FENOC™
FirstEnergy Nuclear Operating Company

Beaver Valley Power Station
P.O. Box 4
Shippingport, PA 15077

Richard D. Bologna
Site Vice President

724-682-5234
Fax: 724-643-8069

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L-17-351

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-001

SUBJECT:
Beaver Valley Power Station, Unit Nos. 1 and 2
Docket No. 50-334, License No. DPR-66
Docket No. 50-412, License No. NPF-73
Anchor Darling Double Disc Gate Valve Information and Status

In Reference 1, the Nuclear Energy Institute (NEI) provided the Nuclear Regulatory Commission (NRC) a resolution plan for the U.S. Nuclear Industry to address the known Anchor Darling Double Disk Gate Valve (ADDDGV) issues. Reference 2 indicated each utility will provide a listing of their ADDDGV population with active safety functions along with relevant valve information, including the results of susceptibility evaluations, repair status, and a repair schedule for each susceptible valve not yet repaired. This letter serves to provide this information for Beaver Valley Power Station, Unit No. 1. Beaver Valley Power Station, Unit No. 2, has no ADDDGVs.

The Attachment to this letter contains the following information for each ADDDGV.

- Plant Name, Unit, and Valve ID
- System
- Valve Functional Description
- Valve Size
- Active Safety Function (open, close, both)
- Are multiple design basis post-accident strokes required? (yes/no)
- Expert Panel Risk Ranking (high, medium, low)
- Result of susceptibility evaluation (susceptible or not susceptible)
- Is the susceptibility evaluation in general conformance with TP16-1-112, Revision 4? (Reference 3)
- Does the susceptibility evaluation rely on thread friction? If yes, was the coefficient of friction (COF) greater than 0.10? For cases where thread-friction was relied upon, information is provided whether the COF was above or below 0.1.

- Was an initial stem-rotation check performed? If yes, include rotation criteria (i.e., less than or equal to 10 degrees or less than or equal to 5 degrees).
- Was the diagnostic test data reviewed for failure precursors described in TP16-1-112, Revision 4? (Reference 3)
- The valve's repair status (i.e., repaired or not repaired)
- A repair schedule for each susceptible valve

By letter dated August 29, 2017 (ADAMS Accession No. ML17243A134), FirstEnergy Nuclear Operating Company identified "High Significance" motor-operated valves (MOVs) and provided commitments related to the repair schedule for those MOVs. Further analysis of the identified MOVs was performed in accordance with the guidance provided in Reference 3. Based on the analysis results, the MOVs are now classified as not susceptible, and the Attachment to this letter reflects this change. Because no repair schedule is necessary, the commitments identified in the August 29, 2017 letter are hereby rescinded.

There are no regulatory commitments contained in this submittal. If there are any questions or if additional information is required, please contact Mr. Thomas A. Lentz, Manager – Fleet Licensing, at 330-315-6810.

Respectfully,

FOR

Richard D. Bologna

Attachment:
Beaver Valley Power Station ADDDGV Listing

References:

1. Letter from Greg Krueger (NEI) to John Lubinski (NRC), Anchor Darling Double Disc Gate Valve Industry Resolution Plan Update (Project 689), dated August 4, 2017.
2. Letter from Joseph Pollock (NEI) to Brian Holian (NRC), NSIAC Concurrence on Anchor Darling Double Disc Gate Valve Industry Response Actions (Project 689), dated October 26, 2017.
3. BWROG Topical Report TP16-1-112, Revision 4, *Recommendations to Resolve Flowserve 10CFR Part 21 Notification Affecting Anchor Darling Double Disc Gate Valve Wedge Pin Failures*, dated August 2017.

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

Attachment
L-17-351

Beaver Valley Power Station ADDDGV Listing

Plant Name	Unit	Valve ID	System	Valve Functional Description	Valve Size (inches)	Active Safety Function (Open, Close, Both)	Are multiple design basis post-accident strokes required? (Yes/No)	Expert Panel Risk Ranking (High, Medium, Low)	Result of susceptibility evaluation (susceptible or not susceptible)	Is the susceptibility evaluation in general conformance with TP16-1-112R4? [A] (Yes/No)	Does the susceptibility evaluation rely on thread friction? If yes, was the COF greater than 0.10? (No), (Yes, >0.10), (Yes, ≤0.10)	Was an initial stem-rotation check performed? If yes, include rotation criteria (No), (Yes, ≤10 deg.), (Yes, ≤5 deg.)	Was the diagnostic test data reviewed for failure precursors described in TP16-1-112R4? (Yes/ No)	Valve repair status [7] (repaired or not repaired)
Beaver Valley	1	MOV-1RW-113A	River Water	Diesel Generator (DG) Heat Exchanger Inlet River Water (RW) Supply Header	4	Open	No [4]	Medium	Not Susceptible [1]	Yes	No	Yes, ≤10 deg.	Yes	Not repaired
Beaver Valley	1	MOV-1RW-113B	River Water	DG Heat Exchanger Inlet RW Supply Header	4	Open	No [4]	Medium	Not Susceptible [1]	Yes	No	Yes, ≤10 deg.	Yes	Not repaired
Beaver Valley	1	MOV-1RW-113C	River Water	DG Heat Exchanger Inlet RW Supply Header	4	Open	No [4]	Medium	Not Susceptible [1]	Yes	No	Yes, ≤10 deg.	Yes	Not repaired
Beaver Valley	1	MOV-1RW-113D1	River Water	DG Heat Exchanger Inlet RW Supply Header	4	Open	No [4]	Medium	Not Susceptible [1]	Yes	No	Yes, ≤10 deg.	Yes	Not repaired
Beaver Valley	1	MOV-1SI-863A	Safety Injection	Low Head Safety Injection (LHSI) to Charging Pumps Supply Valve	6	Open	No [5]	Medium	Not Susceptible [2]	Yes	No	Yes, ≤10 deg.	Yes	Not repaired
Beaver Valley	1	MOV-1SI-863B	Safety Injection	LHSI to Charging Pumps Supply Valve	6	Open	No [5]	Medium	Not Susceptible [2]	Yes	No	Yes, ≤10 deg.	Yes	Not repaired
Beaver Valley	1	MOV-1SI-890A	Safety Injection	LHSI to Reactor Coolant System (RCS) Hot Legs	10 x 8 x 10	Open	No [6]	Low	Not Susceptible [3]	Yes	Yes, > 0.10	Yes, ≤5 deg.	Yes	Not repaired
Beaver Valley	1	MOV-1SI-890B	Safety Injection	LHSI to RCS Hot Legs	10 x 8 x 10	Open	No [6]	Low	Not Susceptible [3]	Yes	Yes, > 0.10	Yes, ≤5 deg.	Yes	Not repaired
Beaver Valley	1	MOV-1SI-890C	Safety Injection	LHSI to RCS Cold Legs	10 x 8 x 10	Close	No [6]	High	Not Susceptible [3]	Yes	Yes, > 0.10	Yes, ≤10 deg.	Yes	Not repaired

[A] Applied Wedge Pin Torque must bound anticipated design basis operating torque requirements and current maximum total torque.

[1] MOV-1RW-113A, 113B, 113C, and 113D1: wedge pin shear capability exceeds the design basis operating torque requirements and current maximum total torque.
[2] MOV-1SI-863A and 863B: wedge pin shear capability exceeds the design basis operating torque requirements and current maximum total torque.
[3] MOV-1SI-890A, 890B, and 890C: wedge pin shear capability including thread friction exceeds the design basis operating torque requirements and current maximum total torque.
[4] MOV-1RW-113A, 113B, 113C, and 113D1: multiple design basis post-accident strokes are not required; however, as a contingency the valves could be stroked to secure the associated diesel generator which has auto-started from a safety injection signal and is running unloaded.
[5] MOV-1SI-863A and 863B: multiple design basis post-accident strokes are not required; however, as a contingency the valves could be stroked to prevent damage to high head safety injection (HHSI) charging pumps if a loss of offsite power occurs with the plant in SI recirculation alignment.
[6] MOV-1SI-890A, 890B, and 890C: multiple design basis post-accident strokes are not required; however, as a contingency the valves could be stroked to isolate a loss-of-coolant accident (LOCA) outside containment.
[7] There are no susceptible valves; therefore, a repair schedule is not necessary.