

GPU SERVICE CORPORATION

A subsidiary of General Public Utilities Corp.

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December 20, 1973

Dr. D. R. Knuth, Director
Directorate of Regulatory Operations
United States Atomic Energy Commission
Washington, D. C. 20545

Subject: Three Mile Island Unit 1
Docket No. 50-289
Bent Vent Valve Thermocouple Guide Tubes

Dear Dr. Knuth:

You were notified on November 26, 1973, of a situation which may be considered reportable under 10CFR50.55(e), "Conditions of Construction". This situation related to bent vent valve thermocouple guide tubes.

DESCRIPTION OF INCIDENT

On November 22, 1973, the Three Mile Island Unit 1 reactor vessel closure head was removed for inspection of the O-rings. At this time it was discovered that seven of the eight vent valve thermocouple nozzles on the reactor vessel closure head were distorted. In addition, the corresponding thermocouple guide tubes on the plenum assembly were also distorted. Of the seven damaged thermocouple nozzles on the closure head, two were significantly bent out of shape while damage to the other five consisted primarily of raised metal. Of the corresponding thermocouple guide tubes on the plenum assembly, two were bent approximately 10° from the vertical while damage to the other five was limited to raised metal and some damage to the tube ends.

CORRECTIVE ACTION

The vent valve thermocouples were originally included in the design because it was felt that they might be required for licensing. However, subsequent to including the guide tubes in the fabrication, additional calculations and discussions with the AEC Staff by the NSSS supplier determined that these would not be required for the Three Mile Island Unit 1 power level.

The apparent cause of the bent tubes was misalignment of the nozzles on the head to the guide tubes on the plenum. Since the vent valve thermocouples are not required for operation of Three Mile Island Unit 1, it was decided to partially remove the nozzles. Otherwise, critical tolerances would need to be re-established and maintained to preclude future occurrences of this nature. As a result of this corrective action, the situation at Three Mile Island Unit 1 with regard to the vent valve thermocouple guide tubes duplicates the situation at Oconee I.

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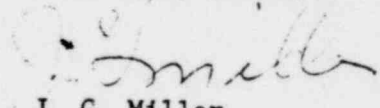
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The corrective action was taken with technical direction from the NSSS contractor and consisted of the following:

- A. The thermocouple nozzles were cut off approximately six inches below the inside surface of the reactor vessel closure head.
- B. The thermocouple nozzle to the reactor vessel closure head welds were visually inspected and dye checked for defects and were found to be satisfactory.
- C. All raised metal on the thermocouple guide tubes (plenum assembly) was removed and blended.
- D. The upper thermocouple guide tube reducer to guide tube weld and the guide tube to plenum upper weld were visually inspected with 5X magnification for defects. None were found.

Very truly yours,


J. G. Miller
Vice President

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cc: Messrs. H. M. Dieckamp
J. P. O'Reilly
W. A. Verrochi

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