



Order No. EA-12-051

RS-15-095

April 30, 2015

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Calvert Cliffs Nuclear Power Plant, Units 1 and 2  
Renewed Facility Operating License Nos. DPR-53 and DPR-69  
NRC Docket Nos. 50-317 and 50-318

Subject: Report of Full Compliance with March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)

References:

1. NRC Order Number EA-12-051, "Issuance of Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," dated March 12, 2012
2. NRC Interim Staff Guidance JLD-ISG-2012-03, "Compliance with Order EA-12-051, Reliable Spent Fuel Pool Instrumentation," Revision 0, dated August 29, 2012
3. 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, dated August 2012
4. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), dated October 26, 2012, Initial Status Report in Response to Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (ML12311A015)
5. 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)
6. 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)
7. Letter from N. S. Morgan (NRC) to G. H. Gellrich (CENG), Calvert Cliffs Nuclear Power Plant, Units Nos. 1 and 2 – Request for Additional Information Regarding Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation, Order EA-12-051 (TAC Nos. MF1140 and MF1141), dated June 19, 2013 (ML13164A393)
8. Letter from M. D. Flaherty (CENG) to Document Control Desk (NRC), Response to Request for Additional Information Regarding Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order EA-12-051) (TAC Nos. MF1140 and MF1141), dated July 3, 2013 (ML13190A017)

9. 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)
10. Letter from M. G. Korsnick (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 February 24, 2014 (ML14069A180)
11. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), 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), dated August 26, 2014 (ML14241A017)
12. Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), February 2015 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 20, 2015 (ML15057A045)
13. 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)
14. Letter from Jason Paige (NRC) to Mary G. Korsnick (EGC), Calvert Cliffs Nuclear Power Plant, Units 1 and 2 – Report for The Audit Regarding Implementation of Mitigating Strategies and Reliable Spent Fuel Pool Instrumentation Related to Orders EA-12-049 and EA-12-051 (TAC Nos. MF1142, MF1143, MF1140, and MF1141), dated February 20, 2015
15. Letter from John Boska (NRC) to Steven Capps (DEC), McGuire Site Unit 1 and 2 – Report for the Onsite Audit of AREVA Regarding Implementation of Reliable Spent Fuel Pool Instrumentation Related to Order EA-12-051 (TAC Nos. MF1062 and MF1063)

On March 12, 2012, the Nuclear Regulatory Commission (“NRC” or “Commission”) issued Order EA-12-051, “Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation,” (Reference 1) to Exelon Generation Company, LLC (EGC), known previously as Constellation Energy Nuclear Group, LLC (Exelon, the licensee) for Calvert Cliffs Nuclear Power Plant, Units 1 and 2. Reference 1 was immediately effective and directed EGC to install reliable spent fuel pool level instrumentation. 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 (OIP) pursuant to Section IV, Condition C. Reference 2 endorsed industry guidance document NEI 12-02, Revision 1 (Reference 3) with clarifications and exceptions identified in Reference 2. Reference 4 provided the EGC initial status report regarding reliable spent fuel pool instrumentation. References 5 and 6 provided the Calvert Cliffs Nuclear Power Plant, Units 1 and 2 OIP.

Reference 1 required submission of a status report at six-month intervals following submittal of the OIP. References 9, 10, 11, and 12 provided the first, second, third, and fourth six-month

status reports, respectively, pursuant to Section IV, Condition C.2, of Reference 1 for Calvert Cliffs Nuclear Power Plant, Units 1 and 2.

In Reference 7, the NRC requested that EGC respond to a request for additional information (RAI) regarding the Calvert Cliffs Nuclear Power Plant, Units 1 and 2 OIP for NRC Order EA-12-051. In Reference 8, EGC provided the response to the June 19, 2013 RAI. In Reference 13, the NRC issued the Calvert Cliffs Nuclear Power Plant, Units 1 and 2 Interim Staff Evaluation (ISE), which contained RAIs regarding the Overall Integrated Plan for Implementation of Order EA-12-051. In communications between the NRC and the nuclear industry coordinated by the NEI, the NRC indicated that the ISE RAIs superseded the RAIs from Reference 7. EGC provided responses to these RAIs in Appendix 1 of the August 26, 2014 six-month status report (Reference 11). The NRC site audit report (Reference 14) contains no remaining audit open items regarding Calvert Cliffs Nuclear Power Plant, Units 1 and 2 compliance with NRC Order EA-12-051.

In Reference 15, the NRC conducted an audit of AREVA Spent Fuel Pool (SFP) supplied technology at the AREVA facility, as well as at the McGuire Station. In summary, the audit concluded that the NRC found the SFP Instrumentation design and qualification process acceptable.

The purpose of this letter is to provide the report of full compliance with the March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (Reference 1) pursuant to Section IV, Condition C.3 of the Order for Calvert Cliffs Nuclear Power Plant, Units 1 and 2.

Calvert Cliffs Nuclear Power Plant installed two independent full scale level monitors for the SFP in response to Order EA-12-051. Calvert Cliffs Nuclear Power Plant, Units 1 and 2 OIP Open Items and ISE RAIs have been addressed and closed as documented in Reference 11, and are complete. The information provided herein documents full compliance for Calvert Cliffs Nuclear Power Plant, Units 1 and 2 with Reference 1.

#### **MILESTONE SCHEDULE – ITEMS COMPLETE**

<b>Milestone</b>	<b>Completion Date</b>
Commence Engineering and Design	2Q2013
Complete engineering and Design	1Q2014
Receipt of SFP Instruments	1Q2014
Commence Installation of SFP Instruments	2Q2014
Respond to NRC ISE RAI	3Q2014
Complete Installation of SFP Instruments	4Q2014
Close out Project/Plant Turnover	4Q2014
Issue EA-12-051 Compliance Letter	With this submittal

## **ORDER EA-12-051 COMPLIANCE ELEMENTS SUMMARY**

The elements identified below for Calvert Cliffs Nuclear Power Plant, as well as the site overall integrated plan response submittal (References 5 and 6), the 6-Month Status Reports (References 9, 10, 11, and 12), and any additional docketed correspondence, demonstrate compliance with Order EA-12-051.

### **IDENTIFICATION OF LEVELS OF REQUIRED MONITORING - COMPLETE**

Calvert Cliffs Nuclear Power Plant has identified the three required levels for monitoring SFP level in compliance with Order EA-12-051. These levels have been integrated into the site processes for monitoring level during events and responding to loss of SFP inventory.

### **INSTRUMENT DESIGN FEATURES - COMPLETE**

The design of the instruments installed at Calvert Cliffs Nuclear Power Plant complies with the requirements specified in the Order and described in NEI 12-02 "Industry Guidance for Compliance with NRC Order EA-12-051". The instruments have been installed in accordance with the station design control process.

The instruments have been arranged to provide reasonable protection against missiles. The instruments have been mounted to retain design configuration during and following the maximum expected ground motion. The instruments will be reliable during expected environmental and radiological conditions when the SFP is at saturation for extended periods. The instruments are independent of each other and have separate and diverse power supplies. The instruments will maintain their design accuracy following a power interruption and are designed to allow for routine testing and calibration.

The instrument display is readily accessible during postulated events and allows for SFP level information to be promptly available to decision makers.

### **PROGRAM FEATURES - COMPLETE**

Training for Calvert Cliffs Nuclear Power Plant, Units 1 and 2 has been completed in accordance with an accepted training process as recommended in NEI 12-02, Section 4.1.

Operating and maintenance procedures for Calvert Cliffs Nuclear Power Plant have been developed and integrated with existing procedures. Procedures have been verified and are available for use in accordance with the site procedure control program.

Site processes have been established to ensure the instruments are maintained at their design accuracy.

This letter contains no new regulatory commitments. If you have any questions regarding this report, please contact David P. Helker at 610-765-5525.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 30<sup>th</sup> day of April 2015.

Respectfully submitted,



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Director - Licensing & Regulatory Affairs  
Exelon Generation Company, LLC

cc: Director, Office of Nuclear Reactor Regulation  
NRC Regional Administrator - Region I  
NRC Senior Resident Inspector – Calvert Cliffs Nuclear Power Plant, Units 1 and 2  
NRC Project Manager, NRR – Calvert Cliffs Nuclear Power Plant, Units 1 and 2  
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