DUQUESNE LIGHT COMPANY

Beaver Valley Power Station

Unit 1

INSERVICE TESTING (IST) PROGRAM FOR PUMPS AND VALVES

Proposed Revision 1G

	Pages Issued	OSC Review/Date
K.L. Ostrowski / 6/29/95 Unit Operations Manager Review/Date	3	BV-OSC-26-95 6-29-95
J.D. Sieber 7/7/95 Approved by Date		

This "Proposed Revision" was made against Revision 12A of the present Unit 1 IST Program.

RELIEF REQUEST 12

Pump mark No(s).:	See Attached Table
Code Test Requirement:	Per IWP-4120, the full-scale range of each instrument shall be three times the reference value or less.
Basis for Relief:	The pumps listed on the attached table use installed instruments which do not meet the requirements of IWP-4120, however, the accuracies of the installed instruments used are more conservative than the Code requirements of IWP-4110, Table IWP-4110-1. Per the attached table, the combination of the higher range and better accuracy for each instrument yields a reading at least equivalvent to the reading achieved from instruments that meet the Code requirements. Therefore, relief is requested in accordance with Generic Letter 89-04, Supplement 1 (NUREG-1482), Paragraph 5.5.1.
Alternate Test:	Use the installed instruments listed on the attached table as long as the combination of the higher range and better accuracy for each installed instrument yields a reading at least equivalent to the reading achieved from instruments that meet the Code requirements.

IST Pump Instrumentation

Pump ID#	Instrument ID#	Condition Requiring Relief	Basis for Relief/Alternate Test
1CH-P-1A 1CH-P-1B 1CH-P-1C	FI-1CH-122A	The range of this gauge is greater than three times the reference flow, at full flow conditions.	The Charging Line Flow Indicator with a range of 0-150 gpm is sized for all modes of Charging Pump operation. During the quarterly recirculation flow testing, the Code requirements are met. During refueling full-flow testing, flow through this line is throttled to between 45-50 gpm, slightly below 1/3 of the range. The calibration accuracy is 1.5%, which would yield a reading more accurate than Code requirements.
	FI-1SI-943	The range of this gauge is greater than three times the reference flow, at full flow conditions.	The Cold Leg Safety Injection Flow Indicator measures total flow to the RCS Cold Leg during an accident. It is sized for all modes of operation with a range of 0-1000 gpm. During the full flow HHSI test flow is throttled to approx. 305 gpm, which is slightly less than 1/3 of the range. With a calibration accuracy of 0.75%, this would yield a reading more accurate than Code requirements.
1RH-P-1A 1RH-P-1B	PI-1RH-600 PI-1RH-601	The range of the gauges is greater than three times the reference pressure at some operating conditions.	These gauges are the discharge pressure gauges for the RHR pumps. They are sized for all modes of pump operation with a range of 0-700 psig. The RHR pumps take suction on the RCS, and the discharge pressure is dependent on the RCS pressure, varying between 96-485 psig (typically 420 psig). The calibration accuracy is 0.5%, which would yield a reading more accurate than Code requirements for any operating pressure.
1SI-P-1A 1SI-P-1B	PI-1SI-943 PI-1SI-944	The range of the gauges is greater than three times the reference pressure, at full flow conditions.	These gauges are the discharge pressure gauges for the LHSI pumps. They are sized for all modes of pump operation with a range of 0-400 psig. They meet the criteria for the quarterly test, however, at higher flow rates the pressure is approx. 25% of the range. The calibration accuracy is 0.5%, which would yield a reading more accurate than Code requirements.
1CC-P-1A 1CC-P-1B 1CC-P-1C	PI-1CC-100A PI-1CC-100B PI-1CC-100C	The range of the gauges is slightly greater than three times the reference pressure.	These gauges are the discharge pressure gauges for the CCR pumps. The range of the gauges is 0-400 psig. The use of a pump curve is allowed for these pumps per RR 11, and the typical pressure readings are slightly lower than 1/3 the range, varing between 110-132 psig. The calibration accuracy is 1.0%, which would yield a reading more accurate than Code requirements.

IST Pump Instrumentation

Pump ID#	Instrument ID#	Condition Requiring Relief	Basis for Relief/Alternate Test
	FI-1CC-117 FI-1CC-118 FI-1CC-119	The range of the gauges is greater than three times the reference flow.	These flow indicators are in the branch lines of the component cooling water system. They are only used if the installed PDIs are over-ranged. In that case the typical flow expected would be enough to meet Code requirements, except for [FI-1CC-117], which could be placed in service with a flow of 4000 gpm. [FI-1CC-117] is sized for all flow conditions wth a range of 0-14,000 gpm and an accuracy of 1.5%. It is in the 24" CCR header supplyng the cooling loads inside containment. When the RHR System is in operation the flow through this line is significantly higher. The calibration accuracy of this gauge would yield a reading more accurate than Code requirements.
	PDI-1CC-119	The range of the flow meter is greater than three times the reference flow for normal operations.	This flow indicator in the CCR header supplying the cooling loads in the Auxiliary Building, has a range of 0-150 inwc. Since the use of a pump curve is approved per relief, the reference flow may not be at a specific flow point. Typical test flow dP is approx. 19 inwc. The accuracy of the gauge is 0.5%, which would yield a reading more accurate than Code requirements.
1FW-P-2 1FW-P-3A 1FW-P-3B	FI-1FW-100A FI-1FW-100B FI-1FW-100C	The range of the gauges is greater than three times the reference flow for the Motor-Driven AFW Pumps.	These flow indicators are in the three lines to the S/Gs from the AFW pumps. The flow indicators are sized to measure accident flow from the Turbine-Driven AFW pump as well as the Motor-Driven pumps, with a range of 0-400 gpm. The reference value for the full-flow test is approx. 110 gpm, 27.5% of the range. The calibration accuracy of the flow meters is 1.0%, which would yield a reading more accurate than Code requirements.
	PI-1FW-156 PI-1FW-156A PI-1FW-156B	The range of the gauges is greater than three times the reference pressure.	These gauges are the suction pressure gauges for the auxilary feedwater pumps. In 1991, DCP 1557 changed the existing 0-160 psig gauges to the present 0-60 psig gauges. This range was selected as a compromise between the IST Program requirements and possible accident pressures (i.e., River Water supplying the AFW pumps). The 0-60 psig range will accommodate the accident pressure and typical test pressure of 10 psig. With a calibration accuracy of 0.5%, this results in a reading more accurate than Code requirements.
1EE-P-1A 1EE-P-1B 1EE-P-1C 1EE-P-1D	PI-1EE-101A PI-1EE-102A	The range of the gauges is greater than three times the reference pressure.	These gauges are the discharge pressure gauges for the D/G Fuel Oil Transfer Pumps. The reference value is approx. 9 psig, slightly below 1/3 of the range of the gauges (0-30 psig). Their calibration accuracy is 0.5%, which would yield a reading more accurate than Code requirements.

ENCLOSURE 2