

## LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

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## REFUELING OPERATIONS

### 3/4.9.6 REFUELING PLATFORM

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#### LIMITING CONDITION FOR OPERATION

3.9.6 The refueling platform shall be OPERABLE and used for handling fuel assemblies or control rods within the reactor pressure vessel.

APPLICABILITY: During handling of fuel assemblies or control rods within the reactor pressure vessel.

ACTION:

With the requirements for refueling platform OPERABILITY not satisfied, suspend use of any inoperable refueling platform equipment from operations involving the handling of control rods and fuel assemblies within the reactor pressure vessel after placing the load in a safe condition.

#### SURVEILLANCE REQUIREMENTS

4.9.6.1 The refueling platform main hoist used for handling of control rods or fuel assemblies within the reactor pressure vessel shall be demonstrated OPERABLE within 7 days prior to the start of such operations by:

- a. Demonstrating operation of the overload cutoff when the cable load is  $1200 \pm 50$  pounds.
- b. Demonstrating operation of the normal uptravel stop when uptravel brings the tip of the grapple hook to greater than or equal to 8 feet below the refueling floor level.
- c. Demonstrating operation of the downtravel stop when downtravel of the grapple tip is  $4 + 0, - 1$  inches below the top of the fuel bundle handle.
- d. Demonstrating operation of the slack cable cutoff when the load is  $50 \pm 10$  pounds.
- e. Demonstrating operation of the hoist loaded interlock when the load is  $350 + 0, - 30$  pounds.
- f. Performing a load test of  $1200 + 50, - 0$  pounds applied to the hoist cable.

## REFUELING OPERATIONS

### SURVEILLANCE REQUIREMENTS (Continued)

4.9.6.2 The refueling platform auxiliary hoist used for handling of control rods or fuel assemblies within the reactor pressure vessel shall be demonstrated OPERABLE within 7 days prior to the start of such operations by:

- a. Demonstrating operation of the overload cutoff when the cable load is  $1000 \pm 50$  pounds.
- b. Demonstrating operation of the hoist loaded interlock when the load is  $400 + 0, - 50$  pounds.
- c. Demonstrating operation of the downtravel stop when less than or equal to 85 feet of cable is played out from the maximum uptravel limit.
- d. Demonstrating operation of the normal uptravel stop when the cable end connector is greater than or equal to 8 feet below the refueling floor level.
- e. Performing a load test of  $1000 + 50, - 0$  pounds applied to the hoist cable.

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## REFUELING OPERATIONS

### BASES

#### 3/4.9.6 REFUELING PLATFORM ~~DELETED~~

The OPERABILITY requirements ensure that (1) the refueling platform will be used for handling control rods and fuel assemblies within the reactor pressure vessel, (2) each hoist has sufficient load capacity for handling fuel assemblies and control rods, and (3) the core internals and pressure vessel are protected from excessive lifting force in the event they are inadvertently engaged during lifting operations.

#### 3/4.9.7 CRANE TRAVEL - SPENT FUEL STORAGE POOL

The restriction on movement of loads in excess of the nominal weight of a fuel assembly over other fuel assemblies in the storage pool ensures that in the event this load is dropped 1) the activity release will be limited to that contained in a single fuel assembly, and 2) any possible distortion of fuel in the storage racks will not result in a critical array. This assumption is consistent with the activity release assumed in the safety analyses.

#### 3/4.9.8 and 3/4.9.9 WATER LEVEL - REACTOR VESSEL and WATER LEVEL - SPENT FUEL STORAGE POOL

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. This minimum water depth is consistent with the assumptions of the safety analysis.

#### 3/4.9.10 CONTROL ROD REMOVAL

These specifications ensure that maintenance or repair of control rods or control rod drives will be performed under conditions that limit the probability of inadvertent criticality. The requirements for simultaneous removal of more than one control rod are more stringent since the SHUTDOWN MARGIN specification provides for the core to remain subcritical with only one control rod fully withdrawn.

#### 3/4.9.11 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

The requirement that at least one residual heat removal loop be OPERABLE or that an alternate method capable of decay heat removal be demonstrated and that an alternate method of coolant mixing be in operation ensures that 1) sufficient cooling capacity is available to remove decay heat and maintain the water in the reactor pressure vessel below 140°F as required during REFUELING, and 2) sufficient coolant circulation would be available through the reactor core to assure accurate temperature indication and to distribute and prevent stratification of the poison in the event it becomes necessary to actuate the standby liquid control system.

The requirement to have two shutdown cooling mode loops OPERABLE when there is less than 22 feet of water above the reactor vessel flange ensures that a single failure of the operating loop will not result in a complete loss of residual heat removal capability. With the reactor vessel head removed and 22 feet of water above the reactor vessel flange, a large heat sink is available for core cooling. Thus, in the event a failure of the operating RHR loop, adequate time is provided to initiate alternate methods capable of decay heat removal or emergency procedures to cool the core.



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- d. Demonstrating operation of the slack cable cutoff when the load is  $50 \pm 10$  pounds.
- e. Demonstrating operation of the hoist loaded interlock when the load is  $550 + 0, - 50$  pounds.
- f. Performing a load test of  $1200 + 50, - 0$  pounds applied to the hoist cable.



## REFUELING OPERATIONS

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### SURVEILLANCE REQUIREMENTS (Continued)

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