



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

Region III
2443 Warrenville Road, Suite 210
Lisle IL 60532-4352

January 30, 2014

EA-13-221

Mr. Michael J. Pacilio
Senior Vice President,
Exelon Generation Co., LLC
President and Chief Nuclear
Officer, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

**SUBJECT: FINAL SIGNIFICANCE DETERMINATION OF A WHITE FINDING
WITH ASSESSMENT FOLLOWUP; NRC INSPECTION REPORT
NO. 05000374/2014007; LASALLE COUNTY STATION, UNIT 2**

Dear Mr. Pacilio:

This letter provides you the final significance determination of the preliminary White finding discussed in our previous communication dated November 15, 2013, which included U.S. Nuclear Regulatory Commission (NRC) Inspection Report No. 05000373/2013004; 05000374/2013004. The finding involved the failure to follow Procedure LOP CW 10, "Dewatering the Circulating Water System." While this failure was not a violation of NRC requirements, the NRC concluded that this failure was a performance deficiency. Specifically, your staff failed to perform the dewatering steps in accordance with Section E.11 and failed to close the waterbox hatches before manipulating the circulating water (CW) inlet isolation valve in accordance with Attachment B of the procedure.

In your letter dated December 16, 2013, you provided a response to the NRC staff's preliminary determination regarding the finding. In your letter, you requested that the significance determination be re-evaluated based on the additional information provided. Specifically, you proposed a blended approach using qualitative risk insights along with the quantitative risk evaluation already performed. Your position was that the quantitative risk evaluation did not fully account for the plant specific configuration and that the NRC's methodology discussed in the Risk Assessment Standardization Project (RASP) Handbook was overly conservative and may not provide a realistic evaluation of the event. The attached enclosure provides our detailed assessment of the major points that you raised in your letter.

The NRC did not agree that a blended approach using qualitative attributes and quantitative risk analysis was necessary for this finding. The NRC would typically use such an approach, consistent with Inspection Manual Chapter (IMC) 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria" only when the probabilistic risk assessment methods and tools, including the existing significance determination process (SDP) appendices, cannot adequately address the finding's complexity or provide a reasonable estimate of the significance due to modeling and other uncertainties within the established SDP timeliness goal of 90 days or less. For this finding, the NRC determined that a detailed risk evaluation using IMC 0609 Appendix A, "The Significance Determination Process for Findings at Power," the NRC Standardized Plant Analysis Risk Model for LaSalle, and the RASP handbook guidance

provided appropriate and sufficient tools and guidance to assess the finding. In this detailed risk evaluation, the NRC carefully reviewed the influential assumptions and concluded that those assumptions were reasonable. Specifically, the quantitative risk model appropriately considered that other than the main condenser, decay heat removal systems were available. In the risk evaluation, these systems were assigned their nominal failure probabilities, as they were not affected by the finding. Important operator actions such as initiating and maintaining suppression pool cooling or containment venting were also properly modeled. These actions are in the baseline risk model and also were not impacted by the performance deficiency.

Therefore, after considering the information developed during the inspection and the additional information you provided in your letter dated December 16, 2013, the NRC has concluded that the finding is appropriately characterized as White, a finding of low to moderate risk significance.

You have 30 calendar days from the date of this letter to appeal the staff's determination of significance for the identified White finding. An appeal must be sent in writing to the Regional Administrator, Region III, 2443 Warrenville Road, Lisle, IL 60532-4352, and must address the criteria in NRC IMC 0609, Attachment 2, "Process for Appealing NRC Characterization of Inspection Findings (SDP Appeal Process)."

As a result of our assessment of LaSalle's Unit 2 performance, including this White finding and the associated White Performance Indicator for Unplanned Scrams with Complications, we have determined that the plant will remain in the Regulatory Response column of the NRC's Action Matrix. In accordance with IMC 0305, "Operating Reactor Assessment Program" guidance on double counting Performance Indicators, the White finding will become an action matrix input starting the 4th quarter of 2013 and the White PI will no longer be considered a White action matrix input starting in that quarter. Therefore, we plan to conduct one supplemental inspection for both the White Performance Indicator and the White finding using Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," when your staff has notified us of your readiness for this inspection. This inspection procedure is conducted to provide assurance that the root cause and contributing causes of risk significant performance issues are understood, the extent of condition and the extent of cause are identified, and the corrective actions are sufficient to prevent recurrence.

For administrative purposes, this letter is issued as NRC Inspection Report 05000374/2014007. Finding (FIN) 05000374/2013004-01 remains open until the 95001 inspection is completed.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, any response

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should not include personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. The NRC also includes significant enforcement actions on its Web site at <http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions>.

Sincerely,

/RA/

Cynthia D. Pederson
Regional Administrator

Docket No. 50-374
License No. NPF-18

Enclosure:
Analysis of Licensee Risk Information

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ANALYSIS OF LICENSEE RISK INFORMATION

The key points presented in your letter and the NRC review of these points is presented below.

Probabilistic Risk Assessment (PRA) Model Uncertainty

Your letter stated that the quantitative PRA analysis did not fully account for the specific plant configuration, the briefings of all involved in the evolution, and the time available to perform the actions. The dominant PRA cut sets contain PRA basic events with significant uncertainty. These events included: (1) human error probabilities related to operator actions; and (2) phenomenological impact on emergency core cooling system (ECCS) pumps following containment leak, rupture or venting.

For At-Power significance determination process (SDP) analyses, the specific plant configuration at the time of the event or when the degraded condition existed is not modeled. Systems that were available and were not impacted by the performance deficiency are assigned nominal values for unavailability. The SDP basis document, Inspection Manual Chapter (IMC) 0308, Attachment 3, "Significance Determination Basis Document," which is available in the NRC's Agencywide Documents Access and Management System (ADAMS) at accession number ML062890430, discusses this general SDP assumption. The basis document also discusses PRA model uncertainty and the treatment of uncertainty in the SDP process. The specific points about additional time available, briefings just prior to the event, and any impact on human error probabilities were reviewed while performing the detailed risk analysis. The NRC determined that the dominant human errors contributing to the risk estimate, notably actions to initiate/control suppression pool cooling or to vent primary containment were modeled as actions that are well-trained, highly reliable, and not time sensitive. Therefore, no change to the human error probabilities for these actions was made.

The NRC acknowledges the uncertainty associated with the impact on ECCS pumps following containment leak, rupture, or venting. IMC 0308, Attachment 3, discusses the fact that a quantitative result is considered reasonable if the inputs and assumptions are reviewed and considered to be appropriate. The Standardized Plant Analysis Risk modeling associated with this impact was reviewed and modified when the detailed risk evaluation was conducted, to more closely match the plant-specific PRA. In summary, while these phenomenological impacts are uncertain, the modeling approach used was reasonable.

Risk Assessment Standardization Project (RASP) Handbook Methodology for event SDP

Your letter also discussed process uncertainty with respect to the RASP Handbook guidance for event SDP evaluations and industry concerns that have been discussed at a recent public meeting. You concluded that because of these concerns, probabilistic methodology alone should not be the only tool used to assess event related SDPs until the issues were resolved.

A summary of the November 4, 2013 public meeting, dated December 2, 2013, and available in ADAMS at accession number ML13326A232, discussed the use of IMC 0609 Appendix M in situations where there is not an appropriate SDP tool. The NRC acknowledges that there are continuing discussions between the NRC and industry about the RASP Handbook guidance. However, the NRC has not determined that qualitative, Appendix-M like approaches are appropriate to be used for every SDP evaluation involving initiating event occurrences. For this LaSalle finding, the NRC determined that quantitative SDP tools were available, appropriate and sufficient to determine the significance of the finding.

Enclosure

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Sincerely,

/RA/

Cynthia D. Pederson
Regional Administrator

Docket No. 50-374
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Enclosure:
Analysis of Licensee Risk Information

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FILE NAME: G:\ORAI\IICS\ENFORCEMENT\Cases\Enforcement Cases 2013\EA-13-221 LaSalle Condenser Finding\EA-13-221 LaSalle draft final significance letter.docx

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DATE	1/17/14	1/17/14	1/17/14	1/20/14	1/28/14	1/29/14	1/30/14

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1 OE concurrence received via email from L. Casey on January 28, 2014.

Letter to Michael J. Pacilio from Cynthia D. Pederson dated January 30, 2014

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