Attachment A

Make the following changes in the Technical Specfication.

Remove	Insert
Page 3.11-1 to 3.11-4	Page 3.11-1 to 3.11-4
Page 4.11-1	Page 4.11-1

3.11 Fuel Handling in the Auxiliary Building

Applicability

Applies to limitations while moving irradiated fuel in the operating floor area of the auxiliary building.

Objective

To limit doses in the event an irradiated fuel assembly is damaged significantly.

Specification

3.11.1 During handling of fuel assemblies in the auxiliary building when either the fuel being handled or the fuel stored in the spent fuel storage pool has decayed less than 60 days since irradiation, the following conditions shall be satisfied:

a. One auxiliary building main exhaust fan shall be operating.

b. The auxiliary building exhaust fan 1C, which takes suction from the spent fuel storage pool area, shall be operating.

c. All doors, windows, and other direct openings between the operating floor area and the outside shall be closed except that the personnel door may be opened for access as required.

d. Roughing filters shall be installed at the inlet to the adsorbers.

e. Charcoal absorbers shall be installed in the ventilation system exhaust from the spent fuel storage pool area and shall be operable.

3.11.2 Radiation levels in the spent fuel storage area shall be monitored continuously.

3.11.3 A load in excess of one fuel assembly and its handling tool shall never be stationed or permitted to pass over storage racks containing spent fuel.

3.11.4 The spent fuel pool temperature shall be limited to 150°F.

Basis:

Charcoal adsorbers will reduce significantly the consequences of a refueling accident which considers the clad failure of a single irradiated fuel assembly. Therefore, charcoal adsorbers should be employed whenever recently irradiated fuel is being handled. This requires that the ventilation system should be operating and drawing air through the adsorbers. The only exception to the requirement occurs when the fuel being handled, or any fuel in the storage pool, has decayed at least 60 days since irradition. The consequences of a fuel handling accident in this case without operation of the charcoal absorbers is significantly less than the guidelines of 10CFR100.[3]

The desired air flow path, when handling irradiated fuel, is from the outside of the building into the operating floor area, toward the spent fuel storage pool, into the area exhaust ducts, through the adsorbers, and out through the ventilation system exhaust to the facility vent. Operation of a main auxiliary building exhaust fan assures that air discharged into the main ventilation system exhaust duct will go through a HEPA and be discharged to the facility vent. Operation of the exhaust fan for the spent fuel storage pool area causes air movement on the operating floor to be toward the pool. Proper operation of the fans and setting of dampers would result in a negative pressure on the operating floor which will cause air leakage to be into the building. Thus, the overall air flow is from the location of low activity (outside the building) to the area of highest activity (spent fuel storage pit). The exhaust air flow would be through a roughing filter and charcoal before being discharged from the facility. The roughing filter protects the adsorber from becoming fouled with dirt; the adsorber removes iodine, the isotope of highest radiological signficance, resulting from a fuel handling accident. The effectiveness of charcoal for removing iodine is assured by having a high throughput and a high removal efficiency. The throughput is attained by operation of the exhaust fans. The high removal efficiency is attained by minimizing the amount of iodine that bypasses the charcoal and having charcoal with a high potential for removing the iodine that does pass through the charcoal.

The spent fuel pool temperature is limited to 150°F because if the spent fuel pool cooling system is lost at that temperature, sufficient time (approximately 7 hours) is available to provide back-up cooling, assuming the maximum anticipated heat load (full core discharge & previously stored fuel), until a temperature of 180°F is reached, the temperature at which the structural integrity of the pool was analyzed and found acceptable.

References

(1) FSAR - Section 9.3-1

(2) ANS-5.1 (N 18.6), October 1973

(3) Letter, J.A. Zwolinski, (USNRC) to R.W. Kober, (RG&E), November 14, 1984.

4.11 Refueling

Applicability

Applies to refueling and to fuel handling in the spent fuel pool.

Specification

4.11.1 Spent Fuel Pit Charcoal Absorber System

4.11.1.1 Within 60 days prior to any operation of the spent fuel pool charcoal absorber system as required by Section 3.11, the following conditions shall be demonstrated. After the conditions have been demonstrated, the occurrence of painting, fire, or chemical release in any ventilation zone communicating with the spent fuel pool charcoal absorber system shall require that the following conditions be redemonstrated, before fuel handling may continue, if operation of the spent fuel fuel pool charcoal absorber system is required per section 3.11

a. The total air flow rate from the charcoal absorbers shall be at least 75% of that measured with a complete set of new absorbers.

b. In-place Freon testing, under ambient conditions, shall show at least 99% removal.

c. The results of laboratory analysis on a carbon sample shall show 90% or greater radioactive methyl iodide removal when tested at least 150°F and 95% RH and at 1.5 to 2.0 mg/m^3 loading with tagged CH_3I.

Attachment B

The proposed change to the Technical Specification deletes the requirement for operation of the charcoal filters when moving fuel in the auxiliary building when the fuel has decayed 60 days since irradiation, and when fuel stored in the pool has decayed at least 60 days.

In response to a request for expansion of the spent fuel storage pool capacity, the NRC SER[1] documented the NRC staff evaluation of the radiological consequences of a tornado missile impact on Region 2 of the spent fuel storage racks. In this analysis, a cooldown time of 60 days and damage to nine fuel assemblies was assumed. No credit was taken for operation of charcoal filters. For this case the offsite radiological consequences were calculated to be 2 rem thyroid and 0.1 rem whole body.

Adjusting these calculated results for damage to only one fuel assembly corresponding to a fuel handling accident, yields resulting doses of approximately 0.2 rem thyroid and 0.01 rem whole body. These consequences are well within the guidelines of 10CFR100 and are significantly less than doses previously considered by the NRC to be acceptable.

Attachment C

In accordance with 10CFR 50.91 this change to the Technical Specifications has been evaluated against three criteria to determine if the operation of the facility in accordance with the proposed amendment would:

1. involve a significant increase in the probability or consequences of an accident previously evaluated; or
2. create the possibility of a new or different kind of accident from any accident previously evaluated; or
3. involve a significant reduction in a margin of safety.

Reference 1 provides an evaluation by the NRC of the limiting thyroid dose that would result from damage to fuel that had decayed 60 days since irradition. As discussed in Attachment B, these results can be used to evaluate the consequences of a fuel handling accident inside the auxiliary building with no credit for iodine removal due to operation of the charcoal filters. The resulting thyroid dose of 0.2 Rem is well within the guidelines of 10CFR 100 and is less than that which was previously considered to be acceptable by the NRC.

Therefore, a no significant hazards finding is warranted because:

1) the probability of a fuel handling accident is unchanged and the consequences are less than those previously evaluated,
2) the possibility of a new or different kind of accident is not created, and
3) the margin of safety is not reduced due to the resulting dose being less than that previously considered acceptable.

References

(1) Letter, Mr. J.A. Zwolinski, NRC, to Mr. R.W. Kober, RG&E, November 14, 1984.