Consumers Power Company

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July 29, 1980

Mr James G Keppler
Office of Inspection and Enforcement
Region III
US Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT - RESPONSE TO IE BULLETIN 80-16 - MISAPPLICATION OF ROSEMOUNT TRANSMITTERS

Consumers Power Company was requested by IE Bulletin 80-16 dated June 27, 1980 (potential misapplication of Rosemount Inc Models 1151 and 1152 pressure transmitters with either "A" or "D" output codes) to verify if our Palisades Plant uses the subject transmitters. Our response is as follows:

Item 1

Determine if your facility has installed or plans to install Rosemount Inc Model 1151 or 1152 pressure transmitters with output codes "A" or "D" in any safety-related application.

Response to Item 1

Rosemount 1151 and 1152 pressure transmitters used at the Palisades Plant are listed in Table 1 (attached).

Item 2

If it is determined that your facility has the transmitters described in 1 above in any safety-related application, determine whether they can be exposed to input pressures that could result in anomalous output signals during normal operation, anticipated transients or design bases accidents. If the affected transmitters can be exposed to input pressures that could result in anomalous output signals, perform a worst case analysis to determine whether the anomalous signals could result in violating any design basis assumption. The safety-related application shall include control, protective or indication functions. If any safety-related application does not conform to the above

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requirements, address the basis for continued plant operation until the problem is resolved and provide an analysis of all potential adverse system effects which could occur as a result of a postulated pressure transmitter maloperation described in Enclosure 1 of this bulletin. In each instance, the analysis should include the effects of postulated transmitter maloperation as it relates to indication, control and protective functions. The analysis shall address both incorrect automatic system operation and incorrect operator actions caused by erroneous indications. Address the conformance to IEEE 279, Section 4.20 in your analysis. Include in your analysis the following table:

a. Complete model number.

b. Transmitter range limits.

c. Transmitter range setting.

d. Range of process variable measured for (1) normal and (2) accident conditions.

e. Values of process variable which could produce anomalous indication based upon your evaluation.

f. Service/function.

Response to Item 2

a. Item 1: Transmitter maloperation may occur at approximately 140 psid across the S/G tubes (100% PCS flow yields approximately 48 psid). The primary coolant pumps are incapable of delivering such flows and the pumps would be tripped during accident conditions; therefore, the possible anomalous region is considered to be well beyond the feasible process values and is not a safety issue.

b. Items 2 & 3: PCS pressure transmitters could possibly experience the reduced output phenomena at pressurizer pressures exceeding approximately 4200 psig. This value is well beyond the ratings of the code safeties and safety injection system. In addition, seven other channels of PCS pressure instrumentation currently exist which do not utilize Rosemount transmitters and would not experience the degraded output.

c. Item 4: The charging flow indication would degrade at a flow of approximately 225 gpm; however, maximum flow of the three positive displacement charging pumps is approximately 120 gpm. Thus, the anomaly is not a problem here.

d. Item 5: The first stage pressure transmitters would yield incorrect outputs at pressures greater than 1400 psig. However, this pressure is greater than main steam pressure and would fall to approximately 0 when the turbine trips.

Based on the above discussion, a worst case analysis to determine whether the anomalous output signals could result in violating any design basis assumption was not performed.

Item 3

Submit a complete description of all corrective actions required as a result of your analysis and evaluations, together with the schedule for accomplishing the corrective actions.

Response to Item 3

As a result of our evaluation and the information supplied in Items 1 and 2, no further action is being considered for the Palisades Plant in the matter of IE Bulletin 80-16.

David P Hoffman (Signed)

David P Hoffman
Nuclear Licensing Administrator

CC Director, Office of Nuclear Reactor Regulation
Director, Office of Inspection and Enforcement
NRC Resident Inspector-Palisades

Attachment, Table I

PALISADES PLANT
IE Bulletin 80-16

Table I

	Tag Number	Service	Model	Cal Range	Range	140% Value
Item 1	dPT 0112 AA,AB,AC,AD dPT 0112 BA,BB,BC,BD dPT 0122 CA,CB,CC,CD dPT 0122 DA,DB,DC,DD	Loop 1A PCS Flow Loop 1B PCS Flow Loop 2A PCS Flow Loop 2B PCS Flow	1152HP6D 1152HP6D 1152HP6D 1152HP6D	0-65 Psid	0-17/100 Psid	140 Psid
Item 2	PT 0104	Narrow Range PCS Pressure	1152GP9A	11-611 Psig	0-500/3000 Psig	4200 Psig
Item 3	PT 0105A,B	PCS Pressure; Subcooled Margin Monitor	1151GP9E	11-2511 Psig	0-500/3000 Psig	4200 Psig
Item 4	FT 0212	Charging Sys Flow	1151HP5E	0-400" WC	0-125/750" WC	1050" WC
Item 5	PT 0515,7	Turbine - 1st Stage Press (Load Demand Signals)	1151GP8E	0-600 Psig	0-170/1000 Psig	1400 Psig