

INSTRUMENTATION

CHLORINE DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

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3.3.7.8 The chlorine detection system shall be OPERABLE with two independent chlorine detectors with their alarm/trip saturation point adjusted to actuate within 5 seconds at a chlorine concentration of  $\leq 5$  ppm.

APPLICABILITY: All OPERATIONAL CONDITIONS.

ACTION:

- a. With one chlorine detector inoperable, restore the inoperable detector to OPERABLE status within 7 days or, within the next 6 hours, initiate and maintain operation of at least one control room emergency outside air supply subsystem in the recirculation mode of operation.
- b. With the chlorine detection system otherwise inoperable, within 1 hour initiate and maintain operation of at least one control room emergency outside air supply subsystem in the recirculation mode of operation.

SURVEILLANCE REQUIREMENTS

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4.3.7.8 The above required chlorine detection system shall be demonstrated OPERABLE by performance of a:

- a. CHANNEL FUNCTIONAL TEST at least once per 31 days.
- b. Detector functional test at least once per 18 months by introducing a measured amount of chlorine into each detector, equivalent to a chlorine concentration of  $\leq 5$  ppm, and verifying the elapsed time to actuate each detector is less than or equal to 5 seconds.

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## INSTRUMENTATION

### BASES.

#### 3/4.3.7.3 METEOROLOGICAL MONITORING INSTRUMENTATION

The OPERABILITY of the meteorological monitoring instrumentation ensures that sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public. This instrumentation is consistent with the recommendations of Regulatory Guide 1.23 "Onsite Meteorological Programs," February, 1972.

#### 3/4.3.7.4 REMOTE SHUTDOWN MONITORING INSTRUMENTATION

The OPERABILITY of the remote shutdown monitoring instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT SHUTDOWN of the unit from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criteria 19 of 10 CFR 50.

#### 3/4.3.7.5 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess important variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1975 and NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations".

#### 3/4.3.7.6 SOURCE RANGE MONITORS

The source range monitors provide the operator with information of the status of the neutron level in the core at very low power levels during startup and shutdown. At these power levels, reactivity additions should not be made without this flux level information available to the operator. When the intermediate range monitors are on scale adequate information is available without the SRMs and they can be retracted.

#### 3/4.3.7.7 TRAVERSING IN-CORE PROBE SYSTEM

The OPERABILITY of the traversing in-core probe system with the specified minimum complement of equipment ensures that the measurements obtained from use of this equipment accurately represent the spatial neutron flux distribution of the reactor core.

#### 3/4.3.7.8 CHLORINE DETECTION SYSTEM

*delete* → The OPERABILITY of the chlorine detection system ensures that an accidental chlorine release will be detected promptly and the necessary protective actions will be automatically initiated to provide protection for control room personnel. Upon detection of a high concentration of chlorine, the control room emergency ventilation system will automatically be placed in the isolation mode of operation to provide the required protection. The detection systems required by this specification are consistent with the recommendations of Regulatory Guide 1.95 "Protection of Nuclear Power Plant Control Room Operators against an Accidental Chlorine Release", February 1975.



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