(1) All changes on this page, except as noted



B 3.3 INSTRUMENTATION

B 3.3.4 Remote Shutdown System

explain basis for change

BASES

BACKGROUND

The Remote Shutdown System provides the control room operator with sufficient instrumentation and controls to place and maintain the unit in a safe shutdown condition from a location other than the control room. This capability is necessary to protect against the possibility that the control room becomes inaccessible. A safe shutdown condition is defined as MODE 3. With the unit in MODE 3, the Auxiliary Feedwater (AFW) System and the steam generator (SG) safety valves or the atmospheric dump valves (ADVs) can be used to remove core decay heat and meet all safety requirements. The long term supply of water for the AFW System and the ability to borate the Reactor Coolant System (RCS) from outside the control room allows extended operation in MODE 3.

(2)

If the control room becomes inaccessible, the operators can establish control at the remote shutdown panel and place and maintain the unit in MODE 3. (Not all controls and necessary transfer switches are located at the remote shutdown panel. Some controls and transfer switches will have to be operated locally at the switchgear, motor control panels, or other local stations.) The unit automatically reaches MODE 3 following a unit shutdown and can be maintained safely in MODE 3 for an extended period of time.

(2) INSERT 1

The OPERABILITY of the remote shutdown control and instrumentation functions ensures there is sufficient information available on selected unit parameters to place and maintain the unit in MODE 3 should the control room become inaccessible.

APPLICABLE SAFETY ANALYSES

The Remote Shutdown System is required to provide equipment at appropriate locations outside the control room with a capability to promptly shut down and maintain the unit in a safe condition in MODE 3.

The criteria governing the design and specific system requirements of the Remote Shutdown System are located in 10 CFR 50, Appendix A, GDC 19 (Ref. 1).

INSERT 3.

(3)

The Remote Shutdown System satisfies Criterion 4 of 10 CFR 50.36(c)(2)(ii).

why don't GDC apply?



INSERT 2

2 **INSERT 1**

The hot shutdown panel is located in the rear of the opposite unit's control room.

1 **INSERT 2**

monitor the prompt shutdown to MODE 3, including the necessary instrumentation to support maintaining

2 **INSERT 3**

Plant Specific Design Criterion (PSDC) 11

why don't the GDC apply?

BASES

SURVEILLANCE REQUIREMENTS (continued)

experience demonstrates that remote shutdown control channels usually pass the Surveillance test when performed at the [18] month Frequency.

SR 3.3.4.6

CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

Whenever a sensing element is replaced, the next required CHANNEL CALIBRATION of the resistance temperature detectors (RTD) sensors is accomplished by an inplace cross calibration that compares the other sensing elements with the recently installed sensing element.

The Frequency of [18] months is based upon operating experience and consistency with the typical industry refueling cycle.

[SR 3.3.4.4

~~SR 3.3.4.4 is the performance of a TADOT every 18 months.~~ This test should verify the OPERABILITY of the reactor trip breakers (RTBs) open and closed indication on the remote shutdown panel, by actuating the RTBs. A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable TADOT of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. The Frequency is based upon operating experience and consistency with the typical industry refueling outage.]

REFERENCES 1. 10 CFR 50, Appendix A, GDC 19.

UFSAR, Section 1.4.3

2 **INSERT 5**

For the Reactor Trip Breaker Indication Function on the hot shutdown panel, the CHANNEL CALIBRATION shall consist of verifying that the indication conforms to the actual reactor trip breaker position ~~(i.e., open, closed)~~. open and close position by actuating the RTBs.