



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 7 TO FACILITY OPERATING LICENSE NO. NPF-62

ILLINOIS POWER COMPANY, ET AL

CLINTON POWER STATION, UNIT 1

DOCKET NO. 50-461

1.0 INTRODUCTION

By letter dated October 30, 1987, the licensees (Illinois Power Company, et al.) requested an amendment to Facility Operating License NPF-62 for Clinton Power Station, Unit No. 1, in the form of Technical Specification (TS) changes. This amendment proposes a number of changes to the TS. Among these changes, the licensees revised a portion of the TS related to containment ventilation and drywell purge (VR/VQ) system isolation valves. Specifically, the licensees propose (1) deletion of the operability and surveillance requirements for the 50° stops installed for the VR/VQ valves, (2) insertion of footnotes in the limiting conditions for operation and applicable surveillance requirements to exclude the time when the VR/VQ valves are opened for performing stroke-time testing, and (3) extension of the administrative control permitting opening of the VR/VQ valves.

The following is the staff's evaluation of the above proposed TS changes pertaining to the VR/VQ system isolation valves.

2.0 EVALUATION

2.1 TS Pages 3/4 6-12, and 13, "Containment Building Ventilation and Purge Systems"

The licensees propose to delete the requirements associated with the VR/VQ valve opening angle restriction in footnote 1 (one asterisk) of TS 3.6.1.8 (limiting conditions for operation) and in TS 4.6.1.8.2 (surveillance requirements), and to revise footnote 2 (two asterisks) of TS 3.6.1.8.

Footnote 1 of TS 3.6.1.8 requires that the 36-inch containment ventilation supply and exhaust valves be blocked to prevent them from opening more than 50°. The surveillance requirements of TS 4.6.1.8.2 require that the 50° valve-opening restriction for the 36-inch containment ventilation supply and exhaust valves be verified at least once every 31 days. The licensees propose to remove these requirements from the TS. Footnote 2 of TS 3.6.1.8 states that containment ventilation system operation shall be defined as any time the 36-inch supply and/or exhaust isolation valves are opened. The licensees propose to insert the following statement to footnote 2: "except when opened for inservice testing performed pursuant to TS 4.0.5".

The staff originally required that the licensees demonstrate vent and purge valve operability in accordance with the requirements of NUREG-0737, Item II.E.4.2(6). In the staff report dated July 20, 1983, it was determined that, among other things, the use of the 24-inch and 36-inch purge valves would be acceptable during operational modes 1, 2, and 3 if the valves were blocked to a maximum opening angle of 50° (90° corresponds to fully open). In its letter dated November 17, 1983, the licensees committed to install mechanical stops on the valves to limit them from opening more than 50° during operational modes 1, 2, and 3. The 50° stops could be removed during modes 4 and 5 if increased purge flow were required during maintenance activities. The staff found the licensees' commitment acceptable as indicated in Supplement 5 to the Clinton Safety Evaluation Report (SSER 5) dated January 1986. The licensees incorporated the appropriate operability and surveillance requirements for the 50° stops into the TS.

Subsequently, the licensees found that purge flow was adequate during modes 4 and 5 with the 50° stops in place and thus, periodic removal of the 50° stops to increase purge flow as originally suggested would not be needed. Therefore, the licensees proposed to modify the 50° stops so that they are a permanent part of the installation of the valves and to delete the requirement for confirmation of the 50° opening angle limitation in the TS. The licensees also proposed to revise the bases for TS 3/4 6.1.8 to specify that the blocking devices are permanently installed on the 36-inch purge valves.

Because the 50° mechanical stops for these valves were previously approved by the staff as discussed in SSER 5 and are a part of the permanent valve installation, the staff finds the elimination of the operability and surveillance requirements for the 50° stops in TS 3.6.1.8 and TS 4.6.1.8.2 to be acceptable. The staff also agrees with the revised bases for TS 3/4 6.1.8 because of the permanent installation of the blocking device on these valves.

TS 3.6.1.8 requires that the opening of the containment building ventilation (36-inch) isolation valves for containment ventilation system operation be limited to less than or equal to 500 hours per year. System operation is defined by TS 3.6.1.8 as any time the valves are open. TS 4.0.5 requires that these valves be tested according to the inservice testing (IST) program by performing stroke-time testing every 92 days. The IST is performed such that the valves are open one at a time for stroke time verification while the other valve in series is closed. The licensees propose to exclude the time when these valves are opened to complete stroke-time testing from the cumulative system operation time limits currently specified in TS 3.6.1.8. The staff finds the proposed revision to footnote 2 of TS 3.6.1.8 acceptable because valve testing in accordance with the IST requirements does not require the containment ventilation system to be operable. Therefore, stroke-time testing should not be considered part of the system operation time limit.

2.2 TS Pages 3/4 6-21, 22, "Drywell Vent and Purge Systems"

The licensees propose to delete footnote 1 (one asterisk) and revise footnote 2 (two asterisks) in TS 3.6.2.7 (limiting conditions for operation), and delete TS 4.6.2.7.4 (surveillance requirements) and its footnote.

Footnote 1 requires that the 24-inch drywell vent and purge supply and exhaust isolation valves and the 36-inch outboard isolation valves be blocked to prevent them from opening more than 50°. Footnote 2 specifies that drywell vent system operation shall be defined as any time either the 10-inch or the 24-inch inboard exhaust valves are open when all valves mentioned in TS 3.6.1.8 are closed. The licensees propose to revise footnote 2 by adding the following: "This excludes the time when either of these valves is opened for inservice testing performed pursuant to TS 4.0.5 (concurrent with all valves of TS 3.6.1.8 closed)."

The surveillance requirements of TS 4.6.2.7.4 state that at least once every 31 days, the 24-inch drywell vent and purge supply and exhaust valves and the 36-inch outboard isolation valves shall be verified to be blocked in order to restrict valve opening to less than or equal to 50°. The footnote for TS 4.6.2.7.4 also specifies that the blocking device for the 24-inch valves shall be verified installed prior to drywell closing and during each cold shutdown except such verification need not be performed more often than once every 92 days. The staff finds the proposed deletion of TS 3.6.2.7.4 and footnote 1 of TS 3.6.2.7 associated with the 50° valve opening angle limitation acceptable because the 50° stop device will become part of the permanent valve installation and cannot be removed.

TS 3.6.2.7 requires that the opening of the drywell vent and purge system (24-inch or 10-inch) isolation valves for drywell vent system operation be limited to 5 hours per year. The basis for limiting the amount of time the valve can be opened for drywell vent system operation is to limit the release of radioactivity to the environs during normal operating conditions. The staff finds that the revision to footnote 2 of TS 3.6.2.7 to exclude the IST stroke-time tests from the system operation time acceptable, because stroke-time testing per the IST program does not require the drywell vent and purge system to be operable.

2.3 TS Page 3/4/6-36, Table 3.6.4-1, "Containment Isolation Valves"

TS Table 3.6.4-1, note (a) states that certain containment isolation valves may be open on an intermittent basis under administrative control. The licensees propose to extend the application of this note to include the VR/VQ valves since they are needed to be opened while certain local leakrate tests are conducted. Note (a) would be inserted into Table 3.6.4-1 for valves 1VR002A,-B and 1VQ006A,-B to allow them to be opened under administrative control during the performance of leak testing

associated with the 36-inch containment ventilation supply and exhaust valves every 92 days as specified in TS 4.6.1.8.3. The VR/VQ valves are part of the test boundary for the 36-inch containment ventilation supply and exhaust valves. Also, when these valves are being leak tested, the 36-inch valves must be closed so that the penetration will remain effectively closed during the test. The staff finds extending the application of note (a) to the valves specified above acceptable because the valves are required to be opened during the local leakrate testing of the 36-inch ventilation system isolation valves every 92 days.

Based on the above review of the licensees' submittal and related documents concerning the containment ventilation system and drywell purge system isolation valves, the staff concludes that the proposed TS changes meet containment isolation dependability requirements set forth in NUREG-0737, Item II.E.4.2, and therefore, are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact have been prepared and published (53 FR 29399) in the Federal Register on August 4, 1988. Accordingly, based upon the environmental assessment, the Commission has determined that the issuance of this amendment will not have a significant effect on the quality of the human environment.

4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that:
(1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and
(2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: August 9, 1988