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March 6, 1990

Re: Indian Point Unit No. 2
Docket No. 50-247

Mr. Donald S. Brinkman, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects I/II
US Nuclear Regulatory Commission
Mail Stop 14B-2
Washington, DC 20555

SUBJECT: Recent AMSAC Inspection

During a recent inspection by your staff, Mr. Vincent Thomas and Mr. Brent Collins asked questions with regard to the Indian Point 2 AMSAC design. Our design was approved by the NRC in a Safety Evaluation dated May 16, 1989. The particular matters raised in the recent inspection were addressed in our submittals dated November 2, 1987 and September 16, 1988, and were discussed with the NRC staff over the course of the AMSAC design deliberations from 1985 to 1989. The purpose of this letter is to address these questions and to provide further information to the staff. This information should be reviewed in conjunction with the 7 drawings reviewed by Mr. Thomas at the inspection.

Each of the two independent AMSAC logic trains are powered by 125VDC, and receive inputs from 4 analog/digital 120VAC powered channels. AC power supplies the AMSAC bistable and relay coils. Appropriate isolation is provided by Class 1E fuses which are coordinated with their upstream instrument bus breakers. The internal fuse of the bistable chassis is rated at one ampere, the relay-coil load fuse is rated at three amperes, and the upstream instrument bus feed circuit breakers are rated at 15 amperes. Additionally, upon loss of the 120VAC power, the AMSAC channels fail to the "tripped" mode and alarm at the CCR. Isolation between AMSAC and the 125VDC power-panels #23 and #24, which are used to power AMSAC's output relays is provided by qualified, Class 1E, 3-ampere fuses in series with 20-ampere circuit breakers. Loss of D.C. Power to AMSAC also alarms in the CCR.

The 125VDC/AC inverters are qualified Class 1E components. Protection is provided by three circuit breakers on the DC input of the inverter connected in series, and by two circuit breakers and a fuse on the AC output also connected in series. Additional protection is provided by static transfer switches which transfer load from the inverter to 480/120 VAC transformers. This transfer takes place automatically on frequency drift, on low DC supply voltage, on deterioration of the internal wave form, and on AC undervoltage or over current. It can also be manually initiated. Inverter transfer for failure is alarmed in the Central Control Room.

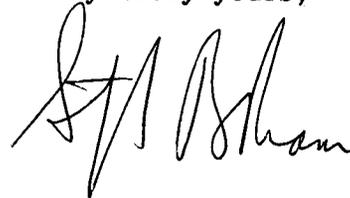
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To conclude, the AMSAC installation, utilizing qualified Class 1E fuses and breakers, is independent of and isolated from all existing plant power supplies whether AC or DC.

Should you have any questions, please contact Mr. Charles Jackson, Manager, Nuclear Safety and Licensing.

Very truly yours,

A handwritten signature in black ink, appearing to read 'C. Jackson', written in a cursive style.

cc: Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555

Mr. William Russell
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