



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. NPF-37,
AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. NPF-66,
AMENDMENT NO. 68 TO FACILITY OPERATING LICENSE NO. NPF-72,
AND AMENDMENT NO. 68 TO FACILITY OPERATING LICENSE NO. NPF-77
COMMONWEALTH EDISON COMPANY
BYRON STATION, UNIT NOS. 1 AND 2
BRAIDWOOD STATION, UNIT NOS. 1 AND 2
DOCKET NOS. STN 50-454, STN 50-455, STN 50-456 AND STN 50-457

1.0 INTRODUCTION

By letter dated May 13, 1993, as supplemented by letters dated August 11 and September 20, 1995, Commonwealth Edison Company (ComEd, the licensee) submitted proposed changes to the Byron and Braidwood Stations' Technical Specifications (TS) for the containment purge ventilation system to allow the simultaneous opening of the 8-inch miniflow purge supply and exhaust valves (mini-purge), under certain conditions, to allow the mini-purge system to be used for other reasons in addition to containment pressure control. These reasons include the reduction of airborne radioactivity in the containment atmosphere and improved respirable air quality of the containment atmosphere prior to personnel entry into the containment. The supplemental letters provided slightly revised wording to the TSs and Bases, as suggested by the NRC staff, on control over when the valves are opened; similar to the wording in the standard improved TSs for Westinghouse plants. The revised wording does not change the objective of the initial application, the reasons for opening the valves or the time the valves may be open and does not change the staff's initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The licensee has proposed to revise TS 3.6.1.7 to delete the limitation of no more than 1,000 hours of mini-purge operation in a calendar year. The prohibition against the concurrent opening of the mini-purge supply and exhaust lines is also proposed to be deleted. The revised TS will specify that "The 8-inch containment purge supply and exhaust isolation valves(s) shall be closed, except when the associated penetration(s) is(are) permitted to be open for PURGING or VENTING operations under administrative control."

The licensee has also proposed to revise TS 4.6.1.7.2 to replace the requirement to determine the number of hours that the mini-purge valves have been open during the calendar year with a requirement to verify the valve positions at least once per 31 days. This TS will ensure that the mini-purge supply and exhaust valves are in the correct position.

The licensee has proposed these TS changes to permit the opening of the mini-purge supply and exhaust lines concurrently, under certain conditions, to allow the mini-purge system to be effectively used for other reasons in addition to containment pressure control. Concurrent opening of the mini-purge supply and exhaust lines will equalize the mass addition and removal from the containment atmosphere. This will allow containment pressure to remain unchanged during mini-purge system operation. Under these conditions, the mini-purge system can be used effectively for other reasons. These other reasons include reduction of airborne activity, respirable air quality considerations for personnel entry, surveillance tests that require the valve(s) to be open, and other safety-related purposes. For the mini-purge system to be effective in performing these other tasks, the supply and exhaust lines must be open concurrently.

The TS Bases were revised within the frame work of the "Marginal to Safety" program and reflect the philosophy employed in the new standard TSs. Requirements are less prescriptive by providing for administrative control of the valves by the licensee. While the licensee has more flexibility in determining the circumstances under which the valves may be opened, an analysis must be completed to assess the safety significance of any planned valve openings. Discussions of the proposed revised TS Bases were held with the licensee and agreement with the licensee was reached on the necessity for the proposed changes. By letter dated September 20, 1995, the licensee formally submitted the TS Bases changes.

The present Byron and Braidwood TS requirements are the same as those in Section 3.6.1.8 of the Westinghouse standard TSs regarding containment ventilation. The proposed TSs and Bases will be similar to surveillance requirement 3.6.3.2 on containment isolation valves in the Westinghouse Improved TSs (NUREG-1431). The present TSs are not conducive to maintaining containment pressure within a narrow range. Currently, every operation of the mini-purge system affects containment pressure due to the restrictions imposed by Specifications 3/4.6.1.7. With only one mini-purge supply or exhaust line open at one time, the mass addition or removal from the containment atmosphere causes a corresponding increase or decrease in the containment pressure. Since containment pressure must be maintained within a narrow range prescribed by Specifications 3/4.6.1.4, these restrictions effectively limit the use of the mini-purge system to containment pressure control.

As stated previously, the licensee is proposing to revise Limiting Condition for Operation (LCO) 3.6.1.7b which now states that the 8-inch containment purge supply and exhaust isolation valve(s) may be open for up to 1,000 hours during a calendar year, provided no more than one line is open at one time.