

ATTACHMENT 2

PEACH BOTTOM ATOMIC POWER STATION  
Units 2 and 3

Docket Nos. 50-277  
50-278

License Nos. DPR-44  
DPR-56

TECHNICAL SPECIFICATION CHANGES

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TABLE 3.2.D  
RADIATION MONITORING SYSTEMS THAT INITIATE AND/OR ISOLATE SYSTEMS

Minimum No. of Operable Instrument Channels (1)	Trip Function	Trip Level Setting	No. of Instrument Channels Provided by Design	Action (2)
2	Refuel Area Exhaust Monitor	Upscale, <16 mr/hr	4 Inst. Channels	A or B
2	Reactor Building Area Exhaust Monitors	Upscale, <16 mr/hr	4 Inst. Channels	B
1(3)	Main Stack Monitor	Upscale, $\leq 10^6$ cps	2 Inst. Channels	C

NOTES FOR TABLE 3.2.D

1. Whenever the systems are required to be operable, the specified number of instrument channels shall be operable or placed in the tripped condition. If this cannot be met, the indicated action shall be taken.
2. Action
  - A. Cease operation of the refueling equipment.
  - B. Isolate secondary containment and start the standby gas treatment system.
  - C. Cease purging of primary containment, and close vent and purge valves greater than 2 inches in diameter.
3. The trip function is required to be operable only when the containment is purging through the SGTS and containment integrity is required. If both radiation monitors are out of service, action shall be taken as indicated in Note 2, (C).

TAB. F 4.2.D

MINIMUM TEST & CALIBRATION FREQUENCY FOR RADIATION MONITORING SYSTEMS

<u>Instrument Channels</u>	<u>Instrument Functional Test</u>	<u>Calibration</u>	<u>Instrument Check (2)</u>
1) Refuel Area Exhaust Monitors - Upscale	(1)	Once/3 months	Once/day
2) Reactor Building Area	(1)	Once/3 months	Once/day
3) Main Stack Monitor	Once/3 months	Once/12 months as described in 4.8.C.4.a	Once/day
<u>Logic System Functional Test (4) (6)</u>		<u>Frequency</u>	
1) Reactor Building Isolation		Once/6 months	
2) Standby Gas Treatment System Actuation		Once/6 months	

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## 3.2 BASES (Cont'd)

Four sets of two radiation monitors are provided which initiate the Reactor Building Isolation function and operation of the standby gas treatment system. Four instrument channels monitor the radiation from the refueling area ventilation exhaust ducts and four instrument channels monitor the building ventilation below the refueling floor. Each set of instrument channels is arranged in a 1 out of 2 twice trip logic.

Trip settings of less than 16 mr/hr for the monitors in the refueling area ventilation exhaust ducts are based upon initiating normal ventilation isolation and standby gas treatment system operation so that none of the activity released during the refueling accident leaves the Reactor Building via the normal ventilation path but rather all the activity is processed by the standby gas treatment system.

Two channels of nonsafety-related radiation monitors are provided in the main stack. Trip signals from these monitors are required only when purging the containment through the SGTs and containment integrity is required. The trip signals isolate primary containment vent and purge valves greater than 2 inches in diameter to prevent accidental releases of radioactivity offsite when the valves are open. This signal is added to fulfill the requirements of item II.E.4.2(7) of NUREG-0737.

Flow integrators are used to record the integrated flow of liquid from the drywell sumps. The integrated flow is indicative of reactor coolant leakage. A Drywell Atmosphere Radioactivity Monitor is provided to give supporting information to that supplied by the reactor coolant leakage monitoring system. (See Bases for 3.6.C and 4.6.C)

Some of the surveillance instrumentation listed in Table 3.2.F are required to meet the accident monitoring requirements of NUREG-0737, Clarification of TMI Action Plan Requirements. This instrumentation and the applicable NUREG-0737 requirements are:

1. Wide range drywell pressure (II.F.1.4)
2. Subatmospheric drywell pressure (II.F.1.4)
3. Wide range suppression chamber water level (II.F.1.5)
4. Main stack high range radiation monitor (II.F.1.1)
5. Reactor building roof vent high range radiation monitor (II.F.1.1)
6. Drywell hydrogen concentration analyzer and monitor (II.F.1.6)
7. Drywell high range radiation monitors (II.F.1.3)
8. Reactor Water Level - wide and fuel range (II.F.2)
9. Safety-Relief Valve position indication (II.D.3)

4.2 BASES (Cont'd)

The radiation monitors in the refueling area ventilation duct which initiate building isolation and standby gas treatment operation are arranged in a 1 out of 2 twice logic system. The bases given above for the rod blocks apply here also and were used to arrive at the functional testing frequency. The air ejector off-gas monitors are connected in a 2 out of 2 logic arrangement. Based on the experience with instruments of similar design, a testing interval of once every three months has been found adequate.

Radiation monitors in the main stack which initiate containment isolation are not safety-related and are required only during containment purging through the SGTS and when containment integrity is required, an activity which occurs infrequently. Therefore, a twelve (12) month calibration interval is appropriate.

The automatic pressure relief instrumentation can be considered to be a 1 out of 2 logic system and the discussion above applies also.

PBAPS  
NOTES FOR TABLE NO. 3.7.1

Key: O = Open  
C = Closed  
SC = Stays Closed  
GC = Goes Closed

Note: Isolation groupings are as follows:

GROUP 1: The valves in Group 1 are actuated by any one of the following conditions:

1. Reactor vessel low-low-low water level.
2. Main steam line high radiation.
3. Main steam line high flow.
4. Main steam line space high temperature.
5. Main steam line low pressure (RUN mode only).

GROUP 2A: The valves in Group 2A are actuated by any one of the following conditions:

1. Reactor vessel low water level.
2. Reactor water cleanup system heat exchanger discharge high temperature.
3. Reactor water cleanup system suction line break.
4. Standby liquid control system actuation.

GROUP 2B: The valves in Group 2B are actuated by any one of the following conditions:

1. Reactor vessel low water level.
2. High drywell pressure.
3. Reactor high pressure of shutdown mode.

GROUP 2C: The valves in Group 2C are actuated by any one of the following conditions:

1. Reactor low water level.
2. High reactor vessel pressure. (600 PSIG)
3. High drywell pressure.

GROUP 2D: The valves in Group 2D are actuated by the following conditions:

1. High drywell pressure.
2. Reactor low water level.

PBAPS  
NOTES FOR TABLE NO. 3.7.1 (Cont'd)

- GROUP 3: The valves in Group 3 are actuated by any one of the following conditions:
1. Reactor vessel low water level.
  2. High drywell pressure.
  3. Reactor building ventilation exhaust high radiation.
  4. Refuel floor ventilation exhaust high radiation.
  5. Main stack high-high radiation during containment purging through SGTS (vent and purge valves greater than two inches in diameter only).
- GROUP 4: The valves in Group 4 are actuated by any one of the following conditions:
1. HPCI steam line high flow.
  2. HPCI steam line space high temperature.
  3. HPCI steam line low pressure. (except for HPCI steam line exhaust drain valve AO-4247)
- GROUP 4A: The valves in Group 4A are actuated by either of the following conditions:
1. Reactor vessel low-low water level.
  2. High drywell pressure.
- GROUP 4B: The valve in Group 4B is actuated when both of the following conditions are present:
1. High drywell pressure.
  2. HPCI steam line low pressure.
- GROUP 5: The valves in Group 5 are actuated by any one of the following conditions:
1. RCIC steam line high flow.
  2. RCIC steam line space high temperature.
  3. RCIC steam line low pressure.
- GROUP 5A: The valves in Group 5A are actuated by the following condition:
1. Reactor vessel low-low water level.
- GROUP 5B: The valve in Group 5B is actuated when both of the following conditions are present:
1. High drywell pressure.
  2. RCIC steam line low pressure.

## PBAPS

NOTES FOR TABLE NO. 3.7.1 (Cont'd)

- GROUP 3: The valves in Group 3 are actuated by any one of the following conditions:
1. Reactor vessel low water level.
  2. High drywell pressure.
  3. Reactor building ventilation exhaust high radiation.
  4. Refuel floor ventilation exhaust high radiation.
  5. Main stack high-high radiation during containment purging through SGTS (vent and purge valves greater than two inches in diameter only).
- GROUP 4: The valves in Group 4 are actuated by any one of the following conditions:
1. HPCI steam line high flow.
  2. HPCI steam line space high temperature.
  3. HPCI steam line low pressure. (except for HPCI steam line exhaust drain valve AO-5247)
- GROUP 4A: The valves in Group 4A are actuated by either of the following conditions:
1. Reactor vessel low-low water level.
  2. High drywell pressure.
- GROUP 4B: The valve in Group 4B is actuated when both of the following conditions are present:
1. High drywell pressure.
  2. HPCI steam line low pressure.
- GROUP 5: The valves in Group 5 are actuated by any one of the following conditions:
1. RCIC steam line high flow.
  2. RCIC steam line space high temperature.
  3. RCIC steam line low pressure.
- GROUP 5A: The valves in Group 5A are actuated by the following condition:
1. Reactor vessel low-low water level.
- GROUP 5B: The valve in Group 5B is actuated when both of the following conditions are present:
1. High drywell pressure.
  2. RCIC steam line low pressure.

## PBAPS

Group 2D - line (traveling in-core probe) is isolated on high drywell pressure or reactor low water level (538"). This is to assure that this line does not provide a leakage path when containment pressure indicates a possible accident condition.

Group 3: Actuation for isolation of valves and dampers associated with the ventilation systems. Group 3 lines are connected to the primary containment but not directly to the reactor vessel. These valves are isolated on reactor low water level (538"), high drywell pressure, reactor building ventilation high radiation which would indicate a possible accident and necessitate primary containment isolation, or refueling floor ventilation high radiation which would indicate a possible refueling accident or main stack high-high radiation (a nonsafety-related signal) during containment purging through SGTS in accordance with Section 3.8.C.8a. The group 3 isolation signals, with the exception of main stack high-high radiation, also "isolate" the reactor building and start the Standby Gas Treatment System. It is not desirable to actuate the group 3 isolation signal by a transient or spurious signal.

The main stack high-high radiation signal (which is nonsafety-related in accordance with NUREG-0737) will isolate only those vent and purge valves which are greater than two inches in diameter during containment purging.

Groups 4 and 5: Actuation associated with process lines that are designed to remain operable and mitigate the consequences of an accident which results in the isolation of other process lines. The signals which initiate isolation of Group 4 and 5 process lines are therefore indicative of a condition which would render them inoperable. Groups 4 and 5 are subdivided as follows:

Group 4A: - process lines are closed on reactor low water level (490") or high drywell pressure. These close on the same signal that initiates HPCIS to ensure that the valves are not open when HPCIS action is required.

Group 4B - line is isolated on high drywell pressure if the HPCI System has been rendered inoperable by low steam line pressure.

Group 5A - process lines are closed only on reactor low water level (490"). These close on the same signal that initiates RCICS to ensure that the valves are not open when RCICS action is required.

Group 5B - line is isolated on high drywell pressure if the RCIC system has been rendered inoperable by low steam line pressure.

The maximum closure times for the automatic isolation valves of the primary containment and reactor vessel isolation control system have been selected in consideration of the design intent to prevent core uncovering following pipe breaks outside the primary containment and the need to contain released fission products following pipe breaks inside the primary containment.