



Commonwealth Edison  
1400 Opus Place  
Downers Grove, Illinois 60515

February 8, 1991

Dr. Thomas E. Murley, Director  
Office Of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Attn: Document Control Desk

Subject: Byron Station Units 1 and 2  
Braidwood Station Units 1 and 2  
Supplement to the application for Amendment to  
Facility Operating License NPF-37, NPF-66  
NPF-72 and NPF-77  
Appendix A, Technical Specifications  
TAC# 71200, 71201, 71202, 71203  
NRC Docket Nos. 50-454, 50-455, 50-456 and 50-457

Reference: (a) November 6, 1987 S.C. Hunsader letter  
T.E. Murley

Dear Dr. Murley:

In reference (a) Pursuant to 10 CFR 50.90, Commonwealth Edison proposed to amend Appendix A Technical Specifications, of Facility Operating License NPF-37, NPF-66 and NPF-72. The proposed amendment requested changes to Technical Specification Tables 3.3-6 and 4.3-3, to allow the control room ventilation (VC) system to remain in operation, providing there are two (2) radiation monitors operable on the ventilation train that is operating. Braidwood Unit 2 has been licensed since the time the request was made; therefore, these changes apply to Braidwood Station Unit 2, Facility Operating License NPF-77, as well.

The description and summary of the proposed changes is presented in Attachment A. The revised Technical Specification pages are contained in Attachment B.

The proposed changes have been reviewed and approved by both on-site and off-site review in accordance with Commonwealth Edison procedures. Commonwealth Edison has reviewed this proposed amendment in accordance with 10 CFR 50.92(c) and has determined that no significant hazards consideration exists. This evaluation is documented in Attachment C. An Environmental Assessment has been completed and is contained in Attachment D.

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Commonwealth Edison is notifying the State of Illinois of our application for this amendment by transmitting a copy of this letter and its attachments to the designated State Official.

To the best of my knowledge and belief the statements contained herein are true and correct. In some respects, these statements are not based on my personal knowledge but upon information received from other Commonwealth Edison and contractor employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

Please direct any questions you may have concerning this matter to this office.

Very truly yours,

*Allen R. Checca*

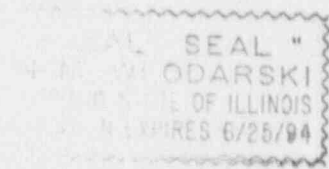
Allen R. Checca  
Nuclear Licensing Administrator

- Attachments (A): Description and Summary
- (B): Proposed Technical Specification Changes
- (C): Evaluation of Significant Hazards Consideration
- (D): Environmental Assessment Statement
- (E): Simplified Drawing-Normal Operation
- (F): Simplified Drawing-Emergency Operation
- (G): Simplified Drawing-Emergency Operating (Alternate)
- (H): UFSAR Section 6.4
- (I): UFSAR Section 6.5.1
- (J): UFSAR Section 9.4.1
- (K): UFSAR Section 11.5

cc: W. Kropp-Resident Inspector, Byron  
 S. Dupont-Resident Inspector, Braidwood  
 A. Hsia-Project Manager (Byron), NRR  
 R. Pulsifer-Project Manager (Braidwood), NRR  
 W. Shafer-Branch Chief, Region III  
 Office of Nuclear Facility Safety-IDNS

State of IL, County of Cook  
 Signed before me on this 11 day  
 of February 19 91 by \_\_\_\_\_

Notary Public Lynna M. Wlodarski



## ATTACHMENT A

### TECHNICAL SPECIFICATION CHANGE REQUEST

#### PROPOSED CHANGES

The following is a brief description of the changes proposed to the Byron and Braidwood, Units 1 and 2, Technical Specifications.

Tables 3.3-6 and 4.3-3, pages 3/4 3-40 and 3-42 respectively, are being revised to designate the radiation monitors assigned to each train of control room ventilation (VC).

Action statement 27, on page 3/4 3-41, is being revised to allow the option of operating a fully functional train of VC when one (1) or more radiation monitors in the opposite VC train are inoperable. With one (1) or more monitors inoperable in each train, the current requirement to place the system in its ESF configuration will be retained.

#### DESCRIPTION OF CURRENT REQUIREMENT

The VC system consists of two independent trains, each possessing 100% of the required airflow and filter capacity to ensure that the area remains habitable under postulated accident conditions. Each train of VC is equipped with a physically diverse outside air intake and a turbine building intake. Each redundant train is located in a separate room. The outside air intake is the normal source of makeup air.

Each outside air intake is equipped with two radiation monitors. These monitors provide an interlock function which, upon receipt of a high radiation signal on either monitor or an operate failure signal on both monitors, will automatically align the makeup air filter unit, various dampers and the recirculation charcoal adsorber to the emergency mode. The system also automatically realigns to the emergency mode on a safety injection (SI) signal.

The Technical Specification currently requires that all four radiation monitors, two in each outside air intake, be operable. In the event that a monitor becomes inoperable, whichever train of VC is in operation is required to be aligned to its emergency configuration.

Attached are UFSAR excerpts which provide a detailed description of the Control Room Ventilation System and the Process Radiation Monitoring System. In addition, simplified drawings are included which depict the system configuration in its normal and emergency lineups. The system is manually aligned to the alternate emergency mode if the turbine building atmosphere is unsuitable.

#### BASES FOR THE CURRENT REQUIREMENT

The current Technical Specification provides assurance that the control room operators can remain inside all spaces served by the VC system for Units 1 and 2 during all normal station conditions in compliance with Criterion 19 of 10 CFR 50, Appendix A. The control room is a common facility which serves both Units 1 and 2. Only one VC train is normally in operation with a full capacity redundant train in standby. Two radiation monitors are provided in each VC train air intake to detect high radiation. The VC air intakes are at opposite ends of the auxiliary building. The physical location of the intake provides the option of drawing makeup air for the control room from the less contaminated intake during and after a LOCA. It is possible one of the makeup air intakes may not have any contaminants while the other may have contaminants. The current specification requires a level of redundancy which ensures that the realignment of the system will be accomplished regardless of any single failure.

The accident of interest, as described in the UFSAR 6.4.4.1, page 6.4-11, is the large break LOCA, and it is assumed to be bounding. The radiation monitors associated with the outside air intakes function to align the makeup filter unit and the recirculation charcoal adsorber in order to reduce the radiation levels in the control room to an acceptable level during accident conditions.

### DESCRIPTION OF THE NEED FOR AMENDING THE REQUIREMENT

The current requirement is overly restrictive in that it requires a VC train to be placed in its emergency configuration upon the failure of a single radiation monitor. With one inoperable radiation monitor, a redundant full capacity VC train with a full complement of radiation monitors is still available. Sufficient redundancy is available that a single failure can still be accommodated with a single monitor inoperable.

The current requirement results in charcoal filters being placed on line for the duration of the monitor inoperability. This results in needless depletion of the charcoal capability and subsequent expenditures with no resulting safety benefit.

### BASES FOR THE AMENDED REQUIREMENT

The amended requirement will allow for the operation of a VC train having its full complement of radiation monitors. The operating train of VC will be capable of realigning to the emergency mode on an SI signal, high radiation signal from either of its two (2) operable monitors or an operate failure signal from both of its operable monitors. When any of these initiation signals exists the operating train of VC aligns to the emergency mode and continues to run. The standby train of VC aligns to the emergency mode on an SI signal or from inputs from its respective radiation monitors, however, the fans in the standby train do not automatically start. These functions are not being changed; therefore, if the operating train should fail, manual intervention would be required to place the idle VC train in operation.

The VC system realigns to the emergency mode on an SI signal without the benefit of any input from the radiation monitors. This reduces the accidents of interest to those that have the potential for a release of radioactivity without causing an SI signal. However, the proposed change only permits operation of a VC train in the normal mode if both its intake radiation monitors are operable; therefore, those accidents which result in a release of radioactivity but do not cause an SI signal are captured by the original assumptions in the accident analysis. The proposed change does not render the system vulnerable to any single failure which would preclude the accomplishment of the system's design safety function.

There is significant economic benefit to be gained with the proposed change. Each filter has a limited life. Frequent operation of the charcoal filter banks during normal operations degrades the charcoal with no added safety benefit. Depletion of the charcoal would require shutdown of both units if it could not be replaced and tested within seven (7) days. The cost of replacing the charcoal in one VC train is conservatively estimated to be \$40,000.

Although no direct safety benefit can be achieved, there is no reduction in the level of protection afforded the control room inhabitants.

### SCHEDULE REQUIREMENTS

No specific schedular restraints have been identified.