## 3.10 REFUELING OPERATIONS

### 3.10.1 CONTAINMENT BUILDING PENETRATIONS

The containment building penetrations shall be in the following status:

a) The equipment door closed and held in place by a minimum of four bolts,

b) A minimum of one door in each air lock is closed, and

c) Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either*:

1) Closed by an isolation valve, blind flange, or manual valve, or

2) Be capable of being closed by an OPERABLE automatic containment ventilation isolation valve.

*Exception may be taken under Administrative Controls for opening of certain valves and airlocks necessary to perform surveillance or testing requirements.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment building.

### 3.10.2 CONTAINMENT VENTILATION ISOLATION SYSTEM

The Containment Ventilation Isolation System shall be OPERABLE.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

a) With the Containment Ventilation Isolation System inoperable, close each of the Containment Ventilation System penetrations providing direct access from the containment atmosphere to the outside atmosphere.

b) The provisions of Specifications 3.0.1 and 3.0.4 are not applicable.

### 3.10.3 INSTRUMENTATION

As a minimum, two Source Range Neutron Flux Monitors shall be OPERABLE, each with continuous visual indication in the control room and one with audible indication in the containment.

APPLICABILITY: MODE 6

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ACTION:

a) With one of the above required monitors inoperable or not operating, immediately suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

b) With both of the above required monitors inoperable or not operating, determine the boron concentration of the Reactor Coolant System at least once per 12 hours.

3.10.4 RADIATION MONITORING

The containment radiation monitors which initiate containment and control room ventilation isolation shall be OPERABLE.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

a) With one or both radiation monitors inoperable, operation may continue provided the containment ventilation isolation valves are maintained closed.

b) With one or both radiation monitors inoperable, within 1 hour isolate the Control Room Ventilation System and initiate operation of the Control Room Ventilation System in the recirculation mode.

3.10.5 DECAY TIME

The reactor shall be subcritical for at least 100 hours.

APPLICABILITY: During movement of irradiated fuel in the reactor vessel.

ACTION:

With the reactor subcritical for less than 100 hours, suspend all operations involving movement of irradiated fuel in the reactor vessel.

3.10.6 COMMUNICATIONS

Direct communications shall be maintained between the control room and personnel at the refueling station.

APPLICABILITY: During CORE ALTERATIONS.

ACTION:

When direct communications between the control room and personnel at the refueling station cannot be maintained, suspend all CORE ALTERATIONS.

a) A $K_{eff}$ of 0.90 or less, or

b) A boron concentration of greater than or equal to 1950 ppm.**

APPLICABILITY: MODE 6*

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or positive reactivity changes and initiate and continue boration at greater than or equal to 45 gpm of a solution containing greater than or equal to 1950 ppm boron or its equivalent until $K_{eff}$ is reduced to less than or equal to 0.90 or the boron concentration is restored to greater than or equal to 1950 ppm, whichever is the more restrictive.

*The reactor shall be maintained in MODE 6 whenever fuel is in the reactor vessel with the vessel head closure bolts less than fully tensioned or with the head removed.

**The boron concentration of the reactor Coolant System and the refueling canal shall be determined by chemical analysis at least once per 24 hours.

## 3.10.9 CRANE TRAVEL-SPENT FUEL STORAGE AREAS

HEAVY LOADS shall be prohibited from travel over fuel assemblies in the storage pool.*

*Exception may be taken for the temporary construction crane to be used for the re-rack operation which may be carried over irradiated fuel to facilitate installation of the crane. Lift rigs which meet the design and operational requirements of NUREG 0612 "Control of Heavy Loads at Nuclear Power Plants" will be used while performing this installation.

APPLICABILITY: With fuel assemblies in the storage pool.

ACTION:

a) With the requirements of the above specification not satisfied, place the crane load in a safe condition.

b) The provisions of Specification 3.0.1 and 3.0.4 are not applicable.