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ILLINOIS POWER COMPANY

CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

June 2, 1988

Docket No. 50-461

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

Subject: Clinton Power Station
Nuclear Systems Protection System (NPSP) Self-Test System (STS) Failure Detection and Indication

Dear Sir:

The purpose of this letter is to inform the NRC staff of Illinois Power's revised position regarding a commitment identified in Supplement 6 to the Safety Evaluation Report (SER) for Clinton. The commitment concerns a condition discovered in which the annunciator features of the Self-Test System were not functioning as described in an earlier supplement (No. 2) to the SER. The justification for the change in position and a brief history of the issue are summarized in the body of this letter.

Supplement 2 of the Clinton SER was issued in May of 1983. This supplement documented the NRC's acceptance of the Self-Test System. NRC staff noted that the automatic testing performed by the Self-Test System offers advantages over conventional surveillance test methods. The supplement included a description of the annunciator features of the STS and described how if a failure was detected in any of the four divisions of functional logic tested by the STS, one of several annunciators intended to identify the affected system and division would be actuated in addition to the "STS Detected Failure" alarm. It also described how a diagnostic program could be utilized by technicians (using the plant computer) to determine the location of a detected failure to the printed-circuit card level.

It was subsequently discovered that, due to the STS as-built design and the way in which the STS automatic test sequence is executed between divisions, the correct system and division annunciators were not always actuated for the division in which a fault was detected. This condition was described in an IP letter submitted to NRC in August of 1985. In that letter, IP committed to the NRC to implement a plant modification for correcting the annunciator condition.

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In Supplement 6 to the SER (issued in July of 1986), the NRC acknowledged the annunciator problem, stipulating that it would be acceptable to disable the system-and-division annunciators and to allow the STS to continue to operate without the extra annunciators on an interim basis until implementation of the modification prior to startup after the first refueling outage. The interim means of operation was determined to be acceptable since the "STS Detected Failure" annunciator would remain operable and operators can use the diagnostic terminal to locate faults to the card level (and thus determine the affected system and division).

Although operation of STS without use of the system-and-division annunciators was stipulated to be an interim means of operation, experience to date has confirmed that these annunciators are not needed and that the interim means of operation is acceptable on a permanent basis. This is based on the fact that when the "STS-Detected Failure" alarm is actuated, technicians must utilize the diagnostic program to identify a fault to the card level regardless of the state or status of the system-and-division annunciators. Identification of a fault to the card level is required in order to repair the fault and take appropriate action. Once a fault is identified to the card level, the affected system and division will also have been identified. The system-and-division annunciators therefore provide no extra information that is immediately useful.

IP therefore desires to close this open issue with no modification required. The significant amount of engineering effort required to make the individual system-and-division annunciators function for correct annunciation of the affected division does not seem necessary in view of any benefit to be gained. This IP position was informally discussed with the NRC staff in April (1988) and preliminary concurrence was received.

It is important to note that the proposed modification (if required) would involve significant effort by IP engineering and require extensive preparation (bid specification preparation, vendor selection, design changes, etc.). As noted above, IP does not feel the modification is required; if however, the NRC's position is different than the indicated preliminarily judgement, IP would like to meet with the NRC staff as soon as possible in order to discuss this issue prior to making the necessary preparations to include the work in the schedule for the first scheduled refueling outage. IP therefore requests, if possible, a verbal response to this letter by June 22, 1988. Your cooperation regarding this request would be sincerely appreciated.

Please contact me for answers to any questions you may have or for any additional information you may require.

Sincerely yours,

F. A. Spangenberg, III
Manager - Licensing and Safety

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Attachment

cc: NRC Resident Office
NRC Region III, Regional Administrator
NRC Clinton Licensing Project Manager
Illinois Department of Nuclear Safety