LICENSE AMENDMENT REQUEST DATED May 7, 1997

Amendment of Spent Fuel Pool Special Ventilation System Specifications

EXHIBIT B

Appendix A, Technical Specification Pages
Marked Up Pages
(shaded material to be added, strikethrough material to be removed)

TS.3.8-1
TS.3.8-4
B.3.8-2

3.8 REFUELING AND FUEL HANDLING

Applicability

Applies to operating limitations associated with fuel-handling operations and~~,~~ CORE ALTERATIONS~~, and crane operations in the spent fuel pool enclosure~~.

Objectives

To ensure that no incident could occur during fuel handling and~~,~~ CORE ALTERATIONS ~~and crane operations~~ that would affect public health and safety.

Specification

A. Core Alterations

1. During CORE ALTERATIONS the following conditions shall be satisfied (except as specified in 3.8.A.2 and 3 below):

   a. 1) The equipment hatch shall be closed. In addition, at least one isolation valve shall be OPERABLE or locked closed in each line which penetrates the containment and provides a direct path from containment atmosphere to the outside.

      2) Airlock doors

         a) At least one door in each air lock is closed, or

         b) Both doors in each air lock may be open if:

            i. The containment (high flow) purge system is isolated,

            ii. The inservice (low flow) purge system is capable of automatic isolation,

            iii. At least one door in each air lock is OPERABLE, under procedural control, and capable of being closed within 30 minutes following a fuel handling accident in containment, and

            iv. At least two containment fan coil unit fans are capable of operating in the high speed mode following a fuel handling accident in containment.

   b. Radiation levels in the fuel handling areas of the containment shall be monitored continuously.

3.8.C. Small Spent Fuel Pool Restrictions

No more than 45 recently discharged assemblies shall be located in the small pool (pool No. 1).

D. Spent Fuel Pool Special Ventilation System

1. Both trains of the Spent Fuel Pool Special Ventilation System shall be OPERABLE during movement of irradiated fuel assemblies in the spent fuel pool enclosure~~at all times~~ (except as specified in 3.8.D.2 and 3.8.D.3 below).

2. If~~With~~ one train of the Spent Fuel Pool Special Ventilation System is inoperable during movement of irradiated fuel assemblies in the spent fuel pool enclosure, restore the train to OPERABLE status within~~fuel handling operations and crane operations with loads over spent fuel (inside the spent fuel pool enclosure) are permissible during the following~~ 7 days. If the inoperable train is not restored within 7 days, place the OPERABLE Spent Fuel Pool Special Ventilation System in operation or suspend movement of irradiated fuel assemblies in the spent fuel pool enclosure.~~, provided the redundant train is demonstrated OPERABLE prior to proceeding with those operations.~~

3. With both trains of the Spent Fuel Pool Special Ventilation System inoperable, suspend movement of irradiated~~all~~ fuel assemblies ~~handling operations and crane operations with loads over spent fuel (inside~~ the spent fuel pool enclosure~~)~~.

4. The provisions of specification 3.0.C are not applicable.

E. Spent Fuel Pool Storage

1. Fuel Assembly Storage

a. To be stored without restriction in the spent fuel pool, the burnup and initial enrichment of a fuel assembly shall be within the unrestricted range of Figure TS.3.8-1.

b. Fuel assemblies with a combination of burnup and initial enrichment in the restricted range of Figure TS.3.8-1 shall be stored in accordance with Specification 5.6.A.1.d.

c. If the requirements of 3.8.E.1.a and 3.8.E.1.b are not met, immediately initiate action to move any noncomplying fuel assembly to an acceptable location.

d. The provisions of Specification 3.0.C are not applicable.

3.8 REFUELING AND FUEL HANDLING

Bases continued

The Spent Fuel Pool Special Ventilation System (SFPSVS) (Reference 3) is a safeguards system which maintains a negative pressure in the spent fuel enclosure upon detection of high area radiation. The Spent Fuel Pool Normal Ventilation System is automatically isolated and exhaust air is drawn through filter modules containing a roughing filter, particulate filter, and a charcoal filter before discharge to the environment via one of the Shield Building exhaust stacks. Two completely redundant trains are provided. The exhaust fan and filter of each train are shared with the corresponding train of the Containment In-service Purge System. High efficiency particulate absolute (HEPA) filters are installed before the charcoal adsorbers to prevent clogging of the iodine adsorbers in each SFPSVS filter train. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. Doors to the spent fuel enclosure are required to be maintained closed when SFPSVS OPERABILITY is required. Opening of personnel doors for personnel use is acceptable (blocking a door open is not allowed).

During movement of irradiated fuel assemblies or control rods, a water level of 23 feet is maintained to provide sufficient shielding.

The water level may be lowered to the top of the RCCA drive shafts for latching and unlatching. The water level may also be lowered below 20 feet for upper internals removal/replacement. The basis for these allowance(s) are (1) the refueling cavity pool has sufficient level to allow time to initiate repairs or emergency procedures to cool the core, (2) during latching/unlatching and upper internals removal/replacement the level is closely monitored because the activity uses this level as a reference point, (3) the time spent at this level is minimal.

The Prairie Island spent fuel storage racks have been analyzed (Reference 4) to allow for the storage of fuel assemblies with enrichments up to 5.0 weight percent U-235 while maintaining $K_{eff} \leq 0.95$ including uncertainties. This criticality analysis utilized the following storage configurations or regions to ensure that the spent fuel pool will remain subcritical during the storage of fuel assemblies with all possible combinations of burnup and initial enrichment:

1. The first region utilizes a checkerboard loading pattern to accommodate new or low burnup fuel with a maximum enrichment of 5.0 wt% U-235. This configuration stores "burned" and "fresh" fuel assemblies in a 2x2 checkerboard pattern. Fuel assemblies stored in "burned" cell locations must have an initial enrichment less than 2.5 wt% U-235 (nominal) or satisfy a minimum burnup requirement. The use of empty cells is also an acceptable option for the "burned" cell locations. Fuel assemblies stored in the "fresh" cell locations can have enrichments up to 5.0 wt% U-235 with no requirements for burnup or burnable absorbers.

2. The second region does not utilize any special loading pattern. Fuel assemblies with burnup and initial enrichments which fall into the unrestricted range of Figure TS.3.8-1 can be stored anywhere in the region with no special placement restrictions. Fuel assemblies which fall into the restricted range of Figure TS.3.8-1 must be stored in the checkerboard region in accordance with Specification 5.6.A.1.d.

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Amendment of Spent Fuel Pool Special Ventilation System Specifications

EXHIBIT C

Appendix A, Technical Specification Pages
Revised Pages

TS.3.8-1
TS.3.8-4
B.3.8-2

3.8 REFUELING AND FUEL HANDLING

Applicability

Applies to operating limitations associated with fuel-handling operations and CORE ALTERATIONS.

Objectives

To ensure that no incident could occur during fuel handling and CORE ALTERATIONS that would affect public health and safety.

Specification

A. Core Alterations

1. During CORE ALTERATIONS the following conditions shall be satisfied (except as specified in 3.8.A.2 and 3 below):

   a. 1) The equipment hatch shall be closed. In addition, at least one isolation valve shall be OPERABLE or locked closed in each line which penetrates the containment and provides a direct path from containment atmosphere to the outside.

      2) Airlock doors

         a) At least one door in each air lock is closed, or

         b) Both doors in each air lock may be open if:

            i. The containment (high flow) purge system is isolated,

            ii. The inservice (low flow) purge system is capable of automatic isolation,

            iii. At least one door in each air lock is OPERABLE, under procedural control, and capable of being closed within 30 minutes following a fuel handling accident in containment, and

            iv. At least two containment fan coil unit fans are capable of operating in the high speed mode following a fuel handling accident in containment.

   b. Radiation levels in the fuel handling areas of the containment shall be monitored continuously.

3.8.C. Small Spent Fuel Pool Restrictions

No more than 45 recently discharged assemblies shall be located in the small pool (pool No. 1).

D. Spent Fuel Pool Special Ventilation System

1. Both trains of the Spent Fuel Pool Special Ventilation System shall be OPERABLE during movement of irradiated fuel assemblies in the spent fuel pool enclosure (except as specified in 3.8.D.2 and 3.8.D.3 below).

2. If one train of the Spent Fuel Pool Special Ventilation System is inoperable during movement of irradiated fuel assemblies in the spent fuel pool enclosure, restore the train to OPERABLE status within 7 days. If the inoperable train is not restored within 7 days, place the OPERABLE Spent Fuel Pool Special Ventilation System in operation or suspend movement of irradiated fuel assemblies in the spent fuel pool enclosure.

3. With both trains of the Spent Fuel Pool Special Ventilation System inoperable, suspend movement of irradiated fuel assemblies in the spent fuel pool enclosure.

4. The provisions of specification 3.0.C are not applicable.

E. Spent Fuel Pool Storage

1. Fuel Assembly Storage

a. To be stored without restriction in the spent fuel pool, the burnup and initial enrichment of a fuel assembly shall be within the unrestricted range of Figure TS.3.8-1.

b. Fuel assemblies with a combination of burnup and initial enrichment in the restricted range of Figure TS.3.8-1 shall be stored in accordance with Specification 5.6.A.1.d.

c. If the requirements of 3.8.E.1.a and 3.8.E.1.b are not met, immediately initiate action to move any noncomplying fuel assembly to an acceptable location.

d. The provisions of Specification 3.0.C are not applicable.

3.8 REFUELING AND FUEL HANDLING

Bases continued

The Spent Fuel Pool Special Ventilation System (SFPSVS)(Reference 3) is a safeguards system which maintains a negative pressure in the spent fuel enclosure upon detection of high area radiation. The Spent Fuel Pool Normal Ventilation System is automatically isolated and exhaust air is drawn through filter modules containing a roughing filter, particulate filter, and a charcoal filter before discharge to the environment via one of the Shield Building exhaust stacks. Two completely redundant trains are provided. The exhaust fan and filter of each train are shared with the corresponding train of the Containment In-service Purge System. High efficiency particulate absolute (HEPA) filters are installed before the charcoal adsorbers to prevent clogging of the iodine adsorbers in each SFPSVS filter train. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. Doors to the spent fuel enclosure are required to be maintained closed when SFPSVS OPERABILITY is required. Opening of personnel doors for personnel use is acceptable (blocking a door open is not allowed).

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2. The second region does not utilize any special loading pattern. Fuel assemblies with burnup and initial enrichments which fall into the unrestricted range of Figure TS.3.8-1 can be stored anywhere in the region with no special placement restrictions. Fuel assemblies which fall into the restricted range of Figure TS.3.8-1 must be stored in the checkerboard region in accordance with Specification 5.6.A.1.d.