WOLF CREEK
NUCLEAR OPERATING CORPORATION

Cynthia R. Hafenstine
Manager Nuclear and Regulatory Affairs

December 20, 2017
RA 17-0144

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

Reference: 1) Letter dated August 4, 2017, "Anchor Darling Double Disc Gate Valve Industry Resolution Plan Update (Project 689)," from G. A. Krueger, NEI, to J. Lubinski, USNRC

2) 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

3) Letter dated October 26, 2017, "NSIAC Concurrence on Anchor Darling Double Disc Gate Valve Industry Response Actions (Project 689)," from J. E. Pollock, NEI, to B. E. Holian, USNRC

Subject: Docket No. 50-482: Wolf Creek Submittal of Anchor Darling Double Disc Gate Valve Information and Status

To Whom It May Concern:

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 Disc Gate Valves (DDGV) issues. Reference 3 indicated each utility will provide a listing of their Anchor Darling DDGV 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 information was requested to be submitted by December 31, 2017. This submittal transmits that information for Wolf Creek Generating Station (WCGS).

The Attachment to this letter contains the following information for each Anchor Darling DDGV:

- Plant Name, Unit, and Valve ID
- System
- Valve Functional Description
- Valve Size
- Active Safety Function (open, close, both)

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- 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 (Reference 2)?
- Does the susceptibility evaluation rely on thread friction? If yes, was the coefficient of friction greater than 0.10?
- Was an initial stem-rotation check performed? If yes, include rotation criteria (i.e. ≤ 10 degrees or ≤ 5 degrees)
- Was the diagnostic test data reviewed for failure precursors described in TP16-1-112R4 (Reference 2)?
- The valve's repair status (i.e. repaired or not repaired)
- A repair schedule for each susceptible valve.

As all Anchor Darling DDGVs subject to Flowserve's Part 21 Notice in service at WCGS have had repairs completed, this letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-4204.

Sincerely,

Cynthia R. Hafenstine

CRH/rlt

Attachment: Wolf Creek Generating Station Anchor Darling DDGV Information and Status

cc: K. M. Kennedy (NRC), w/a
G. A. Krueger (NEI), w/a
B. K. Singal (NRC), w/a
N. H. Taylor (NRC), w/a
Senior Resident Inspector (NRC), w/a

Wolf Creek Generating Station Anchor Darling DDGV Information and Status

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 (repaired or not repaired)
Wolf Creek	1	EGHV0058	Component Cooling Water	CCW TO RCS ISO VLV <CTMT ISO>	2	Close	No	High	Susceptible	Yes	No	No	Yes	Repaired[1][3]
Wolf Creek	1	EGHV0059	Component Cooling Water	CCW RETURN FROM RCS ISO VLV <CTMT ISO>	2	Close	No	High	Susceptible	Yes	No	No	Yes	Repaired[1][3]
Wolf Creek	1	EGHV0060	Component Cooling Water	CCW RETURN FROM RCS ISO VLV <CTMT ISO>	2	Close	No	High	Susceptible	Yes	No	No	Yes	Repaired[1][3]
Wolf Creek	1	EGHV0127	Component Cooling Water	CCW TO RCS HV-58 & HV-71 BYPASS ISO VLV <CTMT ISO>	2	Close (Passive)	No	High	Susceptible[4]	No[4]	No	No	Yes	Repaired[2][3]
Wolf Creek	1	EGHV0130	Component Cooling Water	RCS CCW RETURN HV-60 BYPASS ISO VLV <CTMT ISO>	2	Close (Passive)	No	High	Susceptible[4]	No[4]	No	No	Yes	Repaired[2][3]
Wolf Creek	1	EGHV0131	Component Cooling Water	RCS CCW RETURN HV-59 BYPASS ISO VLV <CTMT ISO>	2	Close (Passive)	No	High	Susceptible[4]	No[4]	No	No	Yes	Repaired[2][3]

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

[1] The repair included torqueing the stem/wedge connection to 170% of the anticipated design basis operating torque, 520 ft-lbs.
[2] The repair included torqueing the stem/wedge connection to 150% of the anticipated design basis operating torque, 520 ft-lbs.
[3] The maximum allowable stem torque is 695 ft-lbs for the installed 2-piece stems, per Flowserve.
[4] Under the TP16-1-112R4 guidance these valves would not be considered susceptible as they are passive valves, however our Part 21 action plan predated access to the BWROG guidance.