



Energy Harbor Nuclear Corp.  
Beaver Valley Power Station  
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**Rod L. Penfield**  
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724-682-5234

April 1, 2020  
L-20-116

10 CFR 50.55a

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

SUBJECT:  
Beaver Valley Power Station, Unit No. 2  
Docket No. 50-412, License No. NPF-73  
10 CFR 50.55a Request Number VRR6, Revision 0, Motor-Operated Valve Test  
Frequency

In accordance with 10 CFR 50.55a(z)(2), Energy Harbor Nuclear Corp. hereby requests Nuclear Regulatory Commission (NRC) approval of request VRR6, Revision 0, that proposes an alternative test frequency for certain motor-operated valves in the Beaver Valley Power Station, Unit No. 2 (BVPS-2) Inservice Testing Program for Pumps and Valves.

Because of the hardship produced by the recent pandemic and the resulting national state of emergency, Energy Harbor Nuclear Corp. is requesting expedited NRC approval of this request. The proposed alternative would defer the tests until the next refueling outage, which is within the current fourth 10-year inservice test interval.

To support the critical generation and startup of BVPS-2 from its scheduled spring 2020 refueling outage, Energy Harbor Nuclear Corp. requests approval of the proposed alternative by April 4, 2020.

The enclosed request identifies the affected components, applicable code requirements, and a description and basis for the proposed alternative.

There are no regulatory commitments contained in this submittal. If there are any questions, or if additional information is required, please contact Mr. Phil H. Lashley, Acting Manager, Nuclear Licensing and Regulatory Affairs, at (330) 315-6808.

Sincerely,

A handwritten signature in black ink, appearing to read "Rod L. Penfield".

Rod L. Penfield

Beaver Valley Power Station, Unit No. 2

L-20-116

Page 2

Enclosure:

Beaver Valley Power Station, Unit No. 2, 10 CFR 50.55a Request Number VRR6,  
Revision 0

cc: NRC Region I Administrator  
NRC Resident Inspector  
NRR Project Manager  
Director BRP/DEP  
Site BRP/DEP Representative

Enclosure  
L-20-116

Beaver Valley Power Station, Unit No. 2  
10 CFR 50.55a Request Number VRR6, Revision 0

(3 Pages Follow)

Proposed Alternative  
In Accordance with 10 CFR 50.55a(z)(2)

--Hardship Without a Compensating Increase in Quality and Safety--

**1. ASME Code Components Affected**

The affected components are the Beaver Valley Power Station, Unit No. 2 (BVPS-2) motor-operated valves (MOVs) listed below:

2CHS\*MOV308A, Reactor coolant pump (RCP) 21A seal water injection isolation  
2CHS\*MOV308B, RCP 21B seal water injection isolation  
2CHS\*MOV308C, RCP 21C seal water injection isolation  
2CHS\*MOV378, RCP seal water return isolation  
2CHS\*MOV8130A, Charging pump suction isolation  
2CHS\*MOV8130B, Charging pump suction isolation  
2SIS\*MOV840, High head to cold leg injection isolation  
2SIS\*MOV841, High head to cold leg injection isolation  
2SIS\*MOV8890A, Low head safety injection pump 21A miniflow recirculation isolation  
2QSS\*MOV101B, Quench spray pump 21B discharge isolation  
2CCP\*MOV112B, RHR heat exchanger (B train) supply isolation  
2CCP\*MOV150-1, Primary component cooling header isolation outside containment  
2CCP\*MOV151-1, Primary component cooling header isolation outside containment  
2SWS\*MOV155-2, Containment air recirculation cooling coils supply header isolation  
2SWS\*MOV113D, Emergency diesel generator heat exchanger 21B service water header B cooling water inlet

**2. Applicable Code Edition and Addenda**

American Society of Mechanical Engineers (ASME) Operation and Maintenance (OM) Code – 2004 Edition, with Addenda through Omb-2006.

**3. Applicable Code Requirements**

ASME OM Code Case OMN-1 (ASME Omb Code-2006), "Alternative Rules for Preservice and Inservice Testing of Active Electric Motor-Operated Valve Assemblies in Light-Water Reactor Power Plants," Paragraph 3.3.1, "Inservice Test Interval," subparagraph (c) states, in part, that the maximum inservice test interval shall not exceed 10 years.

NOTE: ASME OM Code Case OMN-20, "Inservice Test Frequency," allows the specified time period between tests to be extended by up to six months for test periods specified as greater than or equal to two years. This Code Case is applicable to the 2004 Edition of the ASME OM Code in accordance with

10 CFR 50.55a(a)(1)(iv) and 10 CFR 50.55a(b)(3)(x). Therefore, the MOVs tested in accordance with OMN-1 cannot exceed a test interval of ten years plus six months.

#### **4. Reason for Request**

BVPS-2 is scheduled to start its 21<sup>st</sup> refueling outage (2R21) on April 12, 2020. The MOVs listed in Section 1 of this request that are tested in accordance with ASME OM Code Case OMN-1 are near the end of their maximum 10-year test interval as specified in Paragraph 3.3.1(c), and are required to be tested during this refueling outage.

On March 13, 2020, the President of the United States declared a national emergency due to the spread and infectious nature of the Coronavirus-2019 (COVID-19) virus and resulting pandemic. The most recent guidance from the Centers for Disease Control and Prevention (CDC) includes recommendations for social distancing by maintaining approximately six feet from other personnel to limit the spread of the virus. On March 28, 2020, the Governor of Pennsylvania issued a Stay at Home order for Beaver County and the surrounding counties of Allegheny and Butler. Furthermore, on March 28, 2020, the Department of Homeland Security identified workers in the nuclear energy sector as essential critical infrastructure workers.

To prevent the spread of COVID-19 at BVPS, Energy Harbor Nuclear Corp. intends to reduce the amount of personnel on-site, which will pose a hardship for completing the currently planned 2R21 refueling outage work scope. Energy Harbor Nuclear Corp. is also contingency planning in case some of its workforce becomes unavailable due to the COVID-19 outbreak. With the current work scope and potential loss of personnel, there is the potential that the company may not be able to complete the refueling outage in a timely manner, which could negatively impact critical infrastructure that is needed during this time.

#### **5. Proposed Alternative and Basis for Use**

Energy Harbor Nuclear Corp. is requesting relief to extend the testing of the MOVs listed in Section 1 of this request to the next BVPS-2 refueling outage (2R22) in the fall of 2021.

If approved, the test extension interval would represent an additional 1.5 months from when the valves would need to be tested per Code requirements. The MOVs listed in Section 1 of this request were last tested during 2R15 in March of 2011 and have a 10-year test frequency per ASME OM Code Case OMN-1. Although ASME OM Code Case OMN-20 permits a grace period of up to 6 months, it is insufficient to extend the interval to 2R22 planned during the fall of 2021.

Furthermore, each of the MOVs has the following margin between valve operating requirements and the available actuator output capability to satisfy the acceptance criteria for MOV operational readiness, along with the probabilistic risk assessment (PRA) ranking and exercise testing frequency:

Valve	Margin (percent)		Safety Direction	PRA Rank	Exercise Frequency
	Open (O)	Shut (S)			
2CHS*MOV308A	19.5	15.4	S	Low	Cold Shutdown / Refueling
2CHS*MOV308B	19.5	15.3	S	Low	Cold Shutdown / Refueling
2CHS*MOV308C	19.5	16.5	S	Low	Cold Shutdown / Refueling
2CHS*MOV378	74.5	148.9	S	Medium	Cold Shutdown / Refueling
2CHS*MOV8130A	78.5	28.5	S	Low	Cold Shutdown / Refueling
2CHS*MOV8130B	172.3	51.9	S	Low	Cold Shutdown / Refueling
2SIS*MOV840	13.7	11.5	O and S	Low	18 Months
2SIS*MOV841	29.7	225.0	O and S	Low	18 Months
2SIS*MOV8890A	196.5	51.0	O and S	Medium	Quarterly
2QSS*MOV101B	37.0	13.3	O and S	Low	18 Months
2CCP*MOV112B	23.6	23.3	O	Medium	Quarterly / Cold Shutdown
2CCP*MOV150-1	65.0	12.4	O and S	Medium	Refueling
2CCP*MOV151-1	73.6	10.3	O and S	Medium	Refueling
2SWS*MOV155-2	21.2	21.2	S	Low	18 Months
2SWS*MOV113D	40.1	16.2	O	Medium	Quarterly

The values above demonstrate that adequate margin exists between the operating requirements and the available actuator output capability to ensure the MOVs will be operationally ready.

Finally, the valves listed above are rising stem valves that will have their stems cleaned and lubricated in 2R21 except for the following butterfly valves:

- 2CCP\*MOV112B
- 2CCP\*MOV150-1
- 2CCP\*MOV151-1
- 2SWS\*MOV155-2

In conclusion, the following ensures that the proposed alternative to test these MOVs during 2R22 provides reasonable assurance that they remain operationally ready:

- The short 1.5 month test extension from the requirements in ASME OM Code Cases OMN-1 and OMN-20;
- The MOV actuator output margin to operating requirements from the most recent tests;
- They are exercised at least each refueling outage or 18 months;
- Except for four butterfly valves, the others are rising stem valves that will have stem lubrication maintenance during 2R21.

## **6. Duration of Proposed Alternative**

This proposed alternative is requested for use during the fourth 10-year inservice test interval until the next refueling outage in the fall of 2021 (2R22). The fourth 10-year inservice test interval began on September 20, 2017 and ends on September 19, 2027.