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10 CFR 50.4
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November 18, 2014
MNS-14-086

Attention: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555-001

Duke Energy Carolinas, LLC (Duke Energy)
McGuire Nuclear Station (MNS), Unit 1
Docket Number 50-369
Renewed License Number NPF-9

Subject: Notification of Full Compliance with Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design Basis External Events" and with Order EA-12-051, "Order to Modify Licenses With Regard To Reliable Spent Fuel Pool Instrumentation" - McGuire Nuclear Station Unit 1

References:

1. Nuclear Regulatory Commission (NRC) Order Number EA-12-049, Order Modifying Licenses With Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, Revision 0, dated March 12, 2012, Agencywide Documents Access and Management System (ADAMS) Accession No. ML12054A735.
2. McGuire Nuclear Station (MNS) Overall Integrated Plan in Response to March 12, 2012, Commission Order to Modify Licenses With Regard To Requirements for Mitigation Strategies for Beyond Design Basis External Events (Order EA-12-049), dated February 28, 2013, ADAMS Accession No. ML13063A185.
3. McGuire Nuclear Station, Units 1 and 2 - Interim Staff Evaluation Relating to Overall Integrated Plan in Response to Order EA-12-049 (Mitigation Strategies), dated January 16, 2014, ADAMS Accession No. ML13338A406.
4. NRC Order Number EA-12-051, Order to Modify Licenses With Regard To Reliable Spent Fuel Pool Instrumentation, dated March 12, 2012, ADAMS Accession No. ML12054A679.
5. Letter from Duke Energy to NRC, Overall Integrated Plans in Response to March 12, 2012, Commission Order Modifying Licenses With Regard To Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 28, 2013, ADAMS Accession No. ML 13086A095.
6. McGuire Nuclear Station, Units 1 and 2 - Interim Staff Evaluation and Request for Additional Information Regarding the Overall Integrated Plan for Implementation of Order EA-12-051, Reliable Spent Fuel Pool Instrumentation, dated October 28, 2013, ADAMS Accession No. ML13281A791.

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7. McGuire Nuclear Station, Units 1 and 2 Report for the Audit Regarding Implementation of Mitigating Strategies and Reliable Spent Fuel Pool Instrumentation to Orders EA-12-049 and EA-12-051, dated October 9, 2014, ADAMS Accession No. ML14241A454.
8. McGuire Nuclear Station, Second Six-Month Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) ADAMS Accession No. ML14073A467.

Ladies and Gentlemen:

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design-Basis External Events" and Order EA-12-051, "Order to Modify Licenses With Regard To Reliable Spent Fuel Pool Instrumentation," (Reference 1 and Reference 4, respectively).

The Orders require holders of operating reactor licenses and construction permits issued under Title 10 of the Code of Federal Regulations Part 50 to submit for review, Overall Integrated Plans (OIPs) including descriptions of how compliance with the requirements of each Order will be achieved. By letter dated February 28, 2013 (Reference 2), the OIP for MNS in response to Order EA-12-049 was submitted. In a separate correspondence, the OIP for MNS in response to Order EA-12-051 was submitted by letter dated February 28, 2013 (Reference 5).

Order EA-12-049, Section IV.A.2 and Order EA-12-051, Section IV.A.2 requires completion of full implementation to be no later than two refueling cycles after submittal of the overall integrated plan, as required by Condition C.1.a, or December 31, 2016, whichever comes first. In addition, Section IV.C.3 of Orders EA-12-049 and EA-12-051 require that Licensees and CP holders report to the NRC when full compliance is achieved. For MNS Unit 1, the current requirement for full implementation of NRC Orders EA-12-049 and EA-12-051 is prior to restart from the 1EOC23 refueling outage in the fall of 2014.

On November 15, 2014, MNS Unit 1 entered Mode 2 (Startup) following the M1EOC23 refueling outage. As such, November 15, 2014, is the compliance date for MNS Unit 1, and MNS Unit 1 is in full compliance with Orders EA-12-049 and EA-12-051 as demonstrated by this submittal and any other docketed correspondence concerning these Orders.

Attachment 1 provides a brief summary of the key elements associated with compliance to Orders EA-12-049 and EA-12-051 for MNS Unit 1. The Open and Pending Items from the Audit Report (Reference 7) are provided in Attachment 2. For each Open and Pending Item identified in Attachment 2, a summary response in support of closure is provided. The responses are based on information and analyses that have been completed as of the date of this letter. As such, Duke Energy considers these items complete pending NRC closure.

On October 28, 2013, the NRC requested additional information regarding the plan to implement Order EA-12-051, (Reference 6). By letter dated February 27, 2014 (Reference 8), Duke Energy submitted a response to this request for MNS.

In support of the ongoing NRC Audit process, Duke Energy will continue working with the NRC staff in the issuance of a combined Safety Evaluation (SE) for both the Mitigation Strategies and the Spent Fuel Pool Level Instrumentation Orders.

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There are no regulatory commitments contained in this letter or its attachments. Please address any comments or questions regarding this submittal to George Murphy at (980) 875-5715.

I declare under penalty of perjury that the foregoing is true and correct. Executed on November 18, 2014.

Sincerely,

A handwritten signature in black ink, appearing to read "SD Capps". The signature is written in a cursive, flowing style.

Steven D. Capps

Attachments:

1. McGuire Nuclear Station, Unit 1 Summary of Compliance Elements for Orders EA-12-049 and EA-12-051
2. McGuire Nuclear Station, Unit 1 NRC Audit Report Open and Pending Items

United States Nuclear Regulatory Commission

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ATTACHMENT 1
McGUIRE NUCLEAR STATION, UNIT 1 SUMMARY OF COMPLIANCE ELEMENTS FOR ORDERS
EA-12-049 AND EA-12-051

The elements identified below for McGuire Nuclear Station (MNS) Unit 1, as well as the Overall Integrated Plans (OIP) for Orders EA-12-049 and EA-12-051 (References 1 and 7, respectively), the 6-Month Status Reports for Orders EA-12-049 and EA-12-051 (References 4 thru 6 and 9 thru 11, respectively), and any additional docketed correspondence, demonstrate compliance with Orders EA-12-049 and EA-12-051.

STRATEGIES - COMPLETE

MNS Unit 1 strategies are in compliance with Order EA-12-049. All strategy related Open Items, Confirmatory Items, or Audit Questions/Audit Report Open Items have been addressed and are considered complete pending NRC closure.

MODIFICATIONS - COMPLETE

The modifications required to support the Mitigation Strategies and Reliable Spent Fuel Pool Level Instrumentation for MNS Unit 1 have been implemented in accordance with station design control processes.

EQUIPMENT – PROCURED AND MAINTENANCE & TESTING - COMPLETE

The equipment required to implement the Mitigation Strategies and Reliable Spent Fuel Pool Level Instrumentation has been procured and is ready for use at MNS Unit 1. Testing and Maintenance processes have been established through the use of Industry endorsed Electric Power Research Institute (EPRI) Guideline and the MNS Preventative Maintenance program such that FLEX equipment and Spent Fuel Pool Level Instrumentation, reliability is achieved.

FLEX PROTECTED STORAGE - COMPLETE

The storage facilities required to implement the Mitigation Strategies for MNS Unit 1 have been completed and provide protection from the applicable site hazards. The equipment required to implement the Mitigation Strategies for MNS Unit 1 is stored in the FLEX buildings ready for use.

PROCEDURES - COMPLETE

FLEX Support Guidelines (FSG) and procedures for the maintenance and use of the Spent Fuel Pool Level Instrumentation for MNS Unit 1 have been developed in accordance with NEI 12-06, Revision 0, Section 3.2.2 and NEI 12-02, Revision 1, Section 4.2. The FSGs and affected existing procedures have been verified and are available for use in accordance with the site procedure control program.

TRAINING - COMPLETE

Training for MNS Unit 1 has been completed using the MNS Systematic Approach to Training (SAT) as recommended in NEI 12-06, Revision 0, Section 11.6 and in NEI 12-02, Revision 1, Section 4.1.

ATTACHMENT 1
MCGUIRE NUCLEAR STATION, UNIT 1 SUMMARY OF COMPLIANCE ELEMENTS FOR ORDERS
EA-12-049 AND EA-12-051

STAFFING - COMPLETE

The staffing study for MNS has been completed in accordance with NEI 12-01, Revision 0, and 10CFR50.54(f), "Request for Information Pursuant to Title 10 of the Code of Federal Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force review of Insights from the Fukushima Dai-ichi Accident," Recommendation 9.3, dated March 12, 2012 (Reference 13), as documented in letters dated May 20, 2014 (Reference 14), and September 24, 2014 (Reference 16). The staffing study confirmed that MNS has adequate staffing to perform the actions to mitigate beyond design basis events.

NATIONAL SAFER RESPONSE CENTERS - COMPLETE

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

VALIDATION - COMPLETE

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

FLEX PROGRAM DOCUMENT - ESTABLISHED

The FLEX Program Document for MNS has been developed in accordance with the requirements of NEI 12-06, Revision 0.

ATTACHMENT 1
McGUIRE NUCLEAR STATION, UNIT 1 SUMMARY OF COMPLIANCE ELEMENTS FOR ORDERS
EA-12-049 AND EA-12-051

REFERENCES

1. McGuire Nuclear Station Overall Integrated Plan in Response to March 12, 2012, Commission Order to Modify Licenses With Regard To Requirements for Mitigation Strategies for Beyond Design Basis External Events (Order EA-12-049), dated February 28, 2013, ADAMS Accession No. ML13063A185.
2. Nuclear Regulatory Commission Order Number EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, Revision 0, dated March 12, 2012, ADAMS Accession No. ML12054A735.
3. McGuire Nuclear Station, Units 1 and 2 - Interim Staff Evaluation Relating to Overall Integrated Plan in Response to Order EA-12-049 (Mitigation Strategies), dated January 16, 2014, ADAMS Accession No. ML13338A406.
4. McGuire Nuclear Station First 6-Month Status Report for the Implementation of Mitigation Strategies for Beyond Design Basis External Events, dated August 28, 2013, ADAMS Accession No. ML13254A204.
5. McGuire Nuclear Station Second 6-Month Status Report for the Implementation of Mitigation Strategies for Beyond Design Basis External Events, dated February 27 2013, ADAMS Accession No. ML14073A462.
6. McGuire Nuclear Station Third 6-Month Status Report for the Implementation of Mitigation Strategies for Beyond Design Basis External Events, dated August 27, 2014, ADAMS Accession No. ML14253A188.
7. Letter from Duke Energy to NRC, Overall Integrated Plans in Response to March 12, 2012, Commission Order Modifying Licenses With Regard To Requirements for Reliable Spent Fuel Pool Instrumentation (Order EA-12-051), dated February 28, 2013, ADAMS Accession No. ML 13086A095.
8. NRC Order Number EA-12-051, Order to Modify Licenses With Regard To Reliable Spent Fuel Pool Instrumentation, dated March 12, 2012, ADAMS Accession No. ML12054A679.
9. Duke Energy Letter, First 6-Month SFPLI Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation, dated August 26, 2013, ADAMS Accession No. ML13242A009.
10. Duke Energy Letter, Second 6-Month SFPLI Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation, dated February 27, 2014, ADAMS Accession No. ML14073A467.
11. Duke Energy Letter, Third 6-Month SFPLI Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation, dated August 27, 2014, ADAMS Accession No. ML14253A187.

ATTACHMENT 1

McGUIRE NUCLEAR STATION, UNIT 1 SUMMARY OF COMPLIANCE ELEMENTS FOR ORDERS EA-12-049 AND EA-12-051

12. McGuire Nuclear Station, Units 1 and 2 Report for the Audit Regarding Implementation of Mitigating Strategies and Reliable Spent Fuel Pool Instrumentation to Orders EA-12-049 and EA-12-051, dated October 9, 2014, ADAMS Accession No. ML14241A454.
13. 10CFR50.54(f), "Request for Information Pursuant to Title 10 of the Code of Federal Regulations Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force review of Insights from the Fukushima Dai-ichi Accident", Recommendation 9.3, dated March 12, 2012, ADAMS Accession No. ML12053A340.
14. McGuire Nuclear Station Phase 2 Staffing Assessment pursuant to 10CFR 50.54(f) regarding NTTF Recommendations 2.1, 2.3, and 9.3, dated May 20, 2014, ADAMS Accession No. ML14231A950.
15. NRC Letter to Duke Energy, Request for Additional Information Regarding Title 10 of the Code of Federal Regulations Part 50, Section 50.54(f), Recommendation 9.3 Phase 2 Staffing Assessment, dated August 25, 2014 (TAC NOS. MF4314 and MF4315).
16. McGuire Nuclear Station Phase 2 Staffing Assessment Response to Request for Additional Information, dated September 24, 2014.
17. NEI 12-06, Revision 0 "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide."
18. NEI 12-02, Revision 1 "Industry Guidance for Compliance with NRC Order EA-12-051, 'To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation.'"
19. NEI 12-01, Revision 0 "Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities."
20. McGuire Nuclear Station, Units 1 and 2 - Interim Staff Evaluation and Request for Additional Information Regarding the Overall Integrated Plan for Implementation of Order EA-12-051, Reliable Spent Fuel Pool Instrumentation, dated October 28, 2013, ADAMS Accession No. ML13281A791.

ATTACHMENT 2

McGUIRE NUCLEAR STATION, UNIT 1 NRC AUDIT REPORT OPEN AND PENDING ITEMS

Duke Energy provides the following response for the Audit Report Open and Pending Items and considers them to be complete pending NRC closure for McGuire Nuclear Station Unit 1:

| <i>Item¹</i> | <i>Description</i> | <i>Summary Response</i> |
|--|-----------------------------|--|
| ISE CI-3.1.1.4.A and ISE CI-3.4.A | Off-Site Resources | On 9/26/14, the NRC issued its staff assessment of the Strategic Alliance for FLEX Emergency Response (SAFER) program with regard to conformance with the applicable portions of guidance document Nuclear Energy Institute (NEI) 12-06 as endorsed by the NRC in Japanese Lessons Learned Division (JLD)-ISG-2012-01. The NRC staff has concluded that SAFER has procured equipment, implemented appropriate processes to maintain the equipment, and developed plans to deliver the equipment needed to support site responses to Beyond Design Basis External Events (BDBEEs), consistent with NEI 12-06 guidance. Therefore, licensees can reference the SAFER program and implement their SAFER Response Plans to meet the Phase 3 requirements of Order EA-12-049. The McGuire SAFER playbook was issued 9/25/14, and a copy uploaded to the MNS E-Portal. Actions have been completed and information provided to support NRC closure of this item. |
| ISE CI-3.2.4.4.A | Lighting and Communications | The IT-Telecom upgrade work for the MNS UHF radio system is complete. Additional information regarding scope of the upgrade work and verification of the completion of modifications is provided on MNS E-Portal. Actions have been completed and information provided to support NRC closure of this item. |
| Licensee Identified OIP Open Item 5 | Process Connections | Process connections modifications have been completed. The scope of the modifications and verification of implementation during M1EOC23 refueling outage have been placed on |

¹ Interim Staff Evaluation (ISE); Open Items (OI); Confirmatory Items (CI); Audit Questions (AQ); Overall Integrated Plan (OIP); Safety Evaluation (SE); Spent Fuel Pool Instrumentation Requests for Additional Information (SRAI)

ATTACHMENT 2

McGUIRE NUCLEAR STATION, UNIT 1 NRC AUDIT REPORT OPEN AND PENDING ITEMS

| <i>Item¹</i> | <i>Description</i> | <i>Summary Response</i> |
|-------------------------|----------------------------------|---|
| | | MNS E-Portal. Actions have been completed and information provided to support NRC closure of this item. |
| ISE CI-3.2.3.A | Containment Functions Strategies | Calculation DPC-1552.08-00-0280, Revision 1, has been approved and placed in the MNS E-Portal. Extended Loss of All AC Power (ELAP) response actions associated with Containment Functions are primarily contained in FLEX Support Guide (FSG)-12, which has been uploaded to the MNS E-Portal. Actions have been completed and information provided to support NRC closure of this item. |
| ISE CI-3.2.4.9.A | Portable Equipment Fuel | The FLEX equipment does not have special requirements for diesel fuel. The fuel in the McGuire garage storage tank and fuel trucks is replenished on a regular basis such that testing is not warranted. Additional information is provided on the MNS E-Portal. Actions have been completed and information provided to support NRC closure of this item. |
| SE Review Item 5 | NOTRUMP Code | <p>McGuire will abide by the Pressurized Water Reactor Owners Group (PWROG) White Paper (Report PWROG-14064-P, revision 0), which has been placed on the MNS E-Portal, and any associated conditions. McGuire FLEX strategy for RCS make-up (Modes 1-4 ELAP initiation) requires borated injection to begin no later than 13 hours from an event onset, a strategy supported by WCAP-17601-P, Revision 1.</p> <p>A comparison of McGuire key plant-specific parameters to the generic NOTRUMP case in WCAP-17601-P, Revision 1, was performed in the McGuire Mass and Energy release calculation, which utilized the RELAP5 code. Calculation DPC-1552.08-00-0279, Revision 0, has been placed on the MNS E-Portal. Actions have been completed and information provided to support NRC closure of this item.</p> |

ATTACHMENT 2

McGUIRE NUCLEAR STATION, UNIT 1 NRC AUDIT REPORT OPEN AND PENDING ITEMS

| <i>Item¹</i> | <i>Description</i> | <i>Summary Response</i> |
|-------------------------|--------------------|--|
| SE Review Item 7 | RCP Leakage Rate | <p>McGuire evaluated the Reactor Coolant Pump (RCP) No. 1 Seal Leak-off lines, including the common Seal Return header, as part of the Seal Leak-off orifice modifications installed during the M1EOC23 refueling outage. A third party vendor evaluation of the No. 1 seals and the McGuire specific piping configuration provided temperatures and pressures that would be experienced in the leak-off lines throughout the ELAP Loss of (RCP) Seal Cooling (LOSC) transient.</p> <p><u>Questions:</u></p> <p>A. Please clarify whether the piping and all components (e.g., flow elements, flanges, valves, etc.) in your Seal Leak-off line are capable of withstanding the pressure predicted during an ELAP event according to the revised seal leakage model.</p> <p>B. Please clarify whether operator actions are credited with isolating low-pressure portions of the Seal Leak-off line, and if so, please explain how these actions will be executed under ELAP conditions.</p> <p><u>Response:</u></p> <p>The McGuire piping stress evaluation of the leak-off lines demonstrates that the piping and supports will retain their structural integrity during this faulted event, thus no operator action is required to isolate low-pressure portions of the Seal Leak-off line. The McGuire calculation has been placed on the MNS E-Portal.</p> <p>The Pressurizer Water Reactor Owners Group (PWROG) is performing additional confirmatory evaluations in response to Nuclear Safety Advisory Letter (NSAL)-14-1. Duke Energy does not expect that the McGuire RCP No. 1 Seal Leak-off piping will be subjected to conditions worse than what has been already analyzed as a result of the</p> |

ATTACHMENT 2

McGUIRE NUCLEAR STATION, UNIT 1 NRC AUDIT REPORT OPEN AND PENDING ITEMS

| <i>Item¹</i> | <i>Description</i> | <i>Summary Response</i> |
|-------------------------|--------------------|---|
| | | <p>PWROG evaluations. Any new information from the PWROG evaluations will be entered into the corrective action program for disposition.</p> <p><u>Questions:</u></p> <p>C. If over-pressurization of piping or components could occur under ELAP conditions, please discuss any planned modifications to the Seal Leak-off piping and component design and the associated completion timeline.</p> <p>D. Alternately, please identify the Seal Leak-off piping or components that would be susceptible to over-pressurization under ELAP conditions, clarify their locations, and provide justification that the seal leakage rate would remain in an acceptable range if the affected piping or components were to rupture.</p> <p><u>Response:</u> The McGuire piping stress evaluation of the leak-off lines demonstrates that the piping and supports will retain their structural integrity during this faulted event. As such, the above questions are not applicable to McGuire.</p> <p><u>Conclusion:</u> The PWROG is performing additional confirmation evaluations to address NRC questions related to NSAL-14-1 and WCAP-17601-P. Duke Energy fully anticipates that this effort will further validate the McGuire RCP No. 1 Seal Leak-off piping structural integrity evaluations.</p> <p>Any new information received that adversely affects the piping stress analysis will be incorporated into the MNS Corrective Action Program (CAP) for disposition. Although additional confirmation of the McGuire piping stress evaluation by the PWROG is pending,</p> |

ATTACHMENT 2
McGUIRE NUCLEAR STATION, UNIT 1 NRC AUDIT REPORT OPEN AND PENDING ITEMS

| <i>Item¹</i> | <i>Description</i> | <i>Summary Response</i> |
|-------------------------|-----------------------|--|
| | | <p>the current supporting evaluations remain valid. As such, actions are in place to allow for NRC closure of this issue when the PWROG evaluation is complete.</p> |
| SE Review Item 8 | RCP Seal Leakage Rate | <p>Please provide adequate justification for the seal leakage rates calculated according to the Westinghouse seal leakage model that was revised following the issuance of NSAL-14-1. The justification should include a discussion of the following factors:</p> <ol style="list-style-type: none"> 1. Benchmarking of the seal leakage model against relevant data from tests or operating events, 2. Discussion of the impact on the seal leakage rate due to fluid temperatures greater than 550°F resulting in increased deflection at the seal interface, 3. Clarification whether the second-stage reactor coolant pump seal would remain closed under ELAP conditions predicted by the revised seal leakage model and a technical basis to support the determination, and, 4. Justification that the interpolation scheme used to compute the integrated leakage from the reactor coolant pump seals from a limited number of computer simulations (e.g., three) is realistic or conservative. <p><u>Response:</u> In response to NSAL-14-1, McGuire elected to install a restriction orifice in each RCP No. 1 Seal Leak-off Line for Unit 1, in order to mitigate seal leakage associated with an extended LOSC event. This modification required a full third party vendor analysis of the RCP No. 1 seal behavior at various pressure/temperature conditions during the post-ELAP depressurization/cool-down period (primarily chosen at positions of low</p> |

ATTACHMENT 2

McGUIRE NUCLEAR STATION, UNIT 1 NRC AUDIT REPORT OPEN AND PENDING ITEMS

| <i>Item¹</i> | <i>Description</i> | <i>Summary Response</i> |
|-------------------------|--------------------|--|
| | | <p>RCS subcooling margin).</p> <p>As part of the evaluation of the seal behavior, a third party vendor was also requested by McGuire to provide a response to the four NRC questions posed after the August 2014 NRC Mitigation Strategies/SFPI On-site Audit. Those responses provide additional support for the validity of the McGuire Mitigation Strategies response, and have been placed on the MNS E-Portal. As noted however, McGuire intends to credit the follow-on evaluations being performed by the PWROG in response to NSAL-14-1.</p> <p>The PWROG is performing additional confirmation evaluations to address NRC questions related to NSAL-14-1 and WCAP-17601-P regarding RCP seal leakage. Duke Energy fully anticipates that this effort will further validate the analytical bases supporting the mitigating strategies that have been incorporated into procedures and guidelines. Any new information received that require these strategies to be revised will be incorporated into MNS Corrective Action Program for disposition and updates to the NRC will be provided in the next six-month status report as required by Order EA-12-049.</p> <p>McGuire FLEX strategy for RCS make-up (Modes 1-4 ELAP initiation) requires borated injection to begin no later than 13 hours from event onset, a strategy supported by evaluation results published to date by the PWROG. Based on the third party vendor evaluations and the PWROG analysis results published to date, it is not expected that the completion of the PWROG evaluation of standard Westinghouse RCP No. 1 and No. 2 seal behavior during an extended LOSC event will produce results adverse to what has already been analyzed and</p> |

ATTACHMENT 2

McGUIRE NUCLEAR STATION, UNIT 1 NRC AUDIT REPORT OPEN AND PENDING ITEMS

| <i>Item¹</i> | <i>Description</i> | <i>Summary Response</i> |
|-------------------------|--|--|
| | | <p>incorporated into McGuire FLEX response strategies.</p> <p>A comparison of the McGuire and final PWROG seal behavior results, when the latter are made available, will be performed and a summary placed on the MNS E-Portal for NRC staff review. Although additional confirmation of the Mitigation Strategies response is pending, current supporting evaluations remain valid. As such, actions are in place to allow for NRC closure of this issue when the PWROG evaluation is complete.</p> |
| AQ-35 | Loss of Heat Tracing Effects, NEI 12-06, Section 3.2.2, Guideline 12 | <p>The exposed connections are the Refueling Water Storage Tank (RWST) Recirculation piping and the hose connection points to Steam Generator Feedwater. These connections are insulated but do not have trace heating freeze protection. These two connections are not considered to be subject to freezing. No FLEX critical instrumentation is exposed to cold weather. Additional information is provided on the MNS E-Portal. Actions have been completed and information provided to support NRC closure of this item.</p> |
| ISE CI-3.2.1.7.A | Shutdown and Refueling Modes | <p>MNS has followed interim guidance provided by the PWROG. As provided in a letter dated August 27, 2014, MNS will abide by the NRC-endorsed NEI White paper "Shutdown/Refueling Modes" (ML13273A514/ML13267A382), and the clarifications provided by FLEX Guidance Inquiry 2013-10. The follow-on interim guidance in PA-PSC-1126 was also consulted by MNS to ensure an adequate response strategy was developed. When the final guidance is issued by the PWROG, MNS will revise the appropriate procedures. Additional information is provided on the MNS E-Portal. Actions have been completed and information provided to support NRC closure of this item.</p> |

ATTACHMENT 2

McGUIRE NUCLEAR STATION, UNIT 1 NRC AUDIT REPORT OPEN AND PENDING ITEMS

| <i>Item¹</i> | <i>Description</i> | <i>Summary Response</i> |
|----------------------------|---|--|
| SRAI-14, 15, & 16 | SFPI Shock and Vibration analysis | Information for the Shock and Vibration was placed on the MNS E-Portal. Actions have been completed and information provided to support NRC closure of this item. |
| Audit Report Section 3.4.d | The staff requested that the licensee provide information on the MNS E-Portal regarding the fuel quality from the three trucks onsite that will be used initially to refuel FLEX equipment. | The FLEX equipment does not have special requirements for diesel fuel. The fuel in the McGuire garage storage tank and fuel trucks is replenished on a regular basis such that testing is not warranted. Additional information is provided on the MNS E-Portal. Actions have been completed and information provided to support NRC closure of this item. |
| Audit Report Section 4.0.e | The NRC staff requested that the licensee provide a summary of the plant modifications for staff review. | FLEX and SFPLI Modifications have been completed and details have been placed on the MNS E-Portal. Actions have been completed and information provided to support NRC closure of this item. |
| ISE-CI 3.2.4.10.A | The staff will complete a vendor audit of the batteries. | By Letter dated August 27, 2014, McGuire endorsed the white paper for extended battery duty cycles. To close this item the NRC is to audit the battery vendor (GNB). Actions have been completed and information provided to support NRC closure of this item. |