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

SUBJECT: Request for Revision to NUREG-1022

Exelon Generation Company, LLC (Exelon) requests an expedited revision of NUREG-1022 (Revision 3), "Event Report Guidelines, 10 CFR 50.72 and 50.73." Specifically, Section 3.2.7, "Event or Condition that Could Have Prevented Fulfillment of a Safety Function," should be revised to clarify the guidance for reportability of an event or condition that involves secondary containment being declared inoperable per Technical Specifications due to specific momentary conditions which do not impact the ability to perform any safety function. This revision would eliminate unnecessary reporting for conditions without safety consequence. The attachment to this letter provides the details of this request.

This request contains no regulatory commitments.

If you have any questions or require additional information, please contact Glenn Stewart at 610-765-5529.

Respectfully,

Keith R. Jury
Vice President, Licensing and Regulatory Affairs
Exelon Generation Company, LLC

Attachment: Request for Revision to NUREG-1022

**cc: Regional Administrator - NRC Region I
Regional Administrator - NRC Region III**

ATTACHMENT

REQUEST FOR REVISION TO NUREG-1022

Introduction

Revision 3 to NUREG-1022 became effective on July 1, 2013. This revision contains language which requires licensees to link Technical Specifications (TS) inoperability directly to reporting requirements under 10 CFR 50.72, "Immediate notification requirements for operating nuclear power reactors," and 10 CFR 50.73, "Licensee event report system," for an "Event or Condition that Could Have Prevented Fulfillment of a Safety Function." Section 3.2.7 of NUREG-1022 discusses the reportability of an event or condition that could have prevented fulfillment of the safety function of a structure, system, or component (SSC).

The summary of the major comments dispositioned by the NRC in Federal Register Notice 78FR9743, "Event Reporting Guidelines, NUREG-1022, Revision 3; notice of availability," states:

The comments also indicated that the changes, if implemented, will have the effect of requiring licensees to report events or conditions as a "loss of safety function" where no function is lost since a system may be declared inoperable and still be capable of providing the function relied upon in the plant's safety analysis. Upon further review, the NRC disagrees and the position found in the draft Revision 3 to NUREG-1022 is retained in the final version. For systems within scope, the inadvertent TS inoperability of a system in a required mode of applicability constitutes an event or condition for which there is no longer a reasonable expectation that equipment can fulfill its safety function. Therefore, such events or conditions are reportable.

This revised NRC guidance differs from historical reportability guidance where evaluation and judgment of the loss of safety function was allowed based on event-specific conditions. The revised guidance has resulted in an unnecessary increase in Emergency Notification System (ENS) reports and Licensee Event Reports (LERs) involving a purported loss of safety function of secondary containment, even though the safety function has not been impacted.

Discussion

Changes to NUREG-1022 made in Revision 3 are leading to an increase in ENS reports, LERs, and reporting of occurrences in the Safety System Functional Failures (SSFFs) performance indicator (PI) for instances in which there is not a true loss of safety function, but momentary conditions in which TS operability/surveillance criteria are not satisfied. Per the Reactor Oversight Process (ROP), the step increase in reporting of these momentary conditions inflates the counts of SSFFs and triggers a regulatory response not warranted by the facts and that is not indicative of a change in actual licensee performance. The regulatory response required by the ROP action matrix could result in resources expended by both the NRC and licensees without a commensurate improvement in safety. In addition, this situation could impact public confidence by reflecting an inappropriate negative perception of licensees' safety performance.

The specific examples of areas of concern are situations in which secondary containment is momentarily declared inoperable due to: (1) the inadvertent simultaneous opening of both the inner and outer doors in an access opening, and (2) a transitory dip in required negative pressure (e.g., changing environmental conditions).

For example, BWR-4 Standard Technical Specifications Surveillance Requirement (SR) 3.6.4.1.1 requires verification that secondary containment vacuum be $\geq [-0.25]$ " water gauge. Likewise, BWR-4 Standard Technical Specifications SR 3.6.4.1.3 requires verification that one secondary containment access door in each access opening is closed. In accordance with SR 3.0.1, the failure to meet either SR 3.6.4.1.1 or SR 3.6.4.1.3 constitutes failure to meet Limiting Condition for Operation (LCO) 3.6.4.1, "Secondary Containment," which requires secondary containment to be operable. Therefore, based on SR 3.0.1, secondary containment is required to be declared inoperable if either SR 3.6.4.1.1 or SR 3.6.4.1.3 is not met, even if only momentarily. Under the guidance provided in NUREG-1022, Revision 3, momentary declarations of secondary containment TS inoperability are reportable, even though there might not be an impact on, nor a loss of safety function.

The Updated Final Safety Analysis Report (UFSAR) indicates that secondary containment is designed to limit inleakage, and that the inleakage rates are based on a negative pressure of $[0.25]$ " water gauge while the Standby Gas Treatment System (SGTS) is in operation. Since secondary containment takes credit for operation of the SGTS to maintain its design basis, the SGTS is considered part of the safety function of secondary containment. Therefore, as long as the SGTS is operable, the ability of the SGTS to respond following an accident and maintain the TS value of negative $[0.25]$ " water gauge is not impacted by the momentary inoperability of secondary containment for the situations previously described. As a result, momentary drops in secondary containment pressure below the TS value resulting from environmental conditions (wind blowing, temperature drops), or brief simultaneous openings of secondary containment doors, do not constitute a loss of safety function of secondary containment, since overall system performance is not impacted and all required safety functions could be performed.

Additionally, for BWR plants that have adopted an alternative source term in accordance with 10 CFR 50.67, "Accident source term," using the methodology described in NRC Regulatory Guide 1.183, no activity releases are assumed to occur for the first two minutes following initiation of the loss of coolant accident (LOCA). Since the accident source term analysis assumptions are such that no credit is taken for secondary containment for the first two minutes following a design basis LOCA, the above information supports a conclusion that momentary (i.e., less than two minutes) drops in secondary containment pressure below the TS value, which result from environmental conditions or brief simultaneous openings of secondary containment doors, do not constitute a loss of safety function of secondary containment, since "reasonable expectation" of system performance is maintained.

It is clear from the discussion above that the actual safety function of the combined secondary containment and SGTS is not lost during either momentary openings of both secondary containment access doors nor momentary drops in pressure. However, although previous revisions of NUREG-1022 tied reportability to the loss of safety function, the latest revision of NUREG-1022 ties reportability to TS inoperability (including the failure to meet a surveillance requirement). TS rules of usage require inoperability to be declared any time a component or system cannot meet a surveillance requirement, even if only for a brief period of time. The NRC considers any occurrence of TS inoperability being declared, by definition, to be a condition for which there is no longer a reasonable expectation that equipment can fulfill its safety function. This is not the case however, for the scenarios described above.

Actions taken

Exelon has been in contact with NRC Regional and Headquarters management regarding these concerns. Discussions have been held with several levels of NRC management seeking remedies for these unintended consequences associated with the NUREG revision. A White Paper was submitted at the November 2013, ROP Task Force meeting to propose exclusions for SSFF PI reporting. Subsequent discussions with the NRC in December 2013, yielded an alternative approach for excluding the PI reporting under prescribed conditions. It was agreed upon by Exelon and the NRC that, utilizing the existing definition in Nuclear Energy Institute (NEI) 99-02, engineering analysis could be applied to determine if the system was capable of performing its safety function and thus not counted as a SSFF if the safety function was not lost. After agreement was reached with the NRC on the alternative approach, the applicable Exelon procedure was revised to incorporate the NRC guidance for PI reporting exclusions. During the ROP Task Force meeting on January 15, 2014, management from the NRC's Division of Inspection and Regional Support confirmed statements made and conclusions reached, in previous conversations with Exelon on this topic. This discussion is expected to be documented in the NRC summary of the ROP Task Force meeting and should be available by mid-February, 2014. The key points of the discussion were:

- The provisions for PI reporting exclusions are currently in effect,
- NUREG-1022, Revision 3 specifies requirements for notification and submittal of an LER for these events, and is unaffected by the PI discussion, and
- The NRC is aware of industry concerns with NUREG-1022, Revision 3 reporting of SSFFs and resolution of those concerns is being pursued separately.

Exelon intends to continue this practice as agreed upon with the NRC and confirmed in the ROP Task Force meeting.

Conclusion

NUREG-1022, Revision 3 states that "a SSC that has been declared inoperable is one in which the SSC capability is degraded to a point where it cannot perform with reasonable expectation or reliability," and therefore, is reportable. Although "reasonable expectation" that a SSC can perform its safety function is used frequently in the NUREG, the above statements (particularly what is in the Federal Register Notice) indicate that the NRC considers that the failure to meet a TS surveillance requirement is, by definition, a condition where reasonable expectation no longer exists. Exelon disagrees with this position and has concluded that a reasonable expectation of secondary containment being able to meet its safety function continues to exist in the examples discussed in this letter.

NUREG-1022, Revision 3 became effective on July 1, 2013. Prior to this revision, there was a distinction between TS inoperability and "loss of safety function" that was routinely used by the industry. It was generally recognized that TS inoperability did not always automatically mean that a loss of safety function had occurred.

Based on the NUREG-1022, Revision 3 guidance, the scope of items previously reported under the loss of safety function criteria has expanded to include some items for which there is no loss of safety function, but may result from momentary conditions where operability criteria from the TS are not satisfied. A specific area of concern has been identified involving inadvertent momentary drops in secondary containment pressure below the TS value, which result from environmental conditions or brief simultaneous openings of secondary containment access

doors. In cases where these occurrences are of short duration, for the conditions described above, it can be readily demonstrated that the secondary containment function can still be satisfied and that the safety function was not adversely impacted.

Recommendation

Exelon recommends that NUREG-1022, Revision 3 be revised on an expedited basis to clarify the guidance in Section 3.2.7 to exclude reportability of momentary inoperabilities of secondary containment as a loss of safety function, even though secondary containment is declared inoperable for this brief time due to the failure to meet applicable TS surveillance requirements (while applying TS rules of usage), when there is no loss of safety function.

Alternatively, a Regulatory Issue Summary could be issued to provide clarified guidance. This will avoid the unnecessary reporting introduced by the current version of NUREG-1022 while still meeting the intent of 10 CFR 50.72 and 10 CFR 50.73.