

ATTACHMENT 2

CONSUMERS POWER COMPANY
BIG ROCK POINT PLANT
DOCKET 50-155

CURRENT TECHNICAL SPECIFICATION PAGES MARKED UP TO ILLUSTRATE CHANGES

Submitted October 15, 1996

7 Pages

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3.5.2 Operating Requirements

Water addition to the containment sphere must be manually stopped before the accumulated water level reaches an elevation of 596 feet.

3.6 CONTAINMENT REQUIREMENTS

Containment sphere integrity shall be maintained during power operation, refueling operation, shutdown and cold shutdown conditions except as specified by a system of procedures and controls to be established for occasions containment must be breached during cold shutdown. If containment integrity cannot be maintained, the plant shall be brought to the shutdown condition within 12 hours, and to the cold shutdown condition within the following 24 hours.

3.7 CONTAINMENT SPHERE LEAKAGE TESTING - LEAK RATE TESTING PROGRAM

For the purpose of this specification, leakage rate is defined as the percent of the contained atmosphere (weight basis) which escapes per day (24 hrs) under the defined pressure conditions through any leaks in the containment boundary and all isolation valves and their associated piping.

The maximum allowable integrated leakage rate shall not exceed 0.5%/day of the containment atmosphere (weight basis) at the design pressure of 27 psig. The procedure for containment sphere leakage testing shall be:

- (a) At least once every 6 months, the personnel lock, the equipment lock and the sphere supply-and-exhaust ventilation valves shall be pressurized, with air to 23 psig, to test their leak tightness. The sum of leakage rates from these valves and locks shall be less than 0.25%/day of the containment atmosphere (weight basis) at 23 psig. /
- (b) Each reactor shutdown for refueling, but in no case at intervals greater than two years, the following valves shall be tested for operability from both the manual and automatic modes of operation and, at the same time, shall be tested for leak tightness by means of a pressure test utilizing air or the normal working fluid at a pressure not less than 23 psig: /

Main Steam Isolation (MO-7050)

* Main Steam Drain (MO-7065)

Clean-Up System Resin Sluice (CV-4091, CV-4092, CV-4093)

Reactor and Fuel Pit Drain Isolation (CV-4027, CV-4117)

Reactor Enclosure Clean Sump Isolation (CV-4031, CV-4102)

Reactor Enclosure Dirty Sump Isolation (CV-4025, CV-4103)

Reactor Enclosure Treated Waste Valve (CV-4049)

*Operability, automatic controls and instrumentation tests required only if valve is opened for use during operation.

PROGRAMS SHALL BE ESTABLISHED TO IMPLEMENT THE LEAK RATE TESTING OF THE CONTAINMENT AS REQUIRED BY 10CFR50.54 (c) AND 10CFR50 APPENDIX J. OPTION A OR B, AS MODIFIED BY APPROVED EXEMPTIONS. THE OPTION B PROGRAM SHALL BE IN ACCORDANCE WITH THE GUIDELINES OF REGULATORY GUIDE 1.163. *PERFORMANCE-BASED CONTAINMENT LEAKAGE - TEST PROGRAM DATED SEPTEMBER 1995."

INERT

4.1.2 (Contd)

is above 300 psig. The shutdown cooling system shall be OPERABLE and ready for service during REFUELING OPERATIONS and the breakers for MO-7070 and MO-7071 shall be tagged "open". The primary coolant shall be sampled and analyzed daily during periods of POWER OPERATION. The following are absolute limits which if exceeded shall necessitate reactor SHUTDOWN. Corrective action will necessarily be taken at more stringent limits to minimize the possibility of these absolute limits ever being reached.

Conductivity (Micromho/cm)	
Maximum	5
Maximum Transient*	10
pH (Lower and Upper Limits)	4.0 and 10.0
Chloride Ion (ppm)	1.0
Boron (ppm)	100

Isotopic analysis of the primary coolant to determine the DOSE EQUIVALENT I-131 concentration shall be performed at least every 72 hours during periods of operation.

1. If the DOSE EQUIVALENT I-131 concentration exceeds 0.2 $\mu\text{Ci/ml}$ and is less than or equal to 4.0 $\mu\text{Ci/ml}$, isotopic analysis to determine DOSE EQUIVALENT I-131 shall be performed every 24 hours until the activity is less than 0.2 $\mu\text{Ci/ml}$.
2. If the DOSE EQUIVALENT I-131 exceeds 4.0 $\mu\text{Ci/ml}$, the plant shall be placed in a SHUTDOWN condition with the main steam isolation valve closed within 12 hours.

(c) Leakage Limits

1. If the primary coolant system leakage exceeds 1 gpm and the source of leakage is not identified, the reactor shall be SHUTDOWN as described in Section 1.2.5(a) within 12 hours, and cooldown to a COLD SHUTDOWN condition shall be initiated within 24 hours.
2. If leakage from the primary coolant system exceeds 10 gpm, the reactor shall be SHUTDOWN as described in Section 1.2.5(a) within 12 hours, and cooldown to a COLD SHUTDOWN condition shall be initiated within 24 hours.

*Conductivity is expected to increase temporarily after startups from cold shutdown. The maximum transient value here stated is the maximum permissible and applies only to the period subsequent to a cold shutdown between criticality and 24 hours after reaching 20% rated power.

6.1.3 Reactor Safety System Bypass

The following tabulation gives the permissive functional conditions during which certain reactor safety system sensors are bypassed by the reactor safety system mode selector switch. A keylock reactor mode switch shall be provided having "Shutdown," "Refuel," "Bypass Dump Tank" and "Run" positions.

These positions shall have the following functions:

Mode Selector Switch Position	Trip Function	Bypassed
Run	None (e)	
Bypass Dump Tank (a)	Low Steam Drum Water Level Recirculation Waterline Valves Closed Steam Line Backup Isolation Valve Closed High Water Level in Scram Dump Tank (b) High Condenser Pressure	
Refuel (d)	Low Steam Drum Water Level Recirculation Waterline Valves Closed Steam Line Backup Isolation Valve Closed High condenser Pressure	(c)
Shutdown	None (c) LOW STEAM DRUM WATER LEVEL STEAM LINE BACKUP ISOLATION VALVE CLOSED HIGH CONDENSER PRESSURE RECIRCULATION WATERLINE VALVES CLOSED	

(a) Control rod withdrawal is prevented by interlock while switch is in this mode position.

(b) Bypass of this trip function is necessary to enable emptying the dump tank after a scram.

(c) With the mode switch in the "shutdown" position, both the scram circuit and the control rod withdrawal circuit are open. The ventilating duct circuit power supply is transferred to a point which provides penetration closure protection through signals from "high containment sphere pressure" and "low water level in reactor vessel." This permits normal ventilation in the containment sphere during shutdown when the control rods are held in the full-in position. ~~None of the reactor safety system signals are bypassed since there is no need to withdraw control rods.~~

(d) With the mode switch in the refuel position and the crane positioned over the reactor vessel, crane operation is prevented if any one rod is withdrawn from full-in position.

(e) High condenser pressure reactor trip is automatically bypassed any time steam drum pressure is below a set point maximum of 500 psig.

6.9.2.2.A (Contd)

3. Solid Waste

The Radioactive Effluent Release Reports shall include the following information for each class of solid waste (as defined by 10 CFR Part 61) shipped offsite during the report period:

- a. Container burial volume,
- b. Total curie quantity (specify whether determined by measurement or estimate),
- c. Principal radionuclides (specify whether determined by measurement or estimate),
- d. Source of waste and processing employed (e.g., dewatered spent resin, compacted dry waste, evaporator bottoms),
- e. Type of container (e.g., LSA, Type A, Type B, Large Quantity), and
- f. Solidification agent or absorbent (e.g., cement, asphalt).

4. Radiological Impact on Man

SHALL

~~The Radioactive Effluent Release Report to be submitted within 60 days after January 1 of each year shall~~ include potential doses to individuals and populations calculated using measured effluent and averaged meteorological data in accordance with the methodologies in the Offsite Dose Calculation Manual.

- a. Total body and significant organ doses (greater than 1 milliRem) to individuals in unrestricted areas from receiving water-related exposure pathways.
- b. The maximum offsite air doses (greater than 1 milliRad) due to beta and gamma radiation at locations near ground level from gaseous effluents.
- c. Organ doses (greater than 1 milliRem) to individuals in unrestricted areas from radioactive iodine and radioactive material in particulate form from the major pathways of exposure.
- d. Total body doses (greater than 1 manRem) to the population and average doses (greater than 1 milliRem) to individuals in the population from receiving water-related pathways to a distance of 50 miles from the site.

ADMINISTRATIVE CONTROLS

6.12.1 (Contd)

- c. A radiation protection qualified individual (e.g., Health Physics Technician) with a radiation dose rate monitoring device, who is responsible for providing positive control over the activities within the area, and shall perform periodic radiation surveillance as specified by the ~~Chemistry and~~ Radiation Protection Supervisor in the RWP.

SURFACE

- 6.12.2 In addition to the requirements of Specification 6.12.1, areas accessible to personnel with radiation levels greater than 1000 mrem/h at 30 cm (12 inches) but less than 800 rad/h at 1 meter from the radiation source or from any ~~service~~ from which the radiation penetrates shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or health physics supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work areas and the maximum allowable stay time for individuals in that area. In lieu of the stay time specification of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area. /
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/

For individual high radiation areas accessible to personnel with radiation levels of greater than 1000 mR/h that are located within large areas where no enclosure exists for purposes of locking, and no enclosure can be reasonably constructed around the individual areas, then that individual area shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device.

6.13 ENVIRONMENTAL QUALIFICATION

(Deleted)

6.14 PROCESS CONTROL PROGRAM (PCP)

- 6.14.1 Changes to the PCP shall be submitted to the Commission in the Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain: /
 - a. Sufficiently detailed information to support the rationale for the change;
 - b. A determination that the change did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes; and
 - c. Documentation of the fact that the change has been reviewed and approved by the responsible Nuclear Operations Department per CPC-2A (Quality Program).

Limiting Conditions for Operation

11.3.5.3 EMERGENCY POWER SOURCES (Contd)

initiated within one (1) hour and the reactor shall be shutdown as described in Section 1.2.5(a) within twelve (12) hours and shutdown as described in Section 1.2.5(a) and (b) within the following 24 hours.

7. One RDS uninterruptible power supply including battery may be out of service as described in Section 3.1.5 Action ~~a~~ a.

8. During reactor power operation, the 138 kV line may be out of service for repair for periods up to three (3) days.

9. If Specification A.8 is not met, a normal orderly shutdown shall be initiated within one (1) hour and the reactor shall be shutdown as described in Section 1.2.5(a) within twelve (12) hours and shutdown as described in Section 1.2.5(a) and (b) within the following 24 hours.

- B. During power and refueling operations the 2400 volt bus undervoltage components shall be operable or placed in the tripped condition, except during the monthly channel functional testing period.

Surveillance Requirements

11.4.5.3 EMERGENCY POWER SOURCES (Contd)

- (h) Verify that the capacity of the station battery, the RDS batteries and the alternate shutdown battery is adequate to supply and maintain in OPERABLE status all of the actual emergency loads for the design time interval when the battery is subjected to a battery service test. The design time interval for the RDS batteries is one hour, two hours for the station battery and seventy-two hours for the alternate shutdown battery.

- (i) Test and calibrate the 2400 volt bus undervoltage trip control components as follows:

- (1) The undervoltage relays 127-10XY, XZ and YZ will drop out on decreasing voltage of no lower than 107.1 volts, after a delay of ≤ 6 seconds.
- (2) The auxiliary timing relay 162-104 will be actuated after a 10 ± 0.5 second time delay upon receiving a signal from all three (3) undervoltage relays.

BASES FOR 13.1.3.1 - GASEOUS EFFLUENT DOSE RATE (Contd)

or to less than or equal to 3000 ⁴⁵mrem/hr to the skin. These release rate limits also restrict, at all times, the corresponding thyroid dose rate above background to a child via the inhalation pathway to less than or equal to 1500 mrem/yr. /

The required detection capabilities for radioactive materials in gaseous waste samples are tabulated in terms of the lower limits of detection (LLD). Detailed discussion of the LLD and other detection limits can be found in HASL Procedures Manual, HASL-300 (revised annually), Currie, L A, "Limits for Qualitative Detection and Quantitative Determination - Application to Radiochemistry," Anal Chem 40, 586-93 (1968), and Hartwell, J K, "Detection Limits for Radioanalytical Counting Techniques," Atlantic Richfield Hanford Company Report ARH-SA-215 (June 1975).