

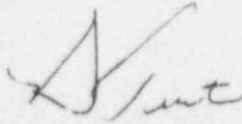
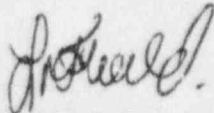
DUQUESNE LIGHT COMPANY

Beaver Valley Power Station

Unit 2

INSERVICE TESTING (IST) PROGRAM FOR PUMPS AND VALVES

Proposed Revision 2E

 Unit Operations Manager Review/Date	Pages Issued <u>5</u>	OSC Review/Date <u>BY-OSC-26-95</u> <u>6/29/95</u>
 Approved by	<u>7/7/95</u> Date	

This "Proposed Revision" was made against Revision 14A of the present Unit 2 IST Program.

EVPS-2 IST Program

RELIEF REQUEST 10

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 instruments which do not meet the requirements of IWP-4120, however, the accuracies of the instruments used is 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 equivalent to the reading achieved from instruments that meet the Code requirements. Therefore, relief is requested in accordance with Generic Letter No. 89-04, Supplement 1 (NUREG-1482), Paragraph 5.5.1.

Alternate Test: Use the instruments listed on the attached table as long as the combination of the higher range and better accuracy for each instrument yields a reading at least equivalent to the reading achieved from instruments that meet the Code requirements.

BVPS-2 IST Program

RELIEF REQUEST 10

IST Pump Instrumentation

Associated Pump	Instrument I.D. No.	Condition Requiring Relief	Basis for Relief/Alternate Test
2CHS*P21A 2CHS*P21B 2CHS*P21C	2CHS-PI151A 2CHS-PI152A 2CHS-PI153A	The range of the gauges is greater than 3 times the reference pressures during quarterly recirculation flow testing and during full flow testing at refueling.	These are the suction pressure gauges for the Charging Pumps. They are sized for all modes of pump operation including accident conditions (i.e., can take suction from the Recirculation Spray Pumps) with a range of 0-160 psig. During recirculation flow testing, the suction pressures are approx. 25% of the range. During full flow testing, the suction pressures are approx. 10% of the range. Their calibration accuracy is 0.5%, which would yield a reading more accurate than Code requirements.
	2CHS-FI122A	The range of the gauge is greater than 3 times the reference flow during testing at refueling.	This Charging Line Flow Indicator is sized for all modes of Charging Pump operation with a range of 0-150 gpm. It meets the Code requirements during quarterly recirculation flow testing of the Charging Pumps, however, the portion of flow through this line during full flow testing at refueling is throttled to between 45-50 gpm, slightly below 1/3 of the range. Its calibration accuracy is 1.5%, which would yield a reading more accurate than Code requirements.
	2CHS-FI943	The range of the gauge is greater than 3 times the reference flow during testing at refueling.	The HHSI Injection Flow Indicator is sized for full flow Charging Pump operation during an accident with a range of 0-1000 gpm. However, the portion of flow through this line during full flow testing of the Charging Pumps at refueling is throttled to approx. 30% of the range. Its calibration accuracy is 1.0%, which would yield a reading more accurate than Code requirements.

EVPS-2 IST Program

RELIEF REQUEST 10

IST Pump Instrumentation

Associated Pump	Instrument I.D. No.	Condition Requiring Relief	Basis for Relief/Alternate Test
2CHS*P22A 2CHS*P22B	2CHS-PI123A 2CHS-PI123B	The range of the gauges is greater than 3 times the reference pressures during quarterly testing.	These are the suction pressure gauges for the Boric Acid Transfer Pumps. They are sized for all modes of pump operation and Boric Acid Storage Tank levels with a range of 0-30 psig. During quarterly testing, the suction pressures are approx. 10-15% of the range. Their calibration accuracy is 0.5%, which would yield a reading more accurate than Code requirements.
2SIS*P21A 2SIS*P21B	2SIS-PI938 2SIS-PI939	The range of the gauges is greater than 3 times the reference pressures during quarterly recirculation flow testing and during full flow testing at refueling.	These are the suction pressure gauges for the Low Head Safety Injection Pumps. They are sized for recirculation and full flow testing with a range of 0-160 psig. During recirculation flow testing, the suction pressures are approx. 20% of the range. During full flow testing, the suction pressures are approx. 10% of the range. Their calibration accuracy is 0.5%, which would yield a reading more accurate than Code requirements.
2RSS*P21A 2RSS*P21B 2RSS*P21C 2RSS*P21D	Test Gauges (Suct Pres)	The range of the gauges may be greater than 3 times the reference pressures during testing at refueling.	A test gauge is installed on the suction line of each Recirculation Spray Pump during testing at refueling. A test dam is erected and filled with water to provide NPSH. The gauges are sized for varying levels of water in the test dam with suction pressures varying between 10-30 IWC. Test gauges of varying ranges and accuracies may be used, however, the combination of range and accuracy would yield a pressure reading within +/-0.5 IWC. Therefore, their better calibration accuracy in combination with a larger range would yield a reading more accurate than Code requirements.

BVPS-2 IST Program

RELIEF REQUEST 10

IST Pump Instrumentation

Associated Pump	Instrument I.D. No.	Condition Requiring Relief	Basis for Relief/Alternate Test
2CCP*P21A 2CCP*P21B 2CCP*P21C	2CCP-PI150A 2CCP-PI150B 2CCP-PI150C	The range of the gauges is greater than 3 times the reference pressures during quarterly testing.	These are the suction pressure gauges for the Component Cooling Water Pumps. They are sized for all modes of pump operation with a range of 0-60 psig. A pump curve is used during quarterly testing as approved by Relief Request No.7. The suction pressures vary between 24-37% of the range. Their calibration accuracy is 0.5%, which would yield a reading more accurate than Code requirements.
2FWE*P23A 2FWE*P23B	2FWE-FI100A 2FWE-FI100B 2FWE-FI100C	The range of the gauges is greater than 3 times the reference flows during full flow testing at cold shutdown and refueling.	These flow meters are located in the three lines to the Steam Generators from the Axiliary Feedwater (AFW) Pumps. They are each sized with a range of 0-400 gpm to measure accident flows from the Turbine-Driven AFW Pump [2FWE*P22]. They are also used to measure accident flows from the Motor-Driven AFW Pumps [2FWE*P23A and B], but at a lesser flow rate of approx. 30% of the range. Their calibration accuracy is 1.5%, which would yield a reading more accurate than Code requirements.
2EGF*P21A 2EGF*P21B 2EGF*P21C 2EGF*P21D	2EGF-PI201A 2EGF-PI201B 2EGF-PI201C 2EGF-PI201D	The range of the gauges is greater than 3 times the reference pressures during bi-monthly testing.	These are the discharge pressure gauges for the Emergency Diesel Generator Fuel Oil Transfer Pumps. They are sized for all modes of pump operation with a range of 0-30 psig. During bi-monthly testing, discharge pressures are between 8.5 to 10.5 psig, slightly below 1/3 of the range. Their calibration accuracy is 1.0%, which would yield a reading more accurate than Code requirements.

EVPS-2 IST Program

RELIEF REQUEST 10

IST Pump Instrumentation

Associated Pump	Instrument I.D. No.	Condition Requiring Relief	Basis for Relief/Alternate Test
2SWS*P21A 2SWS*P21B 2SWS*P21C	2SWS-PI105A 2SWS-PI105B 2SWS-PI105C	The range of the gauges is greater than 3 times the reference pressures during quarterly testing.	These are the Service Water Pump seal water pressure gauges. They are sized for all modes of pump operation with a range of 0-100 psig. During quarterly testing, the seal water pressures are approx. 10% of the range. Their calibration accuracy is 0.5%, which would yield a reading more accurate than Code requirements.