TECHNICAL SPECIFICATIONS

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Amendment No. 32, 33, 52, 54, 57, 67, 80, 81

ATTACHMENT A

2.0 LIMITING CONDITIONS FOR OPERATION

2.21 Post-Accident Monitoring Instrumentation

Applicability

Applies to post-accident monitoring instrumentation not included as part of the Reactor Protective System or Engineered Safety Features. This specification is applicable while in modes 1, 2 and 3.

Objective

To assure that instrumentation necessary to monitor plant parameters during post-accident conditions is operable or that backup methods of analysis are available.

Specifications

Post-accident instrumentation shall be operable as provided in Table 2-10. If the required instrumentation is not operable, then the action specified in Table 2-10 shall be taken.

Basis

Post-accident monitoring instrumentation provides information, during and following an accident, which is considered helpful to the operator in determining the plant condition. It is desirable that this instrumentation be operable at all times during operation of the plant. However, none of the post-accident monitors are required for safe shutdown of the plant nor are any control or safety actions initiated by the monitors.

In general, the post-accident monitors provide wide range capabilities for parameters which are beyond the range of normal protective and control instrumentation. They also provide remote sampling and analysis capabiltiy to reduce personnel exposure under post-accident conditions. Because the information necessary to assess the effect of an accident (i.e., core damage) can be obtained from other sources and by manual methods, it is not necessary that the post-accident monitors be operable at all times.

TABLE 2-10

Post-Accident Monitoring Instrumentation Operating Limits

Instrument	Minimum Operable Channels	Action
1. Containment Wide Range Radiation Monitors (RM-091A & B)	2	(a)
2. Wide Range Noble Gas Stack Monitor		
RM-063L (Noble Gas Portion Only)	1	(a)
RM-063M (Noble Gas Portion Only)	1	(a)
RM-063H (Noble Gas Portion Only)	1	(a)
3. Main Steam Line Radiation Monitor (RM-064)	1	(a)
4. Containment Hydrogen Monitor (VA-81A & B)	2	(b)(c)
5. Containment Water Level		
Narrow Range (LT-599 & LT-600)	1	(d)
Wide Range (LT-387 & LT-388)	2	(b)(c)
6. Containment Wide Range Pressure	2	(b)(c)

(a) With the number of OPERABLE channels less than required by the minimum channels operable requirements, initiate the pre-planned alternate method of monitoring the appropriate parameter(s) within 72 hours, and

1. either restore the inoperable channel(s) to OPERABLE status within 7 days of the event, or

2. prepare and submit a special report to the Commission pursuant to specification 5.9.3 within 14 days following the event outlining the action taken, the cause of the inoperability, and the plans and schedules for restoring the system to OPERABLE status.

(b) With one channel inoperable, restore the inoperable monitor to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours.

(c) With both channels inoperable, restore at least one channel to OPERABLE status within 72 or be in at least HOT SHUTDOWN within the next 12 hours.

(d) With the number of OPERABLE channels less than required by the minimum channels operable requirements, operation may continue until the next cold shutdown, at which time the required channel(s) shall be made operable.

2.0 LIMITING CONDITIONS FOR OPERATION

2.22 Toxic Gas Monitors

Applicability

Applies to toxic gas monitors which monitor the fresh air to the control room. This specification is applicable in all modes.

Objective

To assure that redundant toxic gas monitors which are used for continuous measurement of the fresh air to the control room are operational.

Specifications

Toxic gas monitors shall be operable as provided in Table 2-11. If the required instrumentation is not operable, then the appropriate action specified in Table 2-11 shall be taken.

Basis

The redundant toxic gas monitors were designed to detect toxic gases and to isolate the control room ventilation system in the event of an onsite or offsite toxic gas accident.

If both of the toxic gas detectors are found inoperable, there is no immediate threat to the control room operators and reactor operation may continue while repairs are being made. During this repair, the control room ventilation will be switched to internal recirculation mode of operation.

TABLE 2-11

TOXIC GAS MONITORS OPERATING LIMITS

	Instrument	Minimum Operable Channels	Action
1.	Chlorine Detectors*	2	(a) (b)
2.	Hydrogen Fluoride,* Hydrochloric Acid, and Sulfuric Acid Detectors*	2	(a) (b)
3.	Hydrazine* Ammonia Detectors	2	(a) (b)

(a) With one toxic detector inoperable, restore the inoperable detector to OPERABLE status within 7 days, or within the next 6 hours, initiate and maintain operation of the control room ventilation system in the recirculation mode of operation.

(b) With both toxic detectors inoperable, within 1 hour initiate and maintain operation of the control room ventilation system in the recirculation mode of operation.

*Onsite Chemical Hazards are Chlorine, Hydrogen Fluoride (UF_6 Cylinders), Sulfuric Acid and Hydrazine.

TABLE 3-3 (Continued)

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TESTING OF MISCELLANEOUS INSTRUMENTATION AND CONTROLS

	Channel Description	Surveillance Function	Frequency	Surveillance Method
25.	Containment Purge Isolation Valves (PCV-742A, B, C, & D)	Check	M	Verify valve position using control room indication.
26.	Containment Hydrogen Monitors (VA-81A&B)	a. Check	M	a. Comparison of readings from redundant channels.
		b. Test	Q	b. Calibrate span/zero using sample gas and check flow rates.
		c. Calibrate	R	c. Calibrate using known signals applied to sensors.
27.	Containment Water Level Narrow Range (LT-599 & LT-600)	a. Check	M	a. Compare independent level readings.
		b. Calibrate	R	b. Known signals applied to sensors.
	Wide Range (LT-387 & LT-388)	a. Check	M	a. Observe normal reading and simulate full scale reading.
		b. Calibrate	R	b. Known signals applied to sensors.
28.	Containment Wide Range Pressure Indication	a. Check	M	a. Compare independent pressure readings.
		b. Calibrate	R	b. Apply known pressure to sensors.
29.	Toxic Gas Detectors:			
	YIT-6288A&B (Cl_2) YIT-6286A&B (HCT, HF, H_2SO_4)	a. Check	S	a. Comparison of readings from redundant channels.
		b. Calibrate	M	b. Calibrate span/zero using calibration card.
		c. Calibrate	R	c. Calibrate span/zero adjustment with calibration card, and verify using gas standards.

TABLE 3-3 (Continued)

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TESTING
OF MISCELLANEOUS INSTRUMENTATION AND CONTROLS

Channel Description	Surveillance Function	Frequency	Surveillance Method
YIT-6287A&B (N_2H_4, NH_3)	a. Check	S	a. Comparison of readings from redundant channels.
	b. Calibrate	Q	b. Gas calibration.

Q - Quarterly
S - Each Shift
D - Daily
M - Monthly
A - Annually
R - 18 months
P - Prior to each startup if not performed within previous week.
PM - Prior to scheduled cold leg cooldown below 300^{o}F; monthly whenever temperature remains below 300^{o}F and reactor vessel head is installed.

ATTACHMENT B

Discussion, Justification and
Significant Hazards Considerations

The proposed amendment will establish limiting conditions for operation and surveillance requirements for the Toxic Gas Monitors which were installed in response to NUREG-0737, Item III.D.3.4.

Wording has been proposed for Section 2.0 of the Technical Specifications concerning Limiting Conditions for Operation (LCO's) for the toxic gas monitors. These LCO's require certain actions in the event of inoperability of the subject monitors. These conditions appear in a new table.

The LCO's for the Toxic Gas monitors are consistent with the LCO's proposed for the Chlorine detectors in Enclosure 3 to NRC Generic Letter 83-37.

The additional table has been numbered as Table 2-11. Additionally, Table 2-9, appearing on page 2-98, has been renumbered as Table 2-10. This is to eliminate the confusion raised by the fact that the current Specifications have two tables numbered 2-9.

Additions have also been proposed to Section 3.0, "Surveillance Requirements" of the Technical Specifications. These proposed changes establish surveillance requirements for the Toxic Gas Monitors.

The changes concerning surveillance of the Toxic Gas Monitors are generally consistent with the example provided for Control Room Habitability Systems in Enclosure 3 of Generic Letter 83-37. The District's proposed Specifications do differ in the following areas.

The District does not have two independent control room emergency air clean up systems which are required to be operable during all modes of operation. As the District stated in the control room habitability report (Reference 1), the Fort Calhoun Control Room has only one emergency clean up system. This was reviewed and accepted by the USNRC in Reference 2. The existing Fort Calhoun Technical Specification 2.12 also states that "if the control room air treatment system is found to be inoperable, there is no immediate threat to the control room and reactor operation may continue for a limited period of time while repairs are being made. If the system cannot be repaired within seven (7) days, the reactor is shutdown and brought to cold shutdown within 24 hours." The District still believes this is adequate to ensure safe operation of the plant and no changes have been proposed.

The existing Technical Specification surveillance requirements already address the control room ventilation system and its major components, HEPA and charcoal filters. These requirements include checking damper operation for DBA mode, checking the control room for positive pressure, and checking of the control room thermometer.

As a part of the District's proposed Technical Specifications to conform to requirements of 10 CFR Part 50, Appendix J, the District has been negotiating the specifications for surveillance requirements for testing of charcoal and HEPA filters. Included in this are charcoal and HEPA filters which are part of the control room emergency air clean up system. Because these items are part of a separate licensing issue, they have not been included in this Application.

No Significant Hazards Considerations

(1) This proposed amendment does not involve a significant increase in the probability of an accident previously evaluated. The Toxic Gas Monitoring System was designed and installed to mitigate the consequences of a postulated toxic gas release accident. The proposed changes to the Technical Specifications merely require actions which will ensure that the control room Toxic Gas Monitors are performing their intended functions. These proposed changes do not alter the design, operability requirements or surveillance requirements of any system presently addressed in the existing Technical Specifications.

(2) The proposed changes do not create the possibility of a new or different kind of accident than any previously evaluated. The proposed changes are intended to provide assurance that the toxic gas monitors are capable of performing their intended functions. Therefore, the changes add to the safety of control room operation and are not expected to create the possibility of an unanalyzed accident. These changes do not alter the design, operability requirements or surveillance requirments of any other system presently covered by the exisitng Technical Specifications.

(3) The proposed changes do not involve a reduction in any margin of safety. As stated above, the proposed changes ensure that newly installed systems perform their intended function. The proposed changes do not alter any operability or surveillance requiremnts of any existing plant systems. Establishment of operability and surveillance requirements for the system does not constitute a reduction in the margin of safety.

Based upon (1), (2), and (3), above, the District believes this application does not involve significant hazards considerations.

References

1. OPPD letters from W. C. Jones to the NRC dated January 26, 1981 and August 7, 1981.

2. NRC letter from Mr. R. A. Clark to W. C. Jones dated December 30, 1981.