

SNUPPS

Standardized Nuclear Unit
Power Plant System

5 Choke Cherry Road
Rockville, Maryland 20850
(301) 869-8010

Nicholas A. Petrick
Executive Director

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SLNRC 83-0006 FILE: 0278
SUBJ: Power Systems Branch Review

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Docket Nos. STN 50-482 and STN 50-483

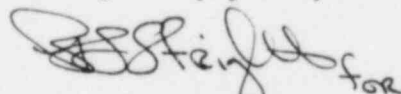
Reference: NRC Summary of meeting held on September 30, 1982 with the Callaway and Wolf Creek applicants concerning Electric Power Systems, Docket Nos. STN 50-482 and STN 50-483, dated October 12, 1982.

Dear Mr. Denton:

The referenced meeting summary discussed several Safety Evaluation Report issues identified during the Power Systems Branch review of the SNUPPS design. The enclosure to this letter provides additional information to support resolution of or identifies the proposed actions required to resolve the remaining NRC concerns regarding these issues.

As noted in the enclosure, an onsite confirmatory review by the NRC staff is required to resolve some of the issues. This review is scheduled for the second week in April 1983 and involves approximately two days of review at each of the SNUPPS sites.

Very truly yours,


Nicholas A. Petrick

MHF/nld/lb4

Enclosure: Discussion of Power Systems Branch Issues

cc: D. T. McPhee	KCPL	J. H. Neisler	USNRC/CAL
G. L. Koester	KGE	T. E. Vandel	USNRC/WC
J. F. Schnell	UE	G. Edison	USNRC

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Discussion of Power Systems Branch Issues

Confirmatory Issue #15

The test results and vendor certifications of test performance for all tests required by IEEE 387 will be available for review during the onsite confirmatory review to be conducted by the NRC staff.

To address the specific NRC staff question regarding the diesel no-load test, according to the vendor test procedure, the no-load test is performed by operating the diesel under no-load conditions for four hours followed by one hour at full load (6201 KW). Full load conditions are simulated using an equivalent resistive load applied in step increments. Application of this load is completed within 60 seconds.

Confirmatory Issue #17

The surveillance test procedures required to resolve this issue will be available for NRC audit in late 1983.

Confirmatory Issue #18

The voltage optimization analysis is currently scheduled for completion in April 1983. It will be provided to the NRC at that time.

The possibility of a partial loss of offsite power resulting from starting reactor coolant pumps C or D when a Safety Injection signal is present will be addressed by means of a caution statement in the procedure for reactor coolant pump operation. Also this aspect of the SNUPPS electrical design will be covered in operator training to provide additional assurance that an inadvertent partial loss of offsite power will not occur.

Confirmatory Issue #19

To resolve the concern of adequate separation of the Class IE system from non-Class IE instrument buses, the SNUPPS design is being modified to incorporate redundant circuit breakers in addition to the isolation transformers previously described in the FSAR. The FSAR will be changed, in a future revision, to indicate that each separation group of the Non-Class IE instrument ac power system is supplied from three delta-connected, suitably qualified, single phase transformers. The 480-V power circuits up to their connection to the transformers are safety-related. These transformers are of the regulating type and exhibit a current-limiting characteristic such that a short circuit on the secondary (Non-Class IE) circuit will result in a primary (Class IE) circuit current that is within the current-carrying capability of the transformer. Further, in order to assure that the Class IE system is not

compromised upon the accidental imposition of 480-V ac on the transformer secondary (120-V ac) circuit, two circuit breakers in series are utilized in the transformer primary circuit of each separation group. For these reasons, the circuits beyond the transformer secondaries are treated per Non-Class IE and non-associated criteria. The Non-Class IE instrument ac power system is not tripped upon the occurrence of an SIS.

In addition, an analysis of the modified design demonstrating acceptable isolation will be submitted to the NRC in March 1983.

Confirmatory Issue #23

Resolution of this issue involves a confirmatory onsite review by the NRC staff.

Confirmatory Issue #(new)

As previously discussed with the NRC staff, the SNUPPS design does not provide for continuous, on-line monitoring of small battery charging currents on the order of 2 amps. However, battery availability is assured by other acceptable means, specifically by Technical Specification requirements. In support of the SNUPPS Technical Specification requirements for periodic surveillance of battery availability, the SNUPPS design relies primarily on specific gravity readings augmented, as required and permitted by Technical Specification, with portable ammeter readings in the 0-2 amp range.