Part 21 (PAR) Event # 48494

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Supplier: SCIENTECH		**Event Date / Time:** 10/11/2012	(MST)
		Last Modification: 11/08/2012	
Region: 4		**Docket #:**	
City: IDAHO FALLS		**Agreement State:** No	
County:		**License #:**	
State: ID			
NRC Notified by: VINCE CHERMAK		**Notifications:** MARVIN SYKES	R2DO
HQ Ops Officer: HOWIE CROUCH		THOMAS FARNHOLTZ	R4DO
Emergency Class: NON EMERGENCY		PART 21 GROUP	EMAIL
10 CFR Section:			
21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE			

PART 21 - POTENTIAL GROUNDING PATHWAY BETWEEN HEAT SINK AND CHASSIS OF CONTROL MODULES

The following information was obtained from the vendor via facsimile:

"This report notifies the Nuclear Regulatory Commission of a defect in CMM830 and TMD830 [modules] that could result in an unintended ground loop that could lead to a low impedance connection between the module output circuitry and chassis.

"There is a mechanical interference between the sheet metal housing and the heat sink for transistor Q1 on the master board assembly. The heat sink of transistor Q1 is connected to the drain of Q1, which is the output of the current loop circuit. Should the heat sink of transistor Q1 short to chassis because of the interference, then an unintended ground loop could lead to a low impedance connection between the module output circuitry and chassis. The effect of grounding Q1 to chassis will vary with the application.

"If Q1 is grounded to the chassis, but no ground connection exists in the output loop, the incidental ground may produce no observable effect on the performance of the module. In that case, any subsequent independent event which introduces a ground in the output loop will cause a loop fault, potentially affecting the module output current.

"Alternatively, if Q1 and chassis are initially isolated, the defect may not manifest unless vibration causes mechanical wearing of the oxide coating of the heat sink. It is possible that a seismic event could cause sufficient wearing to initiate a loop fault, again potentially affecting the module output current."

The affected facilities are HB Robinson and Turkey Point.

IE19
NRR

Part 21 (PAR) Event # 48494

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CURTISS WRIGHT Flow Control Company
SCIENTECH

Instrumentation & Controls Division
200 S. Woodruff Ave.
Idaho Falls, ID 83401
(208) 529-1000

November 8, 2012

Letter Number: 12-40-AVC

Attn: Document Control Desk
US Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT: 10 CFR Part 21 Notification, CMM830 and TMD830 Mechanical Interference

Dear Madam or Sir:

The purpose of this letter is to notify the Nuclear Regulatory Commission of a defect in CMM830 and TMD830 that could result in an unintended ground loop that could lead to a low impedance connection between the module output circuitry and chassis. Details of the defect are provided below in accordance with 10 CFR Part 21.

The written report required by this paragraph shall include, but need not be limited to, the following information, to the extent known:

(i) Name and address of the individual or individuals informing the Commission.

Vince Chermak
Quality Assurance Manager
Scientech, a business unit of Curtiss-Wright Flow Control Corporation
200 S Woodruff Avenue
Idaho Falls, Idaho 83401

Scott Robuck
General Manager
Scientech, a business unit of Curtiss-Wright Flow Control Corporation
200 S Woodruff Avenue
Idaho Falls, ID 83401

(ii) Identification of the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

CMM830, a multiplier/divider replacement for the Hagan 7100, manufactured by Scientech, Model CMM830-05/05/25/00-13-08, Part Number: NUS-A237PA-1

TMD830, a replacement for the Hagan Optimac lead/lag controller, manufactured by Scientech, Model TMD830-04/00/00/00-07-08: Part Number: NUS-A186PA-1

(iii) Identification of the firm supplying the basic component which fails to comply or contains a defect.

Scientech, a business unit of Curtiss-Wright Flow Control Corporation
200 S Woodruff Avenue
Idaho Falls, ID 83401

(iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

There is a mechanical interference between the sheet metal housing and the heat sink for transistor Q1 on the master board assembly. The heat sink of transistor Q1 is connected to the drain of Q1, which is the output of the current loop circuit. Should the heat sink of transistor Q1 short to chassis because of the interference, then an unintended ground loop could lead to a low impedance connection between the module output circuitry and chassis.

The effect of grounding Q1 to chassis will vary with the application.

If Q1 is grounded to the chassis, but no ground connection exists in the output loop, the incidental ground may produce no observable effect on the performance of the module. In that case, any subsequent independent event which introduces a ground in the output loop will cause a loop fault, potentially affecting the module output current.

Alternatively, if Q1 and chassis are initially isolated, the defect may not manifest unless vibration causes mechanical wearing of the oxide coating of the heat sink. It is possible that a seismic event could cause sufficient wearing to initiate a loop fault, again potentially affecting the module output current.

(v) The date on which the information of such defect or failure to comply was obtained.

Submitted for evaluation 10/11/2012; evaluation completed 11/7/2012.

(vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.

PLANT	**CMM830-05/05/25/00-13-08**	**TMD830-04/00/00/00-07-08**
HB Robinson	0	26
Turkey Point	28	24
TOTALS	**28**	**50**

(vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

1. Scientech is expediting fabrication of modified sheet metal housing that will allow sufficient clearance to preclude this problem. The housing attaches to the module with screws and can be easily replaced in the field.
2. Scientech has notified both plants and will provide them with replacement housings and instructions on how to implement the change by November 20, 2012.
3. Scientech will strengthen the process for determining when designs are similar enough to preclude the need for separate qualification testing by December 31, 2012.

(viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

None.

(ix) In the case of an early site permit, the entities to whom an early site permit was transferred.

Not applicable.

Should you have any questions regarding this matter, please contact Robert Queenan, Scientech I&C Division Manager, at (208)524-9311.

Sincerely,

Vince Chermak, SSBB, PMP
Quality Assurance Manager
I&C Division
Scientech, a business unit of Curtiss-Wright Flow Control Company
Office (208) 524-9202 | Fax (208) 524-9238

cc: M. Weinstein, Director of Quality Operations, Scientech