ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION CHANGE

SURRY POWER STATION
UNIT NOS. 1 AND 2

12. A spent fuel cask or heavy loads exceeding 110 percent of the weight of a fuel assembly (not including fuel handling tool) shall not be moved over spent fuel, and only one spent fuel assembly will be handled at one time over the reactor or the spent fuel pit.

    This restriction does not apply to the movement of the transfer canal door.

13. A spent fuel cask shall not be moved into the Fuel Building unless the Cask Impact Pads are in place on the bottom of the spent fuel pool.

14. Two trains of the control and relay room emergency ventilation system shall be operable. With one train inoperable for any reason, demonstrate the other trains is operable by performing the test in Specification 4.20.A.1. With both trains inoperable, comply with Specification 3.10.B.

15. Containment purge shall be filtered through high efficiency particulate air filters and charcoal absorbers.

B. If any one of the specified limiting conditions for refueling is not met, refueling of the reactor shall cease, work shall be initiated to correct the conditions so that the specified limit is met, and no operations which increase the reactivity of the core shall be made.

C. After initial fuel loading and after each core refueling operation and prior to reactor operation at greater than 75% of rated power, the movable incore detector system shall be utilized to verify proper power distribution.

D. The requirements of 3.0.1 are not applicable.

ATTACHMENT 2

SAFETY EVALUTION

SURRY POWER STATION
UNIT NOS. 1 AND 2

SAFETY EVALUATION
REVISION TO HEAVY LOADS REQUIREMENTS
SURRY POWER STATION UNITS 1 AND 2

Section 3.10 of the Technical Specifications provides limits governing heavy loads including the transfer canal door. These limits are as follows:

> A spent fuel cask or heavy loads exceeding 110 percent of the weight of a fuel assembly (not including fuel handling tool) shall not be moved over spent fuel, and only one spent fuel assembly will be handled at one time over the reactor or spent fuel pit..

Nuclear Energy Services, Inc. has performed a transfer canal door drop analysis to evaluate the potential structural damage to the spent fuel pool floor and to the spent fuel storage racks due to the postulated door drop accident from the highest elevation of the crane hook.

Four cases have been considered; A) Vertical drop on pool floor, B) Inclined drop on pool floor, C) Inclined drop over a leak test channel and D) Vertical drop on a spent fuel rack. The maximum velocity and kinetic energy of impact, local damage as well as overall structural response and potential consequences have been evaluated for each of these cases.

The following conservatisms in the door drop analysis should be noted:

A. The effects of the 1/4" stainless steel liner plate are conservatively neglected in the analysis for load cases A and B. The ductile stainless steel liner plate will act as an energy absorbing cushion between the floor/wall of the spent fuel pool and the impacting door.

B. The door is conservatively assumed to be a non-deformable body with the target structure absorbing the entire impact energy. Local deformations of the ductile stainless steel door will, in effect, reduce the kinetic energy transmitted to the target.

C. The empirical equations and analytical procedures used in the analysis for load cases A and B represent the present "state-of-art" in the field of design of structures and components against missile impact. Although some of these empirical equations, generally apply to low mass, small diameter, high velocity missiles, their use in the design of the nuclear power plant structure for large mass, large diameter, small velocity missiles is judged conservative.

For load cases A and B, the pool floor will sustain local damage due to penetration at the surface. However, the overall structural response indicates that the stresses and ductility ratios are well within the allowable for the no-damage criteria. The perforation and spalling criteria are also well within the acceptable values for the Surry spent fuel pool.

For load case C, the liner over the leak test channel will deform a maximum of 0.132 inches. The dropped door will then transfer the load to the surrounding concrete. Subsequent damage to concrete will be governed by load case A and B.

For load case D, the impact cell will dislodge from the individual cell support legs, and will sustain 2.42 inches of permanent axial deformation. However, the integrity of the rack and the leak tightness of the fuel pool floor will not be compromised. Spent fuel assemblies stored in the spent fuel racks will not be damaged due to the space provided between the racks and the spent fuel assemblies (more than the 2.42 inches of fuel rack determined to be damaged).

The door drop may result in a potential damage to a control rod assembly. However, any radioactivity release would be much less than the analysis performed in the UFSAR 14.4.1.3, "Fuel-Handling Accident in the Spent-Fuel Pool."

Based on the results of the analyses, it is concluded that the overall structural integrity of the pool floor and the spent fuel storage racks will be maintained. No loss of coolant will occur due to cracking of the floor or the fracture of the liner plate.

This change permits the transfer canal door to be moved over the spent fuel assemblies since the drop analysis indicates that the integrity of the spent fuel storage racks and the leak tightness of the floor will not be compromised.

This proposed change does not constitute an "unreviewed safety question" as defined in 10CFR50.59 since it does not:

1) Increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety and previously evaluated in the FSAR. The consequences of an accidental drop of the transfer canal door have been shown to be acceptable. The probability of occurrence will not be increased since the operation of the canal door movement remains unchanged except the spent fuel assemblies are stored under the pathway of the canal door.

2) Create the possibility for an accident or malfunction of a different type than any evaluated previously in the UFSAR.

3) Reduce the margin of safety as defined in the basis for any Technical Specifications since the consequences of a transfer canal door drop are acceptable.

This change is in the category of Example iv of those types of license amendments that are considered unlikely to involve significant hazards considerations, as published in the Federal Register, Volume 48, No. 67, April 6, 1983, page 14870, "Standards For Determining Whether License Amendments Involve No Significant Hazards Considerations, Interim Final Reports". Example iv cites "A relief granted upon demonstration of acceptable operation from an operating restriction that was imposed because acceptable operation was not yet

demonstrated. This assumes that the operating restriction and the criteria to be applied to a request for relief have been established in a prior review and that it is justified in a satisfactory way that the criteria have been met". Since the proposed change serves to demonstrate that the fuel pool floor and the spent fuel storage racks are not damaged due to the drop of the transfer canal door, it does not involve a significant hazard consideration as defined in 10CFR50.92.