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

Gentlemen:

Subject: Three Mile Island Nuclear Station Unit I, (TMI-1)  
Operating License No. DPR-50  
Docket No. 50-289  
GPUN Response to NRC Bulletin 90-01, Supplement 1  
Loss of Fill-Oil in Transmitters Manufactured by Rosemount

This letter transmits the GPUN response to NRC Bulletin 90-01, Supplement 1. In response to Bulletin 90-01 in July 1990, GPUN documented the number and application of Rosemount model 1151, 1152 and 1153 transmitters manufactured prior to July 11, 1989 in service at TMI-1 (there are no model 1154 transmitters in service with sensing modules manufactured prior to July 11, 1989). At that time, an enhanced surveillance program was implemented to trend operational and/or calibration data. Data evaluation has provided confirmation that the transmitters continue to perform their intended safety functions.

The actions taken at TMI-1 in response to Bulletin 90-01 were compared with those requested of operating reactors by Supplement 1 to the bulletin. The results of the comparison confirmed that the enhanced surveillance program implemented at TMI-1 satisfies the updated action requested as outlined in Supplement 1. Therefore, for those transmitters manufactured prior to July 11, 1989 remaining in service, as identified in Sections 1 and 2 of Attachment 1, GPUN will continue to implement the existing enhanced surveillance program. Surveillance results are documented, evaluated and maintained by the Plant Materiel Assessment Group. Transmitters listed in Attachment 1 which exhibit indications symptomatic of failure due to fill-oil loss will be replaced or rebuilt with units containing sensing modules manufactured after July 11, 1989 in accordance with the TMI-1 Corrective Maintenance Program.

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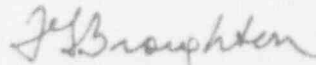
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Attachment 1 also identifies the specific GPUN commitments to take actions for transmitters in each of the pressure/use categories outlined in the supplement. Two transmitters identified in section 1.b have been designated for replacement prior to the 10R outage. The option to replace these transmitters was chosen over that of performing enhanced surveillance because of the effort required to meet the quarterly monitoring requirement.

The accuracy of the enhanced surveillance program was evaluated against the guidelines in Rosemount Technical Bulletin #4. Both methods used at TMI-1, transmitter calibration and operational data trending were found adequate to meet the guideline criteria. All actions requested by the bulletin supplement will be complete with the replacement of the two transmitters as noted in section 1.b of the attachment.

Sincerely,



T. G. Broughton  
Vice President & Director, TMI-1

WGH

Attachments

cc: Administrator, Region 1  
TMI-1 Senior Project Manager  
TMI Senior Resident Inspector

TMI-1 Response to Actions Requested by the NRC  
in IE Bulletin 90-01, Supplement 1

1. High Pressure (>1500 psig) Transmitters

- a) Rosemount Model 1153 Series B and D transmitters manufactured prior to July 11, 1989, that are in service at TMI-1 in either reactor protection trip systems, ESF actuation systems or ATWS applications are listed below:

Tag	Model	Application
RC-PT-949	1153GD9	RC Wide Range Pressure (ATWS/Reg Guide 1.97)
RC-PT-963	1153GD9	RC Wide Range Pressure (ATWS/Reg Guide 1.97)

These pre-July 11, 1989 transmitters, operating at a normal pressure in excess of 1500 psi and installed in the ATWS system, have exceeded the Rosemount 60,000 psi-month threshold criterion. These "mature" transmitters will continue to be monitored using the current enhanced surveillance program on at least a monthly basis. Repair or replacement will be scheduled and accomplished as warranted by trend evaluation results.

- b) Rosemount Model 1153 Series B and D transmitters manufactured prior to July 11, 1989, that are in service at TMI-1 in safety related applications but are not installed in reactor protection trip systems, ESF actuation systems or ATWS applications are listed below:

Tag	Model	Application
MU24A-FT	1153HB5	Low Range Make-up Flow (Reg Guide 1.97)
MU24B-FT	1153HB7	High Range Make-up Flow (Reg Guide 1.97)
RC-LT-777	1153DD5	Pressurizer Level (Reg Guide 1.97)

These transmitters are "mature", having exceeded the Rosemount 60,000/130,000 psi-month threshold criterion, and have exhibited no trend pattern indicative of a loss of fill-oil failure. Transmitters MU24A-FT and MU24B-FT will be replaced before the 10R outage (September 1993) due to the difficulty in meeting the enhanced monitoring requirements of IEB 90-01, Supplement 1. Transmitter RC-LT-777 will be monitored using the enhanced surveillance program currently in place on at least a quarterly frequency. Its repair or replacement will be scheduled and accomplished as warranted by trend evaluation results.

## 2. Medium Pressure (500 to 1500 psig) Transmitters

Rosemount Model 1153 Series B and D transmitters manufactured prior to July 11, 1989, that are in service in RPS, ESF, ATWS, non-RPS, non-ESF and non-ATWS applications at TMI-1 are identified in the following list:

Tag	Model	Application
FW-LT-775	1153DD5	OSTG A Full Range Level (FW/Reg Guide 1.97)
FW-LT-776	1153DD5	OSTG B Full Range Level (FW/Reg Guide 1.97)
FW-LT-788	1153DD5	OSTG B Full Range Level (FW/Reg Guide 1.97)
FW-LT-789	1153DD5	OSTG A Full Range Level (FW/Reg Guide 1.97)
MS-PT-950	1153GD9	OTSG A Pressure (HSPS/Reg Guide 1.97)

These transmitters are "mature", having exceeded the 60,000 psi-months threshold criterion, and have exhibited no trend pattern indicative of a loss of fill-oil failure. Although not required by Supplement 1, these transmitters will be monitored using the enhanced surveillance program. Repair or replacement will be scheduled and accomplished as warranted by trend evaluation results.

## 3. Low Pressure (<500 psig) Transmitters

Rosemount Model 1153 Series B and D transmitters manufactured prior to July 11, 1989, that are in service in low pressure non-RPS, non-ESF and non-ATWS applications are listed below:

Tag	Model	Application
BS-PT-0981A	1153GD7	Wide Range Containment Pressure A
BS-PT-0981B	1153GD5	Narrow Range Containment Pressure A
BS-PT-0982A	1153GD7	Wide Range Containment Pressure B
BS-PT-0982B	1153GD5	Narrow Range Containment Pressure B
DH-DPT-0819	1153DD5	BWST/NaOH Differential Pressure
IC-LT-0802	1153DD4	ICCW Tank Level A
IC-LT-0803	1153DB4	ICCW Tank Level B
MU14-LT	1153DD4	Make-up Tank Level
MU-LT-0778	1153DD4	Make-up Tank Level
NS-LT-800	1153DD4	NSCCW Surge Tank Level A
NS-LT-801	1153DD4	NSCCW Surge Tank Level B
RC-LT-1037	1153DD5	RCS Draindown Level

These transmitters currently exhibit no trend pattern indicative of a loss of fill-oil failure. The enhanced surveillance program currently in place for these transmitters will be discontinued as permitted by the supplement, however, the ability to detect failures will be maintained.

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