

TABLE 3.2.B (CONTINUED)

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT
COOLING SYSTEMS

Minimum No. Of Operable Instrument Channels Per Trip System	Trip Function	Trip Level Setting	Number of Instru- ment Channels Pro vided by Design	Remarks
1 (1)	Core Spray Sparger to Reactor Pressure Vessel d/p	1 (plus or minus 1.5) psid	2 Inst. Channels	Alarm to detect core spray sparger pipe break.
2 (1)	Condensate Storage Tank Low Level	Greater than or equal to 5" above tank bottom	2 Inst. Channels	Provides interlock to HPCI pump suction valves.
2 (1)	Suppression Chamber High Level	Less than or equal to 5" above normal water level	2 Inst. Channels	Transfers HPCI pump suction to suppression chamber.
2 (6)	Condensate Storage Tank Low Level	Greater than or equal to 5' above tank bottom	2 Inst. Channels	Transfer RCIC pump suction to suppression chamber.

PBAPS

Notes for Table 3.2.B

1. Whenever any CSCS subsystem is required by Section 3.5 to be operable, there shall be two operable trip systems. If the first column cannot be met for one of the trip systems, that trip system shall be placed in the tripped condition or the reactor shall be placed in the Cold Shutdown Condition within 24 hours.
2. Close isolation valves in RCIC subsystem.
3. Close isolation valves in HPCI subsystem.
4. Instrument set point corresponds to 18" above the top of active fuel.
5. HPCI has only one trip system for these sensors.
6. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, place at least one inoperable channel in the tripped condition within one hour or declare the RCIC system inoperable.

TABLE 4.2.B (CONTINUED)
MINIMUM TEST AND CALIBRATION FREQUENCY FOR CSCS

<u>Instrument Channel</u>	<u>Instrument Functional Test</u>	<u>Calibration Frequency</u>	<u>Instrument Check</u>
13) 4KV Emergency Power System Voltage Relays (HGA,SV)	Once/operating cycle	Once/5 years	None
14) ADS Relief Valves Bellows Pressure Switches	Once/operating cycle	Once/operating cycle	None
15) LPCI/Cross Connect Valve Position	Once/refueling cycle	N/A	N/A
16) Condensate Storage Tank Level (RCIC) (7)	Once/3 months	Once/operating cycle	Once/day

LIMITING CONDITIONS FOR OPERATION

3.5.D. Reactor Core Isolation Cooling (RCIC Sub-System)

1. The RCIC Sub-System shall be operable whenever there is irradiated fuel in the reactor vessel, the reactor pressure is greater than 105 psig, and prior to reactor startup from a Cold Condition, except as specified in 3.5.D.2 below.
2. From and after the date that the RCICS is made or found to be inoperable for any reason, continued reactor power operation is permissible only during the succeeding seven days provided that during such seven days the HPCIS is operable.
3. If the requirements of 3.5.D cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to 105 psig within 24 hours.

SURVEILLANCE REQUIREMENTS

4.5.D. Reactor Core Isolation
Cooling (RCIC Sub-System)

- | | <u>Item</u> | <u>Frequency</u> |
|-----|--|----------------------|
| 1. | RCIC Sub-System testing shall be performed as follows: | |
| (a) | Simulated Automatic Actuation Test* | Once/Operating Cycle |
| (b) | Pump Operability | Once/Month |
| (c) | Motor Operated Valve Operability | Once/Month |
| (d) | Flow Rate at
~ 1000 psig
Steam Pressure | Once/3 Months |
| (e) | Flow Rate at
~ 150 psig
Steam Pressure | Once/Operating Cycle |

The RICI pump shall deliver at least 600 gpm for a system head corresponding to a reactor pressure of 1000 to 150 psig.

2. When it is determined that the RCIC sub-system is inoperable, the HPCIS shall be demonstrated to be operable immediately and weekly thereafter.

*Shall include automatic restart on low water level signal.

6.9.1.a (Continued)

Start-up reports shall be submitted within 90 days following resumption or commencement of commercial full power operation.

b. Annual Occupational Exposure Tabulation (1)

A tabulation shall be made on an annual basis of the number of station utility and other personnel (including contractors) receiving exposures greater than 100 mrem/yr and their associated man-rem exposure according to work and job function, (2) e.g., reactor operations and surveillance, in-service inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. This tabulation shall be submitted for the previous calendar year prior to March 1 of each year. The dose assignment to various duty functions may be estimated based on pocket dosimeter, TLD, or film badge measurements. Small exposures totalling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total wholebody dose received from external sources shall be assigned to specific major job functions.

c. Annual Safety/Relief Valve Report

Describe all challenges to the primary coolant system safety and relief valves. Challenges are defined as the automatic opening of the primary coolant safety or relief valves in response to high reactor pressure.

d. Monthly Operating Report

Routine reports of operating statistics and shutdown experience, and a narrative summary of the operating experience shall be submitted on a monthly basis to the Office of Management and Program Analysis (or its successor), U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy of the appropriate Regional Office, to be submitted no later than the 15th of the month following the calendar month covered by the report.

(1) A single submittal may be made for a multiple unit station.

(2) This tabulation supplements the requirements of 10 CFR 20.407.

Reportable occurrences, including corrective actions and measures to prevent reoccurrence, shall be reported to the NRC. Supplemental reports may be required to fully describe final resolution of the occurrence. In case of corrected or supplemental reports, a licensee event report shall be completed and reference shall be made to the original report date.

- a. Prompt Notification With Written Followup. The types of events listed below shall be reported as expeditiously as possible, but within 24 hours by telephone and confirmed by telegraph, mailgram, or facsimile transmission to the Director of the appropriate Region Office, or his designate no later than the first working day following the event, with a written followup report within ten working days. The written followup report shall include, as a minimum, a completed copy of a licensee event report form. Information provided on the licensee event report form shall be supplemented, as needed, by additional narrative material to provide complete explanation of the circumstances surrounding the event.

- (1) Failure of the reactor protection system or other systems subject to limiting safety system settings to initiate the required protective function by the time a monitored parameter reaches the setpoint specified as the limiting safety system setting in the technical specifications or failure to complete the required protective function.

Note: Instrument drift discovered as a result of testing need not be reported under this item but may be reportable under items 2.a(5), 2.a(6), or 2.b(1) below.

- (2) Operation of the unit or affected systems when any parameter or operation subject to a limiting condition is less conservative than the least conservative aspect of the limiting condition for operation established in the technical specifications.

6.9.2 (Continued)

Note: If specified action is taken when a system is found to be operating between the most conservative and the least conservative aspects of a limiting condition for operation listed in the technical specifications, the limiting condition for operation is not considered to have been violated and need not be reported under this item, but it may be reportable under item 2.b(2) below.

- (3) Abnormal degradation discovered in fuel cladding, reactor coolant pressure boundary, or primary containment.

Note: Leakage of valve packing or gaskets within the limits for identified leakage set forth in technical specifications need not be reported under this item.

- (4) Reactivity anomalies involving disagreement with the predicted value of reactivity balance under steady state conditions greater than or equal to 1.0% $\Delta k/k$; calculated reactivity balance indicating a shutdown margin less conservative than specified in the technical specifications; short-term reactivity increases that correspond to a reactor period of less than 5 seconds or, if subcritical, an unplanned reactivity insertion of more than 0.5% $\Delta k/k$; or occurrence of any unplanned criticality.
- (5) Failure or malfunction of one or more components which prevents or could prevent, by itself, the fulfillment of the functional requirements of system(s) used to cope with accidents analyzed in the SAR.
- (6) Personnel error or procedural inadequacy which prevents or could prevent, by itself, the fulfillment of the functional requirements of systems required to cope with accidents analyzed in the SAR.

6.9.2 (Continued)

Note: For items 2.a(5) and 2.a(6) reduced redundancy that does not result in a loss of system function need not be reported under this section but may be reportable under items 2.b(2) and 2.b(3) below.

(7) Conditions arising from natural or man-made events that, as a direct result of the event require plant shutdown, operation of safety systems, or other protective measures required by technical specifications.

(8) Errors discovered in the transient or accident analyses or in the methods used for such analyses as described in the safety analysis report or in the bases for the technical specifications that have or could have permitted reactor operation in a manner less conservative than assumed in the analyses.

(9) Performance of structures, systems, or components that requires remedial action or corrective measures to prevent operation in a manner less conservative than assumed in the accident analyses in the safety analysis report or technical specifications bases; or discovery during plant life of conditions not specifically considered in the safety analysis report or technical specifications that require remedial action or corrective measures to prevent the existence or development of an unsafe condition.

Note: This item is intended to provide for reporting of potentially generic problems.

(10) Failure of a primary coolant system safety or relief valve to close.

6.9.2 (Continued)

- b. Thirty-Day Written Reports. The reportable occurrences discussed below shall be the subject of written reports to the Director of the appropriate Regional Office within thirty days of occurrence of the event. The written report shall include, as a minimum, a completed copy of a licensee event report form. Information provided on the licensee event report form shall be supplemented, as needed, by additional narrative material to provide complete explanation of the circumstances surrounding the event.
- (1) Reactor protection system or engineered safety feature instrument settings which are found to be less conservative than those established by the technical specifications but which do not prevent the fulfillment of the functional requirements of affected systems.
 - (2) Conditions leading to operation in a degraded mode permitted by a limiting condition for operation or plant shutdown required by a limiting condition for operation.

Note: Routine surveillance testing, instrument calibration, or preventative maintenance which require system configurations as described in items 2.b(1) and 2.b(2) need not be reported except where test results themselves reveal a degraded mode as described above.

6.17 Facility Staff Overtime Work Limits:

- 6.17.1 Administrative procedures shall be developed and implemented to limit the working hours of the senior reactor operators, reactor operators, health physics and chemistry technicians, non-licensed operators, maintenance and construction personnel, and instrument technicians, when performing safety-related functions.
- 6.17.2 The following overtime limits shall be followed for the personnel identified in 6.17.1, when performing safety-related functions:
- a. An individual shall not be permitted to work more than 16 hours straight, excluding shift turnover time.
 - b. An individual shall not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any seven-day period, all excluding shift turnover time.
 - c. A break of at least eight hours shall be provided between work periods, including shift turnover time. (A meal break does not separate different work periods.)
 - d. Except during shutdown periods of at least three days in duration, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.
- 6.17.3 Deviations from the overtime limits of a 6.17.2 shall be authorized by the individual's employing officer or his designated alternate, or higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation. The employing officer or his designee, shall review at an average of once a month, the number of deviations to assure that excessive deviations are not being authorized.

Facility Staff Overtime Work Limits

As reported in IE Circular No. 80-02, dated February 1, 1980, studies indicate that with fatigue, especially because of loss of sleep, an individual's detection of visual signals deteriorates markedly, the time it takes for a person to make a decision increases, and more errors are made. Other studies show that fatigue results in personnel ignoring some signals because they develop their own subjective standards as to what is important, and as they become more fatigued, they ignore more signals. The objective of the overtime limits specified in this section is to assure that, to the extent practicable, personnel are not assigned to perform safety-related functions while in a fatigued condition. The controls will limit both continuous working hours, and accumulated working hours during any seven-day period. Additionally, the controls will ensure adequate rest breaks between work periods. The overtime limits are based on the NRC's overtime policy enumerated in Generic Letter No. 82-12, dated June 15, 1983.