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ILLINOIS POWER

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May 22, 1991
10CFR50.90

Docket No. 50-461

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

Subject: Additional Information Regarding Proposed License Amendment Due to Inoperable Position Indication for Main Steam Line Isolation Valve 1B21-F022D

Dear Sir:

By letter dated May 15, 1991 (reference U-601841), Illinois Power (IP) requested amendment of Facility Operating License No. NPF-62, Appendix A - Technical Specifications, for Clinton Power Station (CPS). The application for amendment was submitted on an emergency basis pursuant to 10CFR50.91(a)(5) due to an emergent condition discovered on May 4, 1991 wherein it was determined that one channel of the normal position indication for inboard main steam isolation valve (MSIV) 1B21-F022D was inoperable. Because the problem was traced to one of the limit switches on the valve which is inaccessible during plant operation, and because the current CPS Technical Specifications require the plant to be shut down if the inoperable channel is not restored to OPERABLE status within 30 days, an emergency Technical Specification change was requested on the basis that alternate means could be utilized to determine the position of the valve, even under postulated accident conditions.

In response to IP's request, the NRC staff has informed IP that it is considering issuing an amendment that would provide one-time relief for the specific situation that prompted IP's request. The amendment would permit continued plant operation with the noted 1B21-F022D valve position indication channel inoperable (until the next reactor shutdown) provided that a planned alternate method for determining the post-accident isolation status of the associated containment penetration is implemented. At the NRC staff's request, this letter provides a more detailed description of the "alternate method" to be utilized for determining the position of valve 1B21-F022D in the event containment isolation becomes necessary and explains the controls IP will establish to ensure that the alternate method can be readily utilized.

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The normal position indication for MSIV 1B21-F022D, as required by Technical Specification 3.3.7.5, consists of an "open" limit switch which illuminates a red lamp adjacent to the valve control in the main control room when the valve is not fully closed, and a "close" limit switch which illuminates a green lamp adjacent to the valve control in the main control room when the valve is not fully open. Thus, only the red lamp is illuminated when the valve is fully open, and only the green lamp is illuminated when the valve is fully closed. Both lamps are illuminated when the valve is in mid-position. As discussed in IP's May 15, 1991 letter, the open limit switch for MSIV 1B21-F022D was determined to be inoperable on May 4, 1991 such that both lamps remain illuminated when the valve is fully closed. As a result, other means are required to determine if the valve has fully closed (thus effecting isolation of the associated penetration) when required.

In addition to recognizing that the position indication for redundant (outboard) MSIV 1B21-F028D is fully operable, the alternate method for determining the post-accident isolation status of the containment penetration associated with valve 1B21-F022D involves utilizing another limit switch located on the same valve. The alternate limit switch provides a "valve-closed" interlock signal to the MSIV Leakage Control system and is set to the same setpoint as the limit switch associated with the inoperable position indication. The alternate limit switch circuit is safety-related (i.e., is powered by a Class 1E electrical source) but does not include visual indication of any sort. However, certain circuit terminals are readily accessible in a termination cabinet in the main control room. Therefore, a multimeter can be utilized to detect the "close" signal that originates in the alternate limit switch circuit and to verify that MSIV 1B21-F022D has closed when required. Testing has already been successfully performed to verify the effectiveness of this alternate method of determining the position of 1B21-F022D.

To support utilization of the alternate method just described, administrative controls are currently being established. Included in these controls is an operator aid which has been established in the main control room. This aid consists of posted instructions (for utilizing the multimeter to verify limit switch closure) at the termination cabinet and identification of the terminals where the meter leads are to be attached.

Because the plant will be operating under the provisions of an Action Statement associated with a Limiting Condition for Operation (LCO), an entry in the LCO logbook will be maintained. By practice, the log book must contain a description of the condition and the associated compensatory action being taken due to the condition. For the current position indication problem, the logbook will include a description of (1) how the isolation status of the containment penetration associated with MSIV 1B21-F022D can be verified by noting the position of outboard MSIV 1B21-F028D (which has operable position indication) and (2) how the alternate limit switch circuit for inboard MSIV 1B21-F022D may be utilized to verify that the valve has closed. A reference to the operator aid will be included in the log entry.

As an additional administrative control, a repeating entry in the main control room log will be established. This log typically contains important information related to plant operation that is identified for each operating shift. Main control room personnel review the main control room log during each shift turnover. A repeating entry for the MSIV position indication condition will ensure the plant operators are repeatedly apprised of the condition each time a crew comes on shift. The log entry, which is to be carried over from shift to shift, will remain in the log until the next plant shutdown when the inoperable, normal position indication must be fixed.

With respect to briefing and training, operator crews have been briefed on this issue and will receive additional training after issuance of the license amendment. By practice, a copy of each license amendment is provided to the CPS Nuclear Training Department. As a result, plant operators receive training on all applicable amendments as part of continuing operator requalification training.

In summary, IP believes the controls described above will ensure that plant operators are aware of the position indication condition for inboard MSIV 1B21-F022D and that in the event that containment isolation is necessary, operators will be able to verify that the valve has closed or that the associated containment penetration has been isolated.

Sincerely yours,

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

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cc: NRC Clinton Licensing Project Manager
NRC Resident Inspector, V-690
NRC Region III, Regional Adminstrator
Illinois Department of Nuclear Safety