



January 20, 2015

Document Control Desk
US Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: USNRC 10CFR Part 21 Notification

REFERENCE: NTS CPAR 13-23

Firmware Notice for users of Yokogawa DX1000N and DX2000 Model Recorders

The purpose of this letter is to provide an amendment to our 10CFR Part 21 Notification made originally on July 19, 2013. Specifically, the attachment was revised to identify five purchase orders omitted from the original submittal and to correct two typographical errors. The specific changes are identified as an addendum

Text from original letter:

This letter is to inform you of a potential Yokogawa Data Recorder lock-up condition that under specific circumstances may occur on Yokogawa DXAdvanced DX1000N and DX2000 models equipped with firmware versions 3.01 through 4.14. These recorders were bought commercially from Yokogawa by National Technical Systems (NTS) and dedicated as basic components for nuclear safety related service.

The lock-up condition only impacts recorders when utilizing a "custom trend display" option. There is no lock-up concern with these models when standard display screens are in use or on models using firmware versions earlier than R3.01. While NTS has not received any notification this lock-up condition occurred on a safety related recorder, please see the below description of the error and the appropriate corrective measures.

Background:

Public Service Electric and Gas – Hope Creek NPP notified NTS and Yokogawa of a lock up condition which occurred on a newly installed non-safety data recorder in their simulator. Yokogawa studied the condition and notified NTS on June 14, 2013 that a firmware error occurs during a specific set of operating conditions and sequence of events and was identified as the root cause of the recorder lock up condition. While these conditions are highly unlikely in an operating plant because under normal practice the internal memory on the recorder would not be cleared, the recorder will lock-up if the below set up conditions occur simultaneously:

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1. A "Custom Display" that uses a trend screen is active and visible.
2. There is no trend data stored in memory (blank trend screen); this is the condition following a "Clear 3" initialize
3. A "Second Speed" function is invoked via remote input activation (requires /R1 option) or from front panel key activation. This is called "Trend rate switching" a function enabled in Basic Setting Mode that allows the trend update time/division to switch between two separate speeds.

Corrective Action:

This error only affects recorders if "Custom Display" is being utilized. If this feature is not being used, no immediate action needs to be taken. If custom screens exist, then please utilize the recommendations below and update firmware when the new version (4.19) becomes available in August 2013.


A short-term countermeasure is to follow the Yokogawa operational procedure of starting to record data immediately after invoking a "Clear 3" initialize, and then waiting for at least one trend update to occur (Display data save) before invoking a "Second Speed" change action.

Should a lock-up condition occur, as indicated by a freeze of the display clock, the recorder simply needs to be powered off and re-started. The recorder will continue to function properly.

Based on the above, The Nuclear Utilities need to be notified concerning this deviation so an evaluation may be performed to determine if this constitutes a defect that could create a substantial safety hazard. NTS cannot make this determination as only the effected utilities know the way the recorders are configured and utilized.

The attached list is the Nuclear Power Plants which have been provided DX Advanced safety related Yokogawa Recorders with firmware versions 3.01 and above by NTS. NTS has notified these utilities of the above condition via e-mail on July 16, 2013.

Sincerely,


Steven R. Eisenberg
Manager - Special Nuclear Projects
National Technical Systems

CC: Bruce Gleghorn - NTS
Dan Cannon - NTS
Ronald Kelly - NTS
Thomas Brewington - NTS

AMMENDED ATTACHMENT TO NTS NRC LETTER 7/19/2013

CLIENT	CLIENT PURCHASE ORDERS
CENG - Nine Mile	7733424/7730393
Dominion - Surry Station	45782834/4500008940
Dominion - North Anna	45850091/00046364
Entergy - Arkansas Nuclear One	10313790/10326509/10341761/10362938/10372680
Entergy - Fitzpatrick	10312328/10317512/10329338/10339942/ 10346811/10364096/10379046/10385396
Entergy - Grand Gulf	10299200
Entergy - Pilgrim Nuclear Station	10357795/10365141
Entergy - River Bend	10293835/10379891/10383702
Exelon - Braidwood Warehouse	494517
Exelon - Byron	00506649
Exelon - Dresden Station	00455461/00473611/00483004/0049216/00507417
Exelon - Limerick Generating Station	90 053617
Exelon - Quad Cities	00479167/00497042/00497239/00508331/00464988/ 00480022
First Energy - Perry Plant	45366526/45374559/45374707
Florida Power & Light - St. Lucie	02286603/02307150
Georgia Power - Vogtle Plant	SNG10020214
AEP - DC Cook	01557419/01557729
Nebraska Public Power - Cooper	4500151420/4500152079/4500154944
NextEra Energy - Duane Arnold	02313631
NextEra Energy - Point Beach	00031188
Entergy - Palisades	10316253
Progress Energy - H.B. Robinson Plant	00571766/00576508
PSE&G - Salem/Hope Creek	4500574885/4500712721
Edison - San Onofre	4500355704/4500461701
STP Nuclear Operating Company	126480/130241/136969/145482/149909/153762/158238
TVA - Sequoyah Station	4062-185256/4062-205436/268529/4062-424636 4062-428255
Wolf Creek Nuclear Operating Corp.	757157
Xcel Energy - Prairie Island Nuclear	00037448/00046365

Revisions to Attachment

PO's omitted from original submittal

Client	Client PO
NextEra - Point Beach	00031188
STP Nuclear Operating Company	126480
Exelon- Dresden Station	00455461
Entergy - Grand Gulf	10299200
Entergy - ANO	10313790

Typographical errors corrected from original submittal.

Client	Client PO Originally Reported	Correct PO
PSE&G Salem / Hope Creek	4500574888	4500574885
NPPD - Cooper	4500156944	4500154944