

200548

LICENSEE EVENT REPORT

CONTROL BLOCK: 0310610310

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 PATMI 2 000-000000-000 041111 01E 0

01 REPORT SOURCE L 0050000320 0032180 0032780 0

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10

02 Rosemount 1152 Pressure Transmitter in limited cases have exhibited an output  
03 between 4 and 20 ma with input pressures either over or under the calibrated  
04 range. This model transmitter is used as the narrow range pressure transmitter  
05 for the RCS. This anomaly does not interfere with the trip functions of the  
06 RPS but could cause confusion to an operator watching the instrument for saturation  
07 condition. See similar LER 80/289-5/99X-0.

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10 None of the transmitters are functional due to long term degradation from  
11 submergence in water. These transmitters will never be reused, therefore,  
12 no corrective action is necessary.  
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NAME OF PREPARER

S. D. Chaplin

PHONE:

(717) 948-8461

9/17/86

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030603



Metropolitan Edison Company  
Post Office Box 480  
Middletown, Pennsylvania 17057  
717 944-4041

Writer's Direct Dial Number

March 27, 1980  
TLL 132

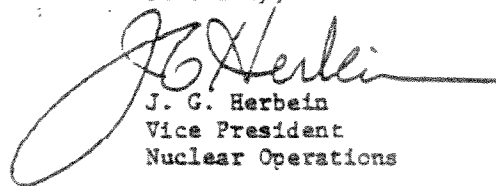
Office of Inspection and Enforcement  
Attn: B. H. Grier, Director  
U. S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, Pa. 19406

Dear Sir:

Three Mile Island Nuclear Station, Units I and II (TMI-I and TMI-II)  
Operating License Nos. DPR-50 and DPR-73  
Docket Nos. 50-289 and 50-320  
Special Report 80-005/99X-0 (TMI-I)  
Special Report 80-011/99X-0 (TMI-II)

Attached please find Special Report 80-005/99X-0 (TMI-I) and 80-011/99X-0 (TMI-II) concerning Rosemount Model 1152 Pressure Transmitters with output codes "A" or "D". On March 21, 1980 at 6 p.m. Mr. L. W. Harding of my staff contacted Mr. M. M. Mendonca (NRC) in Bethesda concerning the potential reportability of this item under 10 CFR 21. Since that time it has been determined that the "defect" is not reportable under this regulation, but that it does represent a condition of which the NRC should be aware.

Sincerely,

  
J. G. Herbein  
Vice President  
Nuclear Operations

JGH:SDC:hah

Attachments

cc: Office of Enforcement and Inspection  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Mr. Chuck Odegaard  
Rosemount, Inc.  
12001 West 78th Street  
Eden Prairie, MN 55344  
J. T. Collins

Aug 5/11

8004040336

# LICENSEE EVENT REPORT

CONTROL BLOCK: - | | | | | (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	P A T M I 2												2	0	0	-	0	0	0	0	-	0	0	3	4	1	1	1	1	2			5								
7	8	LICENSE CODE												14	15	LICENSE NUMBER										25	26	LICENSE TYPE					30	31	32	33	34	35	36	37	CAT	38

**COPT**

REPORT SOURCE L 8 0 5 0 0 0 3 2 0 7 0 3 2 1 8 0 8 0 3 8 0

DOCKET NUMBER EVENT DATE REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 Rosemount 1152 Pressure Transmitter in limited cases have exhibited an output  
03 between 4 and 20 ma with input pressures either over or under the calibrated  
04 range. This model transmitter is used as the narrow range pressure transmitter  
05 for the RCS. This anomaly does not interfere with the trip functions of the  
06 RPS but could cause confusion to an operator watching the instrument for saturation  
07 condition.  
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SYSTEM CODE 09		CAUSE CODE ID (11)		CAUSE SUBCODE B (12)		COMPONENT CODE INSTRUMENT (14)				COMP. SUBCODE T (15)		VALVE SUBCODE Z (16)	
LER/RO REPORT NUMBER 80 (17)		EVENT YEAR 80 (21)		SEQUENTIAL REPORT NO. 011 (24)		OCCURRENCE CODE 99 (28)		REPORT TYPE X (31)		REVISION NO. 0 (32)			
ACTION TAKEN Z (18)		FUTURE ACTION Z (19)		EFFECT ON PLANT Z (20)		SHUTDOWN METHOD Z (21)		HOURS 0000 (22)		ATTACHMENT SUBMITTED Y (23)		NPRD-4 FORM SUB. N (24)	
										PRIME COMP. SUPPLIER K (25)		COMPONENT MANUFACTURER R369 (26)	

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 None of the transmitters are functional due to long term degradation from

1 1 submergence in water. These transmitters will never be reused, therefore,

1 2 no corrective action is necessary.

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FACILITY STATUS		POWER		OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION		
1	9	G	28	0	0	0	28	L	31	N/A
7	8	9	10	11	12	13	14	15	16	17
ACTIVITY RELEASED		CONTENT OF RELEASE		AMOUNT OF ACTIVITY		LOCATION OF RELEASE				
1	6	Z	33	2	34	N/A				
7	8	9	10	11	12	13	14	15	16	17
PERSONNEL EXPOSURES NUMBER		TYPE		DESCRIPTION						
1	7	0	0	0	37	Z	38	N/A		
7	8	9	10	11	12	13	14	15	16	17
PERSONNEL INJURIES NUMBER		DESCRIPTION								
1	8	0	0	0	40			N/A		
7	8	9	10	11	12	13	14	15	16	17
LOSS OF OR DAMAGE TO FACILITY TYPE		DESCRIPTION								
1	9	Z	42					N/A		
7	8	9	10	11	12	13	14	15	16	17
PUBLICITY ISSUED		DESCRIPTION								
1	0	Z	44					N/A	8004040349	
7	8	9	10	11	12	13	14	15	16	17

NAME OF PREPARER S. D. Chaplin

PHONE: (717) 948-8461

32011

SPECIAL REPORT  
NARRATIVE REPORT

TMI-I and TMI-II

LER 80-005/99X-0 (TMI-I)  
LER 80-005/99X-0 (TMI-II)  
OH

I. NATURE OF THE PROBLEM

Rosemount's Model 1152 Pressure Transmitter provides a specified linear output of 4 to 20 ma throughout the calibrated range of operation. Transmitter output at pressures over and under the calibrated range is not specified by Rosemount. It has been observed in a limited number of transmitters that an output between 4 and 20 ma can occur with input pressures either over or under the calibrated range.

For an over range condition, the ambiguous output is due to a unique condition in the transmitter electronics. The result is that the output current may drop below 20 ma. In a limited sample size, the over range ambiguous output occurred in 5% of the transmitters at ambient conditions. Referring to the attached graph, this does not occur until the over range condition exceeds 140% of the upper range limit. At that point, a discontinuity occurs and the output current potentially will be less than 20 ma.

For an under range condition, the ambiguous output is due to a different unique condition in the transmitter electronics. The result is that the output current may exceed 4 ma. In a limited sample size, the under range ambiguous output occurred in 55% of the transmitters at ambient conditions. Again referring to the attached graph, this does not occur until the under range condition exceed 100% of the calibrated span. At that point, the output current potentially will be greater than 4 ma.

In both the over range and under range conditions, the transmitter reverts to specified operation when pressure is again within the calibrated pressure range, provided the over or under pressure condition was within specified limits. Also, for both over range and under range conditions, there is an increased probability that the transmitter output will return to the 4 to 20 ma operating range if the transmitter is exposed to either a radiation or elevated temperature environments.

II. EVALUATION

The Rosemount Model 1152 Pressure Transmitters are currently used as narrow range pressure transmitters for the Reactor Coolant System. The anomaly described above does not interfere with the trip function of the Reactor Protection System but could cause confusion to an operator who might be watching the narrow range pressure instrument for saturation condition in the RCS.

III. RECOMMENDED CORRECTIVE ACTION

All Control Room Operations personnel will be informed of the possible anomaly in the narrow range pressure instrumentation when in the ambiguous over/under range output region.

IV. PLANT STATUS

Currently there are 4 narrow range pressure transmitters (Rosemount) located above the operating floor (348' level) in TMI-I and above the basement floor (underwater) in TMI-II.

TMI-I is currently in a cold shutdown condition per NRC Order.

TMI-II is currently in the recovery mode and none of the narrow range pressure transmitters are functional.

No anomalies have been observed in these transmitters to date.



- 4-20ma Rosemount specified linear output
- xxxx Over range/under range region
- discontinuity point
- oooo ambiguous over range/under range output

