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March 28, 1995
C311-95-2160

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

Dear Sir:

Subject: Three Mile Island Nuclear Station, Unit 1 (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
Status of Corrective Action Taken for Violation 94-19-01

The purpose of this letter is to correct the record in regard to the corrective action commitment made in our response (attached) dated November 2, 1994 to the Notice of Violation (NOV) 94-19-01 of Inspection Report 50-289/94-19. This action is necessary because the corrective action taken to close out the item was different from that described in GPUN's written response to the violation.

As described in the attached NOV response, GPUN committed to modifying the three non-standard differential pressure transmitters located outside containment to the standard configuration for equalizing valve position by April 1, 1995. BS1-DPT2 and BS1-DPT1 have been modified; however, BS5-LT (Sodium Hydroxide Tank level transmitter) will not be modified.

After inspecting most of the differential pressure transmitters located inside containment, a criterion was developed for determining if a modification is required. It was decided that no modification would be required if a differential pressure transmitter has an output signal that can be used to verify that the transmitter is in service after work has been done on it. BS5-LT will generate a 0 foot level indication output with an open equalizing valve. This will result in both a computer and alarm panel low level alarm and a 0 foot level indication in the Control Room. The level indication is checked on a shiftly basis. In addition, modification of BS5-LT would be difficult due to the confines of the box in which the transmitter and manifold are located. Thus, GPUN has determined that modifying BS5-LT is not necessary.

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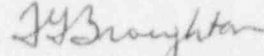
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All the other corrective action commitments described in our response have either been completed as described or are intended to be completed by the startup following the 11R outage.

Sincerely,



T. G. Broughton
Vice President and Director, TMI

Attachment

AWM/mkk

cc: M. G. Evans - TMI Senior Resident Inspector
R. W. Hernan - TMI-1 Senior Project Manager
T. T. Martin - Region I Administrator



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November 2, 1994
C311-94-2150

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

Subject: Three Mile Island Nuclear Station, Unit 1 (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
Inspection Report 94-19 - Notice of Violation Response

Dear Sirs:

Enclosed is the GPU Nuclear reply to the Notice of Violation transmitted as an enclosure to Inspection Report 94-19, and as modified by NRC letter dated October 17, 1994.

Sincerely,

A handwritten signature in dark ink, appearing to read "T. G. Broughton".

T. G. Broughton
Vice President and Director, TMI

AWM/emf

cc: M. G. Evans - TMI Senior Resident Inspector
R. W. Hernan - Senior Project Manager
T. T. Martin - Region I Administrator

NOTICE OF VIOLATION - 94-19-01

10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," states, in part, that measures shall be established to assure that conditions adverse to quality such as failures, malfunctions, or deficiencies are promptly identified and corrected. Further, it requires that the cause of the condition must be determined and corrective actions taken to preclude repetition.

Administrative Procedure (AP) 1071, "Post-Maintenance Testing Guidelines," requires either independent valve verification for standby/idle equipment OR verification of proper instrument indication on running equipment to ensure the proper restoration of systems after maintenance.

Procedure IC-1, "Flow Loop Calibration," step 8.7.3, requires closure of the flow transmitter equalizing valve BS-V-1023 at the completion of the calibration.

Contrary to the above, during the period of June 17, 1994 - September 8, 1994, the building spray (BS) transmitter equalizing valve BS-V-1023 was left open. The licensee did not perform an independent valve verification for the idle BS system, or verify proper instrument indication by running the BS pump as required by AP-1071.

The licensee's corrective action to revise the post maintenance testing guidelines from a previous similar event in June 1993 were based on Plant Evaluation Report (PER) 93-002, which addressed a building spray transmitter valve misalignment event. In addition, the licensee failed to correct the associated transmitter human factor problems identified following the June 1993 event. The corrective actions from the June 1993 event were ineffective in that they did not preclude repetition of a similar event on September 8, 1994.

This is a Severity level IV violation (Supplement I).

GPU NUCLEAR RESPONSE TO NOTICE OF VIOLATION 94-19-01

This Notice of Violation (NOV) is related to a condition discovered on September 8, 1994, while performing Surveillance Procedure (SP) 1300-3A, "Inservice Test of Building Spray (BS) Pump 1A/B and Valves." The plant operators observed that BS-P-1B flow rate was lower than expected. Upon investigation it was determined that the flow rate indication was erroneous due to flow transmitter, BS1-DPT2, having its equalizing valve mispositioned.

I. Reason for the Violation

Our investigation determined that the most probable reason for BS1-DPT2 equalizing valve being out of position on September 8, 1994 was that the valve was left in the wrong position following the calibration surveillance on June 17, 1994. The calibration was performed in accordance with SP 1302-14.1, "Calibration of IST Related Instruments," and Preventive Maintenance Procedure IC-1, "Flow Loop Calibration." There was no documented activity associated with BS1-DPT2 following the calibration until the pump test on September 8, 1994.

Administrative Procedure (AP) 1071, "Post-Maintenance Testing Guidelines," requires independent verification of valves, such as those associated with BS1-DPT2, if system functional testing is not performed in conjunction with the calibration. Based on the recollection of the technicians involved with the June 17, 1994 calibration activity, we believe that an independent valve verification for the BS1-DPT2 valve manifold was performed. However, neither SP 1302-14.1 nor Procedure IC-1 require the documentation of an independent verification for the transmitter valves and thus no documentation is available.

The cause of the BS1-DPT2 flow transmitter equalizing valve mispositioning is that BS1-DPT2 is configured such that the equalizing valve is located on the back side of the transmitter with only a few inches of space between the valve and the room wall. Since the equalizing valve configuration is non-standard, the probability that valve manipulation errors could occur is increased. Although the technician who performed the calibration recalls performing the valve alignment and having an independent verification performed, we conclude that the valve alignment and independent verification was less than adequate.

During our investigation of this problem the following weaknesses were discovered:

- A. Less than adequate valve position and independent verification documentation requirements in the working level procedures
- B. Less than adequate post maintenance testing for all the inservice testing related instruments

II. Corrective Steps That Have Been Taken and the Results Achieved

- A. All similar differential pressure transmitters have been identified from the plant equipment list. The approximately 80 differential pressure transmitters located outside the containment were checked to verify proper valve position and to determine if any other differential pressure transmitters had similar non-standard equalizing valve configurations.

All of the differential pressure transmitters had their equalizing valves correctly positioned. However one instrument, a river water system pump discharge strainer differential pressure instrument, was discovered with its low pressure side isolation valve closed. This instrument valve misalignment would have caused an incorrect pump discharge strainer high differential pressure alarm. This low pressure side isolation valve misalignment was considered to be an isolated case.

There were a total of three differential pressure transmitters identified with a non-standard equalizing valve configuration, BS1-DPT2, BS1-DPT1, and BS5-LT.

- B. Local Caution signs were placed on the three instrument manifolds that have non-standard equalizing valve configurations to alert the operator of the potential problem associated with valve mispositioning.

III. Corrective Steps That Will Be Taken to Avoid Further Violations

The three non-standard differential pressure transmitters located outside containment will be modified to the standard configuration for equalizing valve position; that is, to make the equalizing valve face the operator.

The approximately 60 differential pressure transmitters located in the containment will be checked to verify proper valve position and to determine if any have non-standard equalizing valve configurations. The majority of these valves will be checked during upcoming at-power containment entries; however because of ALARA concerns, several transmitters will not be checked until a reactor shutdown outage occurs. If any of the differential pressure transmitters located inside containment have a non-standard equalizing valve configuration, an evaluation will be performed to determine if a modification is necessary.

The following actions address the weaknesses discovered during the investigation of this problem:

- A. The generic procedures used to perform the calibration of differential pressure transmitters will be revised to document the requirements of valve position and independent verification specified in AP 1071. The I&C procedures to be revised are the following: 1430-Y-17, 1430-Y-17A, 1430-Y-17B, and IC-1.
- B. Performance of IST related instrument calibrations will be coordinated with the performance of the associated functional test, to the extent practical, in order to verify that the instruments are capable of performing their design function after being returned to service.

- C. This NOV response will be reviewed with all I&C maintenance personnel to ensure awareness of this problem and the corrective steps that have been taken and those steps that will be taken.

IV. Date of Full Compliance

The modifications on the three non-standard differential pressure transmitters located outside containment will be completed by April 1, 1995. The checks and any necessary modifications on the differential pressure transmitters located inside containment will be completed by the startup following the 11R outage.

The actions to address the weaknesses identified during the investigation of this problem (Items III. A, B, and C above) will be completed by January 15, 1995.