SURVEILLANCE REQUIREMENTS

4.1.3.5 Each control rod scram accumulator shall be determined OPERABLE:

a. At least once per 7 days by verifying that the indicated pressure is greater than 940 psig unless the control rod is inserted and disarmed or scrammed.

b. At least once per 18 months by:

1. Performance of a:

a) CHANNEL FUNCTIONAL TEST of the leak detectors, and

b) CHANNEL CALIBRATION of the pressure detectors, and verifying an alarm setpoint of ~~940 -30, -0~~ equal to or greater than psig on decreasing pressure.

2. Measuring and recording the time for up to 10 minutes that each individual accumulator check valve maintains the associated accumulator pressure above the alarm setpoint with no control rod drive pump operating.

NUCLEAR SERVICES | INFORMATION LETTER

NUCLEAR SYSTEMS & SERVICES OPERATIONS • SAN JOSE, CALIFORNIA

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Category 4

HCU ACCUMULATOR PRESSURE SWITCHES

Several operating BWR/5s have reported that hydraulic control unit (HCU) accumulator pressure switches have actuated below the limits stated in their plant Technical Specifications during regularly scheduled surveillance testing. These pressure switches trip on low HCU accumulator nitrogen pressure and alarm in the control room. The purpose of this Service Information Letter is to discuss these occurrences and to make recommendations to provide adequate instrument drift allowance to help assure that sufficient nitrogen pressure is maintained to provide the required scram performance.

DISCUSSION

The pressure switches provided for BWR/5 and BWR/6 HCUs are bourdon tube devices, Barksdale Model No. BIT-GH32SS, with a proof pressure of 4800 psig and an adjustable setpoint range of 160-3200 psig. Earlier product lines were provided with similar switches.

The Technical Specifications for BWR/2, BWR/3, and early BWR/4 units do not include a required setting for the accumulator low pressure alarm. The switches have been typically set in the range of 970 to 1000 psig. Switches found to be out of tolerance during periodic testing are reset to the specified value. Since there are no specified limits in the Technical Specifications for these early units, there are no reportability requirements.

However, the Technical Specifications for late BWR/4, BWR/5 and BWR/6 plants require the following typical low pressure alarm setpoints on decreasing pressure:

- o 940 +30, -0 PSIG for BWR/4 and BWR/5 plants
- o 1520 +30, -0 PSIG for BWR/6 plants

This 30 psig band for the low pressure alarm setpoint may not always provide sufficient low side instrument drift margin for the installed pressure switches.

RECOMMENDED ACTION

From previously reported operating plant experience, this setpoint drift concern may be apparently only an early in plant life phenomenon which may eventually stabilize and diminish. As such, General Electric makes the following recommendations to owners of BWRs which are early in plant life or are continuing to experience this pressure switch setpoint drift problem.

1. General Electric recommends that the owners of plants with the 940 +30, -0 psig requirements take the necessary actions to amend their Technical Specifications to state that the low pressure alarms be set at "equal to or greater than 940 psig on decreasing pressure". The switches may then be set to trip at a higher value (a nominal trip setpoint of 1025 psig or above on decreasing pressure should provide adequate setpoint drift margin).

2. General Electric recommends that the owners of plants with the 1520 +30, -0 psig requirements take the necessary actions to amend their technical specifications to state that the low pressure alarms be set at "equal to or greater than 1520 psig on decreasing pressure. The switches may then be set to trip at a higher value (a nominal trip setpoint of 1605 psig or above on decreasing pressure should provide adequate drift margin).

NOTE

The selected setting must not be so high that the alarm lights fail to reset following accumulator repressurization after a scram. The higher settings may also require more frequent nitrogen addition during normal operation.

If unacceptable setpoint drift problems still persist after the above recommendations have been implemented, the original pressure switches may be replaced with devices having a narrower repeatability band. For additional information, contact your local General Electric service representative.

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Information

Product Reference:
C-11 - CRD Hydraulic Control

STATE OF WASHINGTON)
)
County of Benton)

Subject: Control Rod Scram Accumulators 4.1.3.5

I, G. C. Sorensen, being duly sworn, subscribe to and say that I am the Manager, Regulatory Programs for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information and belief the statements made in it are true.

G. C. Sorensen, Manager
Regulatory Programs

On this day personally appeared before me G. C. Sorensen to me known to be the individual who executed the foregoing instrument and acknowledge that he signed the same as his free act and deed for the uses and purposes therein mentioned.

GIVEN under my hand and seal this 9th day of February, 1987.

B. R. Murchands

Notary Public in and for the
State of Washington

Residing at Richland, WA.
Dec 89