



RS-15-253

10 CFR 50.55a

September 21, 2015

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

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

Subject: Withdrawal of Relief Request RV-1 and Revision to Relief Request RG-1
Associated with the Fourth Inservice Testing Interval

Reference: Letter from D. M. Gullott (Exelon Generation Company, LLC) to U. S. NRC,
"Submittal of Relief Requests Associated with the Fourth Inservice Testing
Interval," dated June 22, 2015

In the referenced letter, Exelon Generation Company, LLC (EGC) requested approval of five proposed relief requests in accordance with 10 CFR 50.55a, "Codes and standards." These relief requests are associated with the Fourth 10-Year Inservice Testing (IST) Program Interval for Byron Station. The Fourth 10-Year Interval begins on July 1, 2016 and is required by 10 CFR 50.55a(f)(4) to comply with the requirements of the American Society of Mechanical Engineers (ASME) Operation and Maintenance (OM) Code, 2004 Edition through the 2006 Addenda.

Subsequent to submittal of the referenced letter, additional discussions were held between the NRC and EGC regarding two of the relief requests.

Relief Request RV-1 requested NRC approval to use Code Case OMN-1, Revision 1, "Alternative Rules for Preservice and Inservice Testing of Active Electric Motor-Operated Valve Assemblies in Light-Water Reactor Power Plants." During the review of this relief request, the NRC questioned whether Byron Station would realize additional benefits by submitting Code Case OMN-1, Revision 1, for NRC approval vice using Code Case OMN-1, Revision 0, which is listed in Regulatory Guide 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code," Revision 1. Note that licensees may apply the ASME Operation and Maintenance Code Cases listed in Regulatory Guide 1.192, Revision 1, without prior NRC approval, subject to conditions, as specified in 10 CFR 50.55a(b)(6).

Upon further review, Byron Station concurs that utilization of Code Case OMN-1, Revision 0 will afford the appropriate relief; therefore, EGC respectfully withdraws Relief Request RV-1.

Relief Request RG-1, requested NRC approval to use Code Case OMN-20, "Inservice Test Frequency." Code Case OMN-20 allows a grace period for certain IST specified test frequencies. Relief Request RG-1 provides a list of applicable ASME OM Code requirements to which Code Case OMN-20 will be applied. It was determined that the applicable sections of Code Case OMN-1, Revision 0, would be added to the listing in Relief Request RG-1. Attachment 1 provides an updated revision of Relief Request RG-1 which supersedes, in its entirety, the original version of Relief Request RG-1 submitted with the referenced letter.

As noted in the referenced letter, the Byron Station Fourth 10-year IST Interval will be in effect from July 1, 2016 to June 30, 2026; accordingly, EGC respectfully requests approval of the subject relief requests by June 22, 2016.

There are no regulatory commitments contained in this letter. Should you have any questions concerning this letter, please contact Joseph A. Bauer at (630) 657-2804.

Respectfully,



David M. Gullott
Manager – Licensing
Exelon Generation Company, LLC

Attachment 1: 10 CFR 50.55a Request Number RG-1 – Inservice Test Frequency per Code Case OMN-20

cc: NRC Regional Administrator – Region III
NRC Senior Resident Inspector – Byron Station
NRC Project Manager, NRR – Byron Station
Illinois Emergency Management Agency – Division of Nuclear Safety

ATTACHMENT 1
10 CFR 50.55a Request Number RG-1

Inservice Test Frequency Per Code Case OMN-20
Proposed Alternative Requested In Accordance with 10 CFR 50.55a(z)(2)
-- Hardship or Unusual Difficulty without Compensating
Increase in Level of Quality and Safety --
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1. ASME Code Component(s) Affected

All Pumps and Valves contained within the Byron Station Inservice Testing (IST) Program scope.

2. Applicable Code Edition and Addenda

ASME OM Code 2004 Edition through the 2006 Addenda.

3. Applicable Code Requirement(s)

This request applies to the frequency specifications of the ASME OM Code. The frequencies for tests given in the ASME OM Code do not include a tolerance band.

ISTA-3120(a) – "The frequency for inservice testing shall be in accordance with the requirements of Section IST."

ISTB-3400 – Frequency of Inservice Tests; "An inservice test shall be run on each pump as specified in Table ISTB-3400-1." Table ISTB-3400-1 lists two frequencies – quarterly and biennially.

ISTC-3510 – Exercising Test Frequency; "Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months,..."

ISTC-3540 – Manual Valves; "Manual Valves shall be full-stroke exercised at least once every 2 years, except where adverse conditions may require the valve to be tested more frequently to ensure operational readiness."

ISTC-3630(a) – Frequency; "Tests shall be conducted at least once every 2 years."

ISTC-3700 – Position Verification Testing; "Valves with remote position indicators shall be observed locally at least once every 2 years to verify that valve operation is accurately indicated."

ISTC-5221(c)(3) – Valve Obturator Movement; "At least one valve from each group shall be disassembled and examined at each refueling outage; all valves in each group shall be disassembled and examined at least once every 8 years."

Appendix I, I-1320(a) – Test Frequencies, Class 1 Pressure Relief Valves; "Class 1 pressure relief valves shall be tested at least once every 5 years..."

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- Appendix I, I-1330 – Test Frequency, Class 1 Nonreclosing Pressure Relief Devices; "Class 1 nonreclosing pressure relief devices shall be replaced every 5 years..."
- Appendix I, I-1340 – Test Frequency, Class 1 Pressure Relief Valves that are used for Thermal Relief Application; Refers to I-1320 for test frequency.
- Appendix I, I-1350 – Test Frequency, Classes 2 and 3 Pressure Relief Valves; "Classes 2 and 3 pressure relief valves, with the exception of PWR main steam safety valves, shall be tested every 10 years, ..."
- Appendix I, I-1360 – Test Frequency, Classes 2 and 3 Nonreclosing Pressure Relief Devices; "Classes 2 and 3 nonreclosing pressure relief devices shall be replaced every 5 years, ..."
- Appendix I, I-1370 – Test Frequency, Classes 2 and 3 Primary Containment Vacuum Relief Valves; "Tests shall be performed on all Classes 2 and 3 containment vacuum relief valves at each refueling outage or every 2 years, ..."
- Appendix I, I-1380 – Test Frequency, Classes 2 and 3 Vacuum Relief Valves Except for Primary Containment Vacuum Relief Valves; "All Classes 2 and 3 vacuum relief valves shall be tested every 2 years, ..."
- Appendix I, I-1390 – Test Frequency, Classes 2 and 3 Pressure Relief Devices that are used for Thermal Relief Application; "Tests shall be performed on all Classes 2 and 3 relief devices used in thermal relief application every 10 years,"
- Appendix II, II-4000(a)(1)(e) – Performance Improvement Activities; Subparagraph (1)(e) requires the identification of the interval for each activity.
- Appendix II, II-4000(b)(1)(e) – Optimization of Condition-Monitoring Activities; Subparagraph (1)(e) requires the identification of the interval for each activity.
- OMN-1, 3.3.1(b) – Inservice Test Interval; Subparagraph 3.3.1(b) requires "...MOV inservice testing shall be conducted every 2 refueling cycles or 3 years (whichever is longer)..."
- OMN-1, 3.3.1(c) – Inservice Test Interval; Subparagraph 3.3.1(c) requires "The maximum inservice test interval shall not exceed 10 years."
- OMN-1, 3.6.1 – Normal Exercising Requirements requires "...with the maximum time between exercises to be not greater than 24 months."
- OMN-1, 3.7.2.1 – HSSC MOVs requires "HSSC MOVs that can be operated during plant operation shall be exercised quarterly, unless..."

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OMN-1, 3.7.2.2(c) – LSSC MOVs; Subparagraph 3.7.2.2(c) requires "...using an initial test interval of three refueling cycles or 5 years (whichever is longer)..."

OMN-1, 3.7.2.2(d) – LSSC MOVs; Subparagraph 3.7.2.2(d) requires "LSSC MOVs shall be inservice tested at least every 10 years..."

NOTE: OMN-1 (2006 Addenda) is the version of the Code Case which will be utilized by Byron during the Fourth IST Interval.

4. Reason for Request

In accordance with 10 CFR 50.55a, "Codes and standards," paragraph (z)(2), an alternative is requested to the frequency specifications of the ASME OM Code. The basis of this request is that the Code requirements present an undue hardship without a compensating increase in the level of quality or safety.

ASME OM Code Section IST establishes the inservice test frequencies for all components within the scope of the Code. The frequencies (e.g., quarterly) have always been interpreted as "nominal" frequencies (generally as defined in Table 3.2 of NUREG-1482, Revision 2) and Owners routinely applied the surveillance extension time period (i.e., grace period) contained in the plant Technical Specifications (TS) Surveillance Requirements (SRs). The TS typically allow for a less than or equal to 25% extension of the surveillance test interval to accommodate plant conditions that may not be suitable for conducting the surveillance (SR 3.0.2). However, regulatory issues have been raised concerning the applicability of the TS "Grace Period" to ASME OM Code required inservice test frequencies irrespective of allowances provided under TS Administrative Controls (i.e., TS 5.5.8, "Inservice Testing Program," invokes SR 3.0.2 for various OM Code frequencies of 2 years or less).

The lack of a tolerance band on the ASME OM Code inservice test frequencies restricts operational flexibility. There may be a conflict where a surveillance test could be required (i.e., its Frequency could expire), but where it is not possible or not desired that it be performed until sometime after a plant condition or associated Limiting Condition for Operation (LCO) is within its applicability. Therefore, to avoid this conflict, the surveillance test should be performed when plant conditions allow.

The NRC recognized this potential issue in the TS by allowing a frequency tolerance as described in TS SR 3.0.2. The lack of a similar tolerance applied to OM Code testing places an unusual hardship on the plant to adequately schedule work tasks without operational flexibility.

Thus, just as with TS required surveillance testing, some tolerance is needed to allow adjusting OM Code testing intervals to suit the plant conditions and other maintenance and testing activities. This assures operational flexibility when scheduling surveillance tests that minimize the conflicts between the need to complete the surveillance and plant conditions.

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5. Proposed Alternative and Basis for Use

Byron Station proposes the use of the allowance of grace as stipulated in ASME OM Code Case OMN-20 for flexibility in IST scheduling for applicable code requirements noted in Section 3 above. OMN-20 was published in the 2012 edition of the ASME OM Code and is applicable to all earlier editions and addenda.

The ASME OM Code establishes component test frequencies that are based either on elapsed time periods (e.g., quarterly, 2 years, etc.) or on the occurrence of plant conditions or events (e.g., cold shutdown, refueling outage, upon detection of a sample failure, following maintenance, etc.).

- a. Components whose test frequencies are based on elapsed time periods shall be tested at the frequencies specified in ASME OM Code Section IST with a specified time period between tests as shown in Table 1.

Table 1 – Specified Test Frequency

Frequency	Specified Time Period Between Tests (all values are 'not to exceed'; no minimum periods are specified)
Quarterly (or every 3 months)	92 days
Semiannually (or every 6 months)	184 days
Annually (or every year)	366 days
x Years	x calendar years where 'x' is a whole number of years ≥ 2

The specified time period between tests may be reduced or extended as follows:

- 1) For periods specified as less than 2 years, the period may be extended by up to 25% for any given test. This is consistent with Byron Station TS Section 5.5.8, "Inservice Testing Program."
- 2) For periods specified as greater than or equal to 2 years, the period may be extended by up to 6 months for any given test.
- 3) All periods specified may be reduced at the discretion of the owner (i.e., there is no minimum period requirement).

Period extension is to facilitate test scheduling and considers plant operating conditions that may not be suitable for performance of the required testing (e.g., performance of the test would cause an unacceptable increase in the plant risk profile due to transient conditions or other ongoing surveillance, test or maintenance activities). Period extensions are not intended to be used repeatedly merely as an operational convenience to extend test intervals beyond those specified.

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Period extensions may also be applied to accelerated test frequencies (e.g., pumps in Alert Range) and other less than two year test frequencies not specified in the table above.

Period extensions may not be applied to the test frequency requirements specified in Subsection ISTD, Preservice and Inservice Examination and Testing of Dynamic Restraints (i.e., snubbers) in Light-Water Reactor Nuclear Power Plants, as Subsection ISTD contains its own rules for period extensions.

- b. Components whose test frequencies are based on the occurrence of plant conditions or events (e.g., cold shutdown, refueling outage, upon detection of a sample failure, following maintenance, etc.) may not have their period between tests extended except as allowed by the ASME OM Code.

Previous versions of the ASME Code and the current Byron Station TS provide operational flexibility for the performance of ASME OM Code testing. As currently written, ASME OM Code requirements do not allow testing period extensions that provide an allowance for the performance of ASME OM Code testing. As a result, this places an unusual hardship on Byron Station's ability to schedule and perform ASME OM Code testing without a compensating increase in the level of quality and safety.

6. Duration of Proposed Alternative

The proposed alternative will be utilized during the entire fourth 120-month Inservice Test interval (which will begin on July 1, 2016 and conclude on June 30, 2026).

7. Precedents

Similar requests were approved for:

- a. Callaway Plant Unit 1, (Docket No. 50-483), Request No. PR-04, as discussed in NRC Safety Evaluation Report (SER) dated July 15, 2014 (TAC NOS. MF2784 through MF2789). This report may be found in ADAMS via accession number ML14178A769.
- b. Dresden Nuclear Power Station, 10 CFR 50.55a Request RV-01, NRC Safety Evaluation Report (SER) dated October 31, 2013, TAC NOS. ME9865, ME9866, ME9869, ME9870 and ME9872. This report may be found in ADAMS via accession number ML13297A515.
- c. Three Mile Island Nuclear Station, 10 CFR 50.55a request VR-01, NRC SER dated August 15, 2013, TAC NOS. MF0046, MF0047 and MF0048. This report may be found in ADAMS via accession number ML13227A024.
- d. Quad Cities Nuclear Power Station, Units 1 and 2 (NRC Dockets 50-254 and 50-265), Request No. RV-01, as discussed in NRC Safety Evaluation Report (SER) dated February 14, 2013 (TAC NOS. ME7981 through ME7995). This report may be found in ADAMS via accession number ML13042A348.

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8. References

- a. Byron Station Technical Specifications:
 - 1) Section 1.4 – Frequency
 - 2) Section 3.0 – Limiting Condition for Operation (LCO) Applicability
 - 3) Section 5.5.8 – Inservice Testing Program
- b. ASME OM Code Case OMN-20, Inservice Test Frequency
- c. ASME OM Code Case OMN-1 (2006 Addenda), Alternative Rules for Preservice and Inservice Testing of Active Electric Motor-Operated Valve Assemblies in Light-Water Reactor Power Plants