Hoc, HOO X

From: Richard Knott <RKnott@ParagonES.com>
Sent: Friday, July 14, 2023 2:38 PM
To: Hoc, HOO X
Cc: Douglas VanTassell; Andrews, Sherry E; Lopp, Andrew; Steven Redman; Joe Garguilo
Subject: [External_Sender] Update to Interim Part 21 Report P21-06052023-INT
Attachments: Interim Report P21-06052023-UD to NRC.pdf

Document Control Desk,

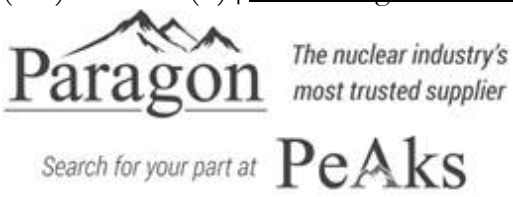
Please see attached update to Paragon's interim Part 21 report. Paragon's evaluation determined the issue identified in the subject interim report (ML23159A005) submitted on June 5th 2023 is not a design or manufacturing defect and is therefore not reportable per 10CFR Part 21.

I confirm that no proprietary, legally privileged, and/or confidential information is included in the attached updated notification.

Please contact me with any questions or concerns.

Respectfully,
Richard

Richard Knott
Vice President, Quality Assurance
(518)450-9706 (C) | www.ParagonES.com



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Paragon

7/14/2023

To: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555
Fax Number (301)816-5151

10CFR Part 21 Interim Notification: P21-06052023-UD

Subject: Final Update Regarding Potential Defect with Trane External Auto/Stop and Emergency Stop Relay Card PN: X13650728-06

Paragon Energy Solutions has concluded the evaluation of the subject potential defect reported under the attached interim report (ML23159A005) in accordance with 10CFR 21.21(a)(2). Lab testing determined the failed relay card, reported by Duke Catawba, was an isolated failure most likely caused by low level human-body model (HBM) electro-static discharge (ESD) event. The ESD event caused degradation of the U1 positive voltage regulator chip resistance characteristics between the input to output and input to ground terminals. The degraded resistance condition of the U1 voltage regulator may have led to improper operation of the U2 microcontroller chip discussed in the interim report.

The condition evaluated does not represent a design or manufacturing defect of the Trane External Auto/Stop and Emergency Stop Relay Card PN: X13650728-06, and Paragon has not been informed of any additional failures of this part from the lot supplied to Catawba or the other customers included in the scope of supply noted in the interim report. Based on the results of the evaluation, reportability under 10CFR Part 21 is not required for this issue.

The below contact information should be utilized regarding any questions.

Sincerely,

Richard Knott
Vice President Quality Assurance
Paragon Energy Solutions
817-284-0077
rknott@paragones.com

Paragon

6/05/2023

To: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555
Fax Number (301)816-5151

10CFR Part 21 Interim Notification: P21-06052023-INT

Subject: Reporting of a Potential Defect with Trane External Auto/Stop and Emergency Stop Relay Card PN: X13650728-06 Requiring Additional Time to Evaluate

Pursuant to 10CFR 21.21 (a)(2), Paragon Energy Solutions, LLC is providing this interim notification of ongoing analysis for Part 21 reportability of a potential defect with the subject relay card.

Potential Affected Plants:

Plant	Customer PO#	Line #	CatID/Item #	QTY
NINE MILE POINT	00631665	1	1677945-1	1
NINE MILE POINT	7736804	7	495385	1
NINE MILE POINT	00680931	1	1677945-1	2
CATAWBA	00173787	27	886875	4
CH-531 Chiller Control Panel Projects Which May Have Installed Relay Cards				
RIVERBEND	10322999			
MCGUIRE	00049845 00049846 00049842			
CATAWBA	00106394			

Condition being evaluated:

On April 5th, 2023, Duke Catawba Nuclear Station informed Paragon of a failure of the relay card upon installation into the CH-531 control panel during planned maintenance on the chiller system. Following replacement, the relay module bound to the Adaptiview system correctly, but the chiller attempted to start without signal to start from the control room. The issue was discovered when the chiller initiated diagnostics for missing evaporator water flow. Flow was not maintained on the chiller due to continued maintenance; however, an internal failure of the 1A13 module (X13650728-06) caused the module to read a closed contact at terminals J3-1/2 which would ordinarily come from closure of the control room start contact. The failure was readily determined during system restoration.

The affected card was originally supplied to Catawba in December 2014 with three other units which have been tested satisfactorily at the plant. The specific failure noted above would not prevent the chiller from performing its safety function. To date this is the only failure of the affected part number which has been

reported to Paragon. Our analysis of the failed relay card has identified minor delamination and water intrusion of the microcontroller chip (date code 1308) installed. This is the only anomaly identified to date, and therefore it is difficult to determine 1) if this condition could exist in more units and 2) if this condition could cause the relay card to fail in a manner that could prevent the chiller from performing its safety function.

Date when evaluation is expected to be complete: 7/15/2023.

Regards,

Richard Knott
Vice President Quality Assurance
Paragon Energy Solutions
817-284-0077
rknott@paragones.com