



Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

April 26, 1994

Mr. William Russell, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Desk

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

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

Reference: D. Saccomando letter to Dr. Murley dated
January 5, 1994, transmitting amendment request for
Main Control Room Ventilation System

Dear Mr. Russell:

Reference 2 transmitted Commonwealth Edison Company's (CECo) request for amending the Braidwood Technical Specification to delete the surveillance which verifies that the Main Control Room ventilation system can be manually isolated in response to a report of a chlorine accident in the vicinity of Braidwood. In addition to amending the Technical Specifications, reference 2 also requested the Nuclear Regulatory Commission Staff to reconsider the additional SER commitment made by CECo to demonstrate control room integrity on a periodic basis.

Enclosed are revisions to Attachments A, C and D which supersedes those transmitted with the reference letter. Revisions to these sections were editorial in nature.

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

Sincerely,

Denise M. Saccomando
Nuclear Licensing Administrator

Attachments

cc:

R. R. Assa, Braidwood Project Manager - NRR
S. G. Dupont, Senior Resident Inspector - Braidwood
J. B. Martin, Regional III Administrator
Office of Nuclear Facility Safety - IDNS

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ATTACHMENT A

DESCRIPTION AND SAFETY ANALYSIS OF PROPOSED CHANGES TO APPENDIX A TECHNICAL SPECIFICATIONS OF FACILITY OPERATING LICENSES NPF-72 and NPF-77

A. DESCRIPTION OF THE PROPOSED CHANGE

Commonwealth Edison Company (CECo) proposes to delete Technical Specification Surveillance Requirement (TSSR) 4.7.6.e.6, which verifies that the Main Control Room ventilation system can be manually isolated and placed in the recirculation mode of operation in response to a report of a chlorine accident in the vicinity of Braidwood.

B. DESCRIPTION AND BASES OF THE CURRENT REQUIREMENT

The current requirement to verify that the Braidwood Main Control Room ventilation system can be manually isolated and placed in recirculation at least once every 18 months is based upon the potential for an accidental release of chlorine gas from sources external to the station. CECo determined that chlorine was transported on the Norfolk and Western railroad line near Braidwood. Analysis showed that the control room concentration would be near the Regulatory Guide 1.95, "Protection of Nuclear Power Plant Operators against an Accidental Chlorine Release", Revision 1, January 1977 (RG 1.95) limit of 15 parts per million (ppm), should an accident of this nature occur. In response to notification of a chlorine accident by representatives of Will County, Illinois, the control room operators would isolate the control room ventilation system from outside air makeup.

C. DESCRIPTION AND BASES OF THE REQUESTED REVISION

TSSR 4.7.6.e.6, which verifies that the control room can be manually isolated and placed in the recirculation mode of operation, will be deleted.

In 1986, a survey was conducted which revealed that chlorine was transported on the Norfolk and Western railroad line near Braidwood. The railroad shipment size analyzed was 83 tons. The analysis showed that the control room concentration would be near the RG 1.95 limit of 15 ppm. A probability analysis was also done which concluded that the probability of this occurrence was remote. Braidwood removed the chlorine detectors and committed to realign manual isolation capabilities and perform a periodic in-leakage test. Since this survey, the railroad line has been removed.

CECo has conducted a new survey and analysis for chlorine sources. This survey established, for a given size chlorine source, a distance beyond which a spillage quantity of the specified size would not cause the control room concentration of chlorine to exceed the limits of Regulatory Guide 1.78, "Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release" Revision 0, June 1974 (RG 1.78). For a one ton source, this distance was 4900 feet. The new evaluation established that there are no stationary chlorine release sources that could pose a threat to control room habitability and no railroad transports chlorine within a ten mile radius of Braidwood. This survey also determined that the largest shipments by truck were 1 ton, and that there were two possible routes; Illinois (IL) 53 or IL 129, that pass within 4900 feet of the station. Making the very conservative assumption that all 1 ton chlorine shipments travel via IL 53 or IL 129, the occurrence of an accidental release was calculated to be only 2×10^{-6} events per year. The evaluation determined that the realistic probability of a truck shipment of 1 ton using either IL 53 or IL 129 is practically zero. The other more probable route for truck shipments is Interstate 55 which is 1.14 miles from the control room intake and thus does not pose a hazard.

Therefore, the evaluation shows that the hazard associated with an accidental chlorine release is within the requirements of NUREG-0800 Standard Review Plan (SRP), July 1981 Section 2.2.3 which states in part: "Accordingly, the expected rate of occurrence of potential exposures in excess of the Title 10 Code of Federal Regulations Part 100 guidelines of approximately 10^{-6} per year is acceptable if, when combined with reasonable qualitative arguments, the realistic probability can be shown to be lower."

D. IMPACT OF THE PROPOSED CHANGE

Deletion of the requirement to manually isolate the control room ventilation system every 18 months will have no impact on the operation of the control room ventilation system. The remaining requirements of TSSR 4.7.6 will continue to demonstrate control ventilation system operability to meet Limiting Condition For Operation for Technical Specification 3.7.6.

E. SCHEDULE REQUIREMENTS

There are no scheduling requirements associated with this amendment request.

ATTACHMENT C

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATIONS FOR PROPOSED CHANGES TO APPENDIX A TECHNICAL SPECIFICATIONS OF FACILITY OPERATING LICENSES NPF-72 AND NPF-77

Commonwealth Edison Company (CECo) has evaluated this proposed amendment and determined that it involves no significant hazards considerations. According to Title 10 Code of Federal Regulations Part 50 Paragraph 92 Subparagraph c (10 CFR 50.92(c)), a proposed amendment to an operating license involves no significant hazards considerations if operation of the facility in accordance with the proposed amendment would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or
2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or
3. Involve a significant reduction in a margin of safety.

This proposed change will delete Technical Specification Surveillance Requirement (TSSR) 4.7.6.e.6; the requirement to test control room ventilation manual isolation capability every 18 months based on the potential for a rail-borne chlorine accident near Braidwood.

A. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Elimination of the requirement to test control room ventilation manual isolation capability does not involve a significant increase in the probability or consequences of an accident previously evaluated. This requirement had been previously necessary because of the potential of a rail borne chlorine accident. Since that time of the imposed surveillance, the Norfolk and Western railroad line which transported chlorine near Braidwood has been removed. In addition, a study has concluded that there are no potential stationary chlorine release sources within a 10 mile radius that could pose a threat to control room habitability. The evaluation concluded that the realistic probability of a transported source of chlorine passing within the critical distance of 4900 feet of Braidwood Station is practically zero. Even using the very conservative assumption that all transported sources of chlorine use IL 53 or IL 129, the occurrence of an accidental release from these shipments was calculated to be only 2×10^{-6} events per year. Thus the probability of a chlorine release is within the requirements of NUREG-0800, Standard Review Plan (SRP), July 1981 Section 2.2.3, and removal of the requirement to conduct Control Room ventilation isolation tests every 18 months does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- B The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.**

The probability of a chlorine accident that could impact the control room environment has been shown to be within the requirements of SRP Section 2.2.3. Control room isolation capability testing was performed only to address a chlorine accident. Therefore, removal of this requirement does not create the possibility of a new or different kind of accident from any accident previously evaluated.

- C. The proposed change does not involve a significant reduction in a margin of safety.**

Control room ventilation isolation testing was performed as a result of the possibility of a chlorine accident in the vicinity of Braidwood. As demonstrated by a recent study, the probability of this event occurring has been reduced to practically zero within the acceptable limits of SRP Section 2.2.3 for transportable chlorine. Survey of the ten mile radius around Braidwood found no stationary chlorine sources with large enough quantities to pose a hazard to control room personnel. Thus, the removal of the requirement to perform Control Room ventilation isolation tests every 18 months does not involve a significant reduction in a margin of safety.

Based upon the above evaluation, CECo has concluded that this change involves no significant hazards considerations.

ATTACHMENT D

ENVIRONMENTAL ASSESSMENT FOR PROPOSED CHANGES TO APPENDIX A TECHNICAL SPECIFICATIONS OF FACILITY OPERATING LICENSES NPF-72 AND NPF-77

Commonwealth Edison has evaluated the proposed amendment against the criteria for the identification of licensing and regulatory actions requiring environmental assessment in accordance with Title 10, Code of Federal Regulations, Part 51, Paragraph 21 (10 CFR 51.21). It has been determined that the proposed change meets the criteria for a categorical exclusion as provided for under 10 CFR 51.22(c)(9). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR 50, and that the change requested involves changes to surveillance requirements, and involves no significant hazards considerations as discussed in Attachment C. There is no change in the types, or significant increase in the amount, of any effluent that may be released offsite. There is no significant increase in individual or cumulative occupational radiation exposure.