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CNS-14-020

10 CFR 50.4

February 28, 2014

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

Duke Energy Carolina, LLC (Duke Energy)
Catawba Nuclear Station, Units 1 and 2
Docket Numbers 50-413 and 50-414
Renewed License Numbers NPF-35 and NPF-52

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

References:

1. Nuclear Regulatory Commission (NRC) Order Number EA-12-049, Order Modifying Licensees With Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, Revision 0, 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-A, dated August 2012 ADAMS Accession No. ML12242A378)
4. Duke Energy's 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 EA-12-049), dated October 29, 2012 (ADAMS Accession No. ML12307A023).
5. Catawba 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
6. Catawba First Six-Month Report 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 August 28, 2013 (ADAMS Accession No. ML13298A010)

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February 28, 2014

Ladies and Gentlemen,

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Order EA-12-049 (Reference 1) to Duke Energy. Reference 1 was immediately effective and directs Duke Energy 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 Duke Energy initial status report regarding mitigation strategies at the Oconee, McGuire and Catawba Nuclear Stations. Reference 5 provided the Catawba overall integrated plan.

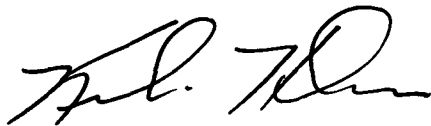
Reference 1 requires submission of a status report at six-month intervals following submittal of the overall integrated plan. Reference 3 provides direction regarding the content of the status reports. Reference 6 provided the first six-month status report for Catawba. The purpose of this letter is to provide the second 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 attached 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.

This letter contains no new Regulatory Commitments and no revision to existing Regulatory Commitments.

Should you have any questions regarding this submittal, please contact Phil Barrett at (803) 701-4138.

I declare under penalty of perjury that the foregoing is true and correct. Executed on February 28, 2014.

Sincerely,

A handwritten signature in black ink, appearing to read "Kelvin Henderson", written in a cursive style.

Kelvin Henderson
Vice President, Catawba Nuclear Station

Enclosure:

Second Six-Month Status Report in Response (Order EA-12-049), Catawba Nuclear Station (CNS), Units 1 and 2, Docket Nos. 50-413 and 50-414, Renewed License Nos. NPF-35 and NPF-52

United States Nuclear Regulatory Commission

Page 3

February 28, 2014

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ENCLOSURE

SECOND SIX MONTH STATUS REPORT (ORDER EA-12-049)

CATAWBA NUCLEAR STATION (CNS), UNITS 1 AND 2

DOCKET NOS. 50-413 AND 50-414

RENEWED LICENSE NOS. NPF-35 AND NPF-52

1 Introduction

Catawba Nuclear Station (CNS) developed an Overall Integrated Plan (Reference 1 in Section 8), documenting the diverse and flexible strategies (FLEX), in response to NRC Order EA-12-049 (Reference 2 in Section 8). The Overall Integrated Plan (OIP) was submitted to the NRC on February 28, 2013. This enclosure provides an update of milestone accomplishments including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any, that occurred during the period from July 31, 2013 to January 28, 2014 (hereafter referred to as "the update period").

2 Milestone Accomplishments

The following milestones were completed during the update period:

- 1) Overall Integrated Plan was submitted on February 28, 2013
- 2) First Six-Month Status Report for Catawba Nuclear Station, Units 1 and 2 was submitted on August 28, 2013.

3 Milestone Schedule Status

The following provides an update to Attachment 2 of the Overall Integrated Plan. It provides the activity status of each item, and whether the expected completion date has changed. The dates are planning dates subject to change as design and implementation details are developed.

The revised milestone target completion dates are not expected to impact the order implementation date.

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Submit 60 Day Initial Status Report	Oct 2012	Complete	Date Not Revised
Submit Overall Integrated Plan	Feb 2013	Complete	Date Not Revised
First 6 Month Status Update	Aug 2013	Complete	Date Not Revised
Second 6 Month Status Update	Feb 2014	Started	Date Not Revised
Develop Engineering Changes (ECs)	Jan 2015	Started	Date Revised
Develop Strategies	Aug 2014	Started	Date Revised
Purchase Equipment	Aug 2014	Started	Date Revised
Develop Equipment PMs	Dec 2014	Started	Date Revised

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Develop Guidelines	Aug 2014	Started	Date Revised
Develop Training	Dec 2014	Started	Date Revised
Implement Training	May 2015	Not Started	Date Not Revised
Staffing 12-01 Phase II	Nov 2014	Not Started	Date Not Revised
Communications Integrated Plan	May 2015	Started	Date Not Revised
EC Implementation (On-Line)	May 2015	Not Started	Date Not Revised
Unit 1 EC Implementation (1EOC22)	Dec 2015	Not Started	Date Not Revised
Unit 2 EC Implementation (2EOC20)	May 2015	Not Started	Date Not Revised
Site Implementation Complete	Dec 2015	Not Started	Date Not Revised
Regional Response Centers Operational	Feb 2015	Started	Date Not Revised

4 Changes to Compliance Method

The following summarizes the changes to the compliance method or strategies as documented in the Overall Integrated Plan or previous 6 Month Updates (Reference 1 and 3 in Section 8). These changes do not impact Catawba Nuclear Stations compliance with NEI 12-06.

- 1) Change: The wording for the Auxiliary Feedwater (CA) piping connection Engineering Change in the list of modifications on Page 18 of 93 and 24 of 93 in the OIP needs to be changed from “Provide primary and alternate CA piping connections for S/G Makeup via the diesel driven portable pump (Open Item 34)” to “Provide primary CA piping connections for S/G Makeup via the diesel driven portable pump (Open Item 34)”. The wording for Open Item 34 also needs to be changed from “Provide primary and alternate CA piping connections for S/G Makeup via portable pump - ECR 5980 and 5981” to “Provide primary CA piping connections for S/G Makeup via portable pump - ECR 5980 and 5981”.

Justification: The current strategy based on the Westinghouse Water Quality Analysis report for McGuire and development of the Flex Support Guidelines (FSGs) is to provide symmetric cooling. As such, a connection point to each Steam Generator will be needed for both the primary and alternate strategy. The following sentence on Page 24 of NEI 12-06 states the following: "Both the primary and alternate connection points do not need to be available for all applicable hazards, but the location of the connection points should provide reasonable assurance of at least one connection being available." Based on this statement, the existing B.5.b connections can be used as the alternate Steam Generator connection points. The B.5.b connections have been determined to be seismically robust by ARES in their recently submitted Flex report for Unit 1. As such, flooding of the Doghouses is the only hazard that would make the B.5.b connections unavailable.

Documentation: ARES Report No. 030321.13.01-001 Revision 0 (Seismic Robustness Review Of Catawba Unit 1 Non-Safety Piping and Components For Diverse and Flexible Mitigation Strategies (Flex), NEI 12-06 Rev. 0, Open Item 34, Westinghouse Water Quality Analysis for McGuire Nuclear Station, FSG-3 (Alternate Low Pressure Feedwater).

- 2) Change: Additional pumps will be purchased that will be used for the low pressure Steam Generator makeup and Mode 5/6 Reactor Coolant System (RCS) makeup strategies. These pumps will be capable of supplying 300 gpm at a discharge pressure of 400 psig. This performance criteria has changed from that stated in the Phase 2 Equipment Table on page 64 of 93 in the OIP.

Justification: While evaluating the pumps available to perform the low pressure Steam Generator makeup strategy, it was determined that this same pump could also work for the low pressure RCS makeup strategy since both functions will not occur at the same time. The rated flow and discharge pressure of this common pump meets all of the expected system conditions for the Steam Generator and RCS makeup strategies. Using the same pump for both functions eliminates the need to purchase, store, and maintain additional equipment.

Documentation: Open Items 37 and 53 are tracking the purchase of these pumps. Pump curves from vendor for the Hale Twin Booster Pump (TBP) that CNS will likely purchase.

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

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

6. Open Items

The following tables provide a summary status of the Open Items. The table under Section 6.a. provides the open items identified in Attachment 5 of the original OIP submitted on February 28, 2013. The table under Section 6.b. provides a list of open items that were added after February 28, 2013. The table under 6.c. provides a list of open items related to the Interim Staff Evaluation (ISE).

a. Open Items Documented in the Overall Integrated Plan.

Item	Overall Integrated Plan Open Item	Status
1	Disconnect all non-critical loads from vital batteries. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 25 in PIP C-12-2291.	Complete
2	Provide pumping capacity to control level in TDAFWP pit sump. Additional analysis required to verify adequate pump head exists to overcome potential Turbine Building flooding. See Corrective Action 26 in PIP C-12-2291.	Started
3	Provide pumping capacity to control level in TDAFWP pit sump. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 27 in PIP C-12-2291.	Not Started
4	Recharge communication system and satellite phone system. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 28 in PIP C-12-2291.	Not Started
5	Align charging to Channel A and D Vital Batteries. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 29 in PIP C-12-2291.	Not Started
6	Align portable injection pump from Refueling Water Storage Tank to Safety Injection System to provide Reactor Coolant System makeup and boration. Approximate time suggested by PWROG to provide negative reactivity addition and maintain margin to criticality. Site specific analysis will need to be performed to establish actual time. See Corrective Action 30 in PIP C-12-2291.	Started
7	Align portable injection pump from Refueling Water Storage Tank to Safety Injection System to provide Reactor Coolant System makeup and boration. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 31 in PIP C-12-2291.	Not Started
8	Provide portable lighting (beyond head and hand lamps and installed battery lighting). Activity to be validated in conjunction with associated procedure changes. See Corrective Action 32 in PIP C-12-2291.	Not Started

Item	Overall Integrated Plan Open Item	Status
9	Install portable fans in Control Room and Battery Rooms. Time based on engineering judgment. Analysis will determine the need and timing for ventilation. See Corrective Action 33 in PIP C-12-2291.	Started
10	Install portable fans in Control Room and battery rooms. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 34 in PIP C-12-2291.	Not Started
11	Connect diesel driven Hale Pump through Essential Service Water piping to Spent Fuel Pool skimmer loop to provide a means to make up to the SFP without entering the SFP area. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 35 in PIP C-12-2291.	Not Started
12	Open Spent Fuel Pool bay doors. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 36 in PIP C-12-2291.	Not Started
13	Align diesel driven Hale Pump to supply Essential Service Water supply header from UHS. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 37 in PIP C-12-2291.	Not Started
14	Align diesel driven Hale Pump to supply second diesel driven Hale Pump to feed SGs. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 38 in PIP C-12-2291.	Not Started
15	Re-power H2 igniters. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 39 in PIP C-12-2291.	Not Started
16	Align charging to Channel B and C Vital Batteries. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 40 in PIP C-12-2291.	Not Started
17	Isolate the Cold Leg Accumulators. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 41 in PIP C-12-2291.	Not Started
18	Evaluate need to provide freeze protection for instrumentation located in Doghouses and yard. 48 hours is based on engineering judgment. Evaluation will be performed to determine actual action time. See Corrective Action 42 in PIP C-12-2291.	Not Started
19	Evaluate need to provide freeze protection for instrumentation located in Doghouses and yard. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 43 in PIP C-12-2291.	Not Started
20	Isolate Instrument Air to Containment. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 44 in PIP C-12-2291.	Not Started

Item	Overall Integrated Plan Open Item	Status
21	Align portable diesel driven Hale Pump to Containment Spray connection. Contingency to be available if required to reduce Containment temperature. Modification of an existing B.5.b Strategy. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 45 in PIP C-12-2291.	Not Started
22	Align RRC diesel generator to power installed Containment Spray pumps. Activity to be validated in conjunction with associated procedure changes. See Corrective Action 46 in PIP C-12-2291.	Not Started
23	Arrangements with local transportation businesses and Regional Response Centers will need to be established to ensure personnel and equipment can reach the site considering extensive damage to surrounding infrastructure (roads, bridges, etc.). See Corrective Action 47 in PIP C-12-2291.	Not Started
24	Additional sump pumps need to be specified, purchased, and placed in critical rooms and floor elevations in the Auxiliary building to mitigate/control internal flooding. See Corrective Action 48 in PIP C-12-2291.	Started
25	Develop adequate procedural and administrative guidance to implement mitigation strategies and supporting activities during Phase 1, 2, and 3. See Corrective Action 49 in PIP C-12-2291.	Not Started
26	Provide S/G Makeup via CA TDP with static RC/RN suction supply - Procedural guidelines and ECR 6139 and 6140. See Corrective Action 7 and 19 in PIP C-12-2291.	Started
27	A site specific Building Specification will be written that details the storage facility design requirements and ECR 5979 will design and construct the facilities. See Corrective Action 12 in PIP C-12-2291.	Started
28	Add appropriate FLEX equipment to the site Periodic Maintenance (PM) program. See Corrective Action 50 in PIP C-12-2291.	Not Started
29	Develop a Document for the FLEX program. See Corrective Action 51 in PIP C-12-2291.	Started
30	Determine if Engineering Change program documents or checklists need to be revised to include verification that the modification does not impact the FLEX program. See Corrective Action 52 in PIP C-12-2291.	Not Started

Item	Overall Integrated Plan Open Item	Status
31	Develop applicable training programs to support the FLEX strategies and supporting activities. Training will be provided once programs are in place. Corrective Action 53 in PIP C-12-2291 has been closed to the Needs and Evaluation Database (NED). NED 13-02758 has been initiated and assigned for processing.	Started
32	Develop flow model calculations to support the various FLEX strategies and document the available static water volume in the RN/CA piping (PIP C-12-2291 CA 20).	Started
33	Provide RN supply header hose connections in the yard and in the pumphouse for portable pump to fill/pressurize RN system - ECR 5976 and 5977.	Started
34	Provide primary CA piping connections for S/G Makeup via portable pump (ECR 5980 and 5981). See Corrective Action 13 and 14 in PIP C-12-2291.	Started
35	Provide MCC cable plug in connections for various loads (ECR 6047 and 6048). See Corrective Action 75 and 76 in PIP C-12-2291.	Started
36	Provide primary and alternate RCS makeup and injection connections (ECR 5983 and 5984). See Corrective Action 15 and 16 in PIP C-12-2291.	Started
37	Purchase high pressure and low pressure RCS injection pumps. See Corrective Action 54 in PIP C-12-2291.	Not Started
38	Provide seismically qualified connection on the FD piping to access diesel fuel in safety related underground storage tanks (ECR 5985 and 5988). See Corrective Action 17 and 18 in PIP C-12-2291.	Not Started
39	Purchase portable diesel fuel transfer pump and storage tank. See Corrective Action 55 in PIP C-12-2291.	Started
40	Provide access road to the SNSWP for the portable diesel pump (ECR 5978). See Corrective Action 11 in PIP C-12-2291.	Started
41	An analysis is needed to determine whether or not venting/letdown is required when providing borated water injection. See Corrective Action 56 in PIP C-12-2291.	Started
42	An analysis is needed to determine if containment spray for temperature/pressure control is not required over the long term. See Corrective Action 57 in PIP C-12-2291.	Started
43	Provide redundant SFP Level Instruments per NRC Order - EC109413 and 109414.	Started
44	Determine lighting requirements via Corrective Action 31 in PIP C-11-6867.	Complete
45	Determine lighting requirements and implement as needed via Corrective Action 24 in PIP C-12-2291.	Started

Item	Overall Integrated Plan Open Item	Status
46	Determine long term environmental conditions in the Control Room and CA Pump room via Corrective Action 13 in PIP C-11-6867. This evaluation will be part of Corrective Action 33 in PIP C-12-2291.	Started
47	Ensure that an appropriate inventory of portable hand-held satellite phones, spare batteries, and chargers, is available for use by the Emergency Response Organization. See Corrective Action 7 in PIP C-12-2195.	Complete
48	Evaluate and purchase, if necessary, additional portable radios, spare batteries, and chargers to ensure required communications links are fully established. Corrective Action 8 in PIP C-12-2195.	Complete
49	Ensure that portable communications equipment (i.e., satellite phones, radios, and diesel generators) are stored in a manner such that maximizes survivability from applicable external events per NEI 12-01, Section 4.5. Corrective Action 9 in PIP C-12-2195.	Not Started
50	Ensure that programmatic controls are established for communications equipment (i.e., portable satellite phones, radios, small generators) to ensure availability and reliability, including the performance of periodic inventory checks and operability testing per NEI 12-01, Section 4.8. Also, provide training on the locations and use of communications systems and equipment (NEI 12-01, Section 4.11). Corrective Action 10 in PIP C-12-2195.	Started
51	Ensure that arrangements are in place with communications service providers to utilize their emergency services as described in NEI 12-01, Section 4.10. Corrective Action 12 in PIP C-12-2195.	Complete
52	Purchase debris removal equipment that is also capable of towing all FLEX equipment. See Corrective Action 58 in PIP C-12-2291.	Started
53	Provide additional portable FLEX equipment such as pumps, air compressors, and generators to be purchased with specific identifiers/labels maintained in the Equipment Data Base (EDB). See Corrective Action 59 in PIP C-12-2291.	Started
54	Develop periodic surveillance procedures and Operator rounds to verify that all FLEX equipment is in its proper storage location and not degraded. See Corrective Action 60 in PIP C-12-2291.	Not Started
55	Develop Regional Response Center Playbook. See Corrective Action 61 in PIP C-12-2291.	Started
56	Complete staffing studies and ensure adequate personnel will be available to support the FLEX mitigation strategies and associated activities. See Corrective Action 7 in PIP C-12-4953.	Not Started

Item	Overall Integrated Plan Open Item	Status
57	Develop procedural guidelines to use handheld instruments tied into local in plant components to monitor essential parameters. See Corrective Action 62 in PIP C-12-2291.	Not Started
58	Develop procedural guidelines to disconnect normal power supplies and attach alternate power cables from disconnect devices and portable generators for select components. See Corrective Action 63 in PIP C-12-2291.	Not Started
59	Develop procedural guidelines to deploy and install lighting in required areas. See Corrective Action 24 in PIP C-12-2291.	Not Started
60	Determine if Phase 3 ventilation needs (RRC equipment, additional procedural guidelines, etc.) are required. See Corrective Action 64 in PIP C-12-2291.	Started
61	Determine if Mobile Boration will be required from the RRC during Phase 3. See Corrective Action 65 in PIP C-12-2291.	Not Started
62	Determine if portable lighting will be required from the RRC during Phase 3. See Corrective Action 66 in PIP C-12-2291.	Not Started
63	Determine if portable fans/ducting will be required from the RRC during Phase 3. See Corrective Action 67 in PIP C-12-2291.	Started
64	Determine Phase 3 requirements related to Radiation Protection Equipment. See Corrective Action 68 in PIP C-12-2291.	Not Started
65	Determine Phase 3 requirements related to Commodities such as food and water. See Corrective Action 69 in PIP C-12-2291.	Not Started
66	Calculate diesel fuel consumption rates for the portable FLEX equipment and compare that to the available fuel stored in the Emergency Diesel Generator safety related underground storage tanks to determine if additional diesel fuel is needed from off-site resources during Phase 3. See Corrective Action 70 in PIP C-12-2291.	Complete
67	Select and purchase Phase 3 debris clearing equipment and/or transport vehicles if needed to move RRC equipment around the site. See Corrective Action 71 in PIP C-12-2291.	Started
68	Implement Flood mitigation activities per Corrective Action Program PIP C-12-0833.	Started
69	Complete initial testing of FLEX mitigation equipment prior to full implementation dates. See Corrective Action 72 in PIP C-12-2291.	Started
70	Establish a Special Emphasis Code in the EDB and Work Control program for FLEX equipment. See Corrective Action 73 in PIP C-12-2291.	Complete
71	Obtain and store any additional equipment in FLEX Storage Facilities or Category I buildings needed to aid in the connection of the RRC equipment to plant components. See Corrective Action 74 in PIP C-12-2291.	Not Started

Item	Overall Integrated Plan Open Item	Status
72	Revise RP/0/A/5000/007 (Natural Disaster and Earthquake) to move equipment at the SNSWP if flooding is imminent. See Corrective Action 79 in PIP C-12-2291.	Complete

b. Open Items added after February 28, 2013

Item	Overall Integrated Plan Open Item	Status
73	Formally evaluate/document potential deployment route concerns such as soil liquefaction discussed in NEI 12-06. See Corrective Action 86 in PIP C-12-2291.	Not Started
74	Document seismic qualification (robustness in accordance with NEI 12-06) of assured RN to KF make up piping on Unit 1. See Corrective Action 87 in PIP C-12-2291.	Started
75	Add new FWST low/high pressure borated water injection pump suction connection. See Corrective Action 83 and 84 in PIP C-12-2291 (ECR-6787 and ECR-6788)	Not Started
76	Evaluate travel paths into the Auxiliary Building through non seismic structures. See Corrective Action 88 in PIP C-12-2291.	Not Started
77	An analysis is needed to determine if there are any impacts to FLEX strategies due to large internal flooding sources that are not seismically robust or that require AC power for isolation. The analysis shall also consider the effects of ground water intrusion during an Extended Loss of All AC Power event. See Corrective Action 89 in PIP C-12-2291.	Not Started
78	A Catawba specific shutdown margin calculation performed in accordance with PWROG guidance is required. See Corrective Action 90 in PIP C-12-2291.	Started
79	Westinghouse assistance is required to provide additional information related to seal leakage on the Catawba Reactor Coolant Pumps. See Corrective Action 91 in PIP C-12-2291.	Not Started
80	The number of Steam Generators and PORVs required for the Low Pressure portable pump makeup FLEX strategy needs to be validated and formally documented in a Catawba station calculation. See Corrective Action 92 in PIP C-12-2291.	Not Started
81	Westinghouse assistance is needed to perform thermal hydraulic analyses to support plant specific decision making and provide justification for the duration of each phase. See Corrective Action 93 in PIP C-12-2291.	Not Started
82	Additional analyses is needed to evaluate whether containment penetration seals and other equipment located inside containment and used in the mitigation strategies are still functional based on the predicted temperatures and pressures during a Fukushima type event. See Corrective Action 94 in PIP C-12-2291.	Not Started

Item	Overall Integrated Plan Open Item	Status
83	Station controlled documents need to be created to capture vendor reports related to generator machine capabilities to power the designated FLEX loads in Phase 2 and 3. See Corrective Action 95 in PIP C-12-2291.	Not Started
84	Determine if any changes to WPM 602, NSD 403, or any other site/fleet Shutdown/Refueling documents need to be revised to comply with the position paper related to Shutdown Risk Management and Contingency Planning. See Corrective Action 96 in PIP C-12-2291.	Not Started
85	Perform a seismic robustness evaluation of the installed cable "backbone" and it's associated components. See Corrective Action 97 in PIP C-12-2291.	Not Started
86	Vendor data and system calculations needed to support FLEX response strategies involving low speed operation of Turbine-Driven CA (TDCA) Pumps in support of ELAP EOP setpoint O.12 development. See Corrective Action 1 in PIP C-13-9158.	Not Started
87	Due to normal operational input to the TDCA pump pit sump and having both TDCA pumps in simultaneous operation, additional portable sump pumps, hoses, and associated equipment are required. See Corrective Action 15 in PIP C-11-6867.	Not Started

c. Interim Staff Evaluation

Interim Staff Evaluation Open Item	Status
The Interim Staff Evaluation has not yet been issued by the NRC.	N/A

Catawba Nuclear Station confirms that the FLEX strategy station battery run-time was calculated in accordance with the IEEE-485 methodology using manufacturer discharge test data applicable to the licensee's FLEX strategy as outlined in the NEI white paper on Extended Battery Duty Cycles. The detailed licensee calculations, supporting vendor discharge test data, FLEX strategy battery load profile, and other inputs/initial conditions required by IEEE-485 are available on the licensee's web portal for documents and calculations. The time margin between the calculated limiting station battery run-time for the FLEX strategy and the expected deployment time for FLEX equipment to supply the dc loads is 3.5 hours.

Catawba Nuclear Station plans on adopting the NRC endorsed EPRI Report 3002000623, "Nuclear Maintenance Applications Center: Preventive Maintenance Basis for FLEX Equipment" to the extent possible relative to manufacturer recommendations and warranty requirements. This issue is inherently part of the Milestone of Section 3 (Develop Equipment PMs) and Open Item #28.

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 Overall Integrated Plan described in this attachment.

- 1) Catawba Nuclear Station, Unit Nos. 1 and 2, 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.
- 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, 2013.
- 3) First Six-Month Status Report (Order EA-12-049), Catawba Nuclear Station (CNS), Units 1 and 2, Docket Nos. 50-413 and 50-41, Renewed License Nos. NPF-35 and NPF-52.