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March 28, 1985

2CAN038511

Director of Nuclear Reactor Regulation
ATTN: Mr. James R. Miller, Chief
Operating Reactors Branch #3
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Arkansas Nuclear One - Unit 2
Docket No. 50-368
License No. NPF-6
CPC Type I and Type II Addressable
Constants Technical Specifications

Gentlemen:

Per our telephone conversation of March 20, 1985, this letter serves to document AP&L's restriction to operate within the allowable software ranges of the Core Protection Calculators (CPC) Type I Addressable Constants. Although the primary means of assuring correct implementation of Addressable Constants are administrative controls, the CPC software is designed to perform an independent range check. This check precludes the operator from entering values outside the allowable ranges. Each time an Addressable Constant is inserted via the operators module, the constant is compared to an upper and lower limit and if an out-of-range condition exists, the implementation is aborted and the operator is alerted. The range limits provide safeguards against unreasonable entry of Addressable Constant values without unnecessary restrictions on the use of the Addressable Constant feature of the CPC design.

The software range limits for the Addressable Constants were implemented to address the NRC's concerns expressed in CPC Staff Position 15. This position required a reasonability check of Addressable Constant values entered into the CPC and a rejection by the CPC of unreasonable values by aborting the entry and notifying the operator. AP&L addressed this concern by including in the CPC software allowable upper and lower bounds for the Addressable Constants. A description of the allowable ranges is contained in Section 3.5.3 and Table 3-4 of CEN-44(A)-P, "ANO-2 CPC Functional

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Description". This document, as well as test results demonstrating the functional adequacy of the software range limits, was reviewed and approved by the NRC staff as a part of the ANO-2 licensing basis. This approval was documented in Supplement 2 to the Safety Evaluation Report (SER) which states "the staff now considers position 15 to be fully resolved."

During the NRC review of the ANO-2 Cycle 2 Reload Report (and contrary to the resolution of CPC Staff Position 15) the NRC staff arbitrarily imposed additional restrictions on the CPC Addressable Constants via the insertion of Technical Specification 2.2.2 and Table 2.2-2. Questions Q-2 and Q-3 of Part II of the NRC Request for Additional Information, letter 2CNAØ481Ø3 dated April 10, 1981, requested adoption of more restrictive bounds on the Addressable Constants via Technical Specification changes, but at the same time allowed changes to the Addressable Constants values out to the software range limits with the approval of the Plant Safety Committee.

AP&L did not understand the reasoning for the Technical Specification change request as it did not result in changing or restricting the allowable values of the Type I Addressable Constants beyond the physical limitations already existing in the software. None the less, AP&L complied with the Technical Specification change request by submitting Specifications 2.2.2 and Table 2.2-2 by our letter dated May 19, 1981 (2CANØ581Ø8).

It should be noted that the required values of Type I Addressable Constants are governed by Technical Specifications Section 3, Limiting Conditions for Operation (LCOs). However, physical limits exist (software range limits) beyond which the CPC will not accept an Addressable Constant's value. Thus, it is not possible to enter a Type I Addressable Constant outside the range reviewed, documented, tested and approved as part of the NRC review and acceptance of the CPC system.

The current Type I Addressable Constant Allowable Values in Technical Specification Table 2.2-2 were chosen based on limited operational experience of ANO-2 during Cycle 1. The Type I Addressable Constants are basically calibration constants which must be frequently changed during operations to keep the CPCs calibrated within the the limits specified in the Technical Specification LCOs. Subsequent operation of ANO-2 has periodically required deviations from the Technical Specification identified Allowable Values, to accommodate compliance with Technical Specifications Section 3 LCOs. Each time a deviation from the Allowable Values is required, a Plant Safety Committee meeting has to be called to approve the deviation. Thus Technical Specification 2.2.2 and Table 2.2-2 has imposed unnecessary administrative burdens on both plant operating staff and the Plant Safety Committee.

Also requested by the NRC's April 10, 1981 letter was the insertion of a listing of Type II Addressable Constants into the Technical Specifications. This request was accommodated by AP&L by the inclusion of the Type II Addressable Constants in Table 2.2-2. As the values of these Addressable Constants are reviewed and approved by the Plant Safety Committee as part of the reload review, and since the values of these constants do not change over the cycle, Allowable Values for these constants were not included in the Table. AP&L is unaware of any benefit gained by having these constants in the Technical Specifications.

AP&L is currently seeking a permanent resolution of this issue on a generic basis through the CE Owners Group Technical Specifications Subcommittee and the CPC Oversight Committee with the three other utilities that have plants equipped with CPC systems. AP&L and these other licensees feel strongly that Technical Specification 2.2.2 and Table 2.2-2 are inappropriate for inclusion in the Technical Specifications and should be removed. The CE Owners Group is prepared to provide additional justification in the presentation to the NRC currently scheduled for March 29, 1985.

In summary, AP&L believes the CPC system is being unduly subjected to regulatory scrutiny beyond that of conventional analog protection systems. The NRC themselves, in Supplement 1 to the ANO-2 SER stated that "Conceptually, the reasonability checks are equivalent to the limits of an adjustable potentiometer in conventional analog hard-wired type of protection systems." Analog systems do not have Technical Specifications identifying the different potentiometers or the Allowable Values for the potentiometers' adjustments; using the same rational, neither should the CPC plants have listed in their Technical Specifications the Addressable Constants or their Allowable Values. Because of the above stated reasons and our belief that the inclusion of Technical Specification 2.2.2 and Table 2.2-2 is contrary to the purpose of Technical Specifications as defined in NUREG-1024, AP&L believes adequate justification exists to delete Technical Specifications 2.2.2 and Table 2.2-2 and will pursue steps to accomplish this through the CE Owners Group.

Very truly yours,

J. Ted Enos
Manager, Licensing

JTE:RBT