

REFUELING OPERATIONS

3/4.9.11 WATER LEVEL SPENT FUEL STORAGE POOL

LIMITING CONDITION FOR OPERATION
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3.9.11 At least 23 feet of water shall be maintained over the top of irradiated fuel assemblies seated in the storage racks. The Spent Fuel Storage Pool shall be maintained with:

- a) The fuel storage pool water level greater than or equal to 23 ft over the top of irradiated fuel assemblies seated in the storage racks, and
- b) The fuel storage pool boron concentration greater than or equal to 1720 ppm.

APPLICABILITY: Whenever irradiated fuel assemblies are in the spent fuel storage pool.

ACTION:

- a) With the water level requirement of the specification not satisfied, immediately suspend all movement of fuel assemblies and crane operations with loads in the fuel storage areas and restore the water level to within its limit within 4 hours.
- b) With the boron concentration requirement not satisfied, immediately suspend all movement of fuel assemblies in the fuel storage pool and initiate action to restore fuel storage pool boron concentration to within the required limit.
- c) The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS
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4.9.11 The water level in the spent fuel storage pool shall be determined to be at least its minimum required depth at least once per 7 days when irradiated fuel assemblies are in the fuel storage pool.

4.9.11.1 Verify the fuel storage pool boron concentration is within limit at least once per 7 days.

REFUELING OPERATIONS

BASES

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

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SPENT FUEL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gas 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 SPENT FUEL CASK CRANE

The maximum load which may be handled by the spent fuel cask crane is limited to a loaded multi-element cask which is equivalent to approximately 100 tons. This restriction is provided to ensure the structural integrity of the spent fuel pool in the event of a dropped cask accident. Structural damage caused by dropping a load in excess of a loaded multi-element cask could cause leakage from the spent fuel pool in excess of the maximum makeup capability.

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The limit on soluble boron concentration in LCO 3/4.9.11 is consistent with the minimum boron concentration specified for the RWT, and assures an additional subcritical margin to the value of k_{eff} which is calculated in the spent fuel storage pool criticality safety analysis to satisfy the acceptance criteria of Specification 5.6.1. Inadvertent dilution of the spent fuel storage pool by the quantity of unborated water necessary to reduce the pool boron concentration to a value that would invalidate the criticality safety analysis is not considered to be a credible event. The surveillance frequency specified for verifying the boron concentration is consistent with NUREG-1432 and satisfies, in part, acceptance criteria established by the NRC staff for approval of criticality safety analysis methods that take credit for soluble boron in the pool water. The ACTIONS required for this LCO are designed to preclude an accident from happening or to mitigate the consequences of an accident in progress, and shall not preclude moving a fuel assembly to a safe position.



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