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Docket Nos. 50-456 and 50-457

Mr. L. D. Butterfield, Jr.
Nuclear Licensing Manager
Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

Dear Mr. Butterfield:

SUBJECT: ISSUANCE OF SUPPLEMENT NO. 5 TO NUREG-1002-BRAIDWOOD STATION, UNITS 1 AND 2

The U. S. Nuclear Regulatory Commission has issued Supplement No. 5 to the Braidwood Station, Units 1 and 2 Safety Evaluation Report related to operation of the facility.

Twenty (20) copies of this report (NUREG-1002 Supplement No. 5) are enclosed for your use. Concurrent with this letter, copies of this report are being placed in the Commission's Public Document Room located at 1717 H Street, N.W., Washington, D.C. 20555 and in the local public document room established for the Braidwood Station.

Sincerely,

/s/

Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosure:
NUREG-1002 Supplement 5 (20 copies)

cc: See next page

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NUREG-1002
Supplement No. 5

Safety Evaluation Report
related to the operation of Braidwood Station, Units 1 and 2

Docket Nos. STN 50-456 and STN 50-457

Commonwealth Edison Company

U.S. Nuclear Regulatory Commission

Office of Nuclear Reactor Regulation

December 1987

NOTICE

Availability of Reference Materials Cited in NRC Publications

Most documents cited in NRC publications will be available from one of the following sources:

1. The NRC Public Document Room, 1717 H Street, N.W.
Washington, DC 20555

2. The Superintendent of Documents, U.S. Government Printing Office, Post Office Box 37082, Washington, DC 20013-7082

3. The National Technical Information Service, Springfield, VA 22161

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Referenced documents available for inspection and copying for a fee from the NRC Public Document Room include NRC correspondence and internal NRC memoranda; NRC Office of Inspection and Enforcement bulletins, circulars, information notices, inspection and investigation notices; Licensee Event Reports; vendor reports and correspondence; Commission papers; and applicant and licensee documents and correspondence.

The following documents in the NUREG series are available for purchase from the GPO Sales Program: formal NRC staff and contractor reports, NRC-sponsored conference proceedings, and NRC booklets and brochures. Also available are Regulatory Guides, NRC regulations in the *Code of Federal Regulations*, and *Nuclear Regulatory Commission Issuances*.

Documents available from the National Technical Information Service include NUREG series reports and technical reports prepared by other federal agencies and reports prepared by the Atomic Energy Commission, forerunner agency to the Nuclear Regulatory Commission.

Documents available from public and special technical libraries include all open literature items, such as books, journal and periodical articles, and transactions. *Federal Register* notices, federal and state legislation, and congressional reports can usually be obtained from these libraries.

Documents such as theses, dissertations, foreign reports and translations, and non-NRC conference proceedings are available for purchase from the organization sponsoring the publication cited.

Single copies of NRC draft reports are available free, to the extent of supply, upon written request to the Division of Information Support Services, Distribution Section, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

Copies of industry codes and standards used in a substantive manner in the NRC regulatory process are maintained at the NRC Library, 7920 Norfolk Avenue, Bethesda, Maryland, and are available there for reference use by the public. Codes and standards are usually copyrighted and may be purchased from the originating organization or, if they are American National Standards, from the American National Standards Institute, 1430 Broadway, New York, NY 10018.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
Washington, D.C. 20555

December 30, 1987

ERRATA SHEET

Report Number:	NUREG-1002 Supplement No. 5
Report Title:	Safety Evaluation Report related to the operation of Braidwood Station, Units 1 and 2
Prepared by:	Office of Nuclear Reactor Regulation
Date Published:	December 1987
Instructions:	Please make the following pen and ink change.

Page 6-1 Last paragraph Fourth line	Change Mode 5 to Mode 4.

Division of Publications Services
Office of Administration and Resources Management

NUREG-1002
Supplement No. 5

Safety Evaluation Report
related to the operation of Braidwood Station, Units 1 and 2

Docket Nos. STN 50-456 and STN 50-457

Commonwealth Edison Company

U.S. Nuclear Regulatory Commission

Office of Nuclear Reactor Regulation

December 1987

ABSTRACT

In November 1983, the staff of the Nuclear Regulatory Commission issued its Safety Evaluation Report (NUREG-1002) regarding the application filed by the Commonwealth Edison Company, as applicant and owner, for a license to operate Braidwood Station, Units 1 and 2 (Docket Nos. 50-456 and 50-457). The first supplement to NUREG-1002 was issued in September 1986; the second supplement was issued in October 1986; the third supplement was issued in May 1987; the fourth supplement was issued in July 1987. This fifth supplement to NUREG-1002 is in support of the low-power license for Unit 2 and provides the status of certain items that remained unresolved at the time Supplement 4 was published. The facility is located in Reed Township, Will County, Illinois.

TABLE OF CONTENTS

1 INTRODUCTION AND GENERAL DESCRIPTION OF FACILITY

1.1 Introduction

In November 1983, the Nuclear Regulatory Commission (NRC) staff issued its Safety Evaluation Report (SER) (NUREG-1002) on the application filed by the Commonwealth Edison Company, as applicant and owner, for a license to operate Braidwood Station, Units 1 and 2 (Docket Nos. 50-456 and 50-457). At that time, the staff identified items that had not been resolved with the applicant. The first supplement to NUREG-1002 was issued in September 1986; the second supplement to NUREG-1002 was issued in October 1986; the third supplement to NUREG-1002 was issued in May 1987; the fourth supplement was issued in July 1987. This fifth supplement to the SER provides the staff evaluation of the open items that have been resolved to date and addresses changes to the SER that resulted from the receipt of additional information from Commonwealth Edison Company (licensee); in addition, this supplement supports the issuance of the low-power license for Unit 2.

Each section or appendix that follows is numbered the same as the corresponding SER section or appendix that is being updated. Each section is supplementary to and not in lieu of the discussion in the SER unless otherwise noted. Appendix A continues the chronology of the staff's actions related to the processing of the application for Braidwood Units 1 and 2. Appendix F lists principal staff members who contributed to this supplement. Appendix K provides the staff evaluation of the licensee's request for relief from performing the Code-required volumetric examination on two welds.

Copies of this SER supplement are available for inspection at the NRC Public Document Room, 1717 H Street, N.W., Washington, D.C., and at the Wilmington Township Public Library, 201 South Kankakee Street, Wilmington, Illinois 60481.

The NRC Project Manager for Braidwood Station, Units 1 and 2, is Mr. Stephen P. Sands. Mr. Sands may be contacted by calling (301) 492-8298 or writing:

Stephen P. Sands
Office of Nuclear Reactor Regulation
Project Directorate III-2
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

1.7 Summary of Outstanding Items

The current status of the outstanding items listed in the SER follows:

Part A Items	Status	Section
(1) Pump and valve operability	Closed in Supplement 2	3.9.3.2*
(2) Seismic and dynamic qualification of equipment	Closed in Supplement 2	3.10*
(3) Environmental qualification of electrical and mechanical equipment	Closed in Supplement 2	3.11*
(4) Containment pressure boundary components	Closed in Supplement 1	6.2.7
(5) Organizational structure	Closed in Supplement 1	13.1, 13.4
(6) Emergency preparedness plans and facilities	Closed in Supplement 1	13.3*
(7) Procedures generation package (PGP)	Closed in Supplement 2	13.5.2
(8) Control room human factors review	Closed in Supplement 4	18.2*
(9) Safety parameter display system	Closed in Supplement 4	18.3*
(10) Control room habitability	Closed in Supplement 3	6.4

Part B Items	Status	Section
(1) Turbine missile evaluation	Closed in Supplement 1	3.5.1.3
(2) Improved thermal design procedures	Closed in Supplement 1	4.4.1
(3) TMI Action Item II.F.2: Inadequate Core Cooling Instrumentation	Closed in Supplement 1	4.4.7
(4) Steam generator flow-induced vibrations	Closed in Supplement 1	5.4.2
(5) Conformance of ESF filter system to RG 1.52	Closed in Supplement 2	6.5.1
(6) Fire protection program	Closed in Supplement 3	9.5.1

*This section includes both site-specific-related information and duplicate-plant design features.

Part B Items (Continued)	Status	Section
(7) Volume reduction system	Closed in Supplement 2	11.1, 11.4.2

1.8 Confirmatory Issues

The current status of the confirmatory issues follows:

Part A Items	Status	Section
(1) Applicant compliance with the Commission's regulations	Closed in Supplement 2	1.1, 3.1*
(2) Site drainage	Closed in Supplement 1	2.4.3.3
(3) Piping vibration test program	Closed in Supplement 1	3.9.2.1*
(4) Preservice inspection program	Closed in Supplement 2	5.2.4, 6.6*
(5) Reactor vessel materials	Closed in Supplement 1	5.3
(6) Electrical distribution system voltage verification	Closed in Supplement 1	8.2.4*
(7) Independence of redundant electrical safety equipment	Closed in Supplement 1	8.4.4
(8) RPM qualifications	Closed in Supplement 1	12.5
(9) Revision to Physical Security Plan	Closed in Supplement 1	13.6
(10) Control room human factors review	Opened in Supplement 4	18.2*
(11) Safety parameter display system	Opened in Supplement 4	18.3*

Part B Items	Status	Section
(1) Inservice testing of pumps and valves	Partially closed in Supplement 2	3.9.6

*This section includes both site-specific-related information and duplicate-plant design features.

Part B Items (Continued)	Status	Section
(2) Steam generator tube surveillance	Closed in Supplement 1	5.4.2.2
(3) Charging pump deadheading	Closed in Supplement 1	6.3.2, 7.3.2
(4) Minimum containment pressure analysis for performance capabilities of ECCS	Closed in Supplement 1	6.2.1.5
(5) Containment sump screen	Closed in Supplement 1	6.2.2
(6) Containment leakage testing vent and drain provisions	Closed in Supplement 1	6.2.6
(7) Confirmatory test for sump design	Closed in Supplement 1	6.3.4.1
(8) IE Bulletin 80-06	Closed in Supplement 1	7.3.2.2
(9) Remote shutdown capability	Closed in Supplement 2	7.4.2.2
(10) TMI Action Plan Item II.D.1	Partially closed in Supplement 1	3.9.3.3, 5.2.2
TMI Action Plan Item II.K.3.1	Closed in Supplement 1	7.6.2.7
TMI Action Plan Item III.D.1.1	Closed in Supplement 1	9.3.5
(11) SWS process control program	Closed in Supplement 2	11.4.1
(12) Noble gas monitor	Closed in Supplement 2	11.5.2
(13) RCP rotor seizure and shaft break	Closed in Supplement 1	15.3.6
(14) Anticipated transients without scram (ATWS)	Partially closed in Supplement 2	15.6
(15) Evaluation of compliance with 10 CFR 50.55a(a)(3)	Closed in Supplement 2	5.2.4.4
(16) Steam generator tube failure	Opened in Supplement 1	15.4.3

1.9 License Conditions

The current status of the license conditions follows:

Part A Items	Status	Section
(1) Inservice inspection program	Closed in Supplement 3	5.2.4, 6.6*
(2) Natural circulation testing	Closed in Supplement 1	5.4.3*
(3) Response time testing	Closed in Supplement 1	7.2.2.5*
(4) Steam valve inservice inspection	Closed in Supplement 1	10.2*
(5) Implementation of secondary water chemistry monitoring and control program as proposed by the Byron/Braidwood FSAR	Closed in Supplement 1	10.3.3*
(6) TMI Item II.F.1: Iodine/Particulate Sampling	Closed in Supplement 3	11.5.2
Part B Items		
(1) Masonry walls	Closed in Supplement 2	3.8.3
(2) TMI Item II.B.3 postaccident sampling	Closed in Supplement 1	9.3.2
(3) Fire protection program	Open	9.5.1
(4) Emergency diesel engine auxiliary support systems	Closed in Supplement 3	9.5.4.1

*This section includes both site-specific-related information and duplicate-plant design features.

5 REACTOR COOLANT SYSTEM

5.2 Integrity of Reactor Coolant Pressure Boundary

5.2.4 Reactor Coolant Pressure Boundary Inservice Inspection and Testing

5.2.4.5 Evaluation of Compliance With 10 CFR 50.55a(g) for Braidwood Unit 2

This evaluation supplements conclusions in Section 5.2.4.3 of Supplement No. 2 of the Braidwood Safety Evaluation Report (SER), NUREG-1002, dated October 1986. In Supplement No. 2 of the SER, the staff evaluated the preservice inspection program for Braidwood Unit 1 and concluded that the preservice inspection program is acceptable and in compliance with 10 CFR 50.55a(g). By letter dated September 23, 1987, the applicant submitted the preservice inspection program for Braidwood Unit 2 and stated that the Unit 2 preservice inspection requirements are the same as those used for Unit 1. Except for Relief Request 2NR-8, the relief requests for Unit 2 are identical to those for Unit 1, which were evaluated in Appendix K of Supplement No. 2. Relief Request 2NR-8 applies only to Unit 2 and is evaluated in Appendix K. All technical issues related to the Braidwood Unit 2 preservice inspection program have been addressed and the staff, therefore, concludes that it is acceptable.

By letter dated April 28, 1987, the licensee committed to submit the Braidwood Unit 2 inservice inspection (ISI) program within 12 months from the date of issuance of the first facility operating license for Braidwood Unit 2. This program will be evaluated on the basis of 10 CFR 50.55a(g)(4) which requires that the initial 120-month inspection interval shall comply with requirements in the latest edition and addenda of the ASME Code incorporated by reference in paragraph 50.55a(b). This program will be evaluated after the applicable ASME Code edition and addenda can be determined and before the first refueling outage when inservice inspection commences.

6 ENGINEERED SAFETY FEATURES

6.4 Control Room Habitability

In a letter dated October 30, 1987, the licensee proposed an interim operating plan for the control room ventilation (VC) system. Section 6.5.1 of Supplement No. 2 (SSER 2) of the Braidwood Safety Evaluation Report (SER), NUREG-1002, dated October 1986, provided the staff evaluation and acceptance of the plan that was intended for use during the startup of Braidwood Unit 1. This acceptance included the provision, during fuel loading and reactor system testing before initial criticality, that one train of the VC emergency makeup filter system be available, including an associated chiller system and control room air handling unit.

In a letter dated March 26, 1987, from S. C. Hunsader to H. R. Denton, the licensee provided a plan to utilize, on a temporary basis in the early summer of 1987, the service building chilled water system in lieu of the control room chiller. Section 6.4 of SSER 4, dated July 1987, provided the NRC evaluation and acceptance of this plan. On the basis of its review of the licensee's proposal, the staff concluded that the proposed cross-tie met General Design Criterion (GDC) 4 of Appendix A to 10 CFR 50 as described in the Standard Review Plan Section 9.4.1 (NUREG-0800) and was, therefore, an acceptable means for providing adequate temporary cooling to the control room envelope.

The licensee has proposed the same plan to again utilize the service building chiller system in an effort to complete the retubing work of the VC system chillers, before the initial criticality of Braidwood Unit 2. A temporary cross-tie of the service building and control room chilled water systems is again being considered. The proposed configuration is the same as the one presented in SSER 4. The evaluated finding of safety significance will remain unchanged since Braidwood Unit 1 will be in cold shutdown (Mode 5) and Unit 2 is expected to be in a condition no more than its pre-critical testing phase.

There are no changes necessary to the Braidwood Technical Specifications since Technical Specification 3/4.7.6 currently includes a note that renders it not applicable before initial criticality on Cycle 1. The licensee requests that this note remain in place for Braidwood Unit 2 in order that Unit 2 pre-critical testing can proceed during the anticipated Unit 1 outage and concurrent VC chiller retubing work. Additionally, Braidwood Unit 1 will be maintained in cold shutdown during the retubing effort and no positive reactivity changes or core alterations will be permitted.

On the basis of its review of the licensee's proposal, the staff concludes that the proposed cross-tie of the service building and control room chilled water systems is acceptable. The retubing of the VC chillers must be completed and satisfactorily tested before entering Mode 5 for Unit 1. The licensee will maintain compliance with the appropriate action statement requirements of Technical Specification 3.7.6.

In SSER 3, dated May 1987, the licensee indicated that representatives from Will County, Illinois, agreed to provide notification to the Braidwood Station in the event of a chlorine accident. The staff believes that this notification process is an acceptable means of alerting the Braidwood Station so that the control room can be isolated. In addition, Braidwood Station was required to include with its control room technical specifications: (1) a surveillance requirement to demonstrate, on an 18-month basis, that the control room envelope can be isolated and (2) a procedure to demonstrate, on an 18-month basis, that control room envelope integrity is maintained (i.e., infiltration into the control room envelope in the isolation mode does not negate the toxic gas analysis and, thus, the capability to protect the operators). The first demonstration that the control room envelope integrity is maintained was to be completed before the fuel loading date for Braidwood Unit 2. However, the licensee has proposed that this demonstration be deferred until the surveillance outage for Unit 1, scheduled for January 1988. Otherwise, Unit 1 would need to shut down as per Technical Specification 3/4.7.6.

On the basis of its review of the licensee's proposal, the staff concludes that the proposed deferral is acceptable because of the low probability of the occurrence of a chlorine release and the fact that compensatory measures are in place that would be used to mitigate the consequences of such an event. However, the control room envelope integrity demonstration must be completed before Unit 1 can enter into Mode 4. The licensee made this commitment by letter dated December 1[illegible], 1987 from S. C. Hunsader to T. E. Murley.

6.6 Inservice Inspection of Class 2 and 3 Components

6.6.4 Evaluation of Compliance With 10 CFR 50.55a(g) for Braidwood Unit 2

This evaluation supplements conclusions in Section 6.6.3 of SSER 2. In SSER 2, the staff evaluated the preservice inspection program (PSI) for Braidwood Unit 1 and concluded that the PSI program is acceptable and in compliance with 10 CFR 50.55a(g). By letter dated September 23, 1987, the applicant submitted the PSI program for Braidwood Unit 2 and stated that the Unit 2 PSI requirements are the same as those used for Unit 1. The relief requests for Class 2 components of Braidwood Unit 2 are identical to those for Braidwood Unit 1; these were evaluated in Appendix K of SSER 2. The staff therefore concludes that the PSI program for Class 2 and 3 components for Braidwood Unit 2 is acceptable.

By letter dated April 28, 1987, the licensee committed to submit the Braidwood Unit 2 inservice inspection (ISI) program within 12 months from the date of issuance of the first facility operating license for Braidwood Unit 2. This program will be evaluated on the basis of 10 CFR 50.55a(g)(4) which requires that the initial 120-month inspection interval shall comply with requirements in the latest edition and addenda of the ASME Code incorporated by reference in paragraph 50.55a(b). This program will be evaluated after the applicable ASME Code edition and addenda can be determined and before the first refueling outage when ISI commences.

9 AUXILIARY SYSTEMS

9.5 <u>Other Auxiliary Systems</u>

9.5.1 Fire Protection Program

By letter dated June 3, 1987, the licensee submitted Amendment No. 10 to the Fire Protection Report for Byron/Braidwood Units 1 and 2. The staff review relates to those changes that are specific to Braidwood Unit 2.

Amendment 10 provides a new Section 2.4 and Appendix A5.8 relating to the Braidwood Unit 2 safe shutdown analysis and Appendix R deviations, respectively. The licensee also provided three attachments to the submittal. Attachment A is an itemized summary and explanation of all changes included in the amendment. Appendix B compares the Braidwood Unit 2 safe shutdown analysis to the Braidwood Unit 1 and Byron Unit 2 analyses. Appendix C compares the Braidwood Unit 2 Appendix R deviations to the Byron Unit 2 deviations.

The staff has reviewed this submittal with respect to the fire protection program against the corresponding analysis that was previously reviewed as documented in the Safety Evaluation Report and its supplements for Byron Units 1 and 2 and Braidwood Unit 1. The Braidwood Unit 2 submittal does not indicate any significant change from the methodology previously reviewed and accepted at the other three nuclear reactor facilities. Further, the Braidwood Unit 2 alternate shutdown approach is identical to that of the other three nuclear reactor facilities.

On the basis of this review, the staff concludes that the same level of fire protection is being provided at Braidwood Unit 2 for the post-fire safe shutdown and alternate shutdown capability as was previously approved for Byron Units 1 and 2 and Braidwood Unit 1. The staff concludes that the previous safety evaluation documented in the Braidwood SER remains valid.

APPENDIX A

CONTINUATION OF CHRONOLOGY OF NRC STAFF RADIOLOGICAL SAFETY REVIEW OF BRAIDWOOD STATION, UNITS 1 AND 2

June 20, 1987	Representatives from NRC, Commonwealth Edison, and Business and Professional People for Public Interest meet in Bethesda, Maryland to provide information to assist in determination of significant hazards consideration regarding transfer of ownership. (Summary issued on July 13, 1987.)
June 26, 1987	Letter to licensee advising that appropriate offsite emergency response plan be revised to reflect provisions of Federal Emergency Management Agency (FEMA) Guidance Memorandum.
July 7, 1987	Letter from licensee concerning additional welds where Code Case N-340 is used at facility.
July 8, 1987	Letter from licensee transmitting Final Safety Analysis Report (FSAR) changes.
July 9, 1987	Letter to licensee concerning Generic Letter 87-12, loss of residual heat removal (RHR) while reactor coolant system (RCS) partially filled.
July 9, 1987	Letter from licensee transmitting additional information to justify FSAR changes.
July 10, 1987	Letter to licensee concerning Generic Letter 87-13, integrity of requalification exams at nonpower reactors.
July 14, 1987	Letter to licensee transmitting Supplement 4 to the Safety Evaluation Report (SSER 4) (NUREG-1002) regarding operation of facility.
July 14, 1987	Letter from licensee concerning list of 11 concern areas on emergency procedures.
July 15, 1987	Letter from licensee concerning changes to be made to plant FSAR.
July 16, 1987	Letter to licensee concerning proposed additions and clarifications regarding conformance with criteria of Regulatory Guides 1.52 and 1.140.

July 22, 1987	Letter from licensee transmitting Technical Specifications regarding surveillance testing of emergency diesel generators.
July 22, 1987	Letter from licensee concerning information regarding five separate issues, including DOE/NRC Forms 741 and 742 and review of safeguards classification information on forms.
July 23, 1987	Letter to licensee concerning amendment to Technical Specification 4.8.1.1.2, diesel generator.
July 30, 1987	Letter from licensee concerning applications for amendments.
July 30, 1987	Letter from licensee submitting "Final Summary Report of Human Factors Engineering Review for Byron and Braidwood Stations SPDS."
August 4, 1987	Letter to licensee concerning Generic Letter 87-14 regarding operator licensing exams.
August 5, 1987	Letter from licensee transmitting Amendment 48 to FSAR.
August 6, 1987	Letter to licensee transmitting Safety Issues Management System (SIMS) printouts for review for each plant.
August 7, 1987	Letter from licensee concerning proposed revisions to test in startup test program involving control rod drop measurements.
August 12, 1987	Letter from licensee transmitting additional proposed exception to FSAR, Appendix A.
August 24, 1987	Letter from licensee transmitting page 6-3 of final summary report of human factors review not included in initial submittal of facilities emergency reponse report.
August 31, 1987	Letter from licensee transmitting SER (NUREG-1002, Supplement 4) Section 18 response, addressing detailed control room design review (DCRDR) and safety parameter display system (SPDS) items.
August 31, 1987	Letter from licensee transmitting Revisions 6 and 7 to inservice testing pump and valve programs, respectively, for Byron Station and Revisions 3 and 3a to inservice testing pump and valve programs.
September 1, 1987	Letter from licensee transmitting final report "Evaluation of Plant Variables for Compliance," per Regulatory Guide 1.97 and Supplement 1 to NUREG-0737.
September 8, 1987	Letter from licensee clarifying the author's withdrawal of applications for amendments to Licenses NPF-66 and NPF-72.

September 8, 1987	Letter from licensee forwarding August 3, 1987 safety issues management system (SIMS) update.
September 9, 1987	Letter to licensee transmitting cost analyses for operating license (OL) application reviews.
September 9, 1987	Letter to licensee requesting that replacement parts on diesel generator auxiliary equipment be classified Safety Category 1, but Quality Group G rather than Quality Group C acceptable.
September 9, 1987	Letter to licensee transmitting request for additional information regarding Generic Letter 83-28, Items 4.2.3 and 4.2.4 concerning Salem anticipated transient without scram (ATWS).
September 10, 1987	Letter from licensee requesting approval for deviation to schedule for submittal of startup test as delineated in Appendix B of Revision 2 to Regulatory Guide 1.68.
September 18, 1987	Letter from licensee requesting one-time exemption to utility February 19, 1986 licensed operator requalification program topical report.
September 18, 1987	Letter from licensee transmitting additional information, requested per telephone conversations, on Item 1 of utility December 1, 1986 response to request for additional information about changes made in Amendment 47 to FSAR.
September 23, 1987	Letter from licensee transmitting Revision 0 to "Braidwood Unit 2 Preservice Inspection Program."
September 23, 1987	Letter from licensee transmitting updated response for Items 2.1 and 4.5.2 of Generic Letter 83-28.
September 25, 1987	Letter from licensee transmitting information assessing safe operation of pressurized-water reactors (PWRs) when reactor coolant systems (RCS) water level is below top of reactor vessel, per Generic Letter 87-12.
September 30, 1987	Letter from licensee transmitting revised emergency plan annexes for generating station emergency procedure manual.
October 6, 1987	Letter from licensee transmitting Policy 1 to MAELU Certificate M-115 and NELIA Certificate N-115.
October 7, 1987	Letter from licensee informing staff that fuel will be loaded on December 11, 1987 as scheduled.

October 13, 1987	Letter from licensee informing staff that J. Gallo and P. P. Steptoe will present oral arguments in proceeding on November 21, 1987 regarding harassment issues presented on appeal and issues concerning plan construction assessment program and overinspection results compiled by Pittsburgh Testing Laboratory.
October 19, 1987	Letter to licensee transmitting safety evaluation regarding SPDS.
October 26, 1987	Letter to licensee informing it of upcoming NRC site visit on November 9-13, 1987 to examine MESAC system.
October 26, 1987	Letter to licensee advising it to schedule submittal for startup tests, per Appendix B of Regulatory Guide 1.68.
November 25, 1987	Letter from licensee informing staff that portions of construction activities regarding plant fire protection program in safety-related areas not expected to be completed by start of fuel loading.
November 25, 1987	Letter from licensee requesting schedular relief for completion of review and evaluation of five preoperational tests and completion and review of retests beyond fuel loading.
November 25, 1987	Letter to licensee forwarding Amendments 12 (Byron Unit 1), 12 (Byron Unit 2), and 2 (Braidwood Unit 1) to Licenses NPF-37, NPF-66, and NPF-72, respectively. Amendments revise Technical Specifications to allow one-time extention to 32 months for interval for performing 18-month instrument surveillance.

APPENDIX F

NRC STAFF CONTRIBUTORS

Name	Title	Review Branch*
John W. Craig	Branch Chief	Plant Systems Branch, DEST
Richard J. Eckenrode	Human Factors Engineer	Human Factors Assessment Branch, DLPQ
George Johnson	Materials Engineer	Materials Engineering Branch, DEST
Dennis J. Kubicki	Fire Protection Engineer	Plant Systems Branch, DEST
Linda L. Luther	Licensing Assistant	Project Directorate III-2
Rayleona F. Sanders	Technical Editor	Policy & Publications Management, DPS
Jared S. Wermiel	Section Leader	Plant Systems Branch, DEST

*Reflects reorganization since SER was issued.

APPENDIX K

COMMONWEALTH EDISON COMPANY
BRAIDWOOD GENERATING STATION - UNIT 2

DOCKET NUMBER 50-457

SAFETY EVALUATION REPORT SUPPLEMENT
PRESERVICE INSPECTION RELIEF REQUEST EVALUATION

Q. RELIEF REQUEST NO. 2NR-8 (REV. 0), EXAMINATION CATEGORY B-J, ITEM NO. B9.31, PRESSURE RETAINING BRANCH CONNECTION WELDS IN CLASS 1 PIPING

CODE REQUIREMENTS: Examination Category B-J, Item B9.31 requires a surface and volumetric examination of the areas described in Figures IWB-2500-9 thru IWB-2500-11 for pipe branch connections greater than 2 in. nominal pipe size. This examination includes essentially 100% of the weld length.

Code Relief Request: Relief is requested from performing the Code-required volumetric examination on the following welds:

Line Number	Weld Number
2RC04AB-12"	2RC-11-05
2RC04AA-12"	2SI-02-45

Reason for Request

The applicant reports that the above listed welds are 316 stainless steel weldolets. Due to the weld geometry and the metallurgical properties of the material, ultrasonic examination of these welds is not practical.

Staff Evaluation: This relief request is acceptable for PSI based on the following:

1. The subject welds received radiographic and surface examinations during fabrication in accordance with ASME Code requirements.

2. The welds are subjected to a system pressure test in accordance with Section XI requirements.

The staff therefore concludes that fabrication examinations and Section XI surface examination provide assurance of the preservice structural integrity of the branch connection welds and that compliance with the specific requirements of Section XI would result in hardship or unusual difficulties without a compensating increase in the level of quality and safety.

NRC FORM 335 (2-84) NRCM 1102, 3201, 3202

U.S. NUCLEAR REGULATORY COMMISSION

BIBLIOGRAPHIC DATA SHEET

SEE INSTRUCTIONS ON THE REVERSE

1. REPORT NUMBER (Assigned by TIDC, add Vol. No., if any)

NUREG-1002
Supplement No. 5

2. TITLE AND SUBTITLE

Safety Evaluation Report related to the operation of Braidwood Station, Units 1 and 2

3. LEAVE BLANK

4. DATE REPORT COMPLETED

MONTH	YEAR
December	1987

5. AUTHOR(S)

6. DATE REPORT ISSUED

MONTH	YEAR
December	1987

7. PERFORMING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code)

Division of Reactor Projects - III, IV, V and Special Projects
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, DC 20555

8. PROJECT/TASK/WORK UNIT NUMBER

9. FIN OR GRANT NUMBER

10. SPONSORING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code)

Same as 7, above

11a. TYPE OF REPORT

Technical

b. PERIOD COVERED (Inclusive dates)

November 1983 - December 1987

12. SUPPLEMENTARY NOTES

Docket Nos. STN 50-456 and STN 50-457

13. ABSTRACT (200 words or less)

In November 1983, the staff of the Nuclear Regulatory Commission issued its Safety Evaluation Report (NUREG-1002) regarding the application filed by the Commonwealth Edison Company, as applicant and owner, for a license to operate Braidwood Station, Units 1 and 2 (Docket Nos. 50-456 and 50-457). The first supplement to NUREG-1002 was issued in September 1986; the second supplement was issued in October 1986; the third supplement was issued in May 1987; the fourth supplement was issued in July 1987. This fifth supplement to NUREG-1002 is in support of the low-power license for Unit 2 and provides the status of certain items that remained unresolved at the time Supplement 4 was published. The facility is located in Reed Township, Will County, Illinois.

14. DOCUMENT ANALYSIS - a. KEYWORDS/DESCRIPTORS

Braidwood Station, Units 1 and 2

b. IDENTIFIERS/OPEN-ENDED TERMS

15. AVAILABILITY STATEMENT

Unlimited

16. SECURITY CLASSIFICATION

(This page)

UNCLASSIFIED

(This report)

UNCLASSIFIED

17. NUMBER OF PAGES

18. PRICE

☆U.S. GOVERNMENT PRINTING OFFICE:1987-202-292:60323

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

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NUREG-1002, Supp. 5   SER RELATED TO THE OPERATION OF BRAIDWOOD STATION, UNITS 1 AND 2   DECEMBER 1987