

10 CFR 50.55a

March 29, 2020

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

Limerick Generating Station, Unit 1
Renewed Facility Operating License No. NPF-39
NRC Docket No. 50-352

Subject: Relief Request GVRR-9 Associated with Pandemic Related Issues – Inservice Testing Interval Extension for Motor Operated Valves

Based on the current situation associated with pandemic related issues, Exelon Generation Company, LLC (Exelon) is requesting a proposed alternative to the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), for the Inservice Testing Program. Attached is the proposed alternative associated with Inservice Testing Interval extension for certain Limerick Generating Station (LGS), Unit 1, Motor Operated Valves (MOVs).

At the current time, Exelon is reducing activities associated with the LGS, Unit 1, outage which began on Saturday, March 28, 2020, in order to limit the spread of the COVID-19 virus. As discussed in the relief request, many of these activities involve close contact and a limit to social distancing. Further review has determined that close contact required to perform the MOV testing would be detrimental to the occupational health and safety of the workforce and result in the potential to spread the virus. Additionally, the station may experience critical shortages of specially trained and qualified personnel due to illness which will greatly affect completion of these required tests during the current refuel outage. Accordingly, Exelon is requesting approval of this relief on an expedited basis.

Due to the urgent nature of this situation, Exelon is requesting approval of the attached relief request by March 31, 2020.

There are no regulatory commitments in this letter.

U.S. Nuclear Regulatory Commission
Relief Request GVRR-9 Associated with Pandemic Related Issues for MOVs
Docket No. 50-352
March 29, 2020
Page 2

If you have any questions concerning this letter, please contact David Neff at
(267) 533-1132.

Respectfully,



David P. Helker
Sr. Manager, Licensing
Exelon Generation Company, LLC

Attachment: Relief Request GVRR-9 Associated with Pandemic Related Issues - Inservice
Testing Interval Extension for Motor Operated Valves

cc: w/ Attachments
Regional Administrator - NRC Region I
NRC Senior Resident Inspector - Limerick Generating Station
NRC Project Manager - Limerick Generating Station
R. R. Janati, Pennsylvania Bureau of Radiation Protection

Attachment

**Relief Request GVRR-9 Associated with Pandemic Related Issues - Inservice Testing
Interval Extension for Motor Operated Valves**

**EXELON GENERATION COMPANY, LLC
IST PROGRAM – RELIEF REQUEST
Limerick Generating Station Unit 1**

**Proposed Alternative in Accordance with 10 CFR 50.55a(z)(2)
Associated with Pandemic Related Issues
GVRR-9, Revision 0, Inservice Testing Interval Extension for Motor Operated Valves**

1. ASME Code Component(s) Affected

The following 17 active safety related motor operated valves (MOVs) are required by Subsection ISTC of the 2012 Edition of the American Society of Mechanical Engineers (ASME) Operation and Maintenance (OM) Code to be tested in accordance with ASME OM Code Mandatory Appendix III.

	<u>Component</u>	<u>System</u>	<u>Code Class</u>	<u>Category</u>	<u>Type</u>
1	HV-013-106	Reactor Enclosure Cooling Water	2	A	MO
2	HV-013-108	Reactor Enclosure Cooling Water	2	A	MO
3	HV-013-111	Reactor Enclosure Cooling Water	2	A	MO
4	HV-041-130B	Nuclear Boiler	1	A	MO
5	HV-041-140	Nuclear Boiler	NC	B	MO
6	HV-046-125	Control Rod Drive Hydraulic	NC	B	MO
7	HV-048-1F006B	Standby Liquid Control	1	A/C	MO
8	HV-051-1F008	Residual Heat Removal	1	A	MO
9	HV-051-1F009	Residual Heat Removal	1	A	MO
10	HV-057-162	Containment Atmospheric Control	2	A	MO
11	HV-057-163	Containment Atmospheric Control	2	A	MO
12	HV-059-101	Primary Containment Instrument Gas	2	A	MO
13	HV-059-151A	Primary Containment Instrument Gas	2	A	MO
14	HV-059-151B	Primary Containment Instrument Gas	2	A	MO
15	HV-087-120A	Drywell Chilled Water	NC	A	MO
16	HV-087-121B	Drywell Chilled Water	NC	A	MO
17	HV-087-123	Drywell Chilled Water	2	A	MO

2. Applicable Code Edition and Addenda

American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), 2012 Edition with no addenda.

3. Applicable Code Requirement

The ASME OM Code Mandatory Appendix III, Preservice and Inservice testing of Active Electric Motor-Operated Valve Assemblies in Water Cooled Reactor Nuclear Power Plants.

The following Appendix III Paragraphs are affected by this Relief Request (RR) for a one-time IST Program interval extension to the next refueling outage for specific Limerick Generating Station (LGS), Unit 1, MOVs.

**EXELON GENERATION COMPANY, LLC
IST PROGRAM – RELIEF REQUEST
Limerick Generating Station Unit 1**

**Proposed Alternative in Accordance with 10 CFR 50.55a(z)(2)
Associated with Pandemic Related Issues
GVRR-9, Revision 0, Inservice Testing Interval Extension for Motor Operated Valves**

III-3310 Inservice Test Interval. (c) The maximum inservice test interval shall not exceed 10 yr. MOV inservice tests conducted per para. III-3400 may be used to satisfy this requirement.

III-3722 LSSC MOVs. (d). LSSC MOVs shall be inservice tested at least every 10 yr in accordance with para. III-3310.

4. Reason for Request

In accordance with 10 CFR 50.55a(z)(2), Exelon Generation Company, LLC (Exelon) is requesting approval for a one-time IST Program interval extension to the next refueling outage for specific LGS, Unit 1, MOVs due to occupational health and safety concerns associated with pandemic related issues. The next refueling outage is currently scheduled for the spring of 2022 (Li1R19). For each of the identified applicable paragraphs, relief is being sought for alternative treatments described in Section 5 of this RR based on the existence of satisfactory MOV performance and capability and that compliance would involve activities that would be detrimental to the occupational health and safety of the workforce and result in the potential to spread the virus. The basis of the request is that compliance results in hardship or unusual difficulty without a compensating increase in level of quality or safety during the current pandemic.

At the current time, Exelon is reducing activities associated with the LGS, Unit 1 outage which began on Saturday, March 28, 2020, in order to limit the spread of the COVID-19 virus. As discussed in this RR, many of these activities involve close contact and a limit to social distancing. Further review has determined that close contact required to perform the MOV testing would be detrimental to the occupational health and safety of the workforce and result in the potential to spread the virus. Additionally, the station may experience critical shortages of specially trained and qualified personnel due to illness which will greatly affect completion of these required tests during the current refueling outage. These tests require several valve maintenance technicians, and other support personnel (e.g., scaffold builders, radiation protection technicians, and other maintenance personnel). Accordingly, Exelon is requesting approval of this relief on an expedited basis.

The United States government declared a national emergency associated with the COVID-19 outbreak on March 13, 2020. In addition, the state of Pennsylvania, where LGS is located, made an Emergency Disaster Declaration on March 5, 2020, to take actions necessary to reduce exposure to the virus associated with the COVID-19 outbreak. The Centers for Disease Control (CDC) is recommending social distancing as it applies to COVID-19. The CDC defines social distancing as "remaining out of congregate settings, avoiding mass gatherings, and maintaining distance (approximately 6 feet or 2 meters) from others when possible." In the case of performing the MOV testing at a nuclear power plant, which requires work in close spaces, this recommendation cannot be effectively implemented.

Due to the COVID-19 pandemic and in an effort to comply with CDC guidance, Exelon is requesting relief associated with performing certain MOV testing. Section 5 of this RR demonstrates that there is reasonable assurance that the design function of each identified

**EXELON GENERATION COMPANY, LLC
IST PROGRAM – RELIEF REQUEST
Limerick Generating Station Unit 1**

**Proposed Alternative in Accordance with 10 CFR 50.55a(z)(2)
Associated with Pandemic Related Issues
GVRR-9, Revision 0, Inservice Testing Interval Extension for Motor Operated Valves**

MOV will be maintained through the next refuel outage currently scheduled for the spring of 2022 (Li1R19). The technical justification utilizes available detailed data from the most recent MOV test, the corresponding MOV Functional Margin, and a review of the maintenance history for each MOV. This provides the technical justification necessary to show that the proposed alternative is acceptable, and that deferral of the MOV testing in 2020 will not result in an adverse consequence to safety.

5. Proposed Alternative and Basis for Use

Exelon is requesting relief associated with performing the identified MOV testing in accordance with 10 CFR 50.55a(z)(2) on the basis that compliance results in hardship or unusual difficulty without a compensating increase in level of quality or safety during the current pandemic. Exelon proposes a one-time extension to IST Program intervals for specific LGS, Unit 1, MOVs to the next refueling outage currently scheduled for the spring of 2022 (Li1R19). An evaluation was performed for each identified MOV that utilized detailed data from the most recent MOV test, the corresponding MOV Functional Margin, and a review of the maintenance history for each MOV. This evaluation concluded that the proposed alternative is acceptable, and that deferral of the specific MOV testing in 2020 will not result in an adverse consequence to safety.

Over the past twenty years, Exelon MOV Programs have demonstrated many margin stable MOVs that are being considered for extension of their current MOV Program maximum inservice test intervals of ten years. Exelon submitted a RR for Limerick to permit implementation of the approved Code Case OMN-26 (Reference 1) and the NRC has accepted the requested licensing action (Reference 2). However, the one-time RR contained in this current submittal does not rely on the approval of the Code Case OMN-26 RR.

Table 1 below contains the calculated MOV Functional Margin, after accounting for uncertainties and degradation factors, based on the most current MOV test. An MOV's functional margin is a composite margin that defines the functional capability of the MOV to perform its design basis safety function. Each of these MOVs has a Functional Margin of high ($\geq 10\%$ and $< 20\%$) or very high ($\geq 20\%$) indicating that there is existing safety margin to assure reliable operation of these MOVs. The evaluation for this RR also included a review of the maintenance history of each MOV. No deficiencies, adverse trends or open maintenance work orders were identified that would impact or degrade each valve's performance capability and exclude it from this interval extension RR. Each MOV in the scope of this RR is currently on a standard testing interval with acceptable performance. Considering the valves' current acceptable performance and the high or very high MOV functional margin, there is reasonable assurance that each MOV will continue to be capable of performing its design function during the use of this RR.

In summary, extending the MOV testing interval for each MOV in the scope of this RR to the next refueling outage scheduled for the spring of 2022 (Li1R19) would not adversely impact the function of the MOV or result in a reduction in plant safety. In the current pandemic environment, performing the required tests would result in an increased risk of virus exposure to plant personnel and a reduction in occupational health and safety without a

**EXELON GENERATION COMPANY, LLC
IST PROGRAM – RELIEF REQUEST
Limerick Generating Station Unit 1**

**Proposed Alternative in Accordance with 10 CFR 50.55a(z)(2)
Associated with Pandemic Related Issues
GVRR-9, Revision 0, Inservice Testing Interval Extension for Motor Operated Valves**

compensating benefit. Therefore, this RR meets the criteria for relief on the basis that compliance results in hardship or unusual difficulty without a compensating increase in level of quality or safety during the current pandemic.

6. Duration of Proposed Alternative

This submittal requests a one-time IST Program interval extension for specific LGS, Unit 1, MOVs to the next refueling outage that is currently scheduled for the spring of 2022 (Li1R19).

7. Precedent

None

8. References

1. Exelon letter to NRC, "Proposed Alternative to Utilize Code Case OMN-26," dated January 31, 2020 (ADAMS Accession No. ML20034C819)
2. NRC email to Exelon, "Code Case OMN-26 (EPID L-2020-LLR-0012)," dated February 25, 2020 (ADAMS Accession No. ML20056F345)

**EXELON GENERATION COMPANY, LLC
IST PROGRAM – RELIEF REQUEST
Limerick Generating Station Unit 1**

**Proposed Alternative in Accordance with 10 CFR 50.55a(z)(2)
Associated with Pandemic Related Issues
GVRR-9, Revision 0, Inservice Testing Interval Extension for Motor Operated Valves**

**Table 1
Comparison of MOV Testing Interval**

#	MOV ID Number	Functional Margin	Last Tested	Current Max Interval	Requested Outage (Year)
1	HV-013-106	78.5	2010	10	L1R19 (2022)
2	HV-013-108	219.1	2010	10	L1R19 (2022)
3	HV-013-111	226.7	2010	10	L1R19 (2022)
4	HV-041-130B	180.6	2010	10	L1R19 (2022)
5	HV-041-140	74.9	2010	10	L1R19 (2022)
6	HV-046-125	102.3	2010	10	L1R19 (2022)
7	HV-048-1F006B	61.1	2010	10	L1R19 (2022)
8	HV-051-1F008	40.3	2010	10	L1R19 (2022)
9	HV-051-1F009	35.6	2010	10	L1R19 (2022)
10	HV-057-162	98.7	2010	10	L1R19 (2022)
11	HV-057-163	361.0	2010	10	L1R19 (2022)
12	HV-059-101	97.6	2010	10	L1R19 (2022)
13	HV-059-151A	97.1	2010	10	L1R19 (2022)
14	HV-059-151B	283.5	2010	10	L1R19 (2022)
15	HV-087-120A	10.2	2010	10	L1R19 (2022)
16	HV-087-121B	22.7	2010	10	L1R19 (2022)
17	HV-087-123	10.1	2010	10	L1R19 (2022)