

ATTACHMENT 3

PROPOSED TECHNICAL SPECIFICATIONS

Marked up Technical Specification Pages;

1-2

3/4 9-4

B 3/4 9-1

Inserts A, B and C

DEFINITIONS

CONTAINMENT INTEGRITY

1.7 CONTAINMENT INTEGRITY shall exist when:

- a. All penetrations required to be closed during accident conditions are either:
 - 1) Capable of being closed by an OPERABLE containment automatic isolation valve system, or
 - 2) Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except as provided in Specification 3.6.4.
- b. The equipment hatch is closed and sealed,
- c. Each air lock is in compliance with the requirements of Specification 3.6.1.3,
- d. The containment leakage rates are within the limits of Specification 3.6.1.2, and
- e. The sealing mechanism associated with each penetration (e.g., welds, bellows, or O-rings) is OPERABLE.

CONTROLLED LEAKAGE

1.8 CONTROLLED LEAKAGE shall be that seal water flow supplied to the reactor coolant pump seals.

CORE ALTERATIONS

1.9 CORE ALTERATIONS shall be the movement ~~or manipulation of any component within the reactor pressure vessel with the vessel head removed and fuel in the vessel.~~ Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe conservative position. INSERT (A) - here ↗

DOSE EQUIVALENT I-131

1.10 DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microCurie/gram) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, "Calculation of Distance Factors for Power and Test-Reactor Sites" or Table E-7 of NRC Regulatory Guide 1.109, Revision 1, October 1977.

E - AVERAGE DISINTEGRATION ENERGY

1.11 E shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (MeV/d) for the radionuclides in the sample isotopes, other than iodines, with half lives greater than 30 minutes, making up at least 95 percent of the total non-iodine activity in the coolant.

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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, and INSERT (B)-
here
 - 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.

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.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be either in its closed/isolated condition or capable of being closed by an OPERABLE automatic containment ventilation isolation valve 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 by:

- a. Verifying the penetrations are in their closed/isolated condition, or
- b. Testing the containment ventilation isolation valves per the applicable portions of Specification 4.6.4.2.

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

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INSERT (A)

of any fuel, sources, reactivity control components, or other components affecting reactivity within the reactor vessel with the vessel head removed and fuel in the vessel.

INSERT (B)

or, both doors of the containment personnel airlock may be open if:

- 1) at least one personnel airlock door is capable of being closed,
- 2) the plant is in MODE 6 with at least 23 feet of water above the fuel, and
- 3) a designated individual is available outside the personnel airlock to close the door.

3/4.9 REFUELING OPERATIONS

BASES

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: (1) the reactor will remain subcritical during CORE ALTERATIONS, and (2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the safety analyses. With the required valves closed during refueling operations the possibility of uncontrolled boron dilution of the filled portion of the RCS is precluded. This action prevents flow to the RCS of unborated water by closing flow paths from sources of unborated water. The boration rate requirement of 16 gpm of 3.0 wt% (5245 ppm) boron or equivalent ensures the capability to restore the SHUTDOWN MARGIN with one OPERABLE charging pump.

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. There are four source range neutron flux channels, two primary and two backup. All four channels have visual and alarm indication in the control room and interface with the containment evacuation alarm system. The primary source range neutron flux channels can also generate reactor trip signals and provide audible indication of the count rate in the control room and containment. At least one primary source range neutron flux channel to provide the required audible indication, in addition to its other functions, and one of the three remaining source range channels shall be OPERABLE to satisfy the LCO.

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.

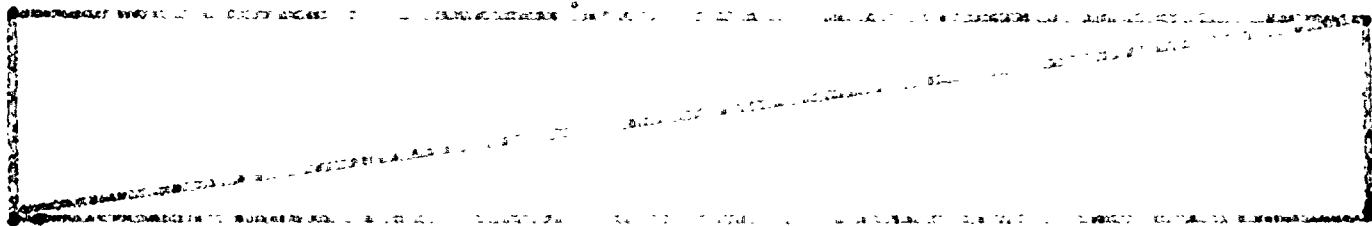
3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

INSERT (C) - HERE

~~The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.~~

3/4.9.5 COMMUNICATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity conditions during CORE ALTERATIONS.



INSERT (C)

The containment airlocks, which are part of the containment pressure boundary, provide a means for personnel access during MODES 1, 2, 3, and 4 operation. During periods of shutdown when containment closure is not required, the door interlock mechanism may be disabled, allowing both doors of an air lock to remain open for extended periods when frequent containment entry is necessary. During CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, both doors of the containment personnel airlock may be open provided (a) at least one personnel airlock door is capable of being closed, (b) the plant is in MODE 6 with at least 23 feet of water above the fuel, and (c) a designated individual is available outside the personnel airlock to close the door.

The requirements on containment penetration closure ensure that a release of fission product radioactivity within containment will be restricted from escaping to the environment. The closure restrictions are sufficient to restrict fission product radioactivity release from containment due to a fuel handling accident during refueling.

During CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, the most severe radiological consequences result from a fuel handling accident. The fuel handling accident is a postulated event that involves damage to irradiated fuel. The in-containment fuel handling accident involves dropping a single irradiated fuel assembly, resulting in damage to a single row of fuel rods. The minimum decay time of 100 hours prior to CORE ALTERATIONS, ensure that the release of fission product radioactivity, subsequent to a fuel handling accident, results in doses that are well within the guidelines values specified in 10 CFR 100.

During CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, one PAL door must be capable of being closed in the event of an accident. The restriction to be in Mode 6 with at least 23 feet of water above the fuel provides sufficient time to respond to a loss of shutdown cooling and ensures a minimum water level exists to provide sufficient shielding during fuel movement. The presence of a designated individual available outside of the personnel airlock, to close the door following evacuation of personnel within containment will minimize the release of radioactive materials.

