

 **TELEDYNE**
ELECTRONIC TECHNOLOGIES
Analytical Instruments

A Teledyne Technologies Company

16830 CHESTNUT STREET, CITY OF INDUSTRY, CA 91748-1020
P.O. BOX 1580, CITY OF INDUSTRY, CA 91749-1580
TELEPHONE: (626) 934-1500 OR (626) 961-9221
FAX: (626) 961-2538 OR (626) 934-1651
WEB SITE: www.teledyne_ai.com

June 21, 2001

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

Subject: 10CFR Part 21 Report, Flow Switch (P/N: C33366)

Dear Sir or Madam:

Teledyne Electronic Technologies, Analytical Instruments hereby notifies and submits a 10CFR Part 21 Report to the U. S. Nuclear Regulatory Commission (NRC) on a problem identified by Chem Tec Equipment Company (supplier) and communicated to Teledyne Analytical Instruments (TAI) on 4 May 2001. We are not certain whether this event warrants a 10CFR Part 21 Report because, in our opinion, this problem does not introduce a *substantial safety hazard*, the sole unit shipped was never installed by the Customer (Carolina Power & Light Corporation) and Teledyne's part dedication program screens for this potential defect. Nevertheless, TAI felt that it was prudent to advise the NRC and the affected Customer, as a minimum.

On 4 May 2001, TAI's supplier, Chem Tec Equipment (CTE) Company, notified TAI of a product recall, Flow Switch (CTE P/N: 125-316-BP NC A742, TAI P/N: C33366) and delineated the affected serial numbers. Although, CTE felt that the flow switch was mechanically sound they had concerns for a potential gas leak into the atmosphere and requested that all units be returned for replacement.

On 18 June 2001, Teledyne notified the only affected Customer (Carolina Power & Light Corporation) on the product recall and requested that they return the affected flow switch (Qty: 1). This flow switch is used in TAI's Containment Monitor, Model 225 CMA-X. Carolina Power & Light Corporation advised TAI that the flow switch was never put into use and the unit was still in their warehouse as a spare part.

TAI's Engineering's analysis revealed that the location of the flow switch in the Containment Monitor is after the analysis of the containment gas, therefore, it would not affect the accuracy of the measurement. However, the gas would not completely return to the containment and some of the gas could leak to the surrounding environment. As a result the end-user would have to determine its impact since TAI does not have complete application visibility. In this case it was a moot point for TAI since it was never installed or put to use.

Reference #: RK: 06-01-010

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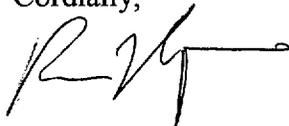
TAI's part dedication program requires the leak testing of all flow switches. The test screens for any leaks greater than 10^{-6} cc/sec. helium. The suspect flow switch did pass this leak test and it is uncertain whether this flow switch would have ever leaked but TAI requested return of the part from the Customer. TAI has received the suspect part and has returned the flow switch to CTE for replacement.

CTE's failure analysis traced the leak to a hold-down screw in the vane assembly. This hole intersected the by-pass hole to produce the leak path to the atmosphere. The drill depth on all three holes on the hold-down plate was out of tolerance. The cause of failure was attributed to the operator inappropriately changing the program code on the CNC machine. CTE's corrective and preventive actions was to revise internal policy to require Machine Shop Manager approval on changes to the CNC program code, created a First Piece Inspection sign-off sheet with 100% inspection on each unit and the operator was retrained on the new policy and procedure.

In summary, TAI has facilitated the appropriate supplier corrective actions, notified the affected Customer and advised the NRC.

Should any further questions arise, please do not hesitate to contact Kim Johns, Nuclear Systems Engineer at (626) 934-1611 or myself at (626) 934-1502.

Cordially,



Ray Khajavi, Director
Quality Assurance