

# Inter-Office Memorandum

To: R. Vollmer

## GPU Service

*File*

Date: June 27, 1979  
TSG/253

Subject: RCS Pressure Indication

To: H. R. Lane

Location: TMI

Additional instrumentation should be provided for monitoring RCS pressure. This instrumentation will provide a high degree of reliability for monitoring the RCS pressure using the decay heat removal system.

The attachment shows the existing instrumentation and the proposed instrumentation (clouded). The proposed instrumentation consists of an additional transmitter, a Heise gage, and the necessary piping and electrical connections. The transmitter can be connected to monitoring instrumentation in the control room by using existing cables or by running a new cable. The Heise gage should be located to minimize any radiation exposure to personnel.

The instrumentation in the decay heat removal system for monitoring RCS pressure is DH-10-PS-1 and SPC-PT-15. DH-10-PS-1 is a pressure switch used for an alarm. SPC-PT-15 is a transmitter used to provide the RCS pressure indication. Should SPC-PT-15 fail, the only alternate means of indicating RCS pressure would be the Heise gage at the sample sink. Consequently, there would be no available means of monitoring RCS pressure if a sample were being drawn or if the Heise gage failed. In order to rely less on the Heise gage at the sample sink, an additional transmitter and a Heise gage should be added to the instrumentation that is now on the decay heat removal system. This will provide redundant pressure indication should one transmitter malfunction and will provide a gage reading locally should both transmitters malfunction. It is recommended that the calibration range be 0-500 psig, thus providing narrow range indication and better resolution in the operating region (the existing transmitter is calibrated for 0-1000 psig).

Also included (see attachment) are double isolation valves to the redundant transmitter. This provides two valve protection to facilitate repair without complete loss of pressure indication. The piping configuration is such that two valve protection is also provided for the Heise gage; thus, it will allow removal of the Heise gage for calibration and/or repair while maintaining pressure indication with the transmitter.

A high degree of reliability, a means of comparison and necessary maintenance can be achieved by the proposed redundancy. In order to keep radiation exposure to a minimum, these additions should be made prior to opening either DHV171 or DHV1.

*R. Manazir*  
R. Manazir

*J. P. Moore*  
J. P. Moore

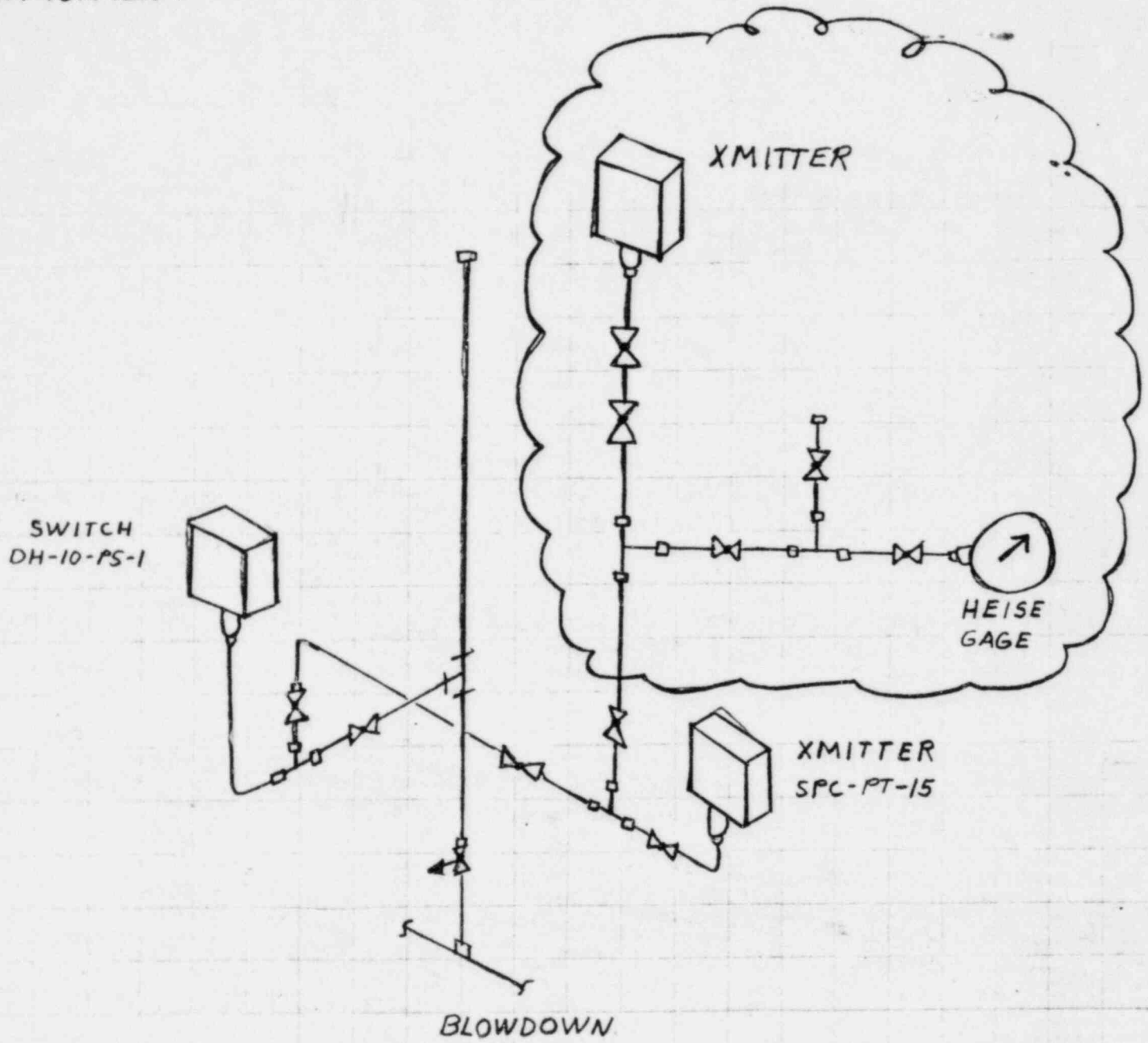
8211180561 790627  
PDR ADDCK 05000289  
P PDR

RM:gp

Att. cc: R. C. Arnold R. Vollmer (NRC) W. H. Hirst J. W. Henry  
J. G. Herbein N. Dye R. F. Wilson J. C. DeVine J. R. Floyd

GPU Service Corporation is a subsidiary of General Public Utilities Corporation

ATTACHMENT



REACTOR COOLANT SYSTEM PRESSURE MEASUREMENT