

RS-21-053
JAFP-21-0032
NMP1L3394

April 20, 2021

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

Braidwood Station, Units 1 and 2
Renewed Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN 50-456 and STN 50-457

Byron Station, Units 1 and 2
Renewed Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. STN 50-454 and STN 50-455

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

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Dresden Nuclear Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

James A. FitzPatrick Nuclear Power Plant
Renewed Facility Operating License No. DPR-59
NRC Docket No. 50-333

LaSalle County Station, Units 1 and 2
Renewed Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Limerick Generating Station, Units 1 and 2
Renewed Facility Operating License Nos. NPF-39 and NPF-85
NRC Docket Nos. 50-352 and 50-353

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

Peach Bottom Atomic Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-277 and 50-278

Quad Cities Nuclear Power Station, Units 1 and 2
Renewed Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

R.E. Ginna Nuclear Power Plant
Renewed Facility Operating License No. DPR-18
NRC Docket No. 50-244

Subject: Response to Request for Additional Information - Proposed Alternative Concerning ASME Section XI Repair/Replacement Documentation for Replacement of Pressure Retaining Bolting

- References:
- 1) Letter from D. Gudger (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Proposed Alternative Concerning ASME Section XI Repair/Replacement Documentation for Replacement of Pressure Retaining Bolting," dated December 1, 2020 (ML20336A008)
 - 2) Email from B. Purnell (U.S. Nuclear Regulatory Commission) to T. Loomis (Exelon Generation Company, LLC), "Exelon Generation Company, LLC - Request for Additional Information Regarding Proposed Fleet Alternative to Documentation Requirements for Pressure Retaining Bolting," dated March 1, 2021 (ML21062A065)

In the Reference 1 letter, Exelon Generation Company, LLC (Exelon) requested a proposed alternative to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," on the basis that the alternative provides an acceptable level of quality and safety. This proposed alternative concerns completion of a Repair/Replacement Plan and Form NIS-2, "Owner's Report for Repair/Replacement Activity" or the NRC approved alternative Form NIS-2A, "Repair/Replacement Certification Record," contained in Code Case N-532-5. Specifically, Exelon proposes to forego preparation and completion of a Repair/Replacement Plan and Form NIS-2 (or NIS-2A) for pressure retaining bolting that is not classified as Examination Category B-G-1, B-G-2, or C-D.

In the Reference 2 email, the U.S. Nuclear Regulatory Commission Staff requested additional information. Attached is our response.

There are no regulatory commitments contained in this letter.

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If you have any questions, please contact Tom Loomis at (610) 765-5510.

Respectfully,

David T. Gudger

David T. Gudger
Senior Manager - Licensing
Exelon Generation Company, LLC

Attachment: Response to Request for Additional Information

Response to Request for Additional Information
Proposed Alternative Concerning ASME Section XI
Repair/Replacement Documentation
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cc: Regional Administrator - NRC Region I
Regional Administrator - NRC Region III
NRC Senior Resident Inspector - Braidwood Station
NRC Senior Resident Inspector - Byron Station
NRC Senior Resident Inspector - Calvert Cliffs Nuclear Power Plant
NRC Senior Resident Inspector - Clinton Power Station
NRC Senior Resident Inspector - Dresden Nuclear Power Station
NRC Senior Resident Inspector - James A. FitzPatrick Nuclear Power Plant
NRC Senior Resident Inspector - LaSalle County Station
NRC Senior Resident Inspector - Limerick Generating Station
NRC Senior Resident Inspector - Nine Mile Point Nuclear Station
NRC Senior Resident Inspector - Peach Bottom Atomic Power Station
NRC Senior Resident Inspector - Quad Cities Nuclear Power Station
NRC Senior Resident Inspector - R.E. Ginna Nuclear Power Plant
NRC Project Manager - Braidwood Station
NRC Project Manager - Byron Station
NRC Project Manager - Calvert Cliffs Nuclear Power Plant
NRC Project Manager - Clinton Power Station
NRC Project Manager - Dresden Nuclear Power Station
NRC Project Manager - James A. FitzPatrick Nuclear Power Plant
NRC Project Manager - LaSalle County Station
NRC Project Manager - Limerick Generating Station
NRC Project Manager - Nine Mile Point Nuclear Station
NRC Project Manager - Peach Bottom Atomic Power Station
NRC Project Manager - Quad Cities Nuclear Power Station
NRC Project Manager - R.E. Ginna Nuclear Power Plant
Maryland DNR - S. Seaman
Pennsylvania DEP - W. DeHaas
NYSERDA - A. L. Peterson
Illinois Emergency Management Agency – Division of Nuclear Safety

Attachment

Response to Request for Additional Information

Request for Additional Information (RAI) 1:

Background

Section 3 of the application identifies the applicable requirements of the ASME BPV Code, Section XI, including the following:

- Paragraph IWA-4141 requires the Owner to provide or cause to be provided a Repair Replacement Program, a Repair Replacement Plan, and specification requirements for repair/replacement activities.
- Paragraph IWA-4142 states, in part, that the organization that performs repair/replacement activities shall establish a Quality Assurance Program for control of their activities in accordance with the Repair/Replacement Program and Plans.

Section 5 of the application states, in part:

Quality Assurance Program and system/component specification requirements remain in place during application of this relief request; therefore, these technical requirements remain unchanged. The specific requirements will not be documented in a Repair/Replacement Plan but are currently implemented through the normal planning, procurement, and maintenance processes.

...

Documentation of the work activity and replacement bolting is achieved through the normal processes of procurement, planning, and maintenance.

...

Replacement bolting will receive Construction Code and Owner's Requirements NDE [nondestructive examination] as part of the normal procurement and receipt inspection processes which identify applicable Construction Code and Owner's Requirements. The Construction Code and Owner's Requirements for NDE will be documented in the procurement and receipt records.

Request

Describe the normal planning, procurement, maintenance, and receipt inspection processes for pressure retaining bolting not included within Examination Categories B-G, B-G-2, or C-D. Explain how these processes will ensure that the replacement of such bolting will be performed in accordance with the requirements in the ASME BPV Code, Section XI, and that this activity will be adequately documented. Explain how the Quality Assurance Program and system/component specification requirements remain in place and applicable for such bolting in the absence of repair/replacement plans.

Response:

The Exelon Quality Assurance Program specifies all requirements whether or not Section XI applies. Work orders are prepared in advance of scheduled maintenance activities. Work Planners reserve bolting materials in accordance with the plant piping specifications, component specifications, or applicable drawings. Bolting materials are classified in

accordance with site requirements and procured in accordance with those requirements, which are governed by ASME, ASTM, or material specifications based on site requirements. In accordance with Exelon's Quality Assurance Topical Report, safety-related bolting materials receive a quality receipt inspection by a qualified individual, which includes physical inspections and documentation review. When bolting materials are installed, material traceability information, such as a unique material identifier or purchase order number, is documented in the work order and available for review as part of the completed work order package.

This relief request proposes to forego preparation and completion of a Repair/Replacement Plan Form and the associated Forms NIS-2 (or NIS-2A) for replacement of pressure retaining bolting that is not classified as Examination Category B-G-1, B-G-2, or C-D. This relief request will not be applied to activities that involve replacement of bolting that has experienced unacceptable service-induced degradation or that is being driven by a design change. The plant Quality Assurance Program and the plant system and component Specification requirements will remain in place and implemented for bolting replacements that occur under the alternatives of this relief request just as they are today.

No technical or process changes are being requested under this relief request. The proposed alternative is simply to remove the administrative Forms required by current Code for the Repair/Replacement Plan Form and the associated Forms NIS-2 (or NIS-2A). The plant work management systems, procurement specifications, installation procedures, and work order documentation will remain in place and be implemented to assure the work activity and material are adequately controlled and documented for these routine replacements of the subset of bolting described above.

RAI 2:

Background

Section 5 of the application states, in part:

The current Form NIS-2 (or NIS-2A) provides documented evidence of compliance with Section XI for repair/replacement activities by obtaining Owner and Authorized Inspection Agency signatures. The proposed alternative would use current work control, procurement, and records retention processes to assure that the Authorized Inspection Agency has access to records of bolting replacement in order to maintain Code oversight; however, there will be no Repair/Replacement Plan or Form NIS-2 (or NIS-2A) presented to the agency in order to complete the Form approval. Owner and Authorized Inspection Agency reviews of completed work orders applying this relief request will be documented in records associated with the work management process (e.g., hard copy signature in work order documentation and electronic work order review records (commonly referred to as "Post Work Review")).

Request

Describe how Exelon's work control, procurement, and records retention processes will demonstrate that repair/replacement activities were adequately performed and the associated requirements of the ASME BPV Code, Section XI, were met. Describe how these processes will permit verification and certification by the Authorized Inspection Agency that the applicable Section XI requirements for repair/replacement activities have been met. Confirm that the licensee's processes discussed above will be readily available for review by NRC inspectors.

Response:

Exelon understands that the wording presented in the second to last paragraph of Section 5 of the relief request may have confused the proposed alternative discussed throughout the request. Exelon will clarify this paragraph with the following revision and additional explanation to the wording contained in that paragraph:

The current Form NIS-2 (or NIS-2A) provides documented evidence of compliance with Section XI for repair/replacement activities by obtaining Owner and Authorized Inspection Agency signatures. This relief request proposes to forego preparation and completion of the Repair/Replacement Plan and associated Form NIS-2 (or NIS-2A) for replacement of pressure retaining bolting that is not classified as Examination Category B-G-1, B-G-2, or C-D. The proposed alternative will use existing work control, procurement, and records retention processes to assure adequate controls of these routine bolting replacements. The Authorized Inspection Agency will have access to these site work control systems for review at their discretion. Should the Authorized Inspection Agency choose to review certain completed work orders that fall under this relief request, the work management system will be used to document any agency comments during the work order records review, commonly referred to as the post-work review process.

Documentation of the work activity and replacement bolting will be maintained through the normal plant processes of procurement, planning, and maintenance. Close-out reviews will continue to be completed through the normal post-work review process to assure appropriate documentation of work performed and material traceability is achieved. These processes and work control systems including the associated work orders and procurement documentation will be available at each site for review by NRC Inspectors.

RAI 3:

Background

The regulations in 10 CFR 50.55a(z) allow the NRC staff to authorize alternatives to the requirements in paragraphs (b) through (h) of 10 CFR 50.55a, but do not allow the staff to approve alternatives to requirements not currently in these paragraphs. The staff does not generally approve alternatives to the requirements in 10 CFR 50.55a beyond the current 10-year inservice inspection (ISI) interval, unless specific circumstances would justify a longer interval. For example, the staff can approve alternatives for the next ISI interval when it is near the end of the current interval and the applicable requirements for the next interval are known (see 10 CFR 50.55a(g)(4)(ii)).

The licensee requested use of the proposed alternative for the remainder of each plant's 10-year ISI interval and for the remainder of each plant's life. Section 2 of the application identifies the ASME BPV Code edition and addenda applicable to the current 10-year ISI interval for each plant, and Section 3 of the application identifies the specific Code requirements associated with this request. However, the application does not identify the ASME BPV Code edition and addenda nor the specific code requirements applicable to future 10-year ISI intervals. Thus, the licensee has not demonstrated that the proposed alternative is limited to the current requirements in paragraphs (b) through (h) of 10 CFR 50.55a.

Request

For each plant, either:

- (1) Limit the scope of the request to the current 10-year ISI interval; or
- (2) Identify the specific ASME BPV Code edition and addenda applicable to each future 10-year ISI interval in which the proposed alternative will be used. Identify the applicable code requirements in each future edition and addenda of the ASME BPV Code, unless they are already listed in Section 3 of the application.

Response:

The requested duration of the proposed alternative for each Exelon plant is for their current 10-year ISI Interval. Section 2 of the Relief Request has been revised for the Dresden Nuclear Power Station, Units 2 and 3, and the Quad Cities Nuclear Power Station, Units 1 and 2 which are currently being updated using the 2017 Edition of ASME Section XI as endorsed in the latest revision of 10 CFR 50.55a that will be in effect eighteen months prior to the new interval start dates for those plants. The Revised Section 2 table below reflects these revised dates, as noted by the revision bars.

<u>PLANT</u>	<u>INTERVAL</u>	<u>EDITION</u>	<u>START</u>	<u>END</u>
Braidwood Station, Units 1 and 2	Fourth	2013 Edition	August 29, 2018 November 5, 2018	July 28, 2028 October 16, 2028
Byron Station, Units 1 and 2	Fourth	2007 Edition, through 2008 Addenda	July 16, 2016	July 15, 2025
Calvert Cliffs Nuclear Power Plant, Units 1 and 2	Fifth	2013 Edition	July 1, 2019	June 30, 2029
Clinton Power Station, Unit 1	Fourth	2013 Edition	July 1, 2020	June 30, 2030
Dresden Nuclear Power Station, Units 2 and 3	Fifth	2007 Edition, through 2008 Addenda	January 20, 2013	January 19, 2023
Dresden Nuclear Power Station, Units 2 and 3	Sixth	2017 Edition	January 20, 2023	January 19, 2033
James A. FitzPatrick Nuclear Power Plant	Fifth	2007 Edition, through 2008 Addenda	August 1, 2017	June 15, 2027
LaSalle County Stations, Units 1 and 2	Fourth	2007 Edition, through 2008 Addenda	October 1, 2017	September 30, 2027
Limerick Generating Station, Units 1 and 2	Fourth	2007 Edition, through 2008 Addenda	February 1, 2017	January 31, 2027
Nine Mile Point Nuclear Station, Unit 1	Fifth	2013 Edition	August 23, 2019	August 22, 2029
Nine Mile Point Nuclear Station, Unit 2	Fourth	2013 Edition	August 23, 2018	August 22, 2028
Peach Bottom Atomic Power Station, Units 2 and 3	Fifth	2013 Edition	January 1, 2019	December 31, 2028
Quad Cities Nuclear Power Station, Units 1 and 2	Fifth	2007 Edition, through 2008 Addenda	April 2, 2013	April 1, 2023
Quad Cities Nuclear Power Station, Units 1 and 2	Sixth	2017 Edition	April 2, 2023	April 1, 2033
R. E. Ginna Nuclear Power Plant	Sixth	2013 Edition	January 1, 2020	December 31, 2029