Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

August 31, 1993

Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Desk

Subject: Application for Amendment to Facility Operating Licenses-Control Room Ventilation System Chiller:

Byron Station Units 1 and 2
NPF-37/66; NRC Docket Nos. 50-454/455

Braidwood Station Units 1 and 2
NPF-72/77; NRC Docket Nos. 50-456/457

Reference: NUREG 1431, Standard Technical Specifications for Westinghouse Plants

Dear Dr. Murley:

Pursuant to 10 CFR50.90, Commonwealth Edison Company (CECo) proposes to amend Section 3.7.6 of Technical Specifications of Facility Operating Licenses NPF-37,NPF-66, NPF-72, and NPF-77. The proposed amendment request a revision to the Limiting Condition for Operation for the Control Room Ventilation System.

The amendment request is subdivided as follows:

Attachment A: Description and Safety Analysis of Proposed Changes

Attachment B: Proposed Revision to the Technical Specifications for Byron and Braidwood Stations

Attachment C: Evaluation of Significant Hazards Considerations

Attachment D: Environmental Assessment

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The proposed changes have been reviewed and approved by the On-site and Off-site Review Committees in accordance with CECo procedures. CECo has reviewed this proposed amendment in accordance with 10 CFR 50.92(c) and has determined that no significant hazards consideration exists.

CECo is notifying the State of Illinois of our application for these amendments by transmitting a copy of this letter and the associated attachments to the designated State Official.

To the best of my knowledge and belief, the statements contained in this document are true and correct. In some respects these statements are not based on my personal knowledge, but on information furnished by other CECo employees, contractor employees, and/or consultants. Such information has been reviewed in accordance with company practice, and I believe it to be reliable.

Please address any further comments or questions regarding this matter to this office.

State of Ill. County of Dupage
Signed before me this 4th day
of August 19 92
Notary Public

" OFFICIAL SEAL "
SANDRA C. LARA
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 6/26/94

Sincerely,

Denise M. Saccomando
Nuclear Licensing Administrator

Attachments

cc: J. B. Hickman, Byron Project Manager - NRR
R. R. Assa, Braidwood Project Manager - NRR
H. Peterson, Senior Resident Inspector - Byron
S. G. Dupont, Senior Resident Inspector - Braidwood
B. Clayton, Branch Chief - Region III
Office of Nuclear Facility Safety - IDNS

ATTACHMENT A

Description and Safety of Proposed Changes

Description of the Proposed Changes

The proposed amendment would add an ACTION that would allow 30 days to restore one train of VC that is inoperable only due to an inoperable chiller unit. If a train of VC becomes inoperable for other reasons, the AOT will remain seven days.

The change would also add an option to Action a in Modes 5 and 6 to allow cessation of CORE ALTERATIONS, positive reactivity additions, and movement of irradiated fuel instead of placing the operable train of VC in makeup mode. Also, the change adds a restriction to Action b to suspend movement of irradiated fuel if both trains of VC are inoperable in Modes 5 and 6. In addition, for consistency with the wording in Action a, the word "changes" was replaced by the word "additions."

Description and Bases of the Current Requirement

Technical Specification 3.7.6 requires that two independent trains of Control Room Ventilation (VC) be operable in all modes. During operation in Modes 1 through 4, when one train of VC is inoperable, the Action statement allows seven days to restore the train to operable status before requiring that both nuclear units be in Hot Standby in six hours and Cold Shutdown within 30 hours.

If one train of VC becomes inoperable in Modes 5 or 6, the Action statement allows seven days to restore the inoperable train to operable status prior to requiring that the remaining operable train be placed in makeup mode.

The operability of VC ensures that the ambient air temperature does not exceed the maximum allowable air temperature for equipment and instrumentation in the control room. In addition, VC must be capable of maintaining the control room habitable for operating personnel during and following all credible accident scenarios. Operation of the VC system must limit the radiation exposure to personnel in the control room to less than 5 rem whole body in accordance with 10CFR50 Appendix A, General Design Criteria 19. The system is designed such that either of two independent one-hundred percent capacity trains can provide these functions.

Description and Bases of the Requested Revision

The requested amendment retains the intent and function of the VC system. No changes are being made to the design or to the assumptions in the design basis analysis. The proposed revision to the Action statement assures that the inoperable VC chiller unit will be restored within 30 days. The 30 day completion time is based on the low probability of an event requiring control room isolation, the consideration that the remaining train can provide the required protection, and that alternate nonsafety related cooling means are available.

The preferred means of alternate cooling involves taking cool air from outside when available and using portable fans. Another alternative would be to cross-tie the Service Building Chiller to the VC system by means of temporary connections. This second option requires several hours of setup time and would be used if cool outside air were not available.

Although shutdown is required by Technical Specifications, operating with only one chiller is not a functionally degraded condition. In fact, the VC system is designed such that each chiller unit is capable of handling all normal and emergency heat loads. Redundant trains of VC, including chiller units, are required to meet the single failure criteria.

The requested amendment adds an alternative Action for Modes 5 and 6 to immediately suspend activities that present a potential for releasing radioactivity that might require isolation of the control room. This places the plant in a condition that minimizes risk. The existing Action requires that the remaining operable VC train be placed in makeup mode of operation. This Action is intended to demonstrate that the remaining train is indeed operable, that no failures that would prevent automatic actuation will occur, and that active failures would be readily detected. The proposed Action does not provide additional assurance that the remaining train of VC is operable; however, it does minimize the probability of the occurrence of an event that would require operation of the VC system. This Action is also consistent with the required Action for the more severe condition of having both trains of VC inoperable. Therefore, the proposed alternative Action is considered to be equally remediating as the existing Action.

Suspending movement of irradiated fuel was added to Action b for Modes 5 and 6 primarily for consistency with the proposed alternative for Action a. This change introduces an additional restriction which helps minimize the probability of an event that would require operation of the VC system. Therefore, this change is conservative in nature. In addition, for consistency with the wording in Action a, the word "changes" was replaced by the word "additions." This change is purely editorial.

The proposed changes are consistent with the revised Standard Technical Specifications for Westinghouse Plants (STS) (NUREG 1431, Revision 0). The STS provide a separate specification for control room chillers that allows one train to be inoperable for 30 days (Specification 3.7.13). The STS also includes Actions in Modes 5 and 6 that are similar to the changes proposed in this request.

In addition, removal of an obsolete footnote (for Braidwood Technical Specifications only) is requested. The footnote states that limiting Condition for Operation 3.7.6 is not applicable prior to initial criticality on Cycle 1. However, this Limiting Condition for Operation 3.7.6 has been applicable since May 1987, and therefore, this footnote is no longer required.

Impact of the Proposed Change

Technical Specifications require that both trains of VC be operable at all times. The Action statement allows one train of VC to be inoperable for seven days before operating units must be shut down. Some types of maintenance involving the VC chiller unit can take longer than seven days. In particular, activities such as retubing or motor disassembly and rebuild of a VC chiller unit can take longer than currently allowed and could take as long as four weeks.

The most significant potential for delay is parts availability. Although CECo Stores maintains replacements for most chiller components, certain parts are not kept in stock due to cost or because they are expected to remain serviceable for the life of the plant. Failure of such a component, e.g. tube sheets or tube supports, could considerably extend the repair time. Depending on availability of these parts, procurement alone could take several weeks.

Technical Specifications only allow one train of VC to be inoperable for longer than 7 days when both units are in Mode 5 or 6. However, for a number of reasons, it is not practical to schedule both units to be shutdown at the same time. The most significant of these reasons is the impact on electrical distribution system planning. Having both units off-line can result in a shortage of power and/or local grid voltage problems. Another concern for a dual unit outage is the increased manpower requirements during refueling and maintenance outages. The additional manpower for a maintenance outage on one unit would adversely affect the schedule for the maintenance or refueling outage on the other unit. Also, the required Action would restrict fuel movement and other refueling activities. The result would be extended outages for both units.

In addition, malfunctions of a VC chiller unit may occur during periods when no plant shutdowns are scheduled. Because of the relatively short Allowed Outage Time (AOT), a failure of a single chiller could result in the unplanned shutdown of two units. A dual unit shutdown such as this could be avoided if adequate time was available to make all necessary repairs and to allow increased preventative maintenance.

Up to this point in time, CECo has been able to perform the necessary chiller maintenance within the AOT. However, during several maintenance outages it has been difficult to complete the scheduled work within the AOT. During one maintenance outage, a Temporary Waiver of Compliance (TWOC) was initiated internally when it appeared that a chiller unit would not be returned to service within seven days. Fortunately, the chiller was repaired within the AOT and the TWOC was not needed. The proposed changes would greatly reduce the potential need for a TWOC in the future.

Several circumstances in the future may require a chiller unit to be out of service for longer than seven days. For example, it is expected that at some time during a chiller's service life, a complete overhaul will be required. This activity will take considerably longer than seven days. Also, modifications to the chiller units are expected to be required to meet new regulations concerning freon usage. These modifications will most likely require longer than seven days to complete.

In addition to the length of the AOT, several other changes are requested. Currently, with one VC train inoperable in Modes 5 or 6, the Action requires that the remaining operable train be run in makeup mode. Extended operation in makeup mode results in a reduced expected service life for the charcoal filter units. The proposed change would add an alternative Action for Modes 5 and 6 tc immediately suspend activities that present a potential for releasing radioactivity. This Action reduces the probability of events that might require isolation of the control room. This Action provides an alternative to placing the VC system in makeup mode, thereby extending the life of the charcoal filter units.

The remaining change to Action b is primarily administrative and is requested for consistency with the proposed alternative added to Action a.

Schedule Requirements

There are currently no specific schedular requirements for the requested changes.

Identification and Discussion of Any Irreversible Consequences

No irreversible consequences will result from the proposed changes.