



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

June 5, 2014

LICENSEE: Exelon Generation Company, LLC

FACILITY: Byron Station, Units 1 and 2  
Braidwood Station, Units 1 and 2

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON MAY 19, 2014, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND EXELON GENERATION COMPANY, LLC CONCERNING DRAFT REQUEST FOR ADDITIONAL INFORMATION, SET 28, PERTAINING TO THE BYRON STATION AND BRAIDWOOD STATION, LICENSE RENEWAL APPLICATION (TAC NOS. MF1879, MF1880, MF1881, MF1882)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Exelon Generation Company, LLC (Exelon or the applicant), held a telephone conference call on May 19, 2014, to discuss and clarify the staff's draft request for additional information (DRAI), Set 28, concerning the Byron Station, Units 1 and 2, and the Braidwood Station, Units 1 and 2, license renewal application. The telephone conference call was useful in clarifying the intent of the staff's DRAIs.

Enclosure 1 provides a listing of the participants, and Enclosure 2 contains a listing of the DRAIs discussed with the applicant, including a brief description on the status of the items.

The applicant had an opportunity to comment on this summary.

*/RA/*

Lindsay Robinson, Project Manager  
Projects Branch 1  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket Nos. 50-454, 50-455, 50-456, and 50-457

Enclosures:

1. List of Participants
2. List of Draft Request for Additional Information

cc w/encls: Listserv

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\*concurred via email

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TELEPHONE CONFERENCE CALL  
BYRON STATION, UNITS 1 AND 2, AND BRAIDWOOD STATION, UNITS 1 AND 2  
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS  
May 19, 2014

**PARTICIPANTS**

**AFFILIATIONS**

Lindsay Robinson	U.S. Nuclear Regulatory Commission (NRC)
William Holston	NRC
John Hufnagel	Exelon Generating Company, LLC (Exelon)
Al Fulvio	Exelon
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DRAFT REQUEST FOR ADDITIONAL INFORMATION  
BYRON STATION, UNITS 1 AND 2, AND BRAIDWOOD STATION, UNITS 1 AND 2,  
LICENSE RENEWAL APPLICATION

May 19, 2014

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Exelon Generation Company, LLC (Exelon or the applicant), held a telephone conference call on May 19, 2014, to discuss and clarify the following draft request for additional information (DRAI), Set 28, concerning the Byron Station, Units 1 and 2, and the Braidwood Station, Units 1 and 2, license renewal application (LRA).

**DRAI 3.0.3-2b**

Applicability:

Byron Station (Byron) and Braidwood Station (Braidwood), all units

Background:

- ~~1. The response to request for additional information (RAI) 3.0.3-2a Request (2) dated May 5, 2014, states that a secondary purpose of the coating installed on the internal surfaces of the acid and caustic supply components was "to protect the base metal from the relatively slow corrosion expected due to the environment the equipment would have been exposed to had the system been put in service."~~
1. The response to RAI 3.0.3-2a Request (4) states that the diesel oil storage tanks are designed such that coating debris will not cause flow blockage of downstream components because the suction lines for the fuel oil transfer pumps are located greater than a foot above the bottom of the tanks and the tank bottoms are sloped such that any debris would accumulate away from the suction line for the fuel oil transfer pumps. In addition, it states that a review of the results of completed tank inspections indicates that significant coating peeling, delamination, blistering, rusting, or unacceptable cracking and flaking have not occurred.
2. The response to RAI 3.0.3-2a Request (8) included changes to license renewal application (LRA) Sections A.2.1.11, A.2.1.18, B.2.1.11, and B.2.1.18 to address acceptance criteria and followup inspections when coating inspections reveal peeling and delamination and other indications.
3. The response to RAI 3.0.3-2a Request (1) states that the safety injection pump oil system includes an oil filter that removes debris and particulate prior to the oil reaching the bearings and the differential pressure across the oil filter is monitored during quarterly surveillances of the pumps.
4. The response to RAI 3.0.3-2 dated January 13, 2014, states that coating inspections for the foam concentrate tanks are performed every 15 years during replacement of the internal bladder.

ENCLOSURE 2

5. The response to RAI 3.0.3-2a Request (7) discussed qualifications of the individual who will approve post-inspection reports for coatings and the key information that will be included in the reports.

Issue:

- ~~1. Insufficient information was provided with regard to the secondary purpose of the coating in the acid and caustic supply lines in that, with the systems out of service, in-leakage of water accompanied by an abundant source of oxygen could result in significant corrosion rates at points where potential coating failures occur. Significant corrosion rates have occurred in normally dry but periodically wetted uncoated fire water systems with inadequate drainage. Although a secondary purpose of the coating was not described for the hypochlorite injection lines and the OC auxiliary building chiller condenser at Byron, the staff has the same concern.~~

~~The staff noted that the Internal Surfaces in Miscellaneous Piping and Ducting Components updated final safety analysis report (UFSAR) Supplement and program were not revised to include key aspects related to managing loss of coating integrity as was done for the Open Cycle Cooling Water System and Fuel Oil Chemistry programs as a result of the response to RAI 3.0.3-2a. The staff noted that these changes were not made because it was assumed that the above described internally coated components are not susceptible to the two concerns unique to coatings that results in loss of coating integrity being managed. However, if a basis cannot be established for a 10-year inspection interval (e.g., the more significant corrosion rates could result in leakage through the pressure boundary between inspections if a portion of the coating were to fail), then loss of coating integrity would need to be managed for these components.~~

1. Insufficient details were provided for the staff to conclude that a 10-year inspection interval for the diesel oil storage tanks is acceptable. For example: (a) even though the tank is sloped and the suction lines are a foot above the tank bottom, depending on the specific gravity of coating debris and the flow velocity, debris could be transported; (b) although corrosion is unlikely for bare metal exposed to fuel, debris and water can collect on the tank bottom and result in loss of material and the RAI response did not address design minimum wall thickness and corrosion allowances; and (c) current inspections are not necessarily an effective indicator of degradation that could occur in the period of extended operation (PEO).
2. The changes to LRA Sections A.2.1.11, A.2.1.18, B.2.1.11, and B.2.1.18 are internally inconsistent because one portion would allow degraded coatings that exhibit delamination and peeling to remain in service while an enhancement states that signs of delamination of the coating from the base metal (e.g., peeling and blistering) are not acceptable. In addition peeling, delamination, and blistering are intermixed, resulting in unclear guidance.
3. The staff has concluded that the quarterly monitoring of the differential pressure across the lubricating oil filter for the safety injection pump lubricating oil system is an important feature of managing loss of coating integrity of the internal coatings on the oil reservoirs. However, neither the UFSAR supplement nor the Lubricating Oil Analysis program credits monitoring the differential pressure across the oil filter.

4. The Fire Water System UFSAR supplement does not include key aspects and the program does not include summary descriptions of activities associated with managing loss of coating integrity as described in RAI 3.0.3-2a Request (2).
5. Appendix B for the Open-Cycle Cooling Water, Fuel Oil Chemistry, and Fire Water System programs do not include key aspects of the post-inspection reports for coatings, as described in the response to RAI 3.0.3-2a Request (7).

Request:

- ~~1. State the basis for why a 10-year inspection interval is acceptable for the internal coatings on the acid and caustic supply and hypochlorite injection lines and the OC auxiliary building chiller condenser at Byron when the base metal could be exposed to a potentially aggressive air-water environment should the coatings fail. In addition, depending on the outcome of the response, changes may be required to LRA Sections A.2.1.25 and B.2.1.25.~~
1. Provide sufficient information for the staff to conclude that neither loss of material nor coating debris would result in loss of the current licensing basis intended functions of the diesel oil storage tanks and downstream in-scope components.
2. Clarify LRA Sections A.2.1.11, A.2.1.18, B.2.1.11, and B.2.1.18 in regard to acceptability of peeling, delamination, and blistering.
3. Revise LRA Sections A.2.1.26 and B.2.1.26 to credit monitoring the differential pressure across the safety injection pump lubricating oil system oil filter.
4. Provide a similar level of detail in the Fire Water System program and UFSAR Supplement as described in the response to RAI 3.0.3-2a Request (2).
5. For the Open-Cycle Cooling Water, Fuel Oil Chemistry, and Fire Water System programs, include a summary description in the LRA of qualifications of the individual who will approve post-inspection reports for coatings and the key information that will be included in the post inspection reports. For the Fire Water System program include a summary description in the LRA of qualifications of the individual who will approve post-inspection reports for coatings.

**Discussion:** The applicant requested clarity on the staff's concern. Each section is discussed below.

1. The staff reviewed the Generic Aging Lessons Learned (GALL) Report and LRA definition for waste water and concluded that in-leakage to the system would have a similar environmental impact as waste water as defined in GALL Report Section IX.D (waters that are collected from equipment and floor drains). Given this, and the information the applicant provided in the response to RAI 3.0.3-2b, the staff has sufficient information to accept the applicant's proposal. This question will be deleted and all subsequent Request sections will be renumbered as shown above.
2. The applicant requested clarity on the staff's concern. No edits were proposed. This question will be sent as part of the formal request titled: "RAI 3.0.3-2b."

3. The applicant requested clarity on the staff's concern. No edits were proposed. This question will be sent as part of the formal request titled: "RAI 3.0.3-2b."
4. The applicant requested clarity on the staff's concern. No edits were proposed. This question will be sent as part of the formal request titled: "RAI 3.0.3-2b."
5. The applicant requested clarity on the staff's concern. No edits were proposed. This question will be sent as part of the formal request titled: "RAI 3.0.3-2b."
6. The applicant requested clarity on the staff's concern. The applicant discussed the staff's concern regarding qualifications of the individuals approving post-inspection reports; the applicant noted that the information was provided in the response for RAI 3.0.3-2a. After further review of the response for RAI 3.0.3-2a, the staff agreed that the qualifications were provided for Open-Cycle Cooling Water and Fuel Oil Chemistry, but the qualifications were not discussed for the Fire Water System program. The question was edited to request the qualification for Fire Water System program only. Additions to the original question are annotated with underline and deletions with strikethrough. This question will be sent as part of the formal request titled: "RAI 3.0.3-2b."