



Exelon Generation®

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NRC Order No. EA-12-051

FLL-14-031

August 26, 2014

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Nine Mile Point Nuclear Station, Units 1 and 2
Renewed Facility Operating License Nos. DPR-63 and NPF-69
Docket Nos. 50-220 and 50-410

Subject: August 2014 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)

Reference: (1) NRC Order Number EA-12-051, Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation, dated March 12, 2012 (ML12054A679)

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Order EA-12-051 (Reference 1) to Constellation Energy Nuclear Group, LLC (CENG) for Nine Mile Point Nuclear Station, LLC, (NMPNS) Units 1 (NMP1) and 2 (NMP2). Reference (1) requires submission of a status report at six-month intervals following submittal of the overall integrated plan. Attachments (1) and (2) provide the third Six-Month Status Report for NMP1 and NMP2 pursuant to Section IV, Condition C.2, of Reference (1). This report updates the milestone accomplishments since the submittal of the last status report, including any changes to the compliance method, schedule, or need for relief and the basis, if any.

There are no regulatory commitments contained in this letter.

If there are any questions regarding this letter, please contact Bruce Montgomery, Acting Manager - Licensing, at 443-532-6533.

A001
MRR

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 26th day of August, 2014.

Respectfully,



Mary G. Korshnick

MGK/STD

Attachments

- (1) NMP1 Six-Month Status Report (August 2014) for Reliable Spent Fuel Pool Instrumentation
- (2) NMP2 Six-Month Status Report (August 2014) for Reliable Spent Fuel Pool Instrumentation

cc: Regional Administrator, Region I, USNRC
NRC Project Manager, NRR – Nine Mile Point Nuclear Station
NRC Senior Resident Inspector – Nine Mile Point Nuclear Station
Director, Office of Nuclear Reactor Regulation
S. Gray, DNR

ATTACHMENT (1)

**NMP1 SIX-MONTH STATUS REPORT (AUGUST 2014)
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

**NINE MILE POINT NUCLEAR STATION, LLC
August 26, 2014**

**ATTACHMENT (1)
AUGUST 2014
NMP1 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

1 Introduction

The Nine Mile Point Unit 1 (NMP1) Overall Integrated Plan (OIP) was submitted to the Nuclear Regulatory Commission (NRC) in February 2013 (Reference 1), documenting the requirements to install reliable spent fuel pool level instrumentation (SFP LI), in response to Reference 2. Subsequently, a supplement to the OIP for SFP LI was submitted to the NRC in March 2013 (Reference 3). By letter dated June 5, 2013 (Reference 4), the NRC requested that CENG respond to a request for additional information (RAI) regarding the NMP1 OIP for Reliable Spent Fuel Pool Instrumentation. By letter dated July 5, 2013 (Reference 5), CENG responded to the June 5, 2013 RAI. By letter dated August 27, 2013 (Reference 6), NMP1 provided the first Six-Month Status Report. By letter dated November 15, 2013 (Reference 7), the NRC provided NMP with its Interim Staff Evaluation (ISE) and RAI regarding the OIP for Reliable Spent Fuel Pool Instrumentation. By letter dated February 24, 2014 (Reference 10), NMP1 provided the second Six-Month Status Report.

This attachment provides an update of milestone accomplishments since submittal of the OIP, including any changes to the compliance method, schedule, or need for relief/relaxation and associated basis (if applicable). NMP1 has completed detailed design for the AREVA VEGAPULS 62ER Through Air Radar System and is completing planning activities for installation. No significant changes have occurred since the previous Six-Month Status Report was submitted in February, 2014 (Reference 10).

2 Milestone Accomplishments

The following milestones have been completed since the development of the OIP (Reference 1), and are current as of August 15, 2014.

- | | |
|---|--------|
| • Submitted Overall Integrated Plan | 1Q2013 |
| • Issued Purchase Order for Instrumentation | 2Q2013 |
| • Commenced Engineering and Design | 2Q2013 |
| • Selected Instrumentation and Technology | 2Q2013 |
| • Submitted first six-month update | 3Q2013 |
| • Submitted second six-month update | 1Q2014 |
| • Received Spent Fuel Pool Instrumentation | 2Q2014 |
| • Completed detailed design | 2Q2014 |

3 Milestone Schedule Status

Table 1 provides an update to milestone schedule to support the OIP (References 1 and 3). It provides the activity status of each item and the expected completion date, noting any change. The dates are planning dates subject to change as design and implementation details are developed. Any changes to the following target completion dates will be reflected in 6-month status reports.

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

**ATTACHMENT (1)
AUGUST 2014
NMP1 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

**Table 1
Status of Reliable Spent Fuel Pool Instrumentation OIP Milestones**

Milestone	Target Completion Date	Status	Revised Target Completion Date
Commence Engineering and Design	2Q2013	Complete	
Complete Engineering and Design	1Q2014	Complete	
Respond to NRC ISE RAIs	3Q2014	Started	
Receipt of SFP Instruments	3Q2014	Complete	
Commence Installation of SFP Instruments	3Q2014	Not Started	4Q2014
Close out Project/Plant Turnover	2Q2015	Not Started	

4 Changes to Compliance Method

No changes have been made to the compliance method since the February 2014 Six-Month Status Report (Reference 10).

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

NMP1 expects to comply with the order implementation date and no relief/relaxation is required at this time.

6 Open Items from Overall Integrated Plan and Interim Safety Evaluation

Table 2 provides a status of the OIP open items documented in the February 2014 Six-Month Status Report (Reference 6). These open items include previous regulatory commitments made in the July 2013 RAI Response (Reference 5). As noted in the memorandum from C.A. Hunt (NRC) to M.A. Mitchell (NRC), Summary of the November 26, 2013 Public Meeting to Discuss Industry Responses to Staff Interim Evaluations for Spent Fuel Pool Instrumentation (Reference 9), the ISE questions supersede any previous requests for information issued by the staff concerning the spent fuel pool instrumentation. Table 3 provides a status of the ISE RAIs.

**Table 2
Status of NMP1 Reliable Spent Fuel Pool Instrumentation OIP Open Items**

NMP1 Open Items	Status
1. Provide specific requirements of the procedure controlling irradiated equipment or materials stored in the SFP, including details of the analysis to be performed, to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs

**ATTACHMENT (1)
AUGUST 2014
NMP1 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

Table 2

Status of NMP1 Reliable Spent Fuel Pool Instrumentation OIP Open Items (Continued)

2. The final system component locations and wire routings will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
3. The full hydrodynamic/seismic qualification details will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
4. The final mounting details for the horn antenna and waveguide assembly will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
5. Further details of the qualification and test program used to confirm the reliability of the permanently installed equipment during and following Beyond Design Bases Events will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
6. Further details on independence and channel separation of the permanently installed equipment will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
7. Further details on the AC and DC power supplies of the permanently installed equipment will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
8. The final calibration methodology will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
9. Specific details of the functional and calibration test program, including frequencies, will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
10. The preventive maintenance, test and calibration program will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
11. The compensatory actions to take when both channels are out of service, and the applicable administrative requirements and implementation procedures will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs

**ATTACHMENT (1)
AUGUST 2014
NMP1 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

**Table 2
Status of NMP1 Reliable Spent Fuel Pool Instrumentation OIP Open Items (Continued)**

12. The compensatory actions to take when a channel is not restored within 90 days, and the applicable administrative requirements and implementation procedures will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
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**Table 3
Status of NMP1 Reliable Spent Fuel Pool Instrumentation ISE RAIs**

NMP1 ISE RAIs	Status
1. Confirm that the correct elevation for Level 2 at NMP1 is 321 ft. 11.5 in. and provide the information regarding specific requirements of the procedure controlling irradiated equipment or materials stored in the SFP, including details of the analysis to be performed to determine the projected dose rate impact and the appropriate Level 2 value as a result of the potential for irradiated material to be stored in the SPF in the future.	Started (8/14)
2. Provide a final labeled sketch or marked-up plant drawing of the plan view of the SFP, depicting the SFP inside dimensions, the planned locations/placement of the primary and back-up SFP level sensor, and the proposed routing of the cables that will extend from these sensors toward the location of the read-out/display device.	Started (2/14)
3. Provide the results of the analyses used to verify the design criteria and methodology for seismic testing of the SFP instrumentation and the electronics units, including, design basis maximum seismic loads and the hydrodynamic loads that could result from pool sloshing or other effects that could accompany such seismic forces.	Started (2/14)
4. For each of the mounting attachments required to attach SFP Level equipment to plant structures, please describe the design inputs, and the methodology that was used to qualify the structural integrity of the affected structures/equipment.	Started (2/14)
5. Provide information indicating (a) whether the 80c rating for the sensor electronics is a continuous duty rating; and, (b) what will be the maximum expected ambient temperature in the room in which the sensor electronics will be located under BDB conditions in which there is no ac power available to run Heating Ventilation and Air Conditioning (HVAC) systems.	Started (2/14)

**ATTACHMENT (1)
AUGUST 2014
NMP1 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

**Table 3
Status of NMP1 Reliable Spent Fuel Pool Instrumentation ISE RAIs (continued)**

6. Provide information indicating the maximum expected relative humidity in the room in which the sensor electronics will be located under BOB conditions, in which there is no ac power available to run HVAC systems, and whether the sensor electronics is capable of continuously performing its required functions under this expected humidity condition.	Started (2/14)
7. Provide analysis of the maximum expected radiological conditions (dose rate and total integrated dose) to which the sensor and associated co-located electronic equipment will be exposed. Also, please provide documentation indicating how it was determined that the electronics for this equipment is capable of withstanding a total integrated dose of 1×10^3 Rads. Please discuss the time period over which the analyzed total integrated dose was applied.	Started (2/14)
8. Provide information describing the evaluation of the comparative sensor design, the shock test method, test results, and forces applied to the sensor applicable to its successful tests demonstrating that the referenced previous testing provides an appropriate means to demonstrate reliability of the sensor under the effects of severe shock.	Started (2/14)
9. Provide information describing the evaluation of the comparative sensor design, the vibration test method, test results, and the forces and their frequency ranges and directions applied to the sensor applicable to its successful tests, demonstrating that the referenced previous testing provides an appropriate means to demonstrate reliability of the sensor under the effects of high vibration.	Started (2/14)
10. Provide information describing the evaluation of the comparative display panel ratings against postulated plant conditions. Also provide results of the manufacturer's shock and vibration test methods, test results, and the forces and their frequency ranges and directions applied to the display panel associated with its successful tests.	Started (2/14)
11. Provide the results of seismic testing per IEEE 344-2004, to demonstrate the reliability of the components within the power and control panel with regard to shock and vibration effects.	Started (2/14)
12. Provide analysis of the seismic testing results and show that the instrument performance reliability, following exposure to simulated seismic conditions representative of the environment anticipated for the SFP structures at Nine Mile Point, has been adequately demonstrated.	Started (2/14)
13. Provide the final configuration of the power supply source for each channel so that the staff may conclude that the two channels are independent from a power supply assignment perspective.	Started (2/14)

**ATTACHMENT (1)
AUGUST 2014
NMP1 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

**Table 3
Status of NMP1 Reliable Spent Fuel Pool Instrumentation ISE RAIs (continued)**

14. Provide the results of the calculation depicting the battery backup duty cycle requirements demonstrating that its capacity is sufficient to maintain the level indication function until offsite resource availability is reasonably assured.	Started (2/14)
15. Provide analysis verifying that the proposed instrument performance is consistent with these estimated accuracy normal and BDB values. Please demonstrate that the channels will retain these accuracy performance values following a loss of power and subsequent restoration of power.	Started (2/14)
16. Provide a list of the procedures addressing operation (both normal and abnormal response), calibration, test, maintenance, and inspection procedures that will be developed for use of the spent SFP instrumentation. The licensee is requested to include a brief description of the specific technical objectives to be achieved within each procedure.	Started (2/14)
17. Provide the following: a. Further information describing the maintenance and testing program the licensee will establish and implement to ensure that regular testing and calibration is performed and verified by inspection and audit to demonstrate conformance with design and system readiness requirements. Please include a description of the plans for ensuring that necessary channel checks, functional tests, periodic calibration, and maintenance will be conducted for the level measurement system and its supporting equipment. b. Information describing compensatory actions when both channels are out-of-order, and the implementation procedures c. Additional information describing expedited and compensatory actions in the maintenance procedure to address when one of the instrument channels cannot be restored to functional status within 90 days	Started (2/14)
18. Provide a description of the in-situ calibration process at the SFP location that will result in the channel calibration being maintained at its design accuracy.	Started (2/14)

7 Potential Interim Safety Evaluation Impacts

There are no potential impacts to the Interim Safety Evaluation at this time.

**ATTACHMENT (1)
AUGUST 2014
NMP1 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

8 References

The following references support the updates to the Overall Integrated Plan described in this enclosure.

1. Letter from M.G. Korsnick (CENG) to Document Control Desk (NRC), Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 28, 2013 (ML13066A172)
2. NRC Order Number EA-12-051, Issuance of Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation, dated March 12, 2012 (ML12054A679)
3. Letter from M.G. Korsnick (CENG) to Document Control Desk (NRC), Supplement to Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation, dated March 8, 2013 (ML13073A155)
4. Letter from M. C. Thadani (NRC) to M. G. Korsnick (CENG), Nine Mile Point Nuclear Station, Units 1 and 2 – Request for Additional Information Re: Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order EA-12-051)(TAC Nos. MF1131 and MF1132), dated June 5, 2013 (ML13154A399)
5. Letter from P. M. Swift (CENG) to Document Control Desk (NRC), Response to Request for Additional Information Re: Overall integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (TAC Nos. MF1131 and MF1132), dated July 5, 2013 (ML13197A220)
6. Letter from E. D. Dean (CENG) to Document Control Desk (NRC), Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation(Order Number EA-12-051), dated August 27, 2013 (ML13254A279)
7. Letter from M.C. Thadani (NRC) to J.A. Spina (CENG), Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, and Nine Mile Point Nuclear Station, Unit Nos. 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 (TAC NOS. MF1131, MF1132, MF1140, and MF1141), dated November 15, 2013 (ML13281A205)
8. NEI 12-02, Industry Guidance for Compliance with NRC Order EA-12-051, “To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation,” Revision 1, August 2012 (ML12240A307)
9. Memorandum from C.A. Hunt (NRC) to M.A. Mitchell (NRC), Summary of the November 26, 2013 Public Meeting to Discuss Industry Responses to Staff Interim Evaluations for Spent Fuel Pool Instrumentation, dated December 26, 2013 (ML13347B030)
10. Letter from M.G. Korsnick (CENG) to Document Control Desk (NRC), February 2014 Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 24, 2014 (ML14069A180)

ATTACHMENT (2)

**NMP2 SIX-MONTH STATUS REPORT (AUGUST 2014)
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

**NINE MILE POINT NUCLEAR STATION, LLC
August 26, 2014**

**ATTACHMENT (2)
AUGUST 2014
NMP2 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

1 Introduction

The Nine Mile Point Unit 2 (NMP2) Overall Integrated Plan (OIP) was submitted to the Nuclear Regulatory Commission (NRC) in February 2013 (Reference 1), documenting the requirements to install reliable spent fuel pool level instrumentation (SFP LI), in response to Reference 2. Subsequently, a supplement to the OIP for SFP LI was submitted to the NRC in March 2013 (Reference 3). By letter dated June 5, 2013 (Reference 4), the NRC requested that CENG respond to a request for additional information (RAI) regarding the NMP2 OIP for Reliable Spent Fuel Pool Instrumentation. By letter dated July 5, 2013 (Reference 5), CENG responded to the June 5, 2013 RAI. By letter dated Aug 27, 2013 (Reference 6), NMP2 provided the first Six-Month Status Report. By letter dated November 15, 2013 (Reference 7), the NRC provided NMP with its Interim Staff Evaluation (ISE) and RAI regarding the OIP for Reliable Spent Fuel Pool Instrumentation. By letter dated February 24, 2014 (Reference 10), NMP2 provided the second Six-Month Status Report.

This attachment provides an update of milestone accomplishments since submittal of the OIP, including any changes to the compliance method, schedule, or need for relief/relaxation and associated basis (if applicable). NMP2 has completed detailed design for the AREVA VEGAPULS 62ER Through Air Radar System and is completing planning activities for installation. No significant changes have occurred since the previous Six-Month Status Report was submitted in February, 2014 (Reference 10).

2 Milestone Accomplishments

The following milestones have been completed since the development of the OIP (Reference 1), and are current as of August 15, 2014.

- | | |
|---|--------|
| • Submitted Overall Integrated Plan | 1Q2013 |
| • Issued Purchase Order for Instrumentation | 2Q2013 |
| • Commenced Engineering and Design | 2Q2013 |
| • Selected Instrumentation and Technology | 2Q2013 |
| • Submitted first six-month update | 3Q2013 |
| • Submitted second six-month update | 1Q2014 |
| • Received Spent Fuel Pool Instrumentation | 2Q2014 |
| • Completed detailed design | 2Q2014 |

3 Milestone Schedule Status

Table 1 provides an update to milestone schedule to support the OIP (References 1 and 3). It provides the activity status of each item and the expected completion date, noting any change. The dates are planning dates subject to change as design and implementation details are developed. Any changes to the following target completion dates will be reflected in 6-month status reports.

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

**ATTACHMENT (2)
AUGUST 2014
NMP2 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

**Table 1
Status of Reliable Spent Fuel Pool Instrumentation OIP Milestones**

Milestone	Target Completion Date	Status	Revised Target Completion Date
Commence Engineering and Design	2Q2013	Complete	
Complete Engineering and Design	1Q2014	Complete	
Respond to NRC ISE RAIs	3Q2014	Started	
Receipt of SFP Instruments	4Q2014	Complete	
Commence Installation of SFP Instruments	4Q2014	Not Started	
Close out Project/Plant Turnover	2Q2016	Not Started	

4 Changes to Compliance Method

No changes have been made to the compliance method since the February 2014 Six-Month Status Report (Reference 10).

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

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

6 Open Items from Overall Integrated Plan and Interim Safety Evaluation

Table 2 provides a status of the OIP open items documented in the August 2013 Six-Month Status Report (Reference 6). These open items include previous regulatory commitments made in the July 2013 RAI Response (Reference 5). As noted in the memorandum from C.A. Hunt (NRC) to M.A. Mitchell (NRC), Summary of the November 26, 2013 Public Meeting to Discuss Industry Responses to Staff Interim Evaluations for Spent Fuel Pool Instrumentation (Reference 9), the ISE questions supersede any previous requests for information issued by the staff concerning the spent fuel pool instrumentation. Table 3 provides a status of the ISE RAIs.

**Table 2
Status of NMP2 Reliable Spent Fuel Pool Instrumentation OIP Open Items**

NMP2 Open Items	Status
1. Provide specific requirements of the procedure controlling irradiated equipment or materials stored in the SFP, including details of the analysis to be performed, to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs

**ATTACHMENT (2)
AUGUST 2014
NMP2 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

**Table 2
Status of NMP2 Reliable Spent Fuel Pool Instrumentation OIP Open Items (continued)**

2. The final system component locations and wire routings will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
3. The full hydrodynamic/seismic qualification details will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
4. The final mounting details for the horn antenna and waveguide assembly will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
5. Further details of the qualification and test program used to confirm the reliability of the permanently installed equipment during and following Beyond Design Bases Events will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
6. Further details on independence and channel separation of the permanently installed equipment will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
7. Further details on the AC and DC power supplies of the permanently installed equipment will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
8. The final calibration methodology will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
9. Specific details of the functional and calibration test program, including frequencies, will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
10. The preventive maintenance, test and calibration program will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
11. The compensatory actions to take when both channels are out of service, and the applicable administrative requirements and implementation procedures will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs

**ATTACHMENT (2)
AUGUST 2014
NMP2 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

**Table 2
Status of NMP2 Reliable Spent Fuel Pool Instrumentation OIP Open Items (continued)**

12. The compensatory actions to take when a channel is not restored within 90 days, and the applicable administrative requirements and implementation procedures will be forwarded to the NRC on February 28, 2014 with the second NMPNS Overall Integrated Plan status update.	Deleted (2/14) Superseded by ISE RAIs
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**Table 3
Status of NMP2 Reliable Spent Fuel Pool Instrumentation ISE RAIs**

NMP2 ISE RAIs	Status
1. Confirm that the correct elevation for Level 2 at NMP2 is 335 ft. 11.9 in. and provide the information regarding specific requirements of the procedure controlling irradiated equipment or materials stored in the SFP, including details of the analysis to be performed to determine the projected dose rate impact and the appropriate Level 2 value as a result of the potential for irradiated material to be stored in the SPF in the future.	Started (8/14)
2. Provide a final labeled sketch or marked-up plant drawing of the plan view of the SFP, depicting the SFP inside dimensions, the planned locations/placement of the primary and back-up SFP level sensor, and the proposed routing of the cables that will extend from these sensors toward the location of the read-out/display device.	Started (2/14)
3. Provide the results of the analyses used to verify the design criteria and methodology for seismic testing of the SFP instrumentation and the electronics units, including, design basis maximum seismic loads and the hydrodynamic loads that could result from pool sloshing or other effects that could accompany such seismic forces.	Started (2/14)
4. For each of the mounting attachments required to attach SFP Level equipment to plant structures, please describe the design inputs, and the methodology that was used to qualify the structural integrity of the affected structures/equipment.	Started (2/14)
5. Provide information indicating (a) whether the 80c rating for the sensor electronics is a continuous duty rating; and, (b) what will be the maximum expected ambient temperature in the room in which the sensor electronics will be located under BDB conditions in which there is no ac power available to run Heating Ventilation and Air Conditioning (HVAC) systems.	Started (2/14)

**ATTACHMENT (2)
AUGUST 2014
NMP2 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

**Table 3
Status of NMP2 Reliable Spent Fuel Pool Instrumentation ISE RAIs (continued)**

6. Provide information indicating the maximum expected relative humidity in the room in which the sensor electronics will be located under BOB conditions, in which there is no ac power available to run HVAC systems, and whether the sensor electronics is capable of continuously performing its required functions under this expected humidity condition.	Started (2/14)
7. Provide analysis of the maximum expected radiological conditions (dose rate and total integrated dose) to which the sensor and associated co-located electronic equipment will be exposed. Also, please provide documentation indicating how it was determined that the electronics for this equipment is capable of withstanding a total integrated dose of 1×10^3 Rads. Please discuss the time period over which the analyzed total integrated dose was applied.	Started (2/14)
8. Provide information describing the evaluation of the comparative sensor design, the shock test method, test results, and forces applied to the sensor applicable to its successful tests demonstrating that the referenced previous testing provides an appropriate means to demonstrate reliability of the sensor under the effects of severe shock.	Started (2/14)
9. Provide information describing the evaluation of the comparative sensor design, the vibration test method, test results, and the forces and their frequency ranges and directions applied to the sensor applicable to its successful tests, demonstrating that the referenced previous testing provides an appropriate means to demonstrate reliability of the sensor under the effects of high vibration.	Started (2/14)
10. Provide information describing the evaluation of the comparative display panel ratings against postulated plant conditions. Also provide results of the manufacturer's shock and vibration test methods, test results, and the forces and their frequency ranges and directions applied to the display panel associated with its successful tests.	Started (2/14)
11. Provide the results of seismic testing per IEEE 344-2004, to demonstrate the reliability of the components within the power and control panel with regard to shock and vibration effects.	Started (2/14)
12. Provide analysis of the seismic testing results and show that the instrument performance reliability, following exposure to simulated seismic conditions representative of the environment anticipated for the SFP structures at Nine Mile Point, has been adequately demonstrated.	Started (2/14)
13. Provide the final configuration of the power supply source for each channel so that the staff may conclude that the two channels are independent from a power supply assignment perspective.	Started (2/14)

**ATTACHMENT (2)
AUGUST 2014
NMP2 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

**Table 3
Status of NMP2 Reliable Spent Fuel Pool Instrumentation ISE RAIs (continued)**

14. Provide the results of the calculation depicting the battery backup duty cycle requirements demonstrating that its capacity is sufficient to maintain the level indication function until offsite resource availability is reasonably assured.	Started (2/14)
15. Provide analysis verifying that the proposed instrument performance is consistent with these estimated accuracy normal and BDB values. Please demonstrate that the channels will retain these accuracy performance values following a loss of power and subsequent restoration of power.	Started (2/14)
16. Provide a list of the procedures addressing operation (both normal and abnormal response), calibration, test, maintenance, and inspection procedures that will be developed for use of the spent SFP instrumentation. The licensee is requested to include a brief description of the specific technical objectives to be achieved within each procedure.	Started (8/14)
17. Provide the following: a. Further information describing the maintenance and testing program the licensee will establish and implement to ensure that regular testing and calibration is performed and verified by inspection and audit to demonstrate conformance with design and system readiness requirements. Please include a description of the plans for ensuring that necessary channel checks, functional tests, periodic calibration, and maintenance will be conducted for the level measurement system and its supporting equipment. b. Information describing compensatory actions when both channels are out-of-order, and the implementation procedures c. Additional information describing expedited and compensatory actions in the maintenance procedure to address when one of the instrument channels cannot be restored to functional status within 90 days	Started (8/14)
18. Provide a description of the in-situ calibration process at the SFP location that will result in the channel calibration being maintained at its design accuracy.	Started (8/14)

7 Potential Interim Safety Evaluation Impacts

There are no potential impacts to the Interim Safety Evaluation at this time.

**ATTACHMENT (2)
AUGUST 2014
NMP2 6-MONTH STATUS REPORT
FOR RELIABLE SPENT FUEL POOL INSTRUMENTATION**

8 References

The following references support the updates to the Overall Integrated Plan described in this enclosure.

1. Letter from M.G. Korsnick (CENG) to Document Control Desk (NRC), Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 28, 2013 (ML13066A172)
2. NRC Order Number EA-12-051, Issuance of Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation, dated March 12, 2012 (ML12054A679)
3. Letter from M.G. Korsnick (CENG) to Document Control Desk (NRC), Supplement to Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation, dated March 8, 2013 (ML13073A155)
4. Letter from M. C. Thadani (NRC) to M. G. Korsnick (CENG), Nine Mile Point Nuclear Station, Units 1 and 2 – Request for Additional Information Re: Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order EA-12-051)(TAC Nos. MF1131 and MF1132), dated June 5, 2013 (ML13154A399)
5. Letter from P. M. Swift (CENG) to Document Control Desk (NRC), Response to Request for Additional Information Re: Overall integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (TAC Nos. MF1131 and MF1132), dated July 5, 2013 (ML13197A220)
6. Letter from E. D. Dean (CENG) to Document Control Desk (NRC), Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated August 27, 2013 (ML13254A279)
7. Letter from M.C. Thadani (NRC) to J.A. Spina (CENG), Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, and Nine Mile Point Nuclear Station, Unit Nos. 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 (TAC NOS. MF1131, MF1132, MF1140, and MF1141), dated November 15, 2013 (ML13281A205)
8. NEI 12-02, Industry Guidance for Compliance with NRC Order EA-12-051, "To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," Revision 1, August 2012 (ML12240A307)
9. Memorandum from C.A. Hunt (NRC) to M.A. Mitchell (NRC), Summary of the November 26, 2013 Public Meeting to Discuss Industry Responses to Staff Interim Evaluations for Spent Fuel Pool Instrumentation, dated December 26, 2013 (ML13347B030)
10. Letter from M.G. Korsnick (CENG) to Document Control Desk (NRC), February 2014 Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 24, 2014 (ML14069A180)