

alter the type or mass of casks that may be placed in the fuel pool, or alter any facet of operation of the spent fuel cask crane. No characteristics of the existing spent fuel cask drop analysis for Unit 1 are affected by the proposed fuel positioning rules or by credit for soluble boron. Therefore, there is no increase in either the probability or the consequences of a cask drop accident caused by this change.

The proposed change does not increase either the probability or the consequences of a loss of normal SFP cooling. The proposed fuel positioning rules do not require any interaction with the fuel pool cooling system. Credit for a portion of the existing soluble boron concentration does not change its interaction with the fuel pool cooling system. The ability to detect and mitigate a loss of SFP cooling event is unchanged, and the revised criticality analysis considered the effects of boiling in the SFP and found them acceptable.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

(2) Would operation of the facility in accordance with the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

No. The proposed change does not modify the physical plant, nuclear fuel, or the design function and operation of the spent fuel pool storage racks at St. Lucie Unit 1. A TS controlled minimum concentration of soluble boron has always been required in the St. Lucie Unit 1 spent fuel pool; as such, the possibility of an inadvertent fuel pool dilution event has always existed. However, the spent fuel pool dilution analysis that accompanies this submittal demonstrates that no credible dilution event could increase fuel pool reactivity such that the effective neutron multiplication factor (k_{eff}) exceeds 0.95. Therefore, implementation of credit for soluble boron to control reactivity in the SFP will not create the possibility of a new or different type of criticality accident.

The limiting fuel assembly mispositioning event does not represent a new or different type of accident. The mispositioning of a fuel assembly within the fuel storage racks has always been possible. The locations of SFP rack modules and the specific modules assigned to each storage region remain unchanged; analysis results show that the storage racks remain subcritical, with substantial margin, following a worst case fuel misloading event. Therefore, a fuel assembly misload event that involves new fuel storage arrangements required by the criticality analysis does not result in a new or different type of criticality accident.

Therefore, the proposed change does not create the possibility of a new or different type of accident from any accident previously evaluated.

(3) Would operation of the facility in accordance with the proposed amendment involve a significant reduction in a margin of safety?

No. The revised fuel positioning requirements proposed by this license amendment provide sufficient safety margin

to ensure that the spent fuel pool storage racks will always remain subcritical. To comply with the requirements of 10 CFR 50.68 when crediting soluble boron, the current TS reactivity limit for the fuel storage racks (*i.e.*, k_{eff} less than or equal to 0.95 when flooded with unborated water) will be replaced with two separate limits (k_{eff} less than 1.0 when flooded with unborated water, and k_{eff} less than or equal to 0.95 when flooded with water containing 500 ppm boron).

The proposed amendment maintains the 0.95 reactivity limit by a combination of restrictions on fuel characteristics and fuel positioning, storage cell geometry and by crediting a portion of the soluble boron in the SFP, rather than by crediting Boraflex.

The proposed license amendment does not reduce the margin of safety provided by the soluble boron normally present in fuel pool water; the TS minimum permissible boron concentration is not decreased. The TS minimum required value of 1720 ppm is substantially greater than the 500 ppm value required by the updated criticality analysis to assure k_{eff} remains = 0.95 for non-accident conditions; it is also substantially greater than the soluble boron concentration necessary to compensate at a 95% probability, with a 95 percent confidence for the limiting postulated reactivity anomaly in the fuel pool storage racks.

No credible dilution of the fuel pool can result in an SFP soluble boron concentration less than the minimum value required by the criticality analysis. Therefore, an inadvertent dilution event can not challenge safety margins.

Based on these evaluations and the supporting analyses, operating the facility with the proposed amendment does not involve in a significant reduction in any margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

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GPU Nuclear Corporation and Saxton Nuclear Experimental Corporation (SNEC), Docket No. 50-146, Saxton Nuclear Experimental Facility (SNEF), Bedford County, Pennsylvania

Date of amendment request: April 22, 2002, as supplemented on December 5, 2002.

Description of amendment request: The proposed amendment would allow removal of the upper half of the SNEF containment vessel and make a change to the organization to add the position of Vice-President GPU Nuclear

Oversight to reflect the merger of GPU Inc. and FirstEnergy Corp.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensees have provided their analysis of the issue of no significant hazards consideration, which is presented below:

GPU Nuclear has determined that Technical Specification Change Request No. 62 involves no significant hazard consideration as defined in 10 CFR 50.92.

1. The proposed changes to the SNEC Technical Specifications do not involve a significant increase in the probability of occurrence or consequences of an accident or malfunction of equipment important to safety previously analyzed in the safety analysis report.

As described in the change to delete Technical Specification 1.1.2, radiation levels inside the Containment Vessel will be below that necessary to maintain the Containment Vessel as an Exclusion Area. Further as required by modified Technical Specification 2.1.1 ventilation controls will be established to monitor and control any potential releases of airborne radioactivity during activities involving removal of the upper dome. Finally an analysis has been performed to determine the dose to a maximally exposed individual due to an accidental release while cutting the Containment Vessel. In developing a source term for the event it was assumed that following the concrete removal process the interior surfaces of the upper Containment Vessel dome was homogeneously coated with concrete dust. NUREG 1507 "Minimum Detectable Concentrations with Typical Radiation Survey Instruments for Various Contaminants and Field Conditions" describes an experiment to determine the attenuation effects due to dusty conditions. The maximum dust loading presented was 9.99 mg/cm² for soil. This value was converted to concrete dust by comparing the relative densities of the material (1.5 g/cm³ for soil and 2.3 g/cm³ for concrete) or 15.3 mg/cm². This amount of dust coating the internal surfaces of the Containment Vessel dome (9.05E6 cm²) results in 299 pounds of dust being left in the Containment Vessel.

Table 1 provides the mix of isotopes remaining at the SNEC Facility based on the most recent survey results and isotope decay. During the removal operation a resuspension factor of 1.9E-2/m (as described in NUREG/CR 0130 "Technology, Safety and Costs of Decommissioning a Reference Pressurized Water Reactor Power Station", Volume 2, page J-27) was selected to represent the amount of concrete dust going airborne. This parameter is about one order of magnitude larger than that used in any other accident analyses described in the NUREG. This entire volume of dust was assumed to be released, unfiltered, directly to the environment.

An accident dispersion factor (c/Q) of 3.41E-3 sec/m³, was also selected as it is the highest, thus most conservative, value used in the SNEC Facility Offsite Dose Calculation Manual (ODCM). Additionally composite dose conversion factors were selected from