

PLANT SYSTEMS

3/4.7.6 CONTROL ROOM EMERGENCY AIR CONDITIONING SYSTEM

LIMITING CONDITION FOR OPERATION

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3.7.6.1 The common control room emergency air conditioning system (CREACS)\* shall be OPERABLE with:

- a. Two independent air conditioning filtration trains (one from each unit) consisting of:
  1. Two fans and associated outlet dampers,
  2. One cooling coil,
  3. One charcoal adsorber and HEPA filter array,
  4. Return air isolation damper.
- b. All other automatic dampers required for operation in the pressurization or recirculation modes.
- c. The control room envelope intact.

APPLICABILITY: ALL MODES and during movement of irradiated fuel assemblies and during CORE ALTERATIONS.

ACTION: MODES 1, 2, 3, and 4

- a. With one filtration train inoperable, align CREACS for single filtration train operation within 4 hours, and restore the inoperable filtration train to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With CREACS aligned for single filtration train operation and with one of the two remaining fans or associated outlet damper inoperable, restore the inoperable fan or damper to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With the Control Room Envelope inoperable, restore the Control Room Envelope to OPERABLE status within 4 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. With one or both series isolation damper(s) on a normal Control Area Air Conditioning System (CAACS) outside air intake or exhaust duct inoperable, close the affected duct within 4 hours by use of at least one isolation damper secured in the closed position or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. (Refer to ACTION 25 of Table 3.3-6.)

\* The CREACS is a shared system with Salem Unit 2

PLANT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

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- e. With one or both isolation damper(s) on an outside emergency air conditioning air intake duct inoperable, close the affected duct within 4 hours by use of at least one isolation damper secured in the closed position and restore the damper(s) to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- f. With any isolation damper between the normal CAACS and the CREACS inoperable, secure the damper in the closed position within 4 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6 or during movement of irradiated fuel assemblies and during CORE ALTERATIONS.

- a. With one filtration train inoperable, align CREACS for single filtration train operation within 4 hours, or suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.
- b. With CREACS aligned for single filtration train operation with one of the two remaining fans or associated outlet damper inoperable, restore the fan or damper to OPERABLE status within 72 hours, or suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.
- c. With two filtration trains inoperable, immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.
- d. With the Control Room Envelope inoperable, immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.
- e. With one or both series isolation damper(s) on a normal CAACS outside air intake or exhaust duct inoperable, immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies until the affected duct is closed by use of at least one isolation damper secured in the closed position. (Refer to ACTION 25 of Table 3.3-6.)
- f. With one or both series isolation damper(s) on an outside emergency air conditioning air intake duct inoperable, immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies until the affected duct is closed by use of at least one isolation damper secured in the closed position. To resume CORE ALTERATIONS or movement of irradiated fuel assemblies, at least one emergency air intake duct must be operable on each unit.
- g. With any isolation damper between the CAACS and the CREACS inoperable, immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies until the damper is closed and secured in the closed position.

## POWER DISTRIBUTION LIMITS

### 3/4.2.2 HEAT FLUX HOT CHANNEL FACTOR - $F_Q(z)$

#### LIMITING CONDITION FOR OPERATION

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$$3.2.2 \quad F_Q(z) \leq \frac{F_Q^{RTP}}{P} * K(z) \quad \text{for } P > 0.5, \text{ and}$$

$$F_Q(z) \leq \frac{F_Q^{RTP}}{0.5} * K(z) \quad \text{for } P \leq 0.5, \text{ and}$$

Where  $F_Q^{RTP}$  = the  $F_Q$  limit at RATED THERMAL POWER (RTP) specified in the CORE OPERATING LIMITS REPORT (COLR),

$$P = \frac{\text{THERMAL POWER}}{\text{RATED THERMAL POWER}}, \text{ and}$$

$K(z)$  = the normalized  $F_Q(z)$  as a function of core height as specified in the COLR.

APPLICABILITY: MODE 1

#### ACTION:

With  $F_Q(z)$  exceeding its limit:

- a. Reduce THERMAL POWER at least 1% for each 1%  $F_Q(z)$  exceeds the limit within 15 minutes and similarly reduce the Power Range Neutron Flux-High Trip Setpoints within the next 4 hours; POWER OPERATION may proceed for up to a total of 72 hours; subsequent POWER OPERATION may proceed provided the Overpower delta T Trip Setpoints have been reduced at least 1% for each 1%  $F_Q(z)$  exceeds the limit. The Overpower delta T Trip Setpoint reduction shall be performed with the reactor in at least HOT STANDBY.
- b. Identify and correct the cause of the out of limit condition prior to increasing THERMAL POWER above the reduced limit required by a. above; THERMAL POWER may then be increased provided  $F_Q(z)$  is demonstrated through a core power distribution measurement to be within its limit.

TABLE 3.3-6  
RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Fuel Storage Area	1	*	≤15 mR/hr	10 <sup>-1</sup> -10 <sup>4</sup> mR/hr	23
b. Containment Area	2	1,2,3&4	≤10 <sup>3</sup> R/hr	1-10 <sup>7</sup> R/hr	26
2. PROCESS MONITORS					
a. Containment					
1) Gaseous Activity					
a) Purge & Pressure - Vacuum Relief Isolation	1#	6 and	Set at less than or equal to 50% of the 10CFR20 concentration limits for gaseous effluents released to unrestricted areas.	10 <sup>1</sup> -10 <sup>6</sup> cpm	26
		1,2,3,4&5	per ODCM Control 3.3.3.9		
b) RCS Leakage Detection	1	1,2,3&4	N/A	10 <sup>1</sup> -10 <sup>6</sup> cpm	24
2) Air Particulate Activity					
a) Purge & Pressure - Vacuum Relief Isolation	1	6	≤2x background	10 <sup>1</sup> -10 <sup>6</sup> cpm	25
b) RCS Leakage Detection	1	1,2,3&4	N/A	10 <sup>1</sup> -10 <sup>6</sup> cpm	24

\* With fuel in the storage pool or building.

# The plant vent noble gas monitor may also function in this capacity when the purge/pressure-vacuum relief isolation valves are open.

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LIMITING CONDITION FOR OPERATION

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- a. Two independent air conditioning filtration trains (one from each unit) consisting of:
  1. Two fans and associated outlet dampers,
  2. One cooling coil,
  3. One charcoal adsorber and HEPA filter array,
  4. Return air isolation damper.
- b. All other automatic dampers required for operation in the pressurization or recirculation modes.
- c. The control room envelope intact.

APPLICABILITY: ALL MODES and during movement of irradiated fuel assemblies and during CORE ALTERATIONS.

ACTION: MODES 1, 2, 3, and 4

- a. With one filtration train inoperable, align CREACS for single filtration train operation within 4 hours, and restore the inoperable filtration train to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With CREACS aligned for single filtration train operation and with one of the two remaining fans or associated outlet damper inoperable, restore the inoperable fan or damper to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With the Control Room Envelope inoperable, restore the Control Room Envelope to OPERABLE status within 4 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. With one or both series isolation damper(s) on a normal Control Area Air Conditioning System (CAACS) outside air intake or exhaust duct inoperable, close the affected duct within 4 hours by use of at least one isolation damper secured in the closed position or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. (Refer to ACTION 28 of Table 3.3-6.)

\* The CREACS is a shared system with Salem Unit 1

PLANT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

- e. With one or both isolation damper(s) on an outside emergency air conditioning air intake duct inoperable, close the affected duct within 4 hours by use of at least one isolation damper secured in the closed position and restore the damper(s) to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- f. With any isolation damper between the normal CAACS and the CREACS inoperable, secure the damper in the closed position within 4 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6 or during movement of irradiated fuel assemblies and during CORE ALTERATIONS.

- a. With one filtration train inoperable, align CREACS for single filtration train operation within 4 hours, or suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.
- b. With CREACS aligned for single filtration train operation with one of the two remaining fans or associated outlet damper inoperable, restore the fan or damper to OPERABLE status within 72 hours, or suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.
- c. With two filtration trains inoperable, immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.
- d. With the Control Room Envelope inoperable, immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies.
- e. With one or both series isolation damper(s) on a normal CAACS outside air intake or exhaust duct inoperable, immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies until the affected duct is closed by use of at least one isolation damper secured in the closed position. (Refer to ACTION 28 of Table 3.3-6.)
- f. With one or both series isolation damper(s) on an outside emergency air conditioning air intake duct inoperable, immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies until the affected duct is closed by use of at least one isolation damper secured in the closed position. To resume CORE ALTERATIONS or movement of irradiated fuel assemblies, at least one emergency air intake duct must be operable on each unit.
- g. With any isolation damper between the CAACS and the CREACS inoperable, immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies until the damper is closed and secured in the closed position.