

# GULF STATES UTILITIES COMPANY

RIVER BEND STATION POST OFFICE BOX 282 ST. FRANCISVILLE, LOUISIANA 70775  
AREA CODE 504 635-094 640-8651

March 31, 1992  
RBG- 36692  
File No. G9.5, G9.33.1

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

Gentlemen:

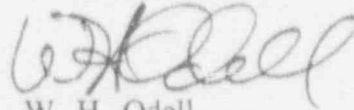
**River Bend Station - Unit 1**  
**Docket No. 50-458**

By letter dated July 20, 1990 (RBG-33277), Gulf States Utilities Company (GSU) provided our response to NRC Bulletin 90-01, "Loss of Fill Oil in Transmitters Manufactured by Rosemount". This response stated in part that preventative maintenance procedures were being revised to include additional calibration check points for non-STP transmitters to provide the data necessary to fully assess the loss of fill-oil concern. Our response further stated that during these evaluations, any transmitters identified as having a failure mode associated with the loss of fill-oil problem would be identified to the NRC.

During routine activities, a trip unit which actuates on low reactor plant component cooling water pressure was found to have been tripped for no apparent reason on September 22, 1991. Investigation by maintenance personnel discovered that the transmitter (Serial No. 404038) was out of calibration and could not properly be calibrated. This subject transmitter was at that time replaced with a new transmitter from stock. The defective transmitter was then returned to Rosemount for failure analysis on October 1, 1992. Rosemount's attached report concluded that the transmitter in question failed due to loss of fill-oil.

Any subsequent Rosemount transmitter failures attributed to the loss of fill-oil concern will be identified to the NRC as before. If you have any questions or comments, please contact Mr. Leif L. Dietrich of my staff at (504) 381-4866.

Sincerely,



W. H. Odell  
Manager - Oversight  
River Bend Nuclear Group

Attachment



J. E. JFM/LLD/WJS

cc: U. S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011

NRC Resident Inspector  
P.O. Box 1051  
St. Francisville, LA 70775

Mr. D. V. Pickett  
U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852

February 21, 1992

Field Return Analysis

Customer: Gulf States  
Model Number: 1153GB7  
Serial Number: 404038  
House Order Number: 958117  
(RMA Number)  
Reason for Return: Output fell from 100 to 59 psi

Preliminary Evaluation

The unit was too slow to calibrate upon receipt. The oil level was measured and found to be low on the high pressure side of the sensor. The module was sent to the Evaluation Lab for further analysis.

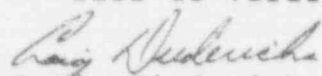
Final Evaluation

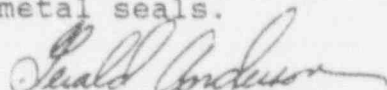
The module was cut open and the sensor removed. Oil residue was detected inside the module housing. Welds and fill tube seals were inspected and found to be good. The sensor was then static pressurized to 4500 psi with evidence of oil leakage observed on the high pressure side of the sensor between the glass to metal interface.

Summary

The cause for failure is leakage of oil from the sensor by way of the glass to metal interface.

Rosemount has implemented several process improvements to reduce the risk of this type of leak. We have also implemented a second high pressure aging step after oil fill to verify the glass to metal seals.

  
Craig Diederichs  
Nuclear Engineering

  
Gerald Anderson  
Nuclear Quality Assurance



GULF STATES UTILITIES COMPANY

RMA#958137

THIS IS NOT A PURCHASE ORDER

Render one invoice in duplicate to address stated on P.O. showing P.O. Number MWA Number & Release Number when applicable

QC	QA	Q
YES <input checked="" type="checkbox"/>	YES <input checked="" type="checkbox"/>	CLASS
NO <input type="checkbox"/>	NO <input type="checkbox"/>	I

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**MATERIAL and WORK AUTHORIZATION**

in accordance with the terms and conditions of our Purchase Order No. **90-C-70675**

—GUM273-88-05 (12/85) Rev. 3

SHIP VIA

Ref No. \_\_\_\_\_

<input type="checkbox"/> SUPPLIER
<input type="checkbox"/> WH DRIVER
<input type="checkbox"/> ORIGINATOR

MWA No.

30607

REV NO

Date **10-1** 19**91**

To: **ROSEMOUNT INC.**

**12001 TECHNOLOGY DRIVE**

**EDEN PRAIRIE, MN 55344**

**ATTN NEIL LIEN/T. CHRISTIAN**

Date Item or Service Required \_\_\_\_\_

SHIP TO

GULF STATES UTILITIES COMPANY  
RIVER BEND STATION  
HWY 61, 2 MILES SOUTH OF  
ST. FRANCISVILLE, LA 70775  
PLEASE INCLUDE PACKING LIST WITH SHIPMENT

MWA ITEM NO	P.O. LINE ITEM	QTY U/M	DESCRIPTION	UNIT COST	TOTAL COST
1	EA		ROSEMOUNT TRANSMITTER, MODEL NO. 1153GB7, S/N: 404038 (REF. MWOK 169711, ICCP*PTIB) (RMA# 958137-ROSEMOUNT)		
			NOTE: TRANSMITTER RESPONDED SLOWLY, AND WOULD NOT CALIBRATE ABOVE 12.03mA		
			(NOTE: TRANSMITTER IS RETURNED TO WAREHOUSE VIA SR # 53652)		
CONFIRMING TO <b>EB</b> ON _____				TOTAL AMOUNT	

DO NOT DUPLICATE.

DEPT HEAD AUTHORIZATION

DATE \_\_\_\_\_

TECHNICAL STAFF AUTHORIZATION

DATE \_\_\_\_\_

GULF STATES UTILITIES COMPANY

QUALITY ASSURANCE AUTHORIZATION  
For QA Program Applicable Only

DATE \_\_\_\_\_

By \_\_\_\_\_

NUCLEAR PROCUREMENT

Date \_\_\_\_\_

White - Supplier  
Blue - Procurement

Green - Receiving  
Canary - Accounting

Pink - Quality Assurance  
Goldenrod - Originator

**ROSEMOUNT\***

Measurement  
Control  
Analytical  
Valves

MWA# 30607

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Rosemount Inc.  
12001 Technology Drive  
Eden Prairie, MN 55344 U.S.A.  
Tel (612) 841-5560  
Telex 4310012  
Fax (612) 828-3088

**PRESSURE TRANSMITTER FAILURE SURVEY**

UTILITY: Gulf States Utilities

PLANT: River Bend

CONTACT PERSON: EKAN BORAZANCI

TELEPHONE: (504) 381-4205

MODEL NUMBER: 1153607

SERIAL NUMBER: 404038

DATE OF RETURN TO ROSEMOUNT: \_\_\_\_\_

TAG NUMBER: ICCPXPT1B

APPLICATION (e.g. Main Steamline, Pressurizer level): HEADER PRESSURE

PROCESS FLUID: WATER

CALIBRATION: 4 mA = 0 PSIG  
20 mA = 100 PSIG

TRANSMITTER POWER SUPPLY VOLTAGE: 24 VDC

WAS THIS A REDUNDANT MEASUREMENT: Yes X No \_\_\_\_\_ How Many 4

DATE INSTALLED: 12-20-83

DATE REMOVED FROM SERVICE: 9-24-91  
(If different from Failure Date)

FAILURE DATE: 9-22-91

TIME SENSING PRESSURE: \_\_\_\_\_

Describe in exact detail the symptoms associated with the failure mode.

The reading on master trip unit for this transmitter felt down to 59 psig with no reason. The other three channels remained at 100 psig in the control room panel readings.

**QUESTIONS:**

1) What are the typical ambient conditions associated with the above application?

Ave. Ambient Temp: 75 °F Vibration: Negligible Hz

Ambient Temp range 70-90 °F

Relative Humidity: 20-95 %