

ATTACHMENT 1

PEACH BOTTOM ATOMIC POWER STATION  
UNITS 2 AND 3

Docket Nos. 50-277  
50-278

License Nos. DPR-44  
DPR-56

LICENSE CHANGE APPLICATION  
ECR 99-00352

TECHNICAL SPECIFICATION PAGES

Units 2 and 3  
3.9-2  
B 3.9-1  
B 3.9-3

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.9.1.1 Perform CHANNEL FUNCTIONAL TEST on each of the following required refueling equipment interlock inputs:</p> <ul style="list-style-type: none"> <li>a. All-rods-in,</li> <li>b. Refuel platform position,</li> <li>c. Refuel platform fuel grapple, fuel loaded,</li> <li>d. Refuel platform frame mounted auxiliary hoist, fuel loaded,</li> <li>e. Refuel platform monorail mounted hoist, fuel loaded.</li> </ul>	<p>7 days</p>

## B 3.9 REFUELING OPERATIONS

### B 3.9.1 Refueling Equipment Interlocks

#### BASES

---

##### BACKGROUND

Refueling equipment interlocks restrict the operation of the refueling equipment or the withdrawal of control rods to reinforce unit procedures that prevent the reactor from achieving criticality during refueling. The refueling interlock circuitry senses the conditions of the refueling equipment and the control rods. Depending on the sensed conditions, interlocks are actuated to prevent the operation of the refueling equipment or the withdrawal of control rods.

Design criteria require that one of the two required independent reactivity control systems be capable of holding the reactor core subcritical under cold conditions (Ref. 1). The control rods, when fully inserted, serve as the system capable of maintaining the reactor subcritical in cold conditions during all fuel movement activities and accidents.

One channel of instrumentation is provided to sense the position of the refueling platform, the loading of the refueling platform fuel grapple and the full insertion of all control rods. Additionally, inputs are provided for the loading of the refueling platform frame mounted auxiliary hoist and the loading of the refueling platform monorail mounted hoist. With the reactor mode switch in the shutdown or refueling position, the indicated conditions are combined in logic circuits to determine if all restrictions on refueling equipment operations and control rod insertion are satisfied.

A control rod not at its full-in position interrupts power to the refueling equipment and prevents operating the equipment over the reactor core when loaded with a fuel assembly. Conversely, the refueling equipment located over the core and loaded with fuel inserts a control rod withdrawal block in the Reactor Manual Control System to prevent withdrawing a control rod.

---

(continued)



BASES (continued)

---

LCO                      To prevent criticality during refueling, the refueling interlocks ensure that fuel assemblies are not loaded with any control rod withdrawn.

To prevent these conditions from developing, the all-rods-in, the refueling platform position, the refueling platform fuel grapple fuel loaded, the refueling platform frame mounted auxiliary hoist fuel loaded, and the refueling platform monorail mounted hoist fuel loaded inputs are required to be OPERABLE. These inputs are combined in logic circuits, which provide refueling equipment or control rod blocks to prevent operations that could result in criticality during refueling operations.

---

APPLICABILITY              In MODE 5, a prompt reactivity excursion could cause fuel damage and subsequent release of radioactive material to the environment. The refueling equipment interlocks protect against prompt reactivity excursions during MODE 5. The interlocks are required to be OPERABLE during in-vessel fuel movement with refueling equipment associated with the interlocks.

In MODES 1, 2, 3, and 4, the reactor pressure vessel head is on, and in-vessel fuel movements are not possible. Therefore, the refueling interlocks are not required to be OPERABLE in these MODES.

---

ACTIONS                      A.1

With one or more of the required refueling equipment interlocks inoperable, the unit must be placed in a condition in which the LCO does not apply. In-vessel fuel movement with the affected refueling equipment must be immediately suspended. This action ensures that operations are not performed with equipment that would potentially not be blocked from unacceptable operations (e.g., loading fuel into a cell with a control rod withdrawn). Suspension of in-vessel fuel movement shall not preclude completion of movement of a component to a safe position.

---

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.9.1.1 Perform CHANNEL FUNCTIONAL TEST on each of the following required refueling equipment interlock inputs:</p> <ul style="list-style-type: none"> <li>a. All-rods-in,</li> <li>b. Refuel platform position,</li> <li>c. Refuel platform fuel grapple, fuel loaded,</li> <li>d. Refuel platform frame mounted auxiliary hoist, fuel loaded,</li> <li>e. Refuel platform monorail mounted hoist, fuel loaded.</li> </ul>	<p>7 days</p>

## B 3.9 REFUELING OPERATIONS

### B 3.9.1 Refueling Equipment Interlocks

#### BASES

---

#### BACKGROUND

Refueling equipment interlocks restrict the operation of the refueling equipment or the withdrawal of control rods to reinforce unit procedures that prevent the reactor from achieving criticality during refueling. The refueling interlock circuitry senses the conditions of the refueling equipment and the control rods. Depending on the sensed conditions, interlocks are actuated to prevent the operation of the refueling equipment or the withdrawal of control rods.

Design criteria require that one of the two required independent reactivity control systems be capable of holding the reactor core subcritical under cold conditions (Ref. 1). The control rods, when fully inserted, serve as the system capable of maintaining the reactor subcritical in cold conditions during all fuel movement activities and accidents.

One channel of instrumentation is provided to sense the position of the refueling platform, the loading of the refueling platform fuel grapple and the full insertion of all control rods. Additionally, inputs are provided for the loading of the refueling platform frame mounted auxiliary hoist and the loading of the refueling platform monorail mounted hoist. With the reactor mode switch in the shutdown or refueling position, the indicated conditions are combined in logic circuits to determine if all restrictions on refueling equipment operations and control rod insertion are satisfied.

A control rod not at its full-in position interrupts power to the refueling equipment and prevents operating the equipment over the reactor core when loaded with a fuel assembly. Conversely, the refueling equipment located over the core and loaded with fuel inserts a control rod withdrawal block in the Reactor Manual Control System to prevent withdrawing a control rod.

---

(continued)



BASES (continued)

---

LCO

To prevent criticality during refueling, the refueling interlocks ensure that fuel assemblies are not loaded with any control rod withdrawn.

To prevent these conditions from developing, the all-rods-in, the refueling platform position, the refueling platform fuel grapple fuel loaded, the refueling platform frame mounted auxiliary hoist fuel loaded, and the refueling platform monorail mounted hoist fuel loaded inputs are required to be OPERABLE. These inputs are combined in logic circuits, which provide refueling equipment or control rod blocks to prevent operations that could result in criticality during refueling operations.

---

APPLICABILITY

In MODE 5, a prompt reactivity excursion could cause fuel damage and subsequent release of radioactive material to the environment. The refueling equipment interlocks protect against prompt reactivity excursions during MODE 5. The interlocks are required to be OPERABLE during in-vessel fuel movement with refueling equipment associated with the interlocks.

In MODES 1, 2, 3, and 4, the reactor pressure vessel head is on, and in-vessel fuel movements are not possible. Therefore, the refueling interlocks are not required to be OPERABLE in these MODES.

---

ACTIONS

A.1

With one or more of the required refueling equipment interlocks inoperable, the unit must be placed in a condition in which the LCO does not apply. In-vessel fuel movement with the affected refueling equipment must be immediately suspended. This action ensures that operations are not performed with equipment that would potentially not be blocked from unacceptable operations (e.g., loading fuel into a cell with a control rod withdrawn). Suspension of in-vessel fuel movement shall not preclude completion of movement of a component to a safe position.

---

(continued)