Local Public Document Room location: Brooks Memorial Library, 224 Main Street, Brattleboro, Vermont 05301 Attorney for licensee: John A. Ritsher, Esquire, Ropes and Gray, One International Place, Boston, Massachusetts 02110-2624 NRC Project Director: Walter R. Butler

Virginia Electric and Power Company, Docket Nos. 50-280 and 50-281, Surry Power Station, Unit Nos. 1 and 2, Surry County, Virginia

Date of amendment request: November 29, 1994

Description of amendment request: Virginia Electric and Power Company plans to insert fuel assemblies containing fuel rods, guide thimble tubes, instrumentation tubes, and midspan grids fabricated with Westinghouse Electric Corporation's (Westinghouse's) advanced zirconium alloy material, ZIRLO, into the Surry Units 1 and 2 reactors, beginning with Cycle 14 at each unit. In the current fuel design, these components are fabricated from Zircaloy-4.

Because the Technical Specifications define the fuel rod cladding material as Zircaloy-4, implementation of this material change requires changes to the Technical Specifications. Technical Specification 5.3.A.1 is being modified to allow the use of either Zircaloy-4 or ZIRLO fuel rod cladding, and an additional reference for the calculation of the heat flux hot channel factor for loss-of-coolant-accident evaluations of fuel with ZIRLO cladding is being defined in Technical Specification 6.2. The use of the ZIRLO fabricated guide thimble tubes, instrumentation tubes, and mid-span grids does not require changes to the Technical Specifications.

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

Specifically, operation of Surry Power Station in accordance with the Technical Specifications changes will not:

1. Involve a significant increase in the probability or consequence of an accident previously evaluated. The Surry fuel assemblies containing fuel rods, guide thimble tubes, instrumentation tubes and mid-span grids fabricated with ZIRLO alloy meet the same fuel assembly and fuel rod design bases as the current fuel assemblies fabricated with Zircaloy-4 components. In addition, the 10 CFR 50.46 criteria will be applied to the fuel rods, guide thimble tubes, instrumentation tubes and mid-span grids fabricated with ZIRLO alloy. The use of these fuel assemblies will not result in a change to the Surry Units 1 and 2 reload design and safety analysis limits. The ZIRLO alloy is

similar in chemical composition to Zircaloy-4, and also has physical and mechanical properties similar to those of Zircaloy-4. Thus the cladding integrity is maintained and the structural integrity of the fuel assembly is not affected. The ZIRLO clad fuel rods improve corrosion resistance and dimensional stability. Since the dose predictions in the safety analyses are not sensitive to the fuel rod cladding material changes as specified in this report, the radiological consequences of accidents previously evaluated in the safety analyses remain valid. Therefore, neither the probability of occurrence nor the consequences of any accident previously evaluated is significantly increased.

2. Create the possibility of a new or different kind of accident from any accident previously identified, since the Surry Units 1 and 2 fuel assemblies containing fuel rods, guide thimble tubes, instrumentation tubes and mid-span grids fabricated with ZIRLO alloy will satisfy the same design bases used for previous fuel regions containing Zircaloy 4 components. Since the original design criteria are being met, the fuel rods, guide thimble tubes, instrumentation tubes and mid-span grids fabricated with ZIRLO alloy will not be initiators for any new accident. Applicable design and performance criteria will continue to be met and no single failure mechanisms have been created. In addition, the use of these fuel assemblies does not involve any alteration to plant equipment or procedures which would introduce any new or unique operational modes or accident precursors. Therefore, the possibility for a new or different kind of accident from any accident previously evaluated is not created.

3. Involve a significant reduction in a margin of safety. The Surry Units 1 and 2 fuel assemblies containing fuel rods, guide thimble tubes, instrumentation tubes and mid-span grids fabricated with ZIRLO alloy do not change the Surry Units 1 and 2 reload design and safety analysis limits. The use of fuel assemblies containing fuel rods, guide thimble tubes, instrumentation tubes and mid-span grids fabricated with ZIRLO alloy will take into consideration the normal core operating conditions allowed in the Technical Specifications. For each cycle reload core these fuel assemblies will be specifically evaluated using approved reload design methods and approved fuel rod design models and methods. This will include consideration of the core physics analysis peaking factors and core average linear heat rate effects. Analyses or evaluations will be performed each cycle to confirm that the 10 CFR 50.46 criteria will be met for the use of fuel with fuel rods, guide thimble tubes instrumentation tubes and mid-span grids fabricated with ZIRLO alloy. Therefore, the margin of safety as defined in the Bases to the Surry Units 1 and 2 Technical Specifications is not significantly reduced.

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. Local Public Document Room location: Swem Library, College of William and Mary, Williamsburg, Virginia 23185.

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Wisconsin Public Service Corporation, Docket No. 50-305, Kewaunee Nuclear Power Plant, Kewaunee County, Wisconsin

Date of amendment request: December 2, 1994

Description of amendment request: The proposed amendment would revise Kewaunee Nuclear Power Plant (KNPP) Technical Specification (TS) 3.2 by eliminating the requirements for the charging pumps, high concentration boric acid in the boric acid storage tanks (BASTs), the boric acid transfer pumps, and boric acid heat tracing. Changes to TS 3.3 and Table TS 3.5.3 are also being proposed to add requirements associated with the emergency core cooling system (ECCS) accumulators, remove the requirements associated with the boric acid storage tanks, and to increase the minimum required boron concentration in the refueling water storage tank (RWST). Additionally, the surveillance requirements involving the BASTs, associated valves and heat tracing located in Table TS 4.1-1, Table TS 4.1-2 and Section 4.5 would be eliminated. Supporting analysis for the limiting design basis accident conditions have been performed using the proposed minimum RWST boron concentration of 2400 ppm.

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

Significant Hazards Determination for Proposed Changes to Technical Specification (TS) 3.2 and Table TS 3.5-3.

The proposed changes were reviewed in accordance with the provisions of 10 CFR 50.92 to show no significant hazards exist. The proposed changes will not:

 Involve a significant increase in the probability or consequences of an accident previously evaluated;

Neither the charging pumps, the high concentration boric acid, the BASTs, the boric acid transfer pumps nor the boric acid heat tracing system are accident initiators. Therefore, a change to these systems will not significantly increase the probability of an accident previously evaluated. The effect of a reduction in initial safety injection boron concentration on the accident analysis was evaluated. The limiting accidents were the Large-Break Loss-of-Coolant Accident