



Velan Inc.

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March 7, 2023

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

Attention: Document Control Desk

Subject: [10 CFR Part 21 Notification per 21.21\(a\) of said document](#)

Note: This is a revised version of the notification submitted January 19, 2023. New/revised text is in blue font.

Gentlemen,

On October 24, 2022, Entergy informed us via e-mail that one of our butterfly valves, model W19-0CP13-KCDN-B0001, was found to have a number of fasteners loose, namely those holding the laminated seal in place by way of a seal ring. This was observed on one valve in a lot of six.

Our evaluation indicates that there are several credible failure modes resulting from these fasteners being "finger tight", as described by personnel at Arkansas One Unit 1 (ANO Unit 1):

1. Increased leak rate across the valve seat, proportional with the number of fasteners lacking the nominal torque
2. Potential limitation in open/close range of travel as result of seal or retaining ring sliding out of position, resulting in severe leakage across the seat
3. Potential for fasteners to come completely loose and become entrained in the flow, subsequently causing damage to equipment located downstream.

The consequences and the severity of these potential failure modes cannot be evaluated as we do not know the system layout and function. Entergy have already remedied the situation, and have received a copy of the interim notification.

We have compiled a list of utilities that have received valves of similar design, and assembled in the same facility. The list is annexed.

[All the valves identified in Annex 1 have been manufactured by Velan. These valves are deemed potentially defective.](#) Our records show that no claim was made by those listed concerning the fasteners not being tightened to torque, or for performance issues linked to the credible failure modes, and we therefore believe this to be an isolated case, but we cannot be absolutely certain. As the consequences and the severity of these potential failure modes cannot be evaluated in absence of information regarding the system layout and function, we will send notifications to those identified in the annex, with our recommendation to check the torque on these fasteners at the next scheduled maintenance.

We [have taken](#) the necessary preventative actions.

[We will submit verification and repair procedures to all utilities identified in Annex 1.](#)

For any additional information on this matter please contact me at +1 438 817-9908 or at victor.apostolescu@velan.com.

Sincerely yours,

Sincerely,

Victor Apostolescu, Eng.
Vice-president, Quality Assurance

CC: B. Carbonaro, Y. Lauzé, M. Lauzon, B. Masterson



Annex 1

DATE	CUSTOMER NAME	CUSTOMER P.O. NO	VALVE FIGURE NO.	QTY' SHIPPED	DATE SHIPPED
5/Mar/12	DUKE ENERGY CAROLINAS, LLC	00121191, REV 001	L18-0CP02-FCDN	1	10-Feb-12
5/Mar/12	DUKE ENERGY CAROLINAS, LLC	00121191, REV 001	L24-0CP02-FCDN	1	10-Feb-12
8/Jun/12	FIRST ENERGY CORPORATION	45213992	L16-0CP02-ACDN-M	1	5-Jun-12
25/Sep/13	FIRST ENERGY CORPORATION	45410638	W21-0CP13-DCDN-G	1	20-Sep-13
25/Sep/13	FIRST ENERGY CORPORATION	45410638	L24-0CP13-XCDN-M0001	2	20-Sep-13
25/Sep/13	FIRST ENERGY CORPORATION	45411943	L22-0CP13-XCDN-M0001	1	20-Sep-13
3/Jul/14	EXELON GENERATION	00516019	W14-0CP02-ACAN	2	23-Jun-14
11/Apr/15	FIRST ENERGY CORPORATION	45454099	W21-0CP13-DCDN	1	1-Apr-15
19/Feb/16	GEORGIA POWER COMPANY	SNG10096762, REV 07	W15-0CP13-FCDN	1	17-Feb-16
19/Feb/16	GEORGIA POWER COMPANY	SNG10096762, REV 07	W15-0CP13-FCDN	1	17-Feb-16
19/Jul/16	DUKE ENERGY CAROLINAS	00167952, REV 00	L24-0CP02-FCDN	1	18-May-16
24/Aug/16	FIRST ENERGY CORPORATION	45482859	W21-0CP13-DCDN	1	8-Aug-16
22/Sep/16	GEORGIA POWER COMPANY	SNG10096762, REV 07	W15-0CP13-FCDN	1	9-Sep-16
21/Oct/16	GEORGIA POWER COMPANY	SNG10096762, REV 07	W15-0CP13-FCDN	1	18-Apr-16
21/Oct/16	FIRST ENERGY CORPORATION	45213992	L15-0CP02-ACDN	1	3-Aug-16
21/Oct/16	FIRST ENERGY CORPORATION	45213992	L15-0CP02-ACDN	1	3-Aug-16
21/Oct/16	FIRST ENERGY CORPORATION	45213992	L15-0CP02-ACDN	1	3-Aug-16
21/Oct/16	FIRST ENERGY CORPORATION	45213992	L15-0CP02-ACDN	1	3-Aug-16
21/Oct/16	FIRST ENERGY CORPORATION	45213992	L15-0CP02-ACDN	1	3-Aug-16
2/Mar/17	DUKE ENERGY CAROLINAS, LLC	00178274	L18-0CP02-FCDN	1	20-Dec-16
15/Aug/18	FIRST ENERGY CORPORATION	45516340	W21-0CP13-DCDN-G0001	1	19-Jun-18
22/Aug/19	FIRST ENERGY CORPORATION	45516996	L22-0CP13-XCDN	1	14-Aug-19
28/Nov/19	GEORGIA POWER	SNG10147262, REV 01	W19-0CP13-FCDN	1	22-Nov-19
28/Nov/19	GEORGIA POWER	SNG10147262, REV 01	W19-0CP13-FCDN	1	25-Nov-19
7/Aug/20	DUKE ENERGY	3070341	L36-0CP13-XCDN	1	7-Aug-20
5/Oct/20	DUKE ENERGY	3070341	L42-0CP13-XCDN	1	2-Oct-20
02-16-2021	DOMINION	70365022	L20-0DP02-XCDA	1	02-16-2021
02-16-2021	DOMINION	70365022	L20-0DP02-XCDA	1	02-16-2021
02-16-2021	DOMINION	70365022	L20-0DP02-XCDA	1	02-16-2021
02-16-2021	DOMINION	70365022	L20-0DP02-XCDA	1	02-16-2021
02-16-2021	DOMINION	70365022	L20-0DP02-XCDA	1	02-16-2021
02-16-2021	DOMINION	70365022	L20-0DP02-XCDA	1	02-16-2021
02-16-2021	DOMINION	70365022	L20-0DP02-XCDA	1	02-16-2021
02-22-2021	DOMINION	70365022	L20-0DP02-XCDA	1	02-22-2021
02-24-2021	DOMINION	70365022	L20-0DP02-XCDA	1	02-24-2021
04-28-2021	DOMINION	70365022	L20-0DP02-XCDA	1	04-28-2021
04-29-2021	DOMINION	70365022	L20-0DP02-XCDA	1	04-29-2021
05-27-2021	DOMINION	70365022	L20-0DP02-XCDA	1	05-27-2021
10/5/2022	ENTERGY	10608907	W21-0CP13-KCDN	2	10/5/2022
10/5/2022	ENTERGY	10608907	W21-0CP13-KCDN	1	10/5/2022
16/5/2022	ENTERGY	10608907	W19-0CP13-KCDN	1	16/5/2022
10/6/2022	ENTERGY	10608907	W21-0CP13-KCDN	1	10/6/2022
10/6/2022	ENTERGY	10608907	W21-0CP13-KCDN	1	10/6/2022