

Samuel L. Belcher
Senior Vice President and Chief Operating Officer

August 28, 2014
L-14-257

10 CFR 2.202

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-001

SUBJECT:

Beaver Valley Power Station, Unit Nos. 1 and 2
Docket No. 50-334, License No. DPR-66
Docket No. 50-412, License No. NPF-73
Davis-Besse Nuclear Power Station
Docket No. 50-346, License No. NPF-3
Perry Nuclear Power Plant
Docket No. 50-440, License No. NPF-58

FirstEnergy Nuclear Operating Company's (FENOC's) Third 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. MF0841, MF0842, MF0961, and MF0962)

On March 12, 2012, the Nuclear Regulatory Commission (NRC or Commission) issued an order (Reference 1) to FENOC. Reference 1 was immediately effective and directs FENOC 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 Nuclear Energy Institute (NEI) 12-06, Revision 0 (Reference 3) with clarifications and exceptions identified in Reference 2. Reference 4 provided the FENOC initial status report regarding mitigation strategies. Reference 5 provided the FENOC overall integrated plan for Beaver Valley Power Station (BVPS), Unit Nos. 1 and 2, Davis-Besse Nuclear Power Station (DBNPS), and Perry Nuclear Power Plant (PNPP).

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. The purpose of this letter is to provide the third

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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 reports for BVPS, DBNPS, and PNPP (Attachments 1, 2, and 3, respectively) provide an update of milestone accomplishments since the last status report, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

This letter contains no new regulatory commitments. If you have any questions regarding this report, please contact Mr. Thomas A. Lentz, Manager – Fleet Licensing, at 330-315-6810.

I declare under penalty of perjury that the foregoing is true and correct. Executed on August 23, 2014.

Respectfully,



Samuel L. Belcher

Attachments:

1. Beaver Valley Power Station Third Six-Month Status Report for the Implementation of Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events
2. Davis-Besse Nuclear Power Station Third Six-Month Status Report for the Implementation of Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events
3. Perry Nuclear Power Plant Third Six-Month Status Report for the Implementation of Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events

References:

1. NRC Order Number EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, dated March 12, 2012
2. NRC Interim Staff Guidance JLD-ISG-2012-01, Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, Revision 0, dated August 29, 2012
3. NEI 12-06, Diverse and Flexible Coping Strategies (FLEX) Implementation Guide, Revision 0, dated August 2012
4. FirstEnergy Nuclear Operating Company's (FENOC's) Initial Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard

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to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events
(Order Number EA-12-049), dated October 26, 2012

5. FirstEnergy Nuclear Operating Company's (FENOC'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 27, 2013

cc: Director, Office of Nuclear Reactor Regulation (NRR)
NRC Region I Administrator
NRC Region III Administrator
NRC Resident Inspector (BVPS)
NRC Resident Inspector (DBNPS)
NRC Resident Inspector (PNPP)
NRC Project Manager (BVPS)
NRC Project Manager (DBNPS)
NRC Project Manager (PNPP)
Ms. Jessica A. Kratchman, NRR/JLD/PMB, NRC
Director BRP/DEP (without Attachments)
Site BRP/DEP Representative (without Attachments)
Utility Radiological Safety Board (without Attachments)

Attachment 1
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Beaver Valley Power Station Third Six-Month Status Report for the Implementation of
Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation
Strategies for Beyond-Design-Basis External Events
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1 Introduction

FirstEnergy Nuclear Operating Company (FENOC) developed an Overall Integrated Plan (OIP) for Beaver Valley Power Station, Unit Nos. 1 and 2 (Reference 1 in Section 8), documenting the diverse and flexible strategies (FLEX), in response to Reference 2. This attachment provides an update of milestone accomplishments since the last status report, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

2 Milestone Accomplishments

The following milestone(s) have been completed since January 31, 2014 and are current as of July 31, 2014.

- Update 2 was submitted
- Completed the Unit 2 plant modifications targeted for 2R17 (spring 2014 refueling outage)
- Completed the fence and gate modification design and the new fence and gate construction
- Completed the security barrier pipe penetrations design

3 Milestone Schedule Status

The following provides an update to Attachment 2 of the OIP. 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 reflect the relief/relaxation of the Reference 2 requirement for completion of full implementation for Beaver Valley Power Station, Unit No. 1, until the completion of the fall of 2016 refueling outage for reactor coolant pump shutdown seal installation that was granted on May 20, 2014 (Reference 4).

The following milestones are deleted based upon the relief/relaxation granted by Reference 4:

- Issue Beaver Valley FSG
- Implement Training

The following milestones are added based upon the relief/relaxation granted by Reference 4:

- Update 6
- Update 7
- Complete 1R24 outage modifications
- Issue Beaver Valley Unit 2 FSG
- Issue Beaver Valley Unit 1 FSG
- Implement Unit 2 Training
- Implement Unit 1 Training

Milestone	Target Completion Date	Activity Status (as of 7/31/14)	Revised Target Completion Date
Submit FLEX Integrated Implementation Plan	02/28/13	Complete	
6 Month NRC Status Updates	08/28/15	Started	08/28/16
<i>Update 1</i>	08/28/13	Complete	
<i>Update 2</i>	02/28/14	Complete	
<i>Update 3</i>	08/28/14	Started	
<i>Update 4</i>	02/27/15	Not Started	
<i>Update 5</i>	08/28/15	Not Started	
<i>Update 6*</i>	02/28/16	Not Started	
<i>Update 7*</i>	08/28/16	Not Started	
Complete FLEX Strategy Review	March-2013	Complete	
Validation	February-2015	Not Started	
<i>Walk-throughs or Demonstrations</i>	February-2015	Not Started	
Complete Staffing Analysis	November-2014	Started	
<i>Submit NEI 12-01 Phase 1 Staffing Study</i>	April-2013	Complete	
<i>Submit NEI 12-01 Phase 2 Staffing Study</i>	November-2014	Started	
Complete Plant Modifications	November-2015	Started	November-2016
<i>Target plant modifications</i>	April-2013	Complete	
Unit 1 Modifications complete	May-2015	Started	November-2016
<i>Complete 1R22 outage modifications</i>	November-2013	Complete	
<i>Complete on-line modifications</i>	February-2015	Started	September-2016
<i>Complete 1R23 outage modifications</i>	May-2015	Started	
<i>Complete 1R24 outage modifications*</i>	November-2016	Started	
Unit 2 Modifications complete	November-2015	Started	
<i>Complete 2R17 outage modifications</i>	May-2014	Complete	
<i>Complete on-line modifications</i>	August-2015	Started	
<i>Complete 2R18 outage modifications</i>	November-2015	Started	
FLEX Storage Complete	March-2015	Started	October-2015
<i>Complete Building Design</i>	June-2014	Started	December-2014
<i>Commence Construction</i>	June-2014	Not Started	January-2015
<i>Complete Construction</i>	March-2015	Not Started	October-2015
River (UHS) Access Complete	October-2014	Started	
<i>Fence & Gate Modification Design</i>	February-2014	Complete	
<i>New Fence & Gate Construction</i>	August-2014	Complete	

Milestone	Target Completion Date	Activity Status (as of 7/31/14)	Revised Target Completion Date
<i>Security Barrier Pipe Penetrations Design</i>	March-2014	Complete	
<i>Security Barrier Pipe Penetration Construction</i>	October-2014	Not Started	
On-site FLEX Equipment	December-2014	Started	October-2015
<i>Confirm FLEX Equipment Requirements</i>	November-2013	Complete	
<i>FLEX Equipment Ordered</i>	June-2014	Started	April-2015
<i>FLEX Equipment Delivered</i>	December-2014	Not Started	October-2015
Off-site FLEX Equipment	April-2015	Started	October-2015
<i>Develop Strategies with RRC</i>	June-2014	Started	June-2015
<i>Phase 3 Site Access Strategies in Place</i>	October-2014	Started	June-2015
<i>Complete Near Site Staging Location (as needed)</i>	April-2015	Not Started	October-2015
Procedures Complete	December-2014	Started	October-2016
<i>PWROG issues NSSS-specific guidelines</i>	June-2013	Complete	
<i>Issue Beaver Valley Unit 2 FSG*</i>	October-2015	Started	
<i>Issue Beaver Valley Unit 1 FSG*</i>	October-2016	Started	
<i>Issue Maintenance Procedures</i>	December-2014	Started	
Training Complete	April-2015	Started	September-2016
<i>Develop Training Plan</i>	September-2014	Started	December-2014
<i>Implement Unit 2 Training*</i>	September-2015	Started	
<i>Implement Unit 1 Training*</i>	September-2016	Started	
Submit Completion Report	November-2015	Not Started	January-2017**

* New milestones added as a result of relief/relaxation for Unit 1 (Reference 4)

** Submittal of completion report occurs after end of refueling outage.

4 Changes to Compliance Method

There are no changes to the compliance method as documented in the OIP (Reference 1).

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

Relief/relaxation of the Reference 2 requirement for completion of full implementation for Beaver Valley Power Station Unit No. 1 until the completion of the fall of 2016 refueling outage for reactor coolant pump shutdown seal installation was granted on May 20, 2014 (Reference 4). No relief/relaxation is required at this time for Beaver Valley Power Station Unit No. 2.

6 Open Items from Overall Integrated Plan and Interim Staff Evaluation

The following tables provide a summary of the open items documented in the OIP or the Interim Staff Evaluation (ISE) (Reference 3) and the status of each item.

Overall Integrated Plan Open Item	Status
OI 1. Finalize the location of the FLEX storage building. The deployment routes, distances, and times provided in this report are bounded for the currently proposed locations but will be updated as necessary.	Complete. (Described in February-2014 status report)
OI 2. Perform containment evaluation based on the boundary conditions described in Section 2 of NEI 12-06. Based on the results of this evaluation, required actions to ensure maintenance of containment integrity and required instrument function will be developed.	Started.
OI 3. Modify the RWST [refueling water storage tank] at each unit to protect it from tornado missiles or identify a borated source that is protected from tornados and can be utilized to provide core cooling when steam generators are not available.	Complete. (Described in February-2014 status report)

Interim Staff Evaluation Open Item	Status
3.2.1.6.A Verify that the TDAFW [turbine driven auxiliary feedwater] pump exhaust stacks are adequately protected from tornado missile hazards.	Started.
3.2.1.8.A Verify resolution of the generic concern associated with the modeling of the timing and uniformity of the mixing of a liquid boric acid solution injected into the RCS [reactor coolant system] under natural circulation conditions potentially involving two-phase flow.	Complete. (Described in February-2014 status report)

ISE Confirmatory Item	Status
3.1.1.4.A Confirm that primary and secondary staging areas for the RRC [regional response center] equipment have been selected and will meet the requirements of the applicable site response plan.	Started.
3.1.2.4.A Confirm that the primary and secondary staging areas have been identified and that the plan for the use of offsite resources will comply with NEI 12-06, Section 6.2.3.4 regarding the need to evaluate for flooding hazard. This confirmation should include a description of the methods to be used to deliver the equipment to the site.	Started.
3.1.3.1.A Confirm that the location of the storage and protection building for FLEX equipment has been identified. Confirm that the FLEX storage	Started.

ISE Confirmatory Item	Status
building is designed to withstand tornado missiles at a level equal to, or greater than, the plant's tornado missile design basis.	
3.1.3.4.A Confirm that the licensee's plan for the use of offsite resources would provide reasonable assurance that the plan will comply with NEI 12-06, Section 7.3.4 regarding high wind hazards.	Not started.
3.1.4.4.A Confirm that the licensee's plan for the use of offsite resources would provide reasonable assurance that the plan will comply with NEI 12-06 Section 8.3.4 regarding snow, ice and extreme cold hazards.	Not started.
3.2.1.1.A Confirm that the licensee has verified that reliance on the NOTRUMP code for the ELAP [extended loss of AC power] analysis of Westinghouse plants is limited to the flow conditions prior to reflux condensation initiation. This includes specifying an acceptable definition for reflux condensation cooling.	Not started.
3.2.1.1.B Confirm that the application of the WCAP-17601 analysis simulating the ELAP transient is properly established.	Not started.
3.2.1.2.A Confirm that, if the licensee continues to credit SHIELD shutdown seals, as planned, (e.g., 1 gallon per minute leakage/seal) in the ELAP analyses for the RCS response, then the impacts of the Westinghouse 10 CFR Part 21 report, "Notification of the Potential Existence of Defects Pursuant to 10 CFR Part 21," dated July 26, 2013 (ADAMS Accession No. ML13211A168) on the use of the low seal leakage rate in the ELAP analysis are addressed.	Started.
3.2.1.2.B Confirm that if the seals are changed, the acceptability of the seals used is addressed, and the RCP seal leakage rates for use in the ELAP analysis are justified.	Not started.
3.2.2.A Since the RWSTs are not currently fully protected against tornado missiles, confirm that the licensee has completed their review to determine whether or not the RWST will need to be further protected against missile hazards.	Complete. (Described in February-2014 status report)
3.2.2.B Confirm that opening doors provides adequate ventilation for SFP [spent fuel pool] area.	Not started.
3.2.3.A Confirm that containment evaluations for all phases are performed based on the boundary	Started.

ISE Confirmatory Item	Status
conditions described in Section 2 of NEI 12-06. Based on the results of this evaluation, confirm that required actions to ensure maintenance of containment integrity and required instrument function have been developed.	
3.2.4.2.A Confirm that the licensee has clarified why the Integrated Plan stated the maximum temperature of the Unit 1/Unit 2 AFW [auxiliary feedwater] pump rooms would reach 115.9/112.3 degrees Fahrenheit (°F), respectively, while Calculation 8700-DMC-2312, described during the audit process, indicated that the maximum temperature would reach 142.9°F.	Not started.
3.2.4.2.B Confirm that the licensee has provided an analysis or calculation to demonstrate that the dissipation of heat generated by the batteries via natural circulation will be adequate to maintain the temperatures in the battery rooms within acceptable levels.	Started.
3.2.4.2.C Confirm that the licensee has addressed how hydrogen concentration in the battery rooms will be limited to acceptable levels.	Started.
3.2.4.6.A Confirm that the licensee has completed a review of Unit 1 AFW room and developed any plans required to maintain a suitable environment.	Not started.
3.4.A Confirm that the licensee has fully addressed considerations (2) through (10) of NEI 12-06, Section 12.2, Minimum Capability of Off-Site Resources, which requires each site to establish a means to ensure the necessary resources will be available from off-site.	Not started.

7 Potential Interim Staff Evaluation Impacts

There are no potential impacts to the ISE identified at this time.

8 References

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

1. FirstEnergy Nuclear Operating Company's (FENOC'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 27, 2013.

2. NRC Order Number EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, dated March 12, 2012.
3. Beaver Valley Power Station, Units 1 and 2 – Interim Staff Evaluation Related To Overall Integrated Plan In Response To Order EA-12-049 (Mitigation Strategies), dated January 29, 2014.
4. NRC Letter, Beaver Valley Power Station, Unit 1 – Relaxation of the Schedule Requirements for Order EA-12-049 “Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design Basis External Events” (TAC No. MF0841), dated May 20, 2014.

Attachment 2
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Davis-Besse Nuclear Power Station Third Six-Month Status Report for the
Implementation of Order EA-12-049, Order Modifying Licenses with Regard to
Requirements for Mitigation Strategies for Beyond-Design-Basis External Events
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1 Introduction

FirstEnergy Nuclear Operating Company (FENOC) developed an Overall Integrated Plan (OIP) for Davis-Besse Nuclear Power Station (Reference 1 in Section 8), documenting the diverse and flexible strategies (FLEX), in response to Reference 2. This attachment provides an update of milestone accomplishments since the last status report, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

2 Milestone Accomplishments

The following milestone(s) have been completed since January 31, 2014 and are current as of July 31, 2014.

- Update 2 was submitted

3 Milestone Schedule Status

The following provides an update to Attachment 2 of the OIP. 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 do not impact the order implementation date.

Milestone	Target Completion Date	Activity Status (as of 7/31/14)	Revised Target Completion Date
Submit FLEX Integrated Implementation Plan	02/28/13	Complete	
6 Month NRC Status Updates	02/28/16	Started	
<i>Update 1</i>	08/28/13	Complete	
<i>Update 2</i>	02/28/14	Complete	
<i>Update 3</i>	08/28/14	Started	
<i>Update 4</i>	02/27/15	Not Started	
<i>Update 5</i>	08/28/15	Not Started	
<i>Update 6</i>	02/28/16	Not Started	
Validation	April-2016	Not Started	
<i>Walk-throughs or Demonstrations</i>	April-2016	Not Started	
Complete Staffing Analysis	October-2015	Not Started	
<i>Submit NEI 12-01 Phase 2 Staffing Study</i>	October-2015	Not Started	
Complete Plant Modifications	April-2016	Started	
<i>Target plant modifications</i>	May-2013	Complete	
Modifications complete	April-2016	Started	
<i>Complete 1R18 outage modifications</i>	June-2014	Complete*	
<i>Complete on-line modifications</i>	February-2016	Started	January-2016
<i>Complete 1R19 outage modifications</i>	April-2016	Started	
<i>Complete Communications Modifications</i>	April-2016	Started	
<i>Complete SFP Level Indication Modifications</i>	April-2016	Started	
FLEX Storage Complete	April-2016	Started	
<i>Complete Building Design</i>	March-2015	Started	
<i>Commence Construction</i>	June-2015	Not Started	
<i>Complete Construction</i>	April-2016	Not Started	
On-site FLEX Equipment	April-2016	Started	February-2016
<i>Confirm FLEX Equipment Requirements</i>	July-2014	Started	October-2014
<i>FLEX Equipment Ordered</i>	January-2015	Started	October-2015
<i>FLEX Equipment Delivered</i>	April-2016	Not Started	February-2016
Off-site FLEX Equipment	April-2016	Started	February-2016
<i>Develop Strategies with RRC</i>	August-2015	Started	October-2015
<i>Phase 3 Site Access Strategies in Place</i>	April-2016	Not Started	October-2015
<i>Complete Near Site Staging Location (as needed)</i>	April-2016	Not Started	February-2016
Procedures Complete	April-2016	Started	
<i>PWROG issues NSSS-specific guidelines</i>	August-2013	Complete	
<i>Issue Davis-Besse FLEX Strategy Guidelines</i>	June-2015	Not Started	
<i>Issue Maintenance Procedures</i>	April-2016	Not Started	
Training Complete	April-2016	Not Started	
<i>Develop Training Plan</i>	September-2015	Not Started	
<i>Implement Training</i>	April-2016	Not Started	
Submit Completion Report	April-2016	Not Started	June-2016**

* Modifications are targeted for 1R19 and on-line; none targeted for 1R18.

** Submittal of completion report occurs after end of refueling outage.

4 Changes to Compliance Method

There are no changes to the compliance method as documented in the OIP (Reference 1).

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

FENOC expects to comply with the order implementation date. Relief/relaxation is not required at this time.

6 Open Items from Overall Integrated Plan and Interim Staff Evaluation

The following tables provide a summary of the open items documented in the OIP or the Interim Staff Evaluation (ISE) and the status of each item.

Overall Integrated Plan Open Item	Status
OI 1. Finalize locations for FLEX storage buildings. Deployment routes, distances and times contained in the submittal are bounded for the currently proposed locations but will be updated as necessary.	Started.
OI 2. Finalize the strategy for providing a protected source of borated water to support FLEX strategies.	Complete. FENOC plans to utilize both the borated water storage tank (BWST) and clean waste receiver tank (CWRT) in the strategy.
OI 3. Determine if a mobile boration unit and/or water purification unit is required to support the FLEX strategies.	Complete. No mobile boration unit or water purification unit is required. Site sources of water are adequate.

Interim Staff Evaluation Open Item	Status
3.2.1.2.A Verify the following with respect to reactor coolant pump (RCP) seals: (1) the DBNPS [Davis-Besse Nuclear Power Station] plant condition during an ELAP [extended loss of all alternating current power] is bounded by the seal leakage test conditions with respect to relevant parameters. (2) the pop-open failure mechanism resulting from hydraulic instability that is discussed in WCAP-16175-P and WCAP-17601-P would not occur or would be bounded by the assumed leakage rate. (3) a basis for the assumed leakage rate of 2 gpm [gallons per minute] is justified in light of	Started.

Interim Staff Evaluation Open Item	Status
<p>recommendations for a larger value of leakage for similarly designed RCPs and seals discussed in WCAP-16175-P and WCAP-17601-P.</p> <p>(4) the modeling of the pressure-dependence of the seal leakage rate is justified.</p> <p>(5) the seal design performance under stresses induced by the cooldown of the RCS [reactor coolant system] is justified.</p>	
<p>3.2.1.4.A Verify that any industry-identified gaps and recommendations applicable to the generically developed mitigating strategies proposed for DBNPS are addressed (e.g., those documented in WCAP-17792-P (transmittal letter located at ADAMS Accession No. ML14037A237) and the appropriate revision of the PWROG's [Pressurized Water Reactors Owners Group] Core Cooling Management Interim Position Paper).</p>	Started.
<p>3.2.1.6.B Verify that a revised sequence of events that is consistent with the final ELAP analyses is developed.</p>	Started.
<p>3.2.1.8.A Verify resolution of the generic concern associated with the modeling of the timing and uniformity of the mixing of a liquid boric acid solution injected into the RCS under natural circulation conditions potentially involving two-phase flow.</p>	Started.

ISE Confirmatory Item	Status
<p>3.1.1.1.A Confirm that the diesel-driven service water pumps have deployment and storage plans developed in accordance with the provisions of NEI [Nuclear Energy Institute] 12-06.</p>	Started.
<p>3.1.1.2.A Confirm that the routes that plant operators will have to access to deploy and control the strategy will only require access through seismically robust structures.</p>	Started.
<p>3.1.1.2.B Confirm that, if power is required to operate the storage building doors, either power supplies will be available to operate the doors or the doors will be equipped with manual overrides to permit manual door opening.</p>	Not Started.
<p>3.1.1.3.A Confirm that guidance is provided for critical actions to perform until alternate indications can be connected and on how to control critical equipment without associated control power.</p>	Not Started.

ISE Confirmatory Item	Status
3.1.1.4.A Confirm the RRC [regional response center] local staging area, evaluation of access routes, and method of transportation to the site.	Not Started.
3.1.2.A Confirm that the licensee has identified the warning time and persistence of the external flooding hazard.	Not Started.
3.1.2.2.A Confirm that the licensee plans to conform to deployment consideration 1 and 2 of NEI 12-06, Section 6.2.3.2.	Not Started.
3.1.3.1.A Confirm that the chosen storage locations are sufficiently separated in distance and axially from the typical tornado path as compared to the local tornado data for tornado width.	Complete. FENOC intends to utilize one robust building constructed for design basis loads and one not protected for wind, which is consistent with NEI 12-06 Frequently Asked Question (FAQ) 2013-07.
3.2.1.1.A Confirm that reliance on the RELAP5/MOD2-B&W code in the ELAP analysis for Babcock and Wilcox plants is limited to the flow conditions prior to boiler-condenser cooling initiation.	Started.
3.2.1.1.B Confirm that the licensee has: (1) Identified the specific analysis case(s) from WCAP-17792-P that are being referenced as the basis for demonstrating the acceptability of the mitigating strategies for DBNPS, and (2) Provided justification that the analyses from WCAP-17792-P that are being credited for DBNPS are adequately representative of the actual plant design, FLEX equipment, and planned mitigating strategies.	Started.
3.2.1.1.C Confirm the continuity of natural circulation by demonstrating the adequacy of the modeling of operator actions associated with primary-to-secondary heat transfer.	Started.
3.2.1.2.B Confirm that either: (1) closure of valve MU38 will not be credited in the ELAP analysis for DBNPS, or (2) procedures to close valve MU38 prior will be implemented to provide assurance that its closure can be credited in the ELAP analysis.	Not Started.
3.2.1.3.A Confirm the basis for the decay heat modeling assumptions present in the analysis credited for DBNPS in WCAP-17792-P, which was not available to the staff during the audit.	Started.

ISE Confirmatory Item	Status
3.2.1.3.B Confirm that the cooldown directed by the DBNPS mitigating strategy is consistent with the capability of the atmospheric vent valves.	Not Started.
3.2.1.6.A Confirm licensee's hydraulic analysis supports that injecting borated water into the RCS within 6 hours after the event is initiated will maintain subcriticality.	Started.
3.2.1.8.B Confirm adequate shutdown margin for ELAP scenarios: (1) with the highest applicable reactor coolant system leakage, and (2) with no reactor coolant system leakage. In addition, confirm that core reload calculation procedures would ensure that these shutdown margin calculations remain bounding for future fuel cycles.	Started.
3.2.1.8.C Confirm that adequate RCS venting capability exists to support the ELAP mitigating strategy for DBNPS.	Started.
3.2.3.A Confirm that the containment pressure and temperature after an event initiated in Modes 1 through 4 will stay at acceptable levels during Phases 1, 2, and 3 and that no additional installed equipment or operator actions are required to maintain containment integrity.	Not Started.
3.2.4.4.A Confirm that upgrades to the site's communications systems have been completed.	Started.
3.2.4.8.A Clarify the discrepancy between the Integrated Plan stated size of the Phase 2 FLEX 480v [volt] portable DGs [diesel generators] (500kW [kilowatt]) and the stated size of the Phase 2 FLEX 480v portable DGs in response to the sizing audit question (600kW).	Started.
3.4.A Confirm that the licensee has fully addressed considerations (2) through (10) of NEI 12-06, Section 12.2, Minimum Capability of Off-Site Resources, which requires each site to establish a means to ensure the necessary resources will be available from off-site.	Not Started.

7 Potential Interim Staff Evaluation Impacts

There are no potential impacts to the ISE identified at this time.

8 References

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

1. FirstEnergy Nuclear Operating Company's (FENOC'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 27, 2013.
2. NRC Order Number EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, dated March 12, 2012.

Attachment 3
L-14-257

Perry Nuclear Power Plant Third Six-Month Status Report for the Implementation of
Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation
Strategies for Beyond-Design-Basis External Events
Page 1 of 11

1 Introduction

FirstEnergy Nuclear Operating Company (FENOC) developed an Overall Integrated Plan (OIP) for Perry Nuclear Power Plant (Reference 1 in Section 8), documenting the diverse and flexible strategies (FLEX), in response to Reference 2. This attachment provides an update of milestone accomplishments since the last status report, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

2 Milestone Accomplishments

The following milestone(s) have been completed since January 31, 2014 and are current as of July 31, 2014.

- Update 2 was submitted

3 Milestone Schedule Status

The following provides an update to Attachment 2 of the OIP. 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.

FENOC is revising the OIP for Perry Nuclear Power Plant (PNPP). Revision 1 of the OIP is incorporating planned strategy changes and is to be submitted under a separate letter. A summary of this planned revision is provided in Section 4 below. The following milestones are deleted based upon the planned Revision 1 of the PNPP OIP:

- Regrade road to barge slip area
- Fence and Gate Construction modifications
- Security Barrier Pipe Penetrations Design
- Security Barrier Pipe Penetration Construction

The following milestone is added based upon the planned Revision 1 of the PNPP OIP:

- Convert ESW [Emergency Service Water] Pumphouse building Unit 2 areas for storage and use

The following milestone is revised:

- Create Maintenance Procedures is revised to be Define Maintenance Strategy

The scheduled start date for the spring 2015 refueling outage has been delayed by approximately one month. Based on this change in schedule, the completion date for the refueling outage is now April 2015, which still complies with the requirements of the order. The revised milestone target completion dates identified above do not impact the updated order implementation date.

Milestone	Target Completion Date	Activity Status (as of 7/31/14)	Revised Target Completion Date
Submit FLEX Integrated Implementation Plan	02/28/13	Complete	
6 Month Status Updates	02/27/15	Started	
<i>Update 1</i>	08/01/13	Complete	
<i>Update 2</i>	02/28/14	Complete	
<i>Update 3</i>	08/28/14	Started	
<i>Update 4</i>	02/27/15	Not Started	
FLEX Strategy Review	May-2013	Complete	
Validation	March-2015	Not Started	April-2015
<i>Walk-throughs or Demonstrations</i>	March-2015	Not Started	April-2015
Complete Staffing Analysis	October-2014	Started	
Complete Plant Modifications	March-2015	Started	April-2015
<i>Target plant modifications</i>	May-2013	Complete	
<i>Complete on-line modifications</i>	December-2014	Started	January-2015
<i>Complete 1R15 outage modifications</i>	March-2015	Started	April-2015
FLEX Storage	January-2015	Started	
<i>Complete Unit 2 Aux Building for storage and Use</i>	January-2015	Started	
<i>Convert Diesel Building for storage and use</i>	January-2015	Started	
<i>Convert ESW Pumphouse building Unit 2 areas for storage and use</i>	January-2015	Not Started	
Lake (UHS) Access	November-2014	Started	April-2015
On-site FLEX Equipment	October-2014	Started	January-2015
<i>Ordered</i>	March-2013	Started	October-2014
<i>Delivered</i>	October-2014	Not Started	January-2015
Off-site FLEX Equipment	March-2015	Not Started	
<i>Develop Strategies with RRC</i>	June-2014	Not Started	January-2015
<i>Complete Near Site Staging Location (as needed)</i>	March-2015	Not Started	
<i>Phase 3 Site Access Strategies in Place</i>	November-2014	Not Started	
Procedures	March-2015	Started	April-2015
<i>Implement EPG/SAG Rev 3 Guidance</i>	August-2014	Started	April-2015
<i>Create Perry FSG</i>	May-2014	Started	October-2014
<i>Implement Perry FSG</i>	March-2015	Started	April-2015
<i>Define Maintenance Strategy</i>	July-2014	Started	April-2015
Training	March-2015	Started	
<i>Develop EOP Training Plan</i>	January-2014	Complete	
<i>Implement EOP Training</i>	March-2015	Started	
<i>Develop SAMG Training Plan</i>	June-2014	Not Started	January-2015
<i>Implement SAMG Training</i>	March-2015	Not Started	

Milestone	Target Completion Date	Activity Status (as of 7/31/14)	Revised Target Completion Date
<i>Develop FLEX Training Plan</i>	August-2014	Started	
<i>Implement FLEX Training</i>	March-2015	Not Started	
Submit Completion Report	March-2015	Not Started	June-2015*

* Submittal of completion report occurs after end of refueling outage.

4 Changes to Compliance Method

The following changes to the compliance method as documented in the OIP (Reference 1) are being made. These changes are being incorporated into Revision 1 of the OIP, which is being submitted under a separate letter. The changes do not impact compliance with Nuclear Energy Institute (NEI) 12-06.

The following discussion details three significant changes to the coping strategies planned for PNPP OIP, Revision 1:

- Change from 480 volts alternating current (Vac) to 4160 Vac FLEX power source
- Change from Suppression Pool "Feed and Bleed" to Suppression Pool Closed Loop Cooling
- Change from portable pumps at the barge slip to portable pumps in the Emergency Service Water Pumphouse (ESWPH)

Change from 480 Vac to 4160 Vac Alternate Power Source

PNPP OIP, Revision 0, provided for the use of a 750 kilowatt (kW) 480 Vac diesel generator to provide power to 480 Vac Bus EF-2-B. Bus EF-2-B would then distribute 480 Vac power to critical loads via (1) Unit 1 divisional 480 Vac busses and (2) dedicated power supplies to new or existing 480 Vac manual transfer switches.

The planned PNPP OIP, Revision 1, provides for the use of two 1.1 Megawatt (MWe) 4160 Vac turbine generators [similar equipment is to be used at the Regional Response Center(s) (RRCs)] to provide power to Unit 2 4160 Vac Bus EH-21. A distribution center (similar equipment is to be used at the RRCs) will be supplied by two 1.1 MWe 4160 Vac turbine generators (operating in parallel) and connect to Bus EH-21 through a permanently installed docking station and isolation breaker on the bus.

Bus TH-21 will be modified to allow Bus EH-21 to provide an alternate power source to the unit cross-tie, and thereby, the alternate preferred source to the Unit 1 Class 1E switch gear (Bus EH-21 will power the Unit 2 off-site source to Unit 1 Class 1E switch gear). Bus EH-21 is the normal power supply to Bus EF-2-B via Bus EF-2-A (through its supply transformer).

PNPP OIP, Revision 0, provided for supplying the Unit 1 Class 1E switch gear and Bus EF-2-B (via Bus EF-2-A and its supply transformer) by connection of the 1.1 MWe 4160 Vac turbine generator(s) to the load via free air cables and ground trucks (Phase 3

strategy). Bus EF-2-B remains the alternate power to the Suppression Pool Clean Up (SPCU) and Alternate Decay Heat Removal (ADHR) pumps through manual bus transfer switches.

This change in strategy provides for:

- Increased electrical capacity
- Reduction in actions to restore power to critical loads required for FLEX coping
- Provides sufficient power to supply motor driven pumps located in the ESWPH
- Simplifies operator action required to re-establish cooling water flow

Change from Suppression Pool Feed and Bleed to Suppression Pool Closed Loop Cooling

PNPP OIP, Revision 0, provided for containment heat removal by use of Suppression Pool "Feed and Bleed." Suppression Pool "Feed and Bleed" was accomplished by thermal mass transfer between the Suppression Pool and a dedicated storage volume, with cool water make-up provided by FLEX pumps. The identified "Feed" source was lake water from either the ESW A or ESW B supply headers through hosed connections to either High Pressure Core Spray (HPCS) or Low Pressure Core Spray (LPCS) flush connections. ESW would have been supplied by fire trucks at the barge slip taking a suction on the lake and pumping into the ESW headers via installed dry hydrants and dedicated buried pipe. Suppression Pool "Bleed" was accomplished by use of the SPCU or the ADHR pump taking suction on the Unit 1 Suppression Pool and transferring this heated water to the Unit 2 Suppression Pool.

The planned PNPP OIP, Revision 1, provides for the use of the SPCU or the ADHR pump taking a suction on the Unit 1 Suppression Pool and transferring the water to the Residual Heat Removal (RHR) System via the Fuel Pool Cooling and Cleanup (FPCC) to RHR suction header. Water flows through the RHR System, bypassing the RHR pump through existing system piping, through the RHR Heat Exchangers back to either the Reactor Pressure Vessel (RPV) or the Suppression Pool.

Pumps in the ESWPH will take a suction on the ESWPH suction bay that is fed by one of two seismically qualified (fully robust) intake/discharge lines that normally provide water to the ESWPH and discharge into the ESW System between the ESW pump discharge check valve and the discharge strainer. The flow in the ESW System is aligned to provide cooling water to the RHR heat exchangers, with ESW System hose connections to provide various other loads as required.

Suppression Pool Closed Loop Cooling replaces the large RHR pump with smaller 480 Vac pumps (ADHR or SPCU pump) and operates the RHR in a modified Suppression Pool to Suppression Pool flow path.

Additionally, these 480 Vac pumps can also serve as a motor-driven high capacity vessel injection source from the Suppression Pool once the RPV pressure is reduced sufficiently.

Change from Portable Pumps at the Barge Slip to Portable Pumps in the ESWPH

PNPP OIP, Revision 0, provided for the use of two fire trucks to be deployed to the barge slip area where they would be connected to installed dry hydrants and pump the discharge into the ESW System between the ESW pump discharge check valve and the discharge strainer via an installed dedicated buried pipe to the ESWPH. The flow in the ESW System was used to supply water to the Reactor Core Isolation Cooling (RCIC) pump suction, LPCS/HPCS for Suppression Pool "Feed," and the Spent Fuel Pool (SFP) Spray System.

The planned PNPP OIP, Revision 1, provides for the use of one of two motor-driven FLEX pumps (for pumping lake water) in the ESWPH, as previously discussed. The flow in the ESW System is used to supply water to the RCIC pump suction, RHR heat exchangers for Suppression Pool Closed Loop Cooling, and the SFP Emergency Makeup System (SFPEMS). The motor-driven FLEX pumps (either the "N" or "N+1") are supplied by a repurposed supply line originally designed to supply the Unit 2 Division 1 ESW pump via a docking station in the ESWPH. The docking station is normally fed from an isolation breaker on Bus EH-21 and can supply either the N and N+1 lake water pumps.

The FLEX pumps will be stored and used in the ESWPH. During use, a set of suction lines will be attached and lowered into the ESWPH suction bay via the associated Unit 2 ESW pump pedestal (pumps will be stored in the area where the Unit 2 ESW pump discharge piping would have been installed). Three 5-inch discharge hoses will be attached between the FLEX pump discharge and the ESW loop. Free air cables will connect the FLEX pump to the docking station (feed from Bus EH-21) to provide electrical power.

Core Cooling and Heat Removal

High Pressure Injection

As in PNPP OIP, Revision 0, RCIC will be used in Phase 1 and Phase 2 in the planned PNPP OIP, Revision 1. Provisions remain to supply the RCIC Pump with an alternate coolant source to address Suppression Pool temperature concerns.

The RCIC alternate suction connection was to be installed in the Condensate Storage Tank (CST) supply line; however, this modification has been moved to the RCIC pump room just prior to the RCIC pump suction. To support this, dry stand pipes are installed in the east and west sides of the Auxiliary Building. The dry stand pipes run from Auxiliary Building elevation (EL) 620' 6" to the Auxiliary Building EL 574' 6" (568' 6") with connection points on Auxiliary Building EL 599' 6". ESW supply header modifications (hose connections) can also be used via the dry stand pipes.

Low Pressure Injection

PNPP OIP, Revision 0, provided for lake water injection via LPCS or HPCS flush connection supplied from the ESW supply header connection point. This provision remains in the planned PNPP OIP, Revision 1. Use of dry stand pipes replaces the dedicated riser from the ESW supply header in PNPP OIP, Revision 0. The water source and flow paths are not altered, except as previously discussed with respect to access to the Ultimate Heat Sink.

The planned PNPP OIP, Revision 1, also provides for low pressure RPV injection via the SPCU or ADHR pumps.

RPV Pressure

PNPP OIP, Revision 0, provided for installation of a single connection point to allow a portable compressor to supply both the Division 1 and Division 2 air system to provide for long term system makeup.

The planned PNPP OIP, Revision 1, deletes the installation of the single connection point. Both air systems provide a seven-day air source and only one air bank is needed to provide long term RPV pressure control. Both systems can be supplied by use of normal (robust) system connection points that do not require modification for use.

Containment Function

The change in strategy from "Feed and Bleed" to Suppression Pool Closed Loop Cooling, as detailed above, provides for continued containment preservation. The ADHR modification detailed in PNPP OIP, Revision 0, provided for a single hose connection to be installed at the outlet of the ADHR pump. The planned PNPP OIP, Revision 1, provides for three hose connections to allow higher flow rates to the RHR System.

The planned PNPP OIP, Revision 1, also provides for three connection points on the FPCC to RHR suction header to allow the ADHR discharge hoses to be connected. PNPP OIP Revision 0, previously provided only one hose connection on this piping.

Containment Integrity

Control of hydrogen is not changed in the planned PNPP OIP, Revision 1; however, an alternate power scheme using portable generators is provided in the case that the two 1.1 MWe 4160 Vac turbine generators cannot supply power to the divisional busses.

Spent Fuel Cooling

PNPP OIP, Revision 0, provided for a SFP Spray System to be installed and supplied from either ESW A or ESW B.

The planned PNPP OIP, Revision 1, includes a new SFP Emergency Makeup System that provides the three required functions of remote fill, fill using hoses, and SFP spray. The SFP Emergency Makeup System provides a dump line configuration with system flow controlled external to the SFP area (external to the Fuel Handling Building). Hose connection point(s) for use of hoses to directly fill the pool or supply portable spray nozzles are also provided. The SFP Emergency Makeup System supply remains unchanged.

Safety Support Function

The planned PNPP OIP, Revision 1, provides for a modification to install a new manual transfer switch to supply Distribution Panel F1C08. This manual transfer switch will have alternate power from Bus EF-2-B similar to the SPCU and ADHR pump manual transfer switches. Power to Distribution Panel F1C08 provides for the use of various installed equipment to support FLEX activities.

Storage

PNPP OIP, Revision 0, provided for storage of fire trucks in the Unit 2 Auxiliary Building and the Diesel Generator Building. Two diesel generators would be stored in a dedicated Unit 2 bay in the Diesel Generator Building. This storage would utilize all three Unit 2 diesel bays. A new FLEX Storage Building would be constructed to hold the N+1 equipment.

The planned PNPP OIP, Revision 1, provides for storage of FLEX equipment in a single Unit 2 bay of the Diesel Generator Building and the Unit 2 Auxiliary Building. These two areas are sufficient to store all of the identified FLEX equipment, except the portable FLEX pumps used for pumping lake water that will be stored in the ESWPH. Construction of a new FLEX storage building is not required.

Modification to Security Features and Barge Slip Area

PNPP OIP, Revision 0, provided for modification to security features in the travel path of the fire truck down to the barge slip; regrading of the travel path and deployment area was also required.

The planned PNPP OIP, Revision 1, does not provide for the use of the barge slip area and, therefore, modifications to the security features in the travel path and barge slip area are not required.

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

FENOC expects to comply with the order implementation date. Relief/relaxation is not required at this time.

6 Open Items from Overall Integrated Plan and Interim Staff Evaluation

The following tables provide a summary of the open items documented in the OIP or the Interim Staff Evaluation (ISE) (Reference 3) and the status of each item.

Overall Integrated Plan Open Item	Status
N/A	N/A

Interim Staff Evaluation Open Item	Status
3.2.1.7.A FENOC has not indicated their intent to follow the provisions of the NRC-endorsed NEI position paper on Shutdown/Refueling Modes that describes how licensees will develop and maintain an appropriate plan for mitigating strategies capability in all plant modes (ADAMS Accession Nos. ML13273A514 and ML13267A382). FENOC should either confirm that PNPP will follow the endorsed guidance, or provide an alternate approach acceptable to the NRC staff.	Complete. (Described in February-2014 status report)

ISE Confirmatory Item	Status
3.1.1.3.A FENOC indicated that the gravity discharge system passively performs the mitigation of groundwater intrusion. It was not clear how the passive portion of this system will maintain groundwater elevation below the 590 foot elevation with no pumping power when the flood level around the plant may be at the 620 foot elevation. The licensee needs justification for groundwater mitigation during flooding conditions.	Started.
3.1.1.4.A With regard to offsite resources, the licensee will develop a plan that will address the logistics for equipment transportation, area set up, and other needs for ensuring the equipment and commodities to sustain the site's coping strategies.	Not started.
3.1.2.1.A During the audit, the licensee was requested to provide the elevations of FLEX equipment that will be deployed or staged across the site. In response, the licensee stated that the flooding re-analysis will need to be reviewed to determine the potential impacts. Confirm the location of FLEX equipment that will be deployed or staged is finalized with that consideration.	Started.
3.2.1.1.A Benchmarks must be identified and discussed which demonstrate that Modular Accident Analysis Program (MAAP) is an appropriate code	Started.

ISE Confirmatory Item	Status
for the simulation of an ELAP [extended loss of AC power] event at PNPP, Unit 1, consistent with the NRC endorsement of the industry position paper on MAAP (ADAMS Accession No. ML13275A318).	
3.2.1.1.B Confirm that the collapsed reactor pressure vessel level remains above Top of Active Fuel and the reactor coolant system cool down rate is within technical specifications limits.	Not Started.
3.2.1.1.C Confirm that MAAP is used in accordance with Sections 4.1, 4.2, 4.3, 4.4, and 4.5 of the June 2013 position paper.	Started.
3.2.1.1.D Confirm that, in using MAAP, the licensee identifies and justifies the subset of key modeling parameters cited from Tables 4-1 through 4-6 of the "MAAP Application Guidance, Desktop Reference for Using MAAP Software, Revision 2" (Electric Power Research Institute Report 1020236).	Not started.
3.2.1.2.A Calculations prepared in support of the licensee's Integrated Plan determined the required Phase 1 flow rate needed to stabilize boil-off, using suppression pool water, was well within the RCIC [reactor core isolation cooling] System injection capacity of 700 gallons per minute. The licensee indicated that further information regarding the specific assumptions and calculations for quantification of inventory losses are captured in proprietary analysis used for Integrated Plan preparation. The licensee should demonstrate adequate RCIC capacity.	Not Started.
3.2.1.3.A The licensee stated that Boiling Water Reactor Owners Group Emergency Procedure Guideline/Severe Accident Guideline, Revision 3, would allow the temperature limit of the suppression pool to be exceeded. The licensee should demonstrate why exceeding this temperature limit is acceptable for PNPP.	Not started.
3.2.3.A Confirm that containment response calculation is completed, commensurate with the level of detail contained in GE Hitachi Report NEDC-33771P/NEDO-33771, Revision 1, "GEH Evaluation of FLEX Implementation Guidelines," ADAMS Accession No. ML130370742.	Not started.
3.2.3.B The licensee should provide results from the successful completion of the evaluations and possible modifications which demonstrate that the	Started.

ISE Confirmatory Item	Status
<p>Suppression Pool Cleanup pump and piping are seismically "robust".</p>	
<p>3.2.4.2.A It is not clear that (1) the assumed temperatures of the various critical rooms, e.g., RCIC Room and Control Room, are adequately evaluated for the potentially high temperature that may occur in these areas or that (2) time critical actions are not required to be taken to maintain equipment functionality or personnel habitability limits. Confirm that these analyses/evaluations are completed.</p>	<p>Not started.</p>
<p>3.2.4.2.B The licensee provided insufficient information on monitoring temperatures and hydrogen concentration levels in the battery rooms to ensure temperature and hydrogen concentration level are within acceptable level. Confirm that battery room temperature and hydrogen concentration remain acceptable.</p>	<p>Started.</p>
<p>3.2.4.4.A Confirm that the proposed communications upgrades in the licensee's communications assessment are completed as planned.</p>	<p>Started.</p>
<p>3.2.4.7.A The licensee should confirm that the quality of water injected into the reactor pressure vessel supports and maintains acceptable long term core cooling.</p>	<p>Not started.</p>
<p>3.2.4.8.A During the audit process, the licensee indicated that the basis for the minimum bus voltage for Division 1 and Division 2 battery systems is the coil voltage required to operate the 4160 volt ac breakers (diesel generator output breakers) on the divisional busses and operation of Automatic Depressurization System SRV [safety relief valve] solenoids. Confirm that the battery loading analyses considers the appropriate minimum voltage.</p>	<p>Not started.</p>
<p>3.2.4.8.B The applicable electrical drawing(s) provided during the audit process were not legible. The licensee should provide a legible copy of electrical drawings for NRC staff review.</p>	<p>Started.</p>
<p>3.2.4.8.C During the audit, the licensee indicated a total load of 429 kilowatts for the FLEX diesel generator which does not appear to match the total sum of all the loads provided during the audit. The licensee should explain and/or resolve this</p>	<p>Started.</p>

ISE Confirmatory Item	Status
discrepancy.	
3.2.4.9.A With respect to refueling of deployed equipment, PNPP is currently evaluating the feasibility of either procuring a fuel trailer (trailer mounted tank with on-board pump mechanism), or mounting a fuel tank within the bed of a heavy-duty truck, with appropriate pumping mechanisms. The licensee should provide a description of the final plans for refueling once these evaluations are complete.	Started.
3.2.4.10.A The licensee should provide the battery dc load profile with the required loads for the mitigating strategies to maintain core cooling, containment, and spent fuel pool cooling.	Not started.
3.2.4.10.B The licensee should provide the final load shedding procedure for review when it is completed.	Started.
3.4.A The licensee did not address considerations 2 through 10 of NEI 12-06, Section 12.2, regarding offsite resources. This information should be confirmed and documented.	Not started.

7 Potential Interim Staff Evaluation Impacts

FENOC is making changes to the compliance method as documented in the OIP (Reference 1). Although the planned changes do not impact compliance with NEI 12-06, there is an impact on the ISE. The planned changes described in Section 4 above are being incorporated into Revision 1 of the OIP, which is being submitted under a separate letter.

8 References

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

1. FirstEnergy Nuclear Operating Company's (FENOC'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 27, 2013.
2. NRC Order Number EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, dated March 12, 2012.
3. Perry Nuclear Power Plant, Unit 1 – Interim Staff Evaluation Relating To Overall Integrated Plan In Response To Order EA-12-49 (Mitigation Strategies), dated January 22, 2014.