As containment pressure reaches the level that requires

containment venting, as required by EOPs, containment pressure and temperature are controlled by venting the Suppression Pool air space to atmosphere.

Open Item # 34: Implement an alternative Containment Cooling strategy, if required, when the analysis of structural temperatures are complete.

This item is **deleted.**

NMP2 containment integrity has been evaluated for FLEX Phases 1, 2, & 3 by performing analysis utilizing MAAP 4.0.6 computer code and documented in report N2-2015-004 Rev 3 'MAAP 4.0.6 Analysis of Nine Mile Point Unit 2 Loss of AC Power Scenario with Successful FLEX Short Term – Cases 1F19a, 1F20a, 1F23a'. The evaluation has concluded that containment integrity is not challenged. Therefore an alternative containment cooling strategy is not needed and this item is deleted.

Open Item # 35: Perform an analysis to determine the containment pressure profile during an ELAP / Loss of Ultimate Heat Sink (LUHS) event and verify the instrumentation and controls in containment which are relied upon by the operators are sufficient to perform their intended function.

This item is **complete.**

Analyses were performed for both Primary Containment (MAAP report N2-2015-004) and Secondary Containment (Calculation ES-289) responses following an ELAP event. The calculated pressure, temperature and relative humidity profiles were used to compare with design and qualification parameters of essential instrumentation which are relied upon during an ELAP. The evaluation concluded that the functionality of instrumentation deemed critical for parameter monitoring is not negatively impacted by the conditions expected following an ELAP event.

4. **Maintain Spent Fuel Pool Cooling – BWR Installed Equipment Phase 1**

Open Item # 42: Evaluate a strategy to provide a vent pathway for steam and condensate from the SFP or justify why it is not needed.

This item is **complete.**

Calculation ES-289 "Reactor Building Thermal Response Following an Extended Loss of AC Power" has been completed. The calculation demonstrates that opening various Reactor Building air lock doors during an ELAP event will minimize the temperature/pressure rise in the Reactor Building by creating a natural circulation path where air is drawn in through doors at grade level exiting through door openings in the stair tower to the Reactor Building roof. The long term environmental conditions were determined to be acceptable. The calculation assumes that the Reactor Building airlock doors will be opened within 8 hours of the event onset and will be proceduralized.

5. **Maintain Spent Fuel Pool Cooling – BWR Installed Equipment Phase 2**

   Open Item # 44 – Perform analysis to verify SFP temperature and level after an ELAP event and adequate level for maintaining radiological access to the refuel floor.

   This item is **complete.**

   With regard to SFP level following an ELAP event, estimations utilizing existing calculations for SFP heatup and makeup water requirements lead to a conclusion that SFP water level is not a significant concern for several hours after the onset of an ELAP. Using the full core refueling outage offload heat load from available design basis calculations, SFP level will lower at approximately 1 foot every 2.0 hours and take approximately 31 hours to reach SFP Level 2 (10 feet above the top of the spent fuel.

   With regard to SFP temperature, and given the above with regard to SFP level, analysis has been completed that indicates refueling floor radiological conditions will not be as restrictive as the conditions related to refueling floor heat up from spent fuel pool heatup. The analysis developed for Secondary Containment conditions following an ELAP indicate that refueling floor temperatures will rise to 120˚F within fifteen (15) hours of the onset of an ELAP event. Given this heat up rate and the restrictions associated with refuel floor access at and above 120 ˚F, response procedures will be revised to ensure refuel floor preparatory actions for mitigation strategy deployment are conducted within eight (8) hours following the onset of an ELAP event.

6. **Safety Functions Support - BWR Portable Equipment Phase 2**

   Open Item # 46: Perform an analysis for long term temperature environmental conditions in the NMP2 Battery Rooms during an ELAP and evaluate any actions to mitigate the impact of this hydrogen production as required.

   This item is **complete.**

   Existing calculation ES-198 'Control Building Station Blackout Analysis' shows that after 8 hours the battery room reaches 99°F. In order to mitigate the temperature rise and remove hydrogen gas buildup, operators will restart a battery room exhaust fan when the FLEX generator re-energizes the 600 VAC load center in Phase 2. Hydrogen production is mitigated by restoring the exhaust fan during Phase 2. The battery low temperature evaluation concluded that the Battery Rooms are not susceptible to a significant cool down following an ELAP event. The Battery Rooms are located within the Control Building at ground Elevation 261 and the Battery Room walls are not exposed to the outside weather conditions. Therefore, low temperature is not expected to be a concern since the Battery Rooms are enclosed in the Control Building. A simplified calculation concludes that the minimum temperature in the Control Building/Battery Room would not decrease below 65 °F for a winter outdoor temperature of -10 °F until approximately 22 hours. This is well after the 8-hour duration that the batteries are relied upon during Phase 1 of an ELAP scenario.

Table 2
Status of NMP2 FLEX OIP Open Items

NMP2 OIP Open Items	Status
1. Define criteria for the local (25 mile) staging area.	**Complete** (see OIP Update 2/2014)
2. Evaluate deployment strategies and deployment routes for hazard impact.	**Complete** (2/2015)
3. Evaluate requirements and options and develop strategies related to the storage on-site of the FLEX portable equipment (including lighting tools such as flashlights and batteries) in accordance with the requirements of NEI 12-06.	**Complete** (8/2015)
4. Exceptions for the site security plan or other (license/site specific – 10 CFR 50.54x) requirements of a nature requiring NRC approval will be communicated in a future Six Month Update following identification.	Started (8/2013)
5. Determine schedule for when Regional Response Centers (RRCs) will be fully operational.	**Complete** (see OIP Update 8/2013)
6. Perform an analysis to validate the FLEX equipment ability to deliver sufficient flow under all expected conditions. Flow requirements from the dry hydrants will consider Phase 2 requirements.	Started (2/2014)
7. Perform an analysis to validate the FLEX equipment ability to deliver sufficient flow under all expected conditions. Flow requirements from the dry hydrants will consider Phase 3 requirements.	**Deleted** (see OIP Update 8/2014)
8. Perform calculations and validate assumptions of fuel consumption and replenishment rate to ascertain the time before off-site replenishment is required.	**Complete** (2/2015)
9. Perform an evaluation of the Uninterruptible Power Supply (UPS) strategy and design and implement as required or formalize the use of the small portable gas generators (communication strategies).	Started (2/2014)
10. Perform an evaluation of the redundant power strategy for radio repeaters and design and implement modifications or programmatic changes as required.	Started (2/2014)

Table 2

Status of NMP2 FLEX OIP Open Items (cont'd)

NMP2 OIP Open Items	Status
11. Verify plans for the FLEX storage facilities in accordance with NEI 12-06 requirements also accommodate the storage and availability of fuel for the small gas generators.	**Complete** (see OIP Update 8/2014)
12. Perform an analysis for feasibility of utilizing the sound powered communications for onsite communications for FLEX strategies.	Started (2/2014)
13. Evaluate required consumables and options for storage and availability during an ELAP and implement programmatic controls to ensure required inventory is maintained.	Started (8/2015)
14. Establish deployment routes from FLEX equipment storage location to connection points (including hazards impacts).	**Complete** (2/2015)
15. Establish a suitable local staging area for portable FLEX equipment to be delivered from the RRC to the site SAFER Staging Area "C".	**Complete** (2/2015)
16. Establish a suitable local staging area for Phase 3 portable FLEX equipment to be deployed on site SAFER Staging Area "B".	**Complete** (2/2015)
17. Provide the necessary storage facilities in order to provide fuel to the transfer pumps during an ELAP event.	**Complete** (2/2015)
18. Develop site specific SAFER Response Plan (playbook) for delivery of portable FLEX equipment from the RRC to the site.	**Complete** (8/2015)
19. Develop and implement a program and/or procedures to keep FLEX equipment deployment pathways clear or identify actions to clear the pathways.	**Complete** (8/2015)
20. Develop preventive maintenance and testing procedures with frequencies based on Original Equipment Manufacturer (OEM) recommendation and Electric Power Research Institute (EPRI) guidelines for FLEX equipment.	Started (8/2013)
21. Evaluate and implement procedures that direct immediate deployment of Phase 2 equipment during Refueling conditions.	**Complete** (8/2015)
22. Purchase and maintain the required equipment to ensure debris removal capability to re-establish deployment routes and transport FLEX portable equipment during all modes of operation.	**Complete** (2/2015)

Table 2
Status of NMP2 FLEX OIP Open Items (cont'd)

NMP2 OIP Open Items	Status
23. Develop procedures/guidelines to address the criteria in NEI 12-06 to support existing symptom based strategies in the Emergency Operating Procedures (EOPs).	Started (2/2014)
24. Evaluate potential soil liquefaction for Nine Mile Point site considering final storage location of FLEX portable equipment and deployment routes established for this equipment.	**Complete** (2/2015)
25. Evaluate requirements and options and develop strategies related to the storage and transport of the on-site FLEX portable equipment.	Started (2/2014)
26. Implement a design change to Reactor Core Isolation Cooling (RCIC) that will support operation of the system at elevated Suppression Pool temperatures as identified in GEH 000-0155-1545 (BWROG RCIC Pump and Turbine Durability Evaluation – Pinch Point Study).	**Deleted** (this OIP Update 8/2015)
27. Perform an analysis of long term RCIC Room temperatures (for equipment qualification and habitability) under ELAP conditions considering elevated Suppression Pool and Secondary Containment temperatures.	Started (2/2014)
28. Perform an evaluation of containment structures to identify necessary actions to enable implementation of the strategy with running RCIC with elevated temperatures.	Started 8/2015
29. Perform additional plant specific analysis to verify acceptable Suppression Pool levels during a long term operation of RCIC beginning with suction from the Condensate Storage Tanks (CSTs). Verify containment limitations are not exceeded.	Started 8/2015
30. Perform an analysis to verify acceptable parameters (e.g., Net Positive Suction Head (NPSH) requirements) for RCIC operation with the higher temperatures and anticipated changes in Suppression Pool level.	Started (2/2015)
31. Perform an analysis to validate containment vent sizing to maintain Suppression Pool parameters to support RCIC capability.	Started (2/2014)
32. Perform an analysis to identify necessary actions, (e.g., modifications or programmatic changes) to maximize battery coping time to at least 8 hours.	**Complete** (2/2015)

Table 2
Status of NMP2 FLEX OIP Open Items (cont'd)

NMP2 OIP Open Items	Status
33. Evaluate NMP2 containment integrity for Phases 1 through 3 and update calculations.	**Complete** (8/2015)
34. Implement an alternative Containment Cooling strategy, if required, when the analysis of structural temperatures are complete.	**Deleted** (this OIP Update 8/2015)
35. Perform an analysis to determine the containment pressure profile during an ELAP / Loss of Ultimate Heat Sink (LUHS) event and verify the instrumentation and controls in containment which are relied upon by the operators are sufficient to perform their intended function.	**Complete** (8/2015)
36. Perform an analysis to determine when ambient heat losses will be low enough such that with Residual Heat Removal (RHR) in a Phase 3 mode of shutdown cooling, venting of the primary containment will no longer be required.	**Deleted** (2/2015)
37. Perform an analysis to verify assumptions related to an adequate nitrogen supply during ELAP conditions and revise or provide ELAP procedures that optimize Safety Relief Valve (SRV) control during an ELAP condition.	Started (8/2015)
38. Perform an analysis to verify the capability of the portable diesel generator (DG) to power all expected loads.	Started (2/2014)
39. Perform an analysis to determine the limiting conditions for an RHR loop to be restarted (e.g., RHR Room, seals and fluid temperatures) and adjust the strategy to start in Shutdown Cooling (SDC) based on the results of the analysis.	**Deleted** (see OIP Update 8/2014)
40. Perform a load distribution analysis for safety related equipment restoration utilizing either two RRC Diesel Generators paralleled on one 4160 VAC bus or one RRC Diesel Generator on each safety related bus (i.e., one on Division 1 and one on Division 2).	**Deleted** (see OIP Update 8/2013)
41. Perform an analysis to determine the service water cooling water flow needed to accommodate all expected cooling loads and resulting RRC pump size requirement.	**Deleted** (see OIP Update 8/2013)
42. Evaluate a strategy to provide a vent pathway for steam and condensate from the SFP or justify why it is not needed.	**Complete** (8/2015)

Table 2
Status of NMP2 FLEX OIP Open Items (cont'd)

NMP2 OIP Open Items	Status
43. Perform an evaluation to determine the effects and required actions for Spent Fuel Pool temperatures expected above design of 150°F during an ELAP.	**Complete** (2/2015)
44. Perform analysis to verify SFP temperature and level after an ELAP event and adequate level for maintaining radiological access to the refuel floor.	**Complete** (8/2015)
45. Perform an analysis to evaluate long term temperature profiles in the NMP2 Main Control Room (MCR) under ELAP condition (Phase 1).	**Deleted** (see OIP Update 8/2013)
46. Perform an analysis for long term environmental conditions in the NMP2 Battery Rooms during an ELAP and evaluate any actions to mitigate the impact of this hydrogen production as required.	**Completed** (8/2015)
47. Evaluate the strategy for repower of select Emergency Lighting loads when the FLEX portable Diesel Generator reenergizes the 600 VAC bus.	Started (2/2014)
48. Perform an analysis of the light coverage during ELAP conditions and determine if the lighting loads should be re-energized from the non-safety related buses by the RRC FLEX generator.	**Complete** (2/2015)
49. Perform an analysis of the need for dewatering based on leak rates and flood response capabilities.	**Deleted** (see OIP Update 8/2014)
50. Implement a design change to install permanent 4160 VAC bus connection points to be able to connect to the RRC supplied Diesel Generator, including paralleling capability, as required to connect more than one Diesel Generator to an electrical bus.	**Deleted** (see OIP Update 8/2014)
51. Implement a design change to receive large capacity RRC pumps to supply the service water distribution header.	**Deleted** (see OIP Update 8/2014)
52. Design and implement a modification that provides for connection of a FLEX portable pump to makeup to the SFP.	Started (8/2014)
53. Implement a design change to install connections for FLEX portable pumps to RHR for both RHR 'A' and 'B'.	Started (8/2014)
54. Implement a design change to install portable generator connections for 600 VAC primary (2EJS*US1) and alternate (2EJS*US3) busses.	Started (8/2014)

Table 2
Status of NMP2 FLEX OIP Open Items (cont'd)

NMP2 OIP Open Items	Status
55. Revise procedures to provide reactor pressure control direction during an ELAP event.	Started (8/2015)
56. Develop and implement procedure direction to ensure that the Main Turbine Hydrogen is vented prior to battery depletion.	Started (8/2015)
57. Revise current EOPs to implement EOP actions necessary to support the strategy to terminate emergency depressurization to preserve RCIC operation.	Started (2/2014)
58. Develop and implement procedures to provide direction for re-energizing the Solenoid Operated Valves (SOVs) and ensuring long term pneumatic supply during an ELAP.	Started (8/2015)
59. Develop procedures to implement the connection of a FLEX portable pump to makeup water to the SFP during an ELAP event to include both primary and alternate strategies.	Started (8/2014)
60. Develop and implement procedures that provide direction for restoration of SFP cooling during ELAP conditions (Phase 3).	**Deleted** (see OIP Update 8/2013)
61. Implement a design change to install permanent dry hydrants in the intake structure for FLEX portable pump suctions.	Started (2/2015)

Table 3 below provides a summary of the open and confirmatory items documented in the NRC's NMP2 ISE (Reference 7) and the status of each item. Items listed as submitted for closure are considered complete.

ISE Confirmatory Item # 4: ISE Confirmatory Item 3.1.1.1.A – The design of the storage facility for FLEX equipment is under development. The method selected for protection of equipment during a Beyond-Design-Basis External Event (BDBEE) was not discussed in the Integrated Plan or during the audit process. Also, there was no discussion of securing large portable equipment for protection during a seismic hazard.

ISE Confirmatory Item # 4 is **submitted for closure**.

Nine Mile Point has constructed a single hardened FLEX storage structure of approximately 8,400 square feet that will meet the requirements for the external events identified in NEI 12-06, such as earthquakes, external floods, storms (high winds, and tornadoes), extreme snow, ice, extreme heat, and cold temperature conditions. The FLEX Storage Building is located inside the Protected Area (PA) fence on the west side of NMP1, South of the Sewage Treatment Plant (STP) and North of the Independent Spent Fuel Storage Installation (ISFSI) area.

The FLEX Storage Building is designated as a seismic Category I and QA Category II structure (Non-Safety Related). The building design is based on SDC-1, Structural Design Criteria, Rev 07 (NMP2's CLB design for SSC for external hazards), which envelopes NMP1 requirements. The top of the slab (floor elevation) is approximately 263.3 feet which is significantly above the reevaluated flood hazard maximum probable flood elevation of 261.8 feet in that area of the site. The FLEX Storage Building was designed and constructed to prevent water intrusion and built to protect the housed FLEX equipment from other hazards identified in the NMP2 OIP. The FLEX Storage Building has its own heating and ventilation, and fire suppression system.

Large FLEX portable equipment such as pumps, generators, portable battery charger, fuel trailers, pay loader, tractor, and trucks are secured with tie-down straps to floor anchors inside the FLEX Storage Building to protect them during a seismic event. The FLEX Storage Building anchors are integrated into the floor slab.

Debris removal equipment such as the FLEX pay loader and tractor are stored inside the FLEX Storage Building in order to be reasonably protected from external events such that the equipment will remain functional and deployable to clear obstructions from the pathway between the FLEX Storage Building and its deployment location(s). Deployments of the FLEX and debris removal equipment from the FLEX Storage Building are not dependent on off-site power. All actions required to access and deploy debris removal equipment and BDB/FLEX equipment can be accomplished manually.

ISE Confirmatory Item # 7: ISE Confirmatory Item 3.2.1.1.A – MAAP benchmarks must be identified and discussed which demonstrate that MAAP4 is an appropriate code for the simulation of an ELAP event.

ISE Confirmatory Item # 7 is **submitted for closure**.

The Modular Accident Analysis Program (MAAP) was used for estimating accident progression timing in support of the FLEX strategies for NMP2. The MAAP analysis has been completed and documented in report N2-2014-004 Rev 3 'MAAP 4.06 Analysis of Nine Mile Point Unit 2 Loss of AC Power Scenario with Successful FLEX Short Term – Cases 1F19a, 1F20a, 1F23a'.

As documented in NMP2 report N2-2015-005 Rev 1 'Use of MAAP in Support of FLEX Implementation', generic response has been provided in EPRI Technical Report 3002002749, "Technical Basis for Establishing Success Timelines in Extended Loss of AC Power Scenarios in Boiling Water Reactors Using MAAP4 - A Guide to MAAP Thermal-Hydraulic Models".

ISE Confirmatory Item # 8: ISE Confirmatory Item 3.2.1.1.B – The collapsed level must remain above Top of Active Fuel (TAF) and the cool down rate must be within technical specification limits.

SE Confirmatory Item # 8 is **submitted for closure**.

The NMP2 SBO/ELAP procedure is still under development. The strategy being utilized is to depressurize/cool down in pressure bands of 1000 psig to 500 psig for the first hour, 400 psig to 200 psig for the second hour, and approximately 200 psig to 150 psig in the third hour and beyond. For the MAAP analysis used to simulate the NMP2 response, a single Safety Relief Valve (SRV) was assumed to be opened to perform the cooldown for modeling simplification purposes only. It is acknowledged that in an actual event the number and timing of SRV openings may vary depending on circumstances. It is not practical nor is it necessary to model all possible combinations of SRVs that may be used in an event. In the aggregate, the overall results would not be sensitive to opening one SRV for a given time, for example, or 2 SRVs each for half the time. The cooldown rate will be, on average in the first two hour increment, less than 100 °F/hour assuming saturated steam. For the MAAP analysis, RPV water level remains above Top of Active Fuel (TAF) for the duration of the analysis with just reactor core isolation cooling (RCIC). The lowest RPV level, calculated by MAAP, was approximately 31.90 feet above the bottom of the reactor vessel. TAF is located at 30.52 feet for NMP 2. The collapsed RPV water level remains approximately 1.4 feet above TAF when level recovers in the first hour, and about 7.3 feet above TAF with the minimum alternate injection flow rate of 180 gpm later in the scenario.

ISE Confirmatory Item # 9: ISE Confirmatory Item 3.2.1.1.C – MAAP4 must be used in accordance with Sections 4.1, 4.2, 4.3, 4.4, and 4.5 of the June 2013 position paper.

SE Confirmatory Item # 9 is **submitted for closure**.

MAAP analysis performed for NMP2 was carried out in accordance with Sections 4.1, 4.2, 4.3, 4.4, and 4.5 of the June 2013 position paper, EPRI Technical Report 3002001785, "Use of Modular Accident Analysis Program (MAAP) in Support of Post-Fukushima Applications". Preparation and Review of the MAAP analysis is conducted under engineering training certification guide ENANRM08.

ISE Confirmatory Item # 10: ISE Confirmatory Item 3.2.1.1.D – In using MAAP4, the licensee must identify and justify the subset of key modeling parameters cited from Tables 4-1 through 4-6 of the "MAAP4 Application Guidance, Desktop Reference for Using MAAP4 Software, Revision 2" (Electric Power Research Institute Report 1020236). This should include response at a plant-specific level regarding specific coding options and parameter choices for key models that would be expected to substantially affect the ELAP analysis performed for that licensee's plant. Although some suggested key phenomena are identified below, other parameters considered important in the simulation of the ELAP event by the vendor / licensee should also be included.
a. Nodalization
b. General two-phase flow modeling
c. Modeling of heat transfer and losses
d. Choked flow
e. Vent line pressure losses
f. Decay heat (fission products / actinides / etc.)

SE Confirmatory Item # 10 is **submitted for closure**.

The following is a summary of the responses from NMP2 report N2-2015-005.

a. The reactor vessel nodalization is fixed by the MAAP code and cannot be altered by the user, with the exception of the detailed core nodalization. The NMP2 MAAP 4.0.6 parameter file divides the core region into 5 equal volume radial regions and 28 axial regions. The axial nodalization represents 25 equalized fueled nodes, 1 unfueled node at the top, and 2 unfueled nodes at the bottom.

b. Containment nodalization is defined by the user. The standard nodalization scheme (as recommended in the MAAP 4.0.6 sample parameter file) is used in the NMP2 MAAP 4.0.6 parameter file and represents the following individual compartments, Reactor pedestal region, Drywell, Wetwell (main pool), and Wetwell (under pedestal).

c. Modeling of heat transfer and losses from the RPV are described in the EPRI Technical Report 3002002749. The MAAP parameters that control these processes, as defined in the EPRI report, were selected to represent NMP2.

d. Choked flow from the SRV and the recirculation pump seal leakage is discussed in the EPRI Technical Report 3002002749. The parameters identified that impact the flow calculation are identified in the NMP2 MAAP report N2-2014-004.

e. The MAAP model for NMP2 contains a detailed wetwell vent flow model. Using a RELAP5 calculation as reference for the vent line hydraulic resistance, an isothermal compressible gas flow equation was applied to develop a vent flow versus venting pressure table in the MAAP input. Specifically, given an assumed vent pipe size, a lookup table for junction discharge flow coefficient, as a function of wetwell pressure, was established.

f. The decay heat calculation in MAAP is discussed in the EPRI Technical Report 3002002749. Input parameters used to compute the decay heat are identified in the EPRI report and are listed in NMP2 MAAP report N2-2014-004.

ISE Confirmatory Item # 11: ISE Confirmatory Item 3.2.1.1.E – The specific MAAP4 analysis case that was used to validate the timing of mitigating strategies in the integrated plan must be identified and should be available for review.

SE Confirmatory Item # 11 is **submitted for closure**.

The MAAP analysis performed in support of the NMP2 Integrated Plan is documented in calculation N2-2014-004 Rev 3 and is available on the ePortal site. Vent Case 1F19a was the specific MAAP run selected to represent the scenario as described in the integrated plan.

ISE Confirmatory Item # 13: ISE Confirmatory Item 3.2.2.A – Evaluation of the refueling floor SFP area for steam and condensation was not yet completed. Mitigating strategies were not discussed in the Integrated Plan or during the audit process

SE Confirmatory Item # 13 is **submitted for closure**.

Calculation ES-289 "Reactor Building Thermal Response Following an Extended Loss of AC Power" has been completed. The calculation demonstrates that opening various Reactor Building air lock doors during an ELAP event will minimize the temperature/pressure rise in the Reactor Building by creating a natural circulation path where air is drawn in through doors at grade level exiting through door openings in the stair tower to the Reactor Building roof. The long term environmental conditions were determined to be acceptable. The calculation assumes that the Reactor Building airlock doors will be opened within 8 hours of the event onset and will be proceduralized.

The thermal response analysis identifies that following an ELAP, refueling floor temperatures will rise to 120˚F within fifteen (15) hours of the onset of the event. Given this heat up rate and the restrictions associated with refuel floor access at and above 120 ˚F, response procedures will be revised to ensure refuel floor preparatory actions for mitigation strategy deployment are conducted within eight (8) hours following the onset of an ELAP event.

Table 3
Status of NMP2 Interim Staff Evaluation (ISE) Open and Confirmatory Items

	ISE Open Items	Status
1.	**ISE Open Item 3.1.1.3.A** – Seismic procedural interface consideration NEI 12-06, Section 5.3.3, Consideration 1, which considers the possible failure of seismically qualified electrical equipment by beyond-design-basis seismic events, was not discussed in the Integrated Plan or during the audit process.	Started (8/2014)
2.	**ISE Open Item 3.2.3.B** – The licensee has not performed finalized calculations to demonstrate that the assumed timeline is appropriate and that containment functions will be restored and maintained following an ELAP event.	Started (2/2014)
3.	**ISE Open Item 3.2.3.C** – Revision 3 to the [Boiling Water Reactor Owner's Group] BWROG Emergency Procedure Guidance (EPG) Severe Accident Guidance (SAG) is a Generic Concern because the BWROG has not addressed the potential for the revised venting strategy to increase the likelihood of detrimental effects on containment response for events in which the venting strategy is invoked (identified as a 'Significant Concern' in the Notes for this Open Item in the ISE).	**Submitted for Closure** (2/2015)
	ISE Confirmatory Items	**Status**
4.	**ISE Confirmatory Item 3.1.1.1.A** – The design of the storage facility for FLEX equipment is under development. The method selected for protection of equipment during a Beyond-Design-Basis External Event (BDBEE) was not discussed in the Integrated Plan or during the audit process. Also, there was no discussion of securing large portable equipment for protection during a seismic hazard.	**Submitted for Closure** (8/2015)
5.	**ISE Confirmatory Item 3.1.1.2.A** – Deployment routes have not yet been finalized or reviewed for possible impacts due to debris and potential soil liquefaction. Movement of equipment and procedural interfaces during a BDBEE were not discussed in the Integrated Plan or during the audit process. Deployment of temporary flood barriers, restocking of supplies in the context of a flood with long persistence and the potential impact of surface icing were also not addressed.	**Submitted for Closure** (2/2015)
6.	**ISE Confirmatory Item 3.1.1.4.A** – Concerning utilization of offsite resources during a BDBEE, the local staging area and access routes were not discussed in the Integrated Plan or during the audit process.	**Submitted for Closure** (2/2015)
7.	**ISE Confirmatory Item 3.2.1.1.A** – MAAP benchmarks must be identified and discussed which demonstrate that MAAP4 is an appropriate code for the simulation of an ELAP event.	**Submitted for Closure** (8/2015)

Table 3
Status of NMP2 Interim Staff Evaluation (ISE) Open and Confirmatory Items (cont'd)

ISE Confirmatory Items	Status
8. **ISE Confirmatory Item 3.2.1.1.B** – MAAP Analysis collapsed level must remain above Top of Active Fuel (TAF) and the cool down rate must be within technical specification limits.	**Submitted for Closure** (8/2015)
9. **ISE Confirmatory Item 3.2.1.1.C** – MAAP4 must be used in accordance with Sections 4.1, 4.2, 4.3, 4.4 and 4. 5 of the June 2013 position paper.	**Submitted for Closure** (8/2015)
10. **ISE Confirmatory Item 3.2.1.1.D** – MAAP modeling parameters.	**Submitted for Closure** (8/2015)
11. **ISE Confirmatory Item 3.2.1.1.E** – The specific MAAP4 analysis case that was used to validate the timing of mitigating strategies in the Integrated Plan must be identified and should be available for review.	**Submitted for Closure** (8/2015)
12. **ISE Confirmatory Item 3.2.1.2.A** – There was no discussion of the applicability of the assumed recirculation system leakage rates and the recirculation pump seal leakage rates to the ELAP event; the pressure dependence of the leak rates; whether the leakage was determined to be single-phase, two-phase, or steam at the donor cell; and how mixing of the leakage flow with the drywell atmosphere was modeled.	Started (8/2015)
13. **ISE Confirmatory Item 3.2.2.A** – Evaluation of the refueling floor SFP area for steam and condensation was not yet completed. Mitigating strategies were not discussed in the Integrated Plan or during the audit process.	**Submitted for Closure** (8/2015)
14. **ISE Confirmatory Item 3.2.3.A** – Perform an evaluation of containment structures to identify necessary actions to enable implementation of the strategy with running RCIC with elevated temperatures.	Started (2/2014)
15. **ISE Confirmatory Item 3.2.4.2.A** – The completion and determination of acceptable results for all of the calculations associated with the proposed strategies for ventilation and critical equipment cooling (e.g., RCIC and Battery Rooms) are required.	Started (2/2014)

Table 3

Status of NMP2 Interim Staff Evaluation (ISE) Open and Confirmatory Items (cont'd)

ISE Confirmatory Items	Status
16. **ISE Confirmatory Item 3.2.4.4.A** – The potential restoration of a portion of the Emergency Lighting System when Division I 600 VAC Unit Substation 2EJS*US1 (or alternatively Division II 2EJS*US3) is repowered is currently under evaluation. NMP2 will provide a summary of the restoration of Emergency Lighting expected to be restored in a future update.	Started (8/2015)
17. **ISE Confirmatory Item 3.2.4.4.B** – Follow-up of communication commitments as discussed in the staff analysis (ML 13100A236) is required.	Started (2/2015)
18. **ISE Confirmatory Item 3.2.4.6.A** – Licensee to provide calculation and basis for use of extrapolated station blackout (SBO) evaluation for Main Control Room habitability.	**Submitted for Closure** (2/2015)
19. **ISE Confirmatory Item 3.2.4.8.A** – The licensee stated that when the design review of the portable generator protection is completed, the specific details on the protection schemes to protect Class 1E equipment from faults from the portable FLEX equipment will be provided in a future update.	Started (8/2015)
20. **ISE Confirmatory Item 3.2.4.8.B** – The licensee will provide an updated summary of the sizing calculations for the FLEX generators at a future update.	**Submitted for Closure** (2/2015)
21. **ISE Confirmatory Item 3.2.4.9.A** – The licensee stated that a summary of the refueling strategies for FLEX equipment will be provided when finalized at a future date.	**Submitted for Closure** (2/2015)
22. **ISE Confirmatory Item 3.2.4.10.A** – The licensee stated that a finalized summary of battery coping time, DC load profile, discussion of loads shed, and minimum DC voltage will be provided in a future update.	**Submitted for Closure** (2/2015)
23. **ISE Confirmatory Item 3.4.A** – The program or process to request RRC equipment was not discussed in the Integrated Plan or during the audit process.	**Submitted for Closure** (2/2015)
24. **ISE Confirmatory Item 3.4.B** – Sizing calculations of RRC FLEX equipment and the compatibility of RRC equipment to plant connection points was not discussed in the Integrated Plan or during the audit process.	**Submitted for Closure** (2/2015)

Note: Items listed as Submitted for Closure are considered Complete.

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 enclosure.

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 Modifying 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), 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
7. Letter from J. S. Bowen (NRC) to J. A. Spina, Nine Mile Point Nuclear Station, Units 1 and 2 – Interim Staff Evaluations Relating to Overall Integrated Plans in Response to Order EA-12-049 (Mitigation Strategies) (TAC Nos. MF 1129 and MF1130), dated December 19, 2013
8. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), 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
9. NEI Position Paper Shutdown and Refueling: ADAMS Accession No. ML13273A514
10. NRC Endorsement of NEI Shutdown and Refueling Paper: ADAMS Accession No. ML13267A382
11. 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

12. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), 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), dated February 19, 2015
13. BWROG Fukushima Response Committee, Beyond Design Basis RCIC Elevated Temperature Functionality Assessment, BWROG-TP-14-018, Rev 0, dated November 2014