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PROPOSED TECHNICAL SPECIFICATION CHANGE REQUEST

CONTROL ROOM HABITABILITY

Consumers Power Company
Palisades Plant - 50-255

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3.8 REFUELING OPERATIONS (continued)

g. During reactor vessel head removal and while refueling operations are being performed in the reactor, the refueling boron concentration shall be maintained in the primary coolant system and shall be checked by sampling on each shift.

h. Direct communication between personnel in the Control Room and at the refueling machine shall be available whenever changes in core geometry are taking place.

i. The Control Room Emergency Air Cleanup System shall be operable per the requirements of Technical Specification 3.14.

3.8.2 If any of the conditions in 3.8.1 are not met, all refueling operations shall cease immediately, work shall be initiated to satisfy the required conditions and no operations that may change the reactivity of the core shall be made.

3.8.3 Refueling operation shall not be initiated before the reactor core has decayed for a minimum of 48 hours if the reactor has been operated at power levels in excess of 2% rated power.

3.8.4 The ventilation system and charcoal filter in the fuel storage building shall be operating whenever irradiated fuel which has decayed less than 30 days is being handled by either of the following operations:

a. Refueling operation with the equipment door open, or
b. Fuel handling in the fuel storage building.

If both fans are unavailable, any fuel movements in progress shall be completed and further fuel movements over the spent fuel storage pool shall be terminated until one fan is returned to service.

3.8.5 When spent fuel which has decayed less than one year is placed in the tilt pit storage racks, the bulk water temperature in the tilt pit storage area must be monitored continuously to assure that the water temperature does not exceed 150°F. Monitoring will continue for 24 hours after any addition of fuel to the main pool or the tilt pit, or when a failure of the spent fuel pool cooling system occurs.

Basis

The equipment and general procedures to be utilized during refueling are discussed in the FSAR. Detailed instructions, the above specifications, and the design of the fuel handling equipment incorporating built-in interlocks and safety features provide assurance that no incident could occur during the refueling operations that would result in a hazard to public health and safety.(1) Whenever changes are not being made in core geometry, one flux monitor is sufficient. This permits maintenance of the instrumentation. Continuous monitoring of radiation levels and neutron flux provides immediate indication of an unsafe condition. The shutdown cooling pump is used to maintain a uniform boron concentration.

3.14 Control Room Emergency Air Cleanup System

LIMITING CONDITIONS FOR OPERATION

3.14.1 Two independent Control Room Emergency Air Cleanup Systems shall be operable with:

a. An air handling unit for each system.

b. A condensing unit for each system.

c. A HEPA/charcoal filter unit and fan for each system.

d. All dampers, duct work and interlocks which are required to operate during accident conditions.

APPLICABILITY: At all times.

ACTION:

For Plant conditions above cold shutdown condition:

With one Control Room Emergency Air Cleanup System inoperable, restore the inoperable system to an operable status within 7 days, or be in at least hot shutdown within the next 12 hours, and in cold shutdown within the following 48 hours.

For cold shutdown and refueling conditions:

a. With one Control Room Emergency Air Cleanup System inoperable, restore the inoperable system to an operable status within 7 days, or suspend all operations involving core alterations or positive reactivity changes.

b. With both Control Room Emergency Air Cleanup Systems inoperable, immediately suspend all operations involving core alterations or positive reactivity changes.

3.14 Control Room Emergency Air Cleanup System

Basis

The function of Control Room Heating, Ventilating, and Air Conditioning (HVAC) System is to maintain Control Room and Technical Support Center environments suitable for continuous personnel occupancy and equipment operation. The system also functions to prevent air in-leakage during normal and post-accident operation. The system removes (by filtration) airborne radioactive iodines in the Control Room, and in the outside air makeup, to ensure habitability of the Control Room and TSC.

Each of the two redundant systems consists of one air handling unit which can supply air up to 16,500 CFM, one condensing unit to supply the required chilling capacity, and one HEPA/charcoal filter unit capable of supplying air to support the habitability requirements of the Control Room/TSC during an accident condition.

When a CHP or CHR signal is received, the Control Room system will automatically go to its emergency mode of operation, which involves bringing outside air from a point approximately 100 meters from containment. This outside air is diverted through HEPA and charcoal filters before the air is admitted to the Control Room/TSC. The system can also be placed on total recirculation, 0% outside supply air, if required, to provide a habitable environment at all times.

TABLE 3.22.1

	FIRE DETECTION ZONE	NUMBER OF DETECTORS	TYPE OF DETECTORS	MINIMUM INSTRUMENTS OPERABLE
1.	Cable Spreading Room, Col M-28	1	Water Flow Sw	1
2.	Switchgear Room 1D, Col G-28 Col G-22 Col G-22 Col G-28	4	Water Flow Sw	4
3.	Diesel Generator Room 1-1, Col J-28	1	Water Flow Sw	1
4.	Diesel Generator Room 1-2, Col M-28	1	Water Flow Sw	1
5.	Turbine Building 590', Col H-9	1	Water Flow Sw	1
6.	Intake Structure 590'	1	Water Flow Sw	1
7.	Control Room and Room 325	7	Smoke	5
8.	Control Room Adjacent Offices, Rooms 324 & 320	2	Smoke	1
9.	Cable SPreading Room (224) Area	8	Smoke	6
10.	Refueling and Spent Fuel Area, Room 220	4	Smoke	2
11.	Switchgear Room 1-D, Room 223	4	Smoke	3
12.	North Penetration, Room 332	2	Smoke	1
13.	Switchgear Room 1-C, Room 116A	2	Smoke	1
14.	Southwest Cable Penetration, Room 250	2	Smoke	1
15.	Engineered Safeguards Panel Area	3	Smoke	2
16.	Stairwell Outside Engineered Safeguards Panel Area	1	Smoke	1
17.	Component Cooling Pump Room 123	2	Smoke	1
18.	Safeguard Area Room 4	3	Smoke	2
19.	Safeguard Area Room 5	2	Smoke	1
20.	Corridor 106 on 590' Elevation	6	Smoke	4
21.	Charging Pump Room 104	2	Smoke	1
22.	Containment, Interior North Penetration Area	3	Smoke	2
23.	Containment, Interior Southwest Penetration Area	3	Smoke	2

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TABLE 3.22.1

	FIRE DETECTION ZONE	NUMBER OF DETECTORS	TYPE OF DETECTORS	MINIMUM INSTRUMENTS OPERABLE
24.	Containment Instrument Air Room	3	Smoke	2
25.	Auxiliary Feed Pump Room, 570' Level of Turbine Building	1	Smoke	1
26.	Battery Room 225A	1	Smoke	1
27.	Battery Room 225B	1	Smoke	1
28.	HVAC Equipment Rooms & Chase			
	West Mechanical Equipment Room	1	Smoke	1
	East Mechanical Equipment Room	1	Smoke	1
	Duct Chase	1	Smoke	1
29.	Air Handling Units V-95 & V-96 Inlet Ducts	2	Smoke	2
30.	Electrical Equipment Room	4	Smoke	3
31.	Technical Support Center	2	Smoke	1

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FIRE PROTECTION SYSTEM

3.22.3 FIRE SPRINKLER SYSTEM

LIMITING CONDITIONS FOR OPERATION

3.22.3.1 The sprinkler systems located in the following areas shall be OPERABLE:

a. Cable Spreading Room/Switchgear Room 1C

b. Switchgear Room 1D

c. Diesel Generator Room 1-1

d. Diesel Generator Room 1-2

e. Southwest Cable Penetrating Room

f. Cable Way Room 328

g. Intake Structure Room 136 and 136A

h. North Cable Penetration Room

i. Electrical Equipment Room

APPLICABILITY:

Whenever equipment in the sprinkler protected area is required to be operable.

ACTION:

1. With one or more of the above required sprinkler systems inoperable, establish a continuous fire watch with backup fire suppression equipment in the unprotected area(s) within one hour. Restore the system(s) to operable status within 14 days, or, in lieu of any other report required by Specification 6.9.2, prepare and submit a Special Report to the Commission within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to operable status.

2. In the event this Limiting Condition for Operation and/or associated Action requirements cannot be satisfied, any provisions relating to the operating restrictions on the plant are not applicable.

Basis

Refer to Basis Section 3.22.2.

FIRE PROTECTION SYSTEM

3.22.4 FIRE HOSE STATIONS

LIMITING CONDITIONS FOR OPERATION

3.22.4.1 The fire hose stations in the following locations shall be OPERABLE:

a. Corridor, Room 239
b. Viewing Gallery, Room 320
c. Corridor, Room 106
d. Corridor, Room 125
e. Fire Hose Station #3
f. Turbine Building 590', Col Y-5
g. Turbine Building 590', Col Y-18
h. Spent Fuel Pool, Room 220
i. Turbine Building 609', Col H-9
j. Outside Fire Hose Station #5
k. North Stairway in containment 612' level
l. South Stairway in containment 612' level

APPLICABILITY:

Whenever equipment in the area protected by that hose station is required to be operable.

ACTION:

1. With the hose station inoperable, provide an additional hose for the unprotected area at an OPERABLE hose station within one hour except k and l listed above.

2. With the hose station inside containment (k & l above) inoperable:

   a. When containment integrity is required, provide portable fire fighting equipment (e.g. water fire extinguishers) at the entrance to containment within one hour.

   b. When containment integrity is not required, provide portable fire fighting equipment (e.g. water fire extinguishers) at the hose station within one hour.

3. In the event this Limiting Condition for Operation and/or associated Action requirement cannot be satisfied, provisions relating to opreating restrictions on the plant are not applicable.

Basis

Refer to Basis Section 3.22.2.

Table 4.2.3
HEPA Filter and Charcoal Adsorber Systems

1. Control Room Emergency Air Cleanup System

The Control Room Emergency Air Cleanup System shall be demonstrated operable:

a. At least once per 12 hours by verifying that the Control Room air temperature is less than or equal to 90°F.

b. At least once per 31 days by initiating from the Control Room, flow through the HEPA filters and charcoal adsorbers, and verifying that the system operates for at least ten continuous hours with the heaters operating.

c. At least once per refueling cycle or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housing, or (2) following major painting, fire or chemical release in any ventilation zone communicating with the system by:

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 12,500 CFM ± 10%.

2. Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978.

3. Verifying a system flow rate of 12,500 CFM ± 10% during system operation when tested in accordance with ANSI N510-1975.

d. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978.

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e. At least once per refueling cycle by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than (8) inches water gauge while operating the system at a flow rate of 12,500 CFM ± 10%.

2. Verifying that on a containment isolation test signal, the system automatically switches into a recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks.

3. Verifying that the system maintains the Control Room at a positive pressure of greater than or equal to (1/8") W.G. relative to the outside atmosphere during system operation.

4. Verifying that the heaters dissipate 15 ± 3 KW when tested in accordance with ANSI N510-1975.

f. After each complete or partial replacement of a HEPA filter bank by verifying that penetration or bypass leakage of the HEPA filter bank is equal to or less than (0.05%) of a DOP test aerosol when tested in place in accordance with ANSI N510-1975 while operating the system at a flow rate of 12,500 CFM ± 10%.

g. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorber bypass or leakage is equal to or less than 0.05% of a halogenated hydrocarbon refrigerant test gas when tested in place in accordance with ANSI N510-1975 while operating the system at a flow rate of 12,500 CFM ± 10%.

Basis

The function of the Control Room Heating, Ventilating, and Air Conditioning (HVAC) System is to maintain Control Room and Technical Support Center environments suitable for continuous personnel occupancy and equipment operation.

By measuring HVAC parameters such as temperature, Control Room pressure, and system flows the system operability can be verified. Proper functioning of the system's HEPA and charcoal filters is verified by testing in accordance with ANSI standard ANSI-N510-1975.

2. Fuel Storage Area HEPA/Charcoal Exhaust System

The Fuel Storage Area HEPA/Charcoal Exhaust System shall be demonstrated operable:

a. At least once per 31 days by initiating, from the Control Room, flow through the HEPA filter and charcoal adsorbers and verifying that the system operates for at least 15 minutes.

b. At least once per refueling outage or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following major painting, fire or chemical release in any ventilation zone communicating with the sytem when the HEPA Filter or charcoal adsorbers are in operation by:

1. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, with the exception that the methyl iodide limit shall be 94%, instead of 99%.

2. Verifying that the HEPA filter bank removes greater than or equal to 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at its rated flow (10,000 CFM, two fans or 7,300 CFM, one fan) ± 20%.

3. Verifying that the charcoal adsorber removes greater than or equal to 99% of a hydrogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at its rated flow (10,000 CFM, two fans or 7,300 CFM, one fan) ± 20%.

c. After every 720 hours (see Note 1) of charcoal adsorber operation by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, with the exception that the methyl iodide limit shall be 94%, instead of 99%.

Note 1: Should the 720-hour limitation occur during a plant operation requiring the use of the HEPA filter and charcoal adsorber, such as during a refueling, testing may be delayed until the completion of the plant operation, or up to 1,500 hours of filter operation, whichever occurs first.

d. At least once per refueling cycle by:

   1. Verifying that the pressure drop across the combined HEPA filter and charcoal adsorber bank is less than (6) inches Water Gauge while operating the system at rated flow (10,000 CFM, two fans or 7,300 CFM, one fan) ±20%.

   2. Verifying that with the ventilation system exhausting through the HEPA/Charcoal Filters at its rated flow (10,000 CFM, two fans or 7,300 CFM, one fan) ±20%, the bypass flow through damper 1893 is less than 1% of total flow.

e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter bank removes greater than or equal to 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at its rated flow (10,000 CFM, two fans or 7,300 CFM, one fan) ±20%.

f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorber removes greater than or equal to 99% of a hydrogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at its rated flow (10,000 CFM, two fans or 7,300 CFM, one fan) ±20%.