



Commonwealth Edison  
1400 Opus Place  
Downers Grove, Illinois 60515

December 22, 1992

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  
Application for Amendment to Facility  
Operating License NPF-37, NPF-66, NPF-72, and NPF-77  
NRC Docket Nos. 50-454, 455, 456 and 457

Reference: TAC # M73975, M73976, M81167, M81168

Dear Dr. Murley:

Pursuant to 10 CFR 50.90, Commonwealth Edison (CECo) proposes to amend Appendix A, Technical Specification of Facility Operating License NPF-37, NPF-66, NPF-72 and NPF-77. The proposed amendment revises specifications 3/4.7.4, 3/4.7.4.1, and 3/4.7.4.2 for Byron and 3/4.7.4 for Braidwood. Also for Braidwood new specifications 3/4.7.4.1 and 3/4.7.4.2 are proposed. The purpose of the revision is to address the concerns of Generic Letter 91-13 concerning Essential Service Water System failures at multi-unit sites.

Detailed descriptions of the proposed changes are presented in Attachments A and E. The revised Technical Specification pages are contained in Attachment B and F for Byron and Braidwood, respectively.

The proposed change has been reviewed and approved by both on-site and off-site review 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. These evaluations are documented in Attachments C and G. Environmental Assessments have been completed and are contained in Attachments D and H.

ZNLD/2382/1

9212300228 921222  
PDR ADDCK 05000454  
P PDR

Handwritten: A001

December 22, 1992

CECo is notifying the State of Illinois 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.

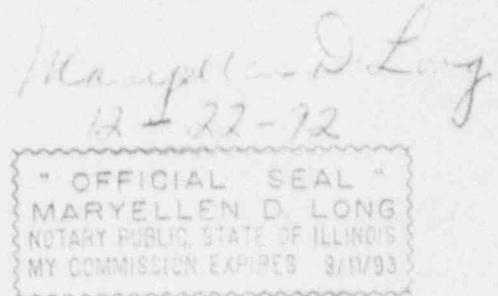
Please direct any questions regarding this matter to this office.

Respectfully,

*Terrence W. Simpkin*  
Terrence W. Simpkin  
Nuclear Licensing Administrator

Attachment A: Byron Description of Proposed Changes  
Attachment B: Byron Marked Up Pages  
Attachment C: Byron No Significant Hazards Consideration  
Attachment D: Byron Environmental Assessment  
Attachment E: Braidwood Description of Proposed Changes  
Attachment F: Braidwood Marked Up Pages  
Attachment G: Braidwood No Significant Hazards Consideration  
Attachment H: Braidwood Environmental Assessment

cc: R. Elliott, Project Manager - NRR  
J. Hickman, Project Manager - NRR  
S. DuPont, Resident Inspector - Braidwood  
W. Kropp, Resident Inspector - Byron  
Document Control Desk - NRR  
Region III Office  
Office of Nuclear Facility Safety - IDNS



## ATTACHMENT A

### DESCRIPTION AND IMPACT OF PROPOSED CHANGES

#### Background

In response to Generic Letter 91-13, Byron reviewed the recommended Technical Specification and procedure improvements. We concluded that the issues in the Letter were applicable to Byron and that we had previously adopted appropriate Technical Specifications to address the concern of Essential Service Water system (SX) failures. In Commonwealth Edison's response to the Generic Letter, dated March 16, 1992, Byron committed to make refinements to the existing specifications. Since there was no new information to support adopting the Specifications proposed in the Letter, we chose to keep the specifications that the NRC had already approved to address SX failures.

#### Summary of the Proposed Changes

A proposed change to 3.7.4 deletes the two components of an Essential Service Water system. Surveillance requirement 4.7.4.c is deleted (relocated). A proposed change to 3.7.4.1 clarifies when the specification is applicable. The proposed change to surveillance 4.7.4.1 does not specifically require that the Essential Service Water (SX) pump be crosstied. The proposed surveillance also states that a flowpath is established or capable of being established; the specific valves required are deleted. An operator must be capable of establishing this flow path and starting the available SX pump from the Main Control Room. Specification 3/4.7.4.2 is reworded for clarity. A discussion of the SX system crosstie is added to the Bases.

The marked up Technical Specification pages indicating the proposed changes are provided in Attachment B. A discussion of each change follows.

#### Detailed Description of the Proposed Changes

##### 1. Proposed changes to 3/4.7.4

###### Description and Bases of the Current Requirement

LCO 3.7.4 describes the independent Essential Service Water (SX) systems as having a loop and cooling tower. Surveillance requirement 4.7.4.c requires that the cooling tower fans be verified operable and that the cooling tower fill be inspected. These requirements ensure that the cooling tower operates as designed during an accident.

###### Description and Bases of the Requested Revision

Byron previously proposed changes to Technical Specification 3/4.7.5 and the associated Bases to incorporate the results of the Ultimate Heat Sink (UHS) studies conducted for the Byron SX system. The proposed changes to 3/4.7.4 and 3/4.7.5 recognize that the cooling towers are part of the UHS, which is a shared system. The requirements for operability of the

UHS are provided in Specification 3/4.7.5. Specification 3/4.7.4 currently includes requirements for the cooling towers and fans. The requirements of Surveillance 4.7.4.c were duplicated in the proposed change to 4.7.5 because they are more appropriate in the UHS discussion. The redundant surveillance (4.7.4.c) is being deleted by this proposal.

#### Impact of the Proposed Change

There are no changes to the requirements except for the numbering of the surveillance requirements. It is more appropriate to include the cooling tower fan operability requirements and cooling tower basin inspection requirements in the UHS Specification because they are not part of an independent system, as previously described.

The proposed UHS changes move the requirements of Surveillance 4.7.4.c into 4.7.5.d and 4.7.5.j. Therefore, to maintain the level of control, approval of this (SX) amendment request is contingent on approval of the UHS amendment request. There is no impact on the safety analyses as long as the requirements appear in either section.

## 2. Applicability of 3.7.4.1

#### Description and Bases of the Current Requirement

Specification 3.7.4.1 is applicable when Unit 2 (Unit 1) is in Modes 5 and 6, and Unit 1 (Unit 2) is in Modes 1, 2, 3, and 4. This ensures that an SX pump from a shutdown unit is available to support the operating unit.

#### Description and Bases of the Requested Revision

The proposed change reverses the order of the requirements to emphasize that the specification is to support the operating unit. The proposed change adds that the specification is applicable when there is no fuel in the reactor vessel. This is not a defined mode in Table 1.2. The proposed bases change states that the availability of an SX pump in the shut down unit ensures the availability of sufficient redundant cooling capacity for the operating unit. The shut down condition includes those times when there is no fuel in the reactor vessel.

#### Impact of the Proposed Change

The proposed change is more restrictive than the existing requirement because the SX pump must be available under an additional condition. It is important to include the condition when the shut down unit has no fuel in the reactor vessel because the specification is written for a shut down unit to support an operating unit. It makes no difference whether there is fuel in the shut down unit's reactor. Byron recognizes this and performs the surveillances when the shut down unit is in Mode 5 or 6, or when the unit is defueled. The enhanced wording is consistent with Table 1.2 and ensures that the shut down unit's SX pump will be available to support the operating unit.

### 3. Proposed Changes to Surveillance 4.7.4.1

#### Description and Bases of the Current Requirement

Surveillance 4.7.4.1 demonstrates availability of the SX pumps by starting the pumps and verifying crosstie capability is available to the opposite unit's system. The surveillance lists specific valves that must be open or capable of being opened to establish a flowpath. The surveillance lists which bus must be energized to supply power to the available SX pump. The surveillances ensure that an SX pump can supply water to the opposite unit.

#### Description and Bases of the Requested Revision

The purpose of proposed Surveillance 4.7.4.1 is to demonstrate that the SX pump is available to support operation of the opposite unit. The reference to the crosstie is deleted since it is addressed specifically in Specification 3/4.7.4.2.

The specific list of valves to be open or capable of being opened is replaced by a requirement to have, or be able to establish, a flowpath. It is still necessary to be able to establish this flowpath from the Main Control Room. The wording allows for operator flexibility in establishing the flowpath.

A new surveillance ensures that the available SX pump can be manually started from the Main Control Room. This requires several things, including energizing the bus, racking in the breaker, and having control power available. The new requirement, therefore, provides additional assurance that the SX pump will be able to perform its safety function because the surveillance is more inclusive.

A proposed editorial change replaces "day" with "24 hours" to be consistent with Table 1.1 and other specifications.

#### Impact of the Proposed Change

The changes do not affect the system's ability to perform its safety function. The crosstie valves, 1SX005 and 2SX005, are already covered in 3/4.7.4.2. The proposed changes to Surveillance 4.7.4.1.a allow alternate valves to be used in establishing a flowpath. This does not affect any accident analyses because the flowpath provided in the current surveillance is not specifically listed. As long as a flowpath exists, the analyses remain bounding.

An additional surveillance that verifies that the SX pump can be started from the Main Control Room provides additional assurance that the pump will function as designed. Merely having the bus energized does not guarantee that the pump can be started. A flowpath, control power and properly positioned breaker are also prerequisites to using the pump to supply cooling water. Requiring that a pump be capable of being started from the Main Control Room includes all actions necessary to provide cooling water; therefore the pump would be capable of performing its safety function.

4. Editorial Changes to 3/4.7.4.2

Description and Bases of the Current Requirement

Specification 3/4.7.4.2 is applicable in Modes 1, 2, 3, and 4. The crosstie serves as a flowpath between Units 1 and 2. The crosstie valves, 1SX005 and 2SX005, are cycled or verified locked open with power removed to ensure that flow from one unit to the opposite unit can be established.

Description and Bases of the Requested Revision

The proposed change adds that the LCO applies with any unit in Modes 1, 2, 3, or 4, which is how Byron already performs the surveillance. The word change is for clarity. The LCO has also been clarified requiring the valve to be open or capable of being open from the Main Control Room to provide an Essential Service Water flowpath between Unit 1 and Unit 2. This wording provides a more accurate description of the purpose of the crosstie valves.

The surveillance is clarified to state explicitly that each crosstie valve shall be cycled or verified locked open with power removed. An editorial change is proposed to replace "verify" to "verifying the" to improve readability. The requirements themselves are not changed. The requirements ensure that the SX crosstie remains capable of providing flow from one unit to the other.

Impact of the Proposed Change

There are no changes to the requirements. These changes are editorial in nature and serve to improve readability. The proposed wording changes more accurately reflect how this Technical Specification is applied. Since there are no changes to the actions, there is no impact on the safety analyses involving the crosstie. In Commonwealth Edison's request for the original Technical Specification, we stated that the crosstie would be required whenever either or both units are in Modes 1, 2, 3, or 4. The SER issued with the amendment, dated November 23, 1988, also noted this condition. The proposed wording change preserves this meaning.

5. Addition to Bases for 3/4.7.4

Description and Bases of the Current Requirement

The Bases for 3/4.7.4 describes the safety function for the Essential Service Water (SX) system.

Description and Bases of the Requested Revision

The proposed change adds a sentence describing the SX system crosstie for redundant cooling capacity for two unit sites. The sentence based on the Bases proposed in Generic Letter 91-13.

Impact of the Proposed Change

The proposed Bases describe the SX crosstie, which the Generic Letter identifies as an important feature of Byron's design. To recognize the significance of the crosstie for

providing redundant cooling capacity, the Bases are amended. There are no changes to plant operation resulting from the Bases change. Specification 3/4.7.4.2 provides the requirements for the crosstie.

#### Schedule Requirements

There are no specific schedule requirements for the requested changes. However, deleting Surveillance 4.7.4.c., as discussed in item 1 above, is contingent upon approval of our proposed amendment to Technical Specification 3/4.7.5. Therefore, to ensure that controls are in place to verify cooling tower fan operability and that there is no abnormal breakage or degradation of the cooling tower fill material, this request should not be issued prior to issuing revisions to Specification 3/4.7.5.

#### Identification and discussion of any irreversible consequences

The proposed changes are mostly editorial wording changes that support the current interpretations of the specifications. The additional requirement enhances the availability of the SX pump to operate as designed. No irreversible consequences will result from the proposed changes.

#### Conclusion

Based upon the information presented above, it can be concluded that the proposed changes do not constitute an unreviewed safety question.