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Docket No. 50-461

10CFR21.21

Document Control Desk
Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: 10CFR21 Interim Report 21-95-018: Asea Brown Boveri
ITE Gould Type SS-13 Solid State Trip Device Failure

Dear Sir:

On August 7, 1995, during an attempt to shift the Control Room Heating, Ventilating, and Air Conditioning (VC) system operation from the A train to the B train, the B train return air fan would not start. An investigation of the failure to start found the fan's circuit breaker, 0AP06E5D, in a tripped condition. Illinois Power (IP) staff reset the circuit breaker and attempted to start the fan but the breaker tripped again. The breaker was replaced with a spare breaker, and the fan started and operated satisfactorily. Testing of the deficient breaker on August 8, 1995, identified that its solid state trip device was causing the breaker to trip. IP does not know why the solid state trip device caused the breaker to trip, but has returned the device to the supplier for testing.

On August 10, 1995, IP determined that the potentially deficient type SS-13 solid state trip device was a condition potentially reportable under the provisions of 10CFR21. IP's investigation of this issue and evaluation for reportability are restrained by the results of supplier testing of the potentially deficient solid state trip device.

On August 21, 1995, IP identified another potentially deficient type SS-13 solid state trip device. This device was installed in the circuit breaker for the B Switchgear Heat Removal (VX) system condensing unit motor.

IP provides the following information in accordance with 10CFR21.21(c)(4). Initial notification of this matter will be provided by facsimile of this letter to the NRC Operations Center in accordance with 10CFR21.21(c)(3) on the date this letter is signed by the responsible officer.

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- (i) J. G. Cook, Vice President of IP, Clinton Power Station, Post Office Box 678, Clinton, Illinois, 61727, is the responsible officer informing the Nuclear Regulatory Commission (NRC) of a condition potentially reportable under the provisions of 10CFR, Part 21, by means of this report.
- (ii) The Basic components involved in this condition are solid state trip devices, type SS-13, manufacturer part number 609901-T012, serial numbers 45779 and 45778. One trip device was installed in the circuit breaker for VC system B train return air fan 0VC04CB, and the other trip device was installed in the circuit breaker for the VX system B train condensing unit motor 1VX06CB. The trip device provides electrical overcurrent protection of the connected circuit breaker load.
- (iii) The solid state trip devices were manufactured by Gould/ITE (now ABB, Asea Brown Boveri).
- (iv) During an attempt to transfer VC system operation from the A train to the B train, the B train return air fan would not start. An investigation found the return air fan's circuit breaker in a tripped condition. IP reset the circuit breaker and attempted to start the return air fan but the breaker tripped again. The breaker was replaced with a spare breaker and the fan started and operated satisfactorily. Testing of the VC system breaker identified that its solid state trip device was causing the breaker to trip. The trip device in the VX system exhibited similar symptoms as the VC system trip device. IP does not know why the solid state trip device caused the breaker to trip but is continuing the investigation of this issue.

The failure of the VC system B train return air fan prevents the B train from performing its intended safety function which is to maintain a habitable environment and ensure the operability of all components in the main control room under all operating and accident conditions.
- (v) The potentially deficient solid state trip device in the VC system was identified on August 8, 1995. On August 10, 1995, IP determined that the trip device was potentially reportable under the provisions of 10CFR, Part 21.
- (vi) A model SS-13 solid state trip device is typically installed on auxiliary power 480-volt circuit breakers used for motor control at CPS.
- (vii) IP replaced the VC system breaker (having the potentially deficient device) with a spare breaker and the fan started and operated satisfactorily. Testing of the device by IP at CPS was inconclusive. IP has returned the VC system solid state trip device to the supplier for testing. Initial testing by the supplier at its Fenton, Missouri location was also inconclusive. The supplier is currently planning to test

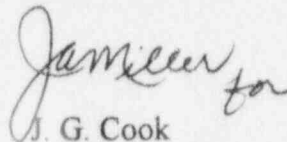
the device at its Allentown, Pennsylvania location. IP is awaiting the results of the supplier testing to determine further actions. The supplier has not provided a schedule for completing the testing.

IP replaced the VX system trip device with a new unit and plans to return the potentially deficient device to the supplier for testing. IP is tracking the solid state trip device issue in accordance with condition report 1-95-08-012.

- (viii) IP has no advice to offer other purchasers or licensees about this issue at this time. Additional information about this issue may be obtained by contacting D. G. Lukach, system engineer, at (217) 935-8881, extension 3952.

IP will provide an update on the status of the investigation of this issue by December 20, 1995.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "J. G. Cook", with a stylized flourish at the end.

J. G. Cook
Vice President

RSF/csm

cc: NRC Clinton Licensing Project Manager
NRC Resident Office, V-690
Regional Administrator, Region III, USNRC
Illinois Department of Nuclear Safety
INPO Records Center
Asea Brown Boveri