DRESSER-RAND

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June 4, 2010

To: Documentation Control Desk
US Nuclear Regulatory Commission
Washington, DC, 20555

Subject: 10CFR Part 21 Final Report Dresser-Rand No. 042

To Whom It May Concern-

Attached find a copy of Dresser-Rand Final Part 21 Report Number 042. It is directed at a Digital Control System Output Filter. Initial Report Number 042 was submitted to the NRC via confirmed fax on 5/11/2010.

The anomaly was recently discovered during an outage at the Farley Nuclear Power station. The plant was installing Dresser-Rand's Digital Control System Conversion on the Emergency Feedwater Terry Steam Turbine.

The problem was contained immediately. The 2 plants that were affected are Farley Nuclear Power Station and San Onofre Nuclear Power Station. Both plants have been notified of the issue and have implemented corrective action.

Please call me at 585-596-3406 if there are any questions related to this issue.

Joe Menichino
Manager, Navy/Nuclear Product Engineering
Dresser-Rand Government Business Unit

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FINAL REPORT 10CFR PART 21
REPORT OF A POTENTIAL SAFETY HAZARD

Report No. 42

PREPARED BY:	Mark Konieczny 6/4/10	File No:	37858A/40101A
		Serial No:	37858A/40101A
TITLE:	Navy Nuclear Product Engineer	Type:	GS2
		Ref:	
PART NAME:	Output Filter Network	DR Part No:	890313-001
		DR Dwg No:	890313
APPROVAL:	JOE MCCLELLAND, ENG MGR.	Rev. Level:	N/A

1. DESCRIPTION OF DEFECT OR NON-COMPLIANCE

The Output Filter Network part # 890313-001 is manufactured at Introl Design for use in the Dresser-Rand digital speed control system for RCIC and Auxiliary Feedwater turbines. The procedure for assembling the printed circuit board is to crimp and solder eyelets on both sides of the board prior to mounting the motor connections terminal block. This procedure was not followed on serial #s 10007 through 10012. For this batch, the eyelets were not soldered to the board on the terminal block side. As a result, the connection between the p.c. board trace and the terminal block may be broken when the connection is stressed such as when tightening wire connections on the terminal block.

2. POTENTIAL SAFETY HAZARD OR NON-COMPLIANCE

The result of a broken connection in the output filter network would be to lose power to the actuator controlling governor valve position. The control system would not be able to regulate turbine speed. If a GS-2 turbine start were initiated, the governor valve would open wide resulting in an overspeed trip of the turbine.

3. NUMBER AND LOCATION OF ALL COMPONENTS

Serial # 10007 – Originally sold to SONGS as a spare for digital control system – removed from service and recommend return to DR for inspection and refurbishment.
Serial # 10008 – Originally installed in SONGS turbine control panel for unit 3 – removed from service and recommend return to DR for inspection and refurbishment.
Serial # 10009 – In Dresser-Rand inventory – was inspected and repaired by Introl Design
Serial # 10010 – Originally installed in SONGS turbine control panel for unit 2 – removed from service and recommend return to DR for inspection and refurbishment.
Serial # 10011 – Originally sold to Farley NPP for spare. This was installed in control system for unit 2. Unit was removed from service, returned to DR, inspected, and repaired. Returned to Farley NPP and is in spares inventory.
Serial # 10012 – In Introl Design inventory. Unit was inspected, repaired, and returned to inventory.

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4. CORRECTION ACTION BY:	Mark Konieczny	COMPLETED BY	Mark Konieczny

The affected batch of filters is recommended to be returned to Dresser-Rand for inspection, repair, and testing. As of this date, both customers have been notified of the defect, have removed affected filters from service and inventory, and Dresser-Rand recommends the units be returned for inspection and refurbishment. Dresser-Rand and Introl Design have uncovered the problem, have improved procedures to eliminate a repeat of the problem and have required additional testing of the output filter network prior to delivery to future customers. A failure analysis has been performed and the details of this analysis are in Dresser-Rand EL 20947.

5. ADVICE TO AFFECTED CLIENTS RELATED TO THIS REPORT

Clients have been advised of the potential risk and have removed affected units from service. Clients have been instructed on the inspection method to verify proper operation of the filter.