



December 21, 2016

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

Subject: Part 21 on Yokogawa DX1000N/P1 Series Recorder, with 24 VDC Power Supply (/P1 option code)

Dear Sirs,

Pursuant to the requirements of 10 CFR Part 21, this letter notifies the NRC of a Part 21 condition relating to EMC testing of Yokogawa DX1000N/P1 Series Recorder with 24 VDC Power Supply (/P1 option code). The information of the defect was obtained November 15, 2016 (date of Notice of Deviation No. 6-3, Project PR039132/B60634). The Equipment Under Test (EUT) indicated susceptibility during CS114, Conducted Susceptibility Bulk Cable Injection testing at Test Location L2 (high power cable only with the power return and chassis ground excluded) at 10 kHz. The EUT shutdown and did not recover immediately following a power cycle. After letting it rest for approximately 10 minutes, the EUT powered up.

Resistor R73, which is part of the over-voltage protection circuitry on Power Board Assembly B8705RQ was removed from the test specimen DX1000N/P1, and the Recorder passed CS114 re-testing at Test Location L2. Yokogawa Electric Corporation has implemented a design change that removed the over-voltage protection circuitry components from the Power Board Assembly on DX1000N/P1 Series Recorders effective 11/23/2016.

The impact on qualification is that the power board assembly must be replaced with Yokogawa Power Board Assembly B8705RQ, Rev. 9 to meet CS114 requirements.

NTS will recommend that each customer review their specific Yokogawa DX1000N/P1 Series Recorder applications and verify that it is required to meet CS114 requirements.

NTS Huntsville will notify customers of this defect and recommend that DX1000N/P1 Series Recorders that have been supplied for use in safety-related applications be returned for replacement of the power board assembly with Yokogawa Power Board Assembly B8705RQ, Rev. 9 to meet the CS114 requirements.

Should a screen black-out occur under a CS114 condition (Test Location L2 at 10kHz), the recorder simply needs to be powered off and re-started. The recorder will continue to function properly.

Thank you for your consideration in this matter and if you have any questions, please contact NTS' Senior Director of Nuclear Engineering and Test Services, Tom Brewington at (256) 716-4512 or email at tom.brewington@nts.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Megan Toomey", with a horizontal line extending to the right from the end of the signature.

Megan Toomey
Sr. Contracts Manager
NTS Huntsville

See attachment: Customers of Yokogawa DX1000N Series Recorders with P1 option.

IE19
NRR

Customer	Project	Customer PO No.	Description	Qty
Curtiss-Wright QualTest NP	PR042163	CP00009994	Yokogawa DX1002N-3-4-2/M1/P1/S-S (2)	2
Curtiss Wright Nuclear Div	PR043306	CP00010214	Yokogawa DX1012N-3-4-2/A3/C2/M1/P1/S2/S-S Recorder (1)	1
Entergy / Grand Gulf	PR033773	10431836	Yokogawa DX1006N-3-4-2/C3/M1/P1/S2/S-S Recorder	2
	PR046191	10475156	Yokogawa DX1006N-3-4-2/C3/M1/P1/S2/S-S Recorder	1
Exelon / Byron	PR022508	506649	Yokogawa DX1004N-3-4-2/A2/F1/M1/R1/P1/USB1/S5/S-S	3
nbn Elektronik AG	PR050812	11300	Yokogawa DX1006-3-4-2/P1/S2/S-S Recorder (2)	2
	PR035812	11030	Yokogawa DX1012N-3-4-2/A1/M1/P1/TPS2/USB1/S2/S-S Recorder (10)	10
	PR028087	10769	Yokogawa DX1006N-3-4-2/P1/S2/S-S	1
PSEG /Salem	PR030770	4500815250	Yokogawa DX1006N-3-4-2/AS1/CC1/M1/P1/R1/USB1/SS Recorder	4
PSEG / Hope Creek	PR018147	4500712721	Yokogawa DX1006N-3-4-2/CC1/M1/P1/USB1S80/S2/S-S	58
Yokogawa China	PR032413	14NNG09808-JZ-1	Yokogawa DX1002N-3-4-2/H2/P1/R1/S2/S-S and DX1006N-3-4-2/H2/P1/R1/S2/S-S Recorders	1&4
	PR051154	16NNB07206-JZ-1	Yokogawa DX1012N-3-4-2/A3/C3/M1/USB1/P1/S-S Recorder (1)	1
Yokogawa Deutschland	PR032471	4500685309 Rev 1	Yokogawa DX1006N-3-4-2/A1/F1/M1/P1/R1/USB1/CC1/S-S Recorder	1
Yokogawa Iberia SA	PR027804	4500664285	Yokogawa DX1012N-3-4-2/M1/P1/S-S	1
Total				92