

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

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REFUELING OPERATIONS

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 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 airlock is closed, however both doors of one personnel airlock may be open if:
 - 1) One personnel airlock door is capable of being closed, and
 - 2) A designated individual is available outside the personnel airlock to close the door.
- c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:
 - 1) Closed by a manual or automatic isolation valve, blind flange, or equivalent; or
 - 2) Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust Isolation System; or
 - 3) Be capable of being closed by a designated individual available at the penetration.*

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.

* A designated individual shall not be used for manual isolation of valves CAP-V1, CAP-V2, CAP-V3, and/or CAP-V4.

REFUELING OPERATIONS

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

SURVEILLANCE REQUIREMENTS

4.9.4 For the above required containment building penetrations:

- a. Determine that each of the above required containment building penetrations shall be in its required condition within 100 hours prior to the start of, and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building, and
- b. Demonstrate that the Containment Purge and Exhaust Isolation System is OPERABLE at least once every 18 months and within 10 days prior to the start of CORE ALTERATIONS or movement of irradiated fuel in the containment building by verifying that containment purge and exhaust isolation occurs on manual initiation and on a High Radiation test signal from each of the manipulator crane radiation area monitoring instrumentation channels.**

** Not required for those valves complying with Specification 3.9.4.c.1 or Specification 3.9.4.c.3.

REFUELING OPERATIONS

3/4.9.9 (This specification number is not used.)

3/4.9 REFUELING OPERATIONS

BASES

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the Source Range Neutron Flux Monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short-lived fission products. This decay time is consistent with the assumptions used in the safety analyses.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The Limiting Condition for Operation (LCO) limits the consequences of a fuel handling accident in containment by limiting the potential escape paths for fission product radioactivity released within containment. The LCO requires any penetration providing direct access from the containment atmosphere to the outside atmosphere to be closed except for the OPERABLE containment purge and exhaust penetrations, the approved alternate closure methods and the containment personnel airlock.

For the approved alternate closure methods, the LCO requires that a designated individual must be available to close or direct the remote closure of the penetration in the event of a fuel handling accident. "Available" means stationed at the penetration or performing activities controlled by a procedure on equipment associated with the penetration. The inside containment fuel handling accident analysis provides assurance that manual isolation of penetration valves up to a 12-inch diameter size, within the assumed time, can be attained with the use of a designated individual. With respect to the 36-inch diameter CAP valves, a designated individual is not allowed since manual closure would most likely exceed the assumed closure time.

For the personnel airlocks (containment or equipment hatch), the LCO ensures that the airlock can be closed after containment evacuation in the event of a fuel handling accident. The requirement that the airlock door is capable of being closed requires that the door can be closed and is not blocked by objects that cannot be easily and quickly removed. As an example, the use of removable protective covers for the door seals and sealing surfaces is permitted. The requirement for a designated individual located outside of the airlock area available to close the door following evacuation of the containment will minimize the release of radioactive material.

The fuel handling accident analysis inside containment assumes both of the personnel airlock doors are open and an additional 12" diameter penetration (or equivalent area) is open. The analysis is bounded by these assumptions since all of the available activity is released within a 2 hour period.

The OPERABILITY of the Containment Purge and Exhaust Isolation System ensures that the containment vent and purge penetrations will be automatically isolated upon detection of high radiation levels within the containment. The OPERABILITY of this system is required to restrict the release of radioactive material from the containment atmosphere to the environment.

3/4.9 REFUELING OPERATIONS (Continued)

BASES

3/4.9.9 (THIS SPECIFICATION NUMBER IS NOT USED.)

3/4.9.10 and 3/4.9.11 WATER LEVEL - REACTOR VESSEL and STORAGE POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gap activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the safety analysis.

3/4.9.12 FUEL STORAGE BUILDING EMERGENCY AIR CLEANING SYSTEM

The limitations on the Fuel Storage Building Emergency Air Cleaning System ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. Operation of the system with the heaters operating for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing.

3/4.9.13 SPENT FUEL ASSEMBLY STORAGE

Restrictions on placement of fuel assemblies of certain enrichments within the Spent Fuel Pool is dictated by Figure 3.9-1. These restrictions ensure that the K_{eff} of the Spent Fuel Pool will always remain less than 0.95 assuming the pool to be flooded with unborated water. The restrictions delineated in Figure 3.9-1 and the action statement are consistent with the criticality safety analysis performed for the Spent Fuel Pool as documented in the FSAR.

3/4.9.14 NEW FUEL ASSEMBLY STORAGE

Restrictions on placement of fuel assemblies of certain enrichments within the New Fuel Storage Vault is dictated by Specification 3/4.9.14. These restrictions ensure that the K_{eff} of the New Fuel Storage Vault will always remain less than 0.95 assuming the area to be flooded with unborated water. In addition, these restrictions ensure that the K_{eff} of the New Fuel Storage Vault will always remain less than 0.98 when aqueous foam moderation is assumed. The restrictions delineated in Specification 3/4.9.14 and the action statement are consistent with the criticality safety analysis performed for the New Fuel Storage Vault as documented in the FSAR.