Xcel Energy®

Prairie Island Nuclear Generating Plant
1717 Wakonade Drive East
Welch, MN 55089

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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Prairie Island Nuclear Generating Plant Units 1 and 2
Docket Numbers 50-282 and 50-306
Renewed Facility Operating License Nos. DPR-42 and DPR-60

Prairie Island Nuclear Generating Plant's 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) (TAC Nos. MF0834 and MF0835)

References:

1. NRC Order 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 (ADAMS Accession No. ML12054A735).

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 (ADAMS Accession No. ML12229A174).

3. NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide," Revision 0, dated August 2012 (ADAMS Accession No. ML12242A378).

4. NSPM Letter to 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 29, 2012 (L-PI-12-092) (ADAMS Accession No. ML12305A287).

5. NSPM Letter to NRC, "Prairie Island Nuclear Generating Plant's Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)," dated February 26, 2013 (L-PI-13-007) (ADAMS Accession No. ML13060A379).

6. NSPM Letter to NRC, "Prairie Island's First Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)," dated August 26, 2013 (L-PI-13-080) (ADAMS Accession No. ML13239A094).

7. NSPM Letter to NRC, "Prairie Island Nuclear Generating Plant's Second Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)," dated February 26, 2014 (L-PI-14-018) (ADAMS Accession No. ML14057A771).

8. NSPM Letter to NRC, "Prairie Island Nuclear Generating Plant's Second Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), CORRECTED" dated October 20, 2014 (L-PI-14-104) (ADAMS Accession No. ML14295A761).

9. NSPM Letter to NRC, "Prairie Island Nuclear Generating Plant's Third Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049) (TAC Nos. MF0834 and MF0835)," dated August 25, 2014 (L-PI-14-078) (ADAMS Accession No. ML14237A512).

10. NSPM Letter to NRC, "Prairie Island Nuclear Generating Plant's Fourth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049) (TAC Nos. MF0834 and MF0835)," dated February 26, 2015 (L-PI-15-021) (ADAMS Accession No. ML15057A323).

On March 12, 2012, the NRC staff issued Order EA-12-049, "Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," (Reference 1) to all NRC power reactor licensees and

holders of construction permits in active or deferred status. Reference 1 was immediately effective and directs Northern States Power Company, a Minnesota corporation (NSPM), doing business as Xcel Energy, to develop, implement and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event for the Prairie Island Nuclear Generating Plant (PINGP). Specific requirements are outlined in Attachment 2 of Reference 1.

Pursuant to Condition C of Section IV, Reference 1 required submission of an initial status report 60 days following issuance of the final interim staff guidance (ISG), an overall integrated plan, and status reports at six-month intervals following the submittal of the overall integrated plan. The ISG (Reference 2) endorses, with exceptions and clarifications, the industry guidance document, NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide," Revision 0 (Reference 3). Reference 4 provided the PINGP initial 60-day status report regarding mitigation strategies. Reference 5 provided the overall integrated plan for PINGP. The first, second, third, and fourth six-month status reports were provided in References 6, 7, 9, and 10, respectively. Reference 8 provided a correction to the second six-month status report (Reference 7).

The purpose of this letter is to provide the fifth six-month status report pursuant to Section IV, Condition C.2 of Reference 1, which delineates the progress made in implementing the requirements of the Reference 1 Order. The enclosed report provides an update of milestone accomplishments since the overall integrated plan was submitted, including changes to the compliance method, schedule, or the need and basis for relief, if any.

Please contact Lynne Gunderson, Licensing Engineer, at 651-267-7421, if additional information or clarification is required.

Summary of Commitments

This letter makes no new commitments and no revisions to existing commitments.

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

Executed on August 25, 2015.

Kevin Davison
Site Vice President, Prairie Island Nuclear Generating Plant
Northern States Power Company - Minnesota
Enclosure

cc: Administrator, Region III, USNRC
Director of Nuclear Reactor Regulation (NRR), USNRC
Project Manager, Prairie Island Nuclear Generating Plant, USNRC
Resident Inspector, Prairie Island Nuclear Generating Plant, USNRC

Prairie Island Nuclear Generating Plant, Units 1 and 2

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

1.0 Introduction

The Nuclear Regulatory Commission (NRC) issued Order EA-12-049, "Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," on March 12, 2012 (Reference 1). The Order required licensees to develop, implement and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event. The Order required licensees to submit an overall integrated plan (OIP), including a description of how the requirements in Attachment 2 of the Order would be achieved. Northern States Power Company, a Minnesota corporation (NSPM), doing business as Xcel Energy, submitted the OIP (Reference 2) for the Prairie Island Nuclear Generating Plant (PINGP) on February 26, 2013. In accordance with Section IV, Condition C.2 of Reference 1, NSPM submitted the first six-month status report on August 26, 2013 (Reference 3), the second six-month status report on February 26, 2014 (Reference 4), the third six-month status report on August 25, 2014 (Reference 5), and the fourth six-month status report on February 26, 2015 (Reference 8).

On February 27, 2014, the NRC issued an Interim Staff Evaluation (ISE) for PINGP's Mitigating Strategies OIP (Reference 6). The ISE documents the NRC's conclusion that NSPM has provided sufficient information to determine that there is reasonable assurance that the OIP, when properly implemented, will meet the requirements of Order EA-12-049 at PINGP. The ISE also documents the confirmatory and open items identified by the NRC as a result of their review and audit of PINGP's OIP.

This Enclosure provides the fifth six-month status report. This status report includes an update of milestone accomplishments since submittal of the OIP including changes to the compliance method, schedule, or the need and basis for relief, if any.

2.0 Milestone Accomplishments

The original milestone schedule with target dates was provided in Attachment 2 of the Reference 2 Enclosure. NSPM has accomplished the following milestones since the last six-month status (Reference 8). This report reflects status as of July 31, 2015:

- National SAFER Response Center Operational
- Submit Phase 2 Staffing Assessment
- Implement Communication Recommendations

3.0 Milestone Schedule Status

The following Table 1 provides an update of the milestone schedule for the OIP. This table reflects status as of July 31, 2015. This table includes a brief milestone status and a revised target date if the target date has changed. The target dates are planning dates subject to change as design and implementation details are developed. Three milestones have been accomplished since the last status report. The following describe schedule changes since the previous status update (Reference 8).

- Commence Installation for Online Modifications – Phase 2 and 3

  NSPM previously determined that online modifications would not be needed to complete the implementation of the requirements of Order EA-12-049 (Reference 1) and changed this milestone to "Not Applicable" in the fourth six-month status (Reference 8). Subsequent to the submittal of Reference 8, NSPM determined that the 480V Motor Control Centers (MCCs) do not need to be deenergized to perform the physical tie-in modifications. Therefore, NSPM has elected to perform these modifications with the units on-line. The revised target milestone date for Commencing On-Line Modifications is June 2015. This work has already commenced.

- Implement Storage

  The milestone target completion date for Implement Storage was changed from September 2015 to October 2015 based on weather and resource delays. The FLEX Storage target milestone date is changed to October 2015.

- Issue Maintenance Procedures

  The milestone target completion date for Issue Maintenance Procedures was changed from September 2015 to "Prior to startup from Unit 2 Implementation Outage." Per NSPM processes, the maintenance procedures will be developed and issued in time to ensure performance of the PMs as scheduled.

- Implement Training

  The training schedule for FLEX implementation requires completion prior to the Unit 2 Outage startup. Therefore, the milestone target completion date is changed in this status report. The change aligns training schedules with the strategy and modification completion dates and allows for any needed gap training.

Table 1 – Overall Integrated Plan Milestone schedule			
Milestone	**Target Completion Date**	**Activity Status**	**Revised Target Date**
Submit 60 Day Status Report	October 2012	Complete	
Submit Overall Integrated Plan	February 2013	Complete	
Submit First Six-Month Status Update	August 2013	Complete	
Commence Engineering Modification Design – Phase 2 & 3	September 2013	Complete	
Submit Second Six-Month Status Update	February 2014	Complete	
National SAFER Response Center Operational	August 2015	Complete	
Procure Equipment	September 2015	Started	
Submit Third Six-Month Status Update	August 2014	Complete	
Commence Installation for Online Modifications – Phase 2 and 3	Online modifications are not needed	Started	June 2015
Implement Storage	September 2015	Started	October 2015
Issue Maintenance Procedures	September 2015	Not Started	Fall 2015 prior to startup from Unit 2 Implementation Outage
Implement Training	August 2015	Started	Fall 2015 prior to startup from Unit 2 Implementation Outage
Submit Fourth Six-Month Status Update	February 2015	Complete	

Table 1 – Overall Integrated Plan Milestone schedule			
Milestone	**Target Completion Date**	**Activity Status**	**Revised Target Date**
Submit Phase 2 Staffing Assessment	Four months prior to 2R29	Complete	
Implement Communication Recommendations	Four months prior to 2R29	Complete	
Issue Procedures updated for FLEX strategies	Fall 2015 prior to startup from Unit 2 Implementation Outage	Started	
Submit Fifth Six-Month Status Update	August 2015	Complete with this submittal	
Unit 2 Implementation Outage	Fall 2015	Not Started	
Submit Sixth Six-Month Status	February 2016	Not Started	
Unit 1 Implementation Outage	Fall 2016	Not Started	
Validation Walk-throughs	Fall 2016	Not Started	
Submit Seventh Six-Month Status	August 2016	Not Started	
Submit Completion Report	December 2016	Not Started	

4.0 Proposed Changes to Compliance Method

There are changes to the compliance method as documented in the OIP (Reference 2). These changes and additional clarifications or updates to information in the OIP are discussed below.

- OIP Compliance Change - Time Constraint for Establishing RCS Makeup

  The first six-month status report communicated NSPMs decision to install a low leakage seal design at PINGP and that NSPM would evaluate the seal design to determine if changes to the FLEX strategies are warranted. NSPM described the impact of the change to Flowserve low leakage reactor coolant pump (RCP) seals in the second six-month status report. The compliance change description identified that NSPM anticipated the time required for providing reactor coolant

system (RCS) makeup water would be extended with the new RCP seal packages such that a portable pump to supply the RCS makeup water would not be necessary until Phase 3. NSPM needed to confirm the coping time for the RCS Inventory Control Phase 2 strategy when information was available from Flowserve. Additionally, NSPM provided a backup strategy for Phase 2. The backup strategy was to provide portable generators to repower the charging pumps during Phase 2.

NSPM has evaluated information from Flowserve along with new criteria for when RCS makeup must be reestablished. The new criteria for when RCS makeup must be reestablished is "prior to onset of reflux cooling" and is established to address NRC concerns with modeling the thermal hydraulics of the RCS during reflux cooling and with potential diluting of the cold legs during reflux cooling. The NSPM evaluations concluded that the repowering of the charging pumps is a required action to be taken during Phase 2 and is no longer considered a backup strategy to the low leakage seals. Additionally, NSPM determined there is a 32 hour time constraint associated with repowering the charging pumps.

- OIP Compliance Change – N+1 criteria for 480 VAC portable generators

NEI 12-06 establishes that licensees should have sufficient equipment to address all functions at all units onsite plus one additional spare and states that a two-unit site would nominally have at least three sets of portable ac/dc power supplies (N+1 = 3). NEI 12-06 also provides that it is acceptable to have a single resource that is sized to support the required functions for multiple units at a site with the example of a single pump capable of providing all water supply functions for a dual unit site. The PINGP FLEX strategy for portable power supplies is different than that outlined in NEI 12-06 in that the sets are not divided by unit, but rather are divided by functions across both units. The PINGP FLEX strategy for portable power supplies is considered an alternative method for complying with Order EA-12-049. The discussion below discusses the original OIP, the change based on similar generator loadings, and justification for the alternative.

The original PINGP OIP (Reference 2) contains a table entitled "PWR Portable Equipment Phase 2," which lists the portable equipment used during phase 2 along with the equipment's diverse uses, performance criteria, and maintenance requirements. In the PINGP OIP table, NSPM had two separate line entries for 480 VAC Generators. Each line item notes that the portable generator was to be shared between the two units for the diverse uses described in the table. A footnote for the table states that the listed quantities represent that needed to meet the NEI 12-06 N+1 criteria. The N+1 number for both of the portable generator line items was listed as two. One line item was for a 480 VAC portable generator to repower the MCCs in the Battery Rooms and Screenhouse while the other line item was for a 480 VAC portable generator to repower the RCS

makeup pump[1]. Based on how the table was constructed in the original OIP, it could be construed that the PINGP FLEX strategy requires four total generators to support the required functions for both units (i.e., N = 1 and N+1 = 2 for two line items, which would result in a total of four generators).

At the time the original OIP was written, detailed specifications for the two generators listed in the two line items of the OIP table were not developed. It was expected that the generators would potentially be different in capacity. Subsequent evaluation has determined that the generator loads are sufficiently similar to require only one bounding generator model. As a result, NSPM has ordered three identical 480 VAC generators that are each capable of supplying either:

1. the Battery Rooms and Screenhouse MCCs for both units or
2. the charging pumps for both units.

Any two of the three generators are sufficient to support all required functions for both PINGP units. Therefore, two generators are required (i.e., N = 2) and only one additional spare is required (i.e., N+1 = 3).

Note that if NSPM had chosen to use unit specific generators to power the unit specific Battery Room MCCs and charging pumps, then two generators would need to be staged and cables routed to meet the battery life time constraint of 11.5 hours. PINGP's current FLEX strategy requires deployment of one generator to repower both unit's Battery Room MCCs to meet the 11.5 hour time constraint and deployment of a second generator to repower the charging pumps for both units by the 32 hour time constraint. Unit specific generators would increase the time needed to repower these battery chargers and reduce the margin to complete this time sensitive operator action. Note that in the hypothetical unit specific case described, the number of deployed generators would also be equal to two (i.e., N) and three identical generators (i.e., N+1) would still be required.

This OIP compliance change combines the 480 VAC portable generator line items into one line item that lists three 480 VAC generators shared between the units. The performance criteria stated in the table is further clarified that one generator is repowering the MCCs in the Battery Rooms and Screenhouse for both units and one generator is repowering the charging pumps for both units. This OIP change defines the required number of deployed generators and the spare generator for the PINGP FLEX strategy. Since the generators are identical in capacity, a total of two generators is sufficient to address all functions for all units and three generators are sufficient to meet the N+1 criteria. This approach

[1] In the OIP (Reference 2), the portable RCS makeup pump has been replaced with repowering an installed charging pump. This change was discussed in the second six-month status (Reference 4) and the compliance change titled, "Time Constraint for Establishing RCS Makeup," located in this enclosure.

for using the portable power supplies across the units for two different functions is considered an alternative method for complying with Order EA-12-049.

- OIP Compliance Change – Refueling strategy for Phase 2 portable equipment.

  The fourth six-month status report (Reference 8) communicated an OIP change in the strategy for refueling portable equipment during Phase 2. The OIP originally refueled equipment from portable containers with fuel stored in the day tanks for the emergency diesel generators. Reference 8 identified an OIP compliance change to include sufficient fuel oil storage in a robust structure, such as the FLEX storage building, to meet the refueling needs of the Phase 2 equipment.

  Subsequent to the Reference 8 submittal, NSPM identified issues with including fuel oil storage as part of the FLEX building design. This results in an additional change to the Phase 2 portable equipment refueling strategy. The new refueling strategy for the non-flood condition is to use the 121 or 122 Heating Boiler Fuel Storage Tanks, if available, as the source of fuel for refueling the Phase 2 FLEX portable equipment. The tanks are located underground with a local fill connection above grade. However, the Heating Boiler Fuel Storage Tanks are not safety-related and are not considered seismically robust. Therefore, if the Heating Boiler Storage Tanks are not available, fuel will be extracted from the safety-related 121, 122, 123, or 124 Fuel Oil Storage Tanks for the Emergency Diesel Generators.

- OIP Compliance Change – Single robust FLEX storage building rather than two separate buildings.

  The OIP submitted for PINGP included the following statement regarding Protection of FLEX Equipment:

  > *NSPM plans to construct two separate storage locations to meet the guidance of NEI 12-06. The equipment will be stored in structures that are designed to the American Society of Civil Engineers (ASCE) 7-10, Minimum Design Loads for Buildings and Other Structures, or an evaluated equivalent.*

  NSPM has revised this strategy. The revised strategy is to build a single robust building that is able to withstand the PINGP site specific design basis seismic and tornado loads as well as high winds, snow and ice loads. As stated in the OIP (Reference 2), the building will not be designed to withstand an external flood because the flood hazard has ample warning time to allow deployment of FLEX equipment.

- OIP Compliance Change – Light emitting diode (LED) lighting

  The OIP submitted for PINGP identified the following modification to support coping time:

  > *Use of light emitting diode (LED) components for Appendix R lighting units will also be evaluated.*

  NSPM will not pursue the modification to install LED lighting to extend the Appendix R battery life due to the extensive nature of the modification to these lights and the flexibility offered by a portable lighting strategy.

- OIP Compliance Change – Elimination of Emergency Lighting System from FLEX strategies

  The OIP submitted for PINGP identified the ability to restore the Emergency Lighting System once the portable generators have repowered the battery chargers:

  > *This action will be designed to restore the Battery Chargers and all of the Safety Related Instrument Inverters (which will restore all channels of essential instrumentation), and the Emergency Lighting System (as applicable) in the associated train.*

  Based on other planned plant configuration changes, NSPM intends to permanently remove the Emergency Lighting from the DC (direct current) Power System. Therefore, NSPM will not restore the Emergency Lighting System once the portable generators have repowered the Battery Chargers. The strategy for lighting will be through the battery backed Appendix R light units (as long as the batteries last) and through portable lighting such as head lamps and flashlights.

- OIP Compliance Change – Locations of DC load shed, battery depletion calculation results, and the preferred train of DC that will be restored.

  The OIP submitted for PINGP included the following regarding the locations of the DC load shed:

  > *Load shedding will be performed in order to extend battery operational times. The strategy for the load shedding will be to reduce the load on the batteries through use of relatively simple actions (opening DC Panel Breakers). The load shedding will focus on two DC Panels for each Battery and reduces the overall load while maintaining essential instrumentation. It is assumed that panel breakers at the four panels in the Battery Rooms are opened at 60 minutes and that the panel breakers at the four panels in the Relay Room are opened at 90 minutes.*

NSPM revised this strategy. The strategy is accomplished by opening DC Panel Breakers and pulling fuses. The stripping of the loads will occur within the Battery rooms (stripped within 60 minutes), the relay room (stripped within 90 minutes), the D5/D6 Building (stripped within 90 minutes), and the Auxiliary Building (stripped within 90 minutes).

This section of the PINGP OIP also stated:

> *Preliminary estimates indicate that battery life can be extended up to at least 16 hours with this load shedding scheme. The battery depletion calculation is currently being finalized to account for these changes. If the results are different than reported herein, this will be reported in a six month status report, as required by Order EA-12-049.*

NSPM has finalized the battery depletion calculations. The limiting battery depletion time is 11.5 hours. Therefore, the time of 16 hours in the OIP is revised to 11.5 hours. The change in battery depletion time also changes the Attachment 1A, "Sequence of Events Timeline."

Lastly, the original PINGP OIP stated:

> *Two portable FLEX diesel generators will be provided; one to repower MCCs 1AC1 and 2AC1 and the other to repower MCCs 1AC2 and 2AC2. The primary means to restore a train of DC in each Unit will be to repower MCCs 1AC2 and 2AC2. The alternate means to restore a train of DC in each unit will be to repower MCCs 1AC1 and 2AC1.*

In Reference 8, NSPM provided an OIP compliance clarification that only one portable FLEX diesel generator will be deployed to repower the one train of DC power on each unit. Based on that OIP compliance clarification, the revised OIP controlled by NSPM states:

> *A portable FLEX diesel generator will be used to repower MCCs 1AC2 and 2AC2 as the primary means to restore a train of DC in each Unit. The alternate means to restore a train of DC in each unit will be to repower MCCs 1AC1 and 2AC1.*

NSPM has now revised the primary and alternate means to restore a train of DC in each unit. The primary means to restore a train of DC in each unit will be the portable FLEX diesel generator repowering MCCs 1AC1 and 2AC2. The alternate means to restore a train of DC in each unit will be to repower MCCs 1AC2 and 2AC1. This change in the preference of repowering MCCs is based on the ability to control the Turbine Driven Auxiliary Feedwater (TDAFW) Pump from the control room.

- OIP Compliance Change – Cooling Water (CL) management during an Extended Loss of A/C Power (ELAP)

  The OIP described the CL system supply to the TDAFWP during Phase 1 and 2 of an ELAP event. This included discussion that the CL flow must be reduced within four hours if the Emergency Intake line is the only source of water available to the Diesel Driven Cooling Water Pumps (DDCLP). Attachment 1A of the OIP (Reference 2), "Sequence of Events Timeline," lists the CL flow reduction within four hours as a time constraint. The calculation that determines the time for reducing the CL flow was revised, which resulted in the time changing to 3.3 hours. Therefore, NSPM revised the time constraint for reducing the CL flow demand to 3.3 hours if the Emergency Intake line is the only source of water available to the DDCLP.

  Additionally, the OIP states that the DDCLP Fuel Oil Day Tank provides up to eight hours of fuel supply. A calculation determined that during an ELAP the DDCLP Fuel Oil Day Tank will support running the DDCLP for at least eight hours as long as the DDCLP speed is reduced during the first two hours of the event. To ensure an eight hour supply of fuel to the DDCLP during an ELAP, NSPM is adding a two hour time constraint in Attachment 1A of the OIP. This two hour time constraint is associated with reducing the speed of a DDCLP.

5.0 Need and Basis for Relief from the Requirements of the Order

NSPM expects to comply with the Order implementation date and requirements and no relief is required at this time.

6.0 Open Items from Overall Integrated Plan and Interim Staff Evaluation

NSPM did not identify any open items in the PINGP mitigating strategies OIP. The NRC ISE was issued on February 27, 2014 (Reference 6). The NRC did not identify any open items in the ISE. Closure of the ISE confirmatory items will be completed as part of the NRC's audit process, as described in Reference 7.

7.0 Potential Interim Staff Evaluation Impacts

The ISE (Reference 6) was reviewed and the following sections are potentially impacted by the compliance changes described in Section 4.0 above.

- ISE Section 3.2.4.4 Accessibility- Lighting and Communications

  The compliance change described above in Section 4.0 regarding the Emergency Lighting System and its repowering potentially affects this ISE

section. There is a Confirmatory Item (CI 3.2.4.4.A) tracking to confirm that emergency lighting will be available during DC load shedding or that adequate lighting for mitigating strategies is provided.

- ISE Section 3.2.1.9 Use of Portable Pumps and ISE Section 3.2.4.7 Water Sources

  The compliance change described above in Section 4.0 regarding the time constraint for establishing RCS makeup potentially affects these ISE sections. These ISE sections discuss the need to confirm the time constraint and discuss the backup strategy for the low leakage seals. There is a Confirmatory Item (CI 3.2.1.9.A) tracking confirmation of the time required before makeup water is required for RCS inventory control.

- ISE Section 3.2.4.9 Portable Equipment Fuel

  The compliance changes described above in Section 4.0 regarding the time constraint for the DDCLP speed reduction and the refueling strategy for portable equipment potentially affects this ISE section.

  - DDCLP speed reduction:
    The ISE quotes the OIP sections that discuss the Fuel Oil Day Tank containing approximately eight hours of supply to the DDCLPs. No specific conclusions were made regarding the Fuel Oil Day Tank supply to the DDCLP. The addition of the two hour time constraint to reduce DDCLP speed to ensure an eight hour fuel supply should not impact the ISE discussion.
  - Refueling strategy for portable equipment:
    The ISE identifies that the licensee's refueling strategy was in development and that Confirmatory Item CI 3.2.4.9.A would track confirmation that total fuel consumption was determined as well as adequate methods for onsite fuel transport.

- ISE Sections
  - 3.1.1.1 Protection of FLEX Equipment – Seismic Hazards
  - 3.1.2.1 Protection of FLEX Equipment – Flooding Hazard
  - 3.1.3.1 Protection of FLEX Equipment – High Winds Hazard
  - 3.1.4.1 Protection of FLEX Equipment – Snow, Ice and Extreme Cold

  The compliance change described above in Section 4.0 regarding the FLEX storage building potentially affects these ISE Sections. The referenced ISE sections note two storage locations. Confirmation of final storage location for FLEX equipment is tracked by Confirmatory Item 3.1.1.2.A.

- ISE Section 3.2.4.10 Load Reduction to Conserve DC Power

  The compliance change described in Section 4.0 above for the DC load shedding potentially affects this section of the ISE. However, this section of the ISE recognizes battery depletion calculations were not complete and review of final calculations was identified as part of Confirmatory Item 3.2.4.10.B.

- ISE Section 3.2.4.7 Water Sources

  The compliance change described in Section 4.0 above for CL management during an ELAP potentially affects this section of the ISE. The ISE quotes the OIP section that discusses the four hour time constraint the operators have to reduce the CL system flow demand (changed to 3.3 hours). No specific conclusions were made regarding this time constraint in the ISE.

8.0 References

The following references support the updates to the overall integrated plan described in this enclosure:

1. NRC Order 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 (ADAMS Accession No. ML12054A735).

2. NSPM Letter to NRC, “Prairie Island Nuclear Generating Plant’s Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049),” dated February 26, 2013 (L-PI-13-007) (ADAMS Accession No. ML13060A379).

3. NSPM Letter to NRC, “Prairie Island’s First Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049),” dated August 26, 2013 (L-PI-13-080) (ADAMS Accession No. ML13239A094).

4. NSPM Letter to NRC, “Prairie Island Nuclear Generating Plant’s Second Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049),” dated February 26, 2014 (L-PI-14-018) (ADAMS Accession No. ML14057A771).

5. NSPM Letter to NRC, "Prairie Island Nuclear Generating Plant's Third Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049) (TAC Nos. MF0834 and MF0835)," dated August 25, 2014 (L-PI-14-078) (ADAMS Accession No. ML14237A512).

6. NRC Interim Staff Evaluation "Prairie Island Nuclear Generating Plant Units 1 and 2 - Interim Staff Evaluation Relating to Overall Integrated Plan in Response to Order EA-12-049 (Mitigation Strategies)(TAC Nos. MF0834 and MF0835)," dated February 27, 2014 (ADAMS Accession No. ML14030A540).

7. NRC memorandum, "Supplemental Staff Guidance for Addressing Order EA-12-049 on Mitigation Strategies for Beyond-Design-Basis External Events," dated August 28, 2013 (ADAMS Accession No. ML13238A263).

8. NSPM Letter to NRC, "Prairie Island Nuclear Generating Plant's Fourth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049) (TAC Nos. MF0834 and MF0835)," dated February 26, 2015 (L-PI-15-021) (ADAMS Accession No. ML15057A323).