



Commonwealth Edison

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December 20, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Byron Generating Station Units 1 and 2
Braidwood Generating Station Units 1 and 2
FSAR Amendment 44
NRC Docket Nos. 50-454, 50-455, 50-456,
and 50-457

Dear Mr. Denton:

The application for construction permits and operating licenses for Byron Generating Station Units 1 and 2 and Braidwood Generating Station Units 1 and 2, docketed September 20, 1983, are hereby amended by submittal of Amendment 44 pursuant to 10 CFR 50.34.

Amendment 44 to the Byron/Braidwood FSAR consists of new responses to questions 40.189 (Power Systems Branch) and 280.1 (Chemical Engineering Branch), revised responses to Questions 022.25, 040.17, 040.62, 040.92, 040.93, 040.99, 040.101, 040.103, 040.112, 040.167, 040.184, 040.185, 040.187, 212.63, 212.68, 221.5, 311.12, and 362.1 (Braidwood), and voluntary text changes.

Attachment A to this letter is an itemized summary of changes contained in the amendment. This summary is provided at the request of the NRC Staff as an aid to the identification of FSAR changes requiring further evaluation by the NRC.

Three signed originals and fifty-seven copies of this amendment are submitted for NRC use.

Please direct questions regarding these matters to this office.

Very truly yours,

T. R. Tramm
Nuclear Licensing Administrator

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SUBSCRIBED and SWORN to
before me this 21st day
of December, 1983

Rosalie A. Pienta
Notary Public

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ATTACHMENT A

SUMMARY OF CHANGES CONTAINED IN B/B-FSAR AMENDMENT 44

<u>PAGE, FIGURE, OR TABLE NUMBER</u>	<u>DESCRIPTION OF CHANGES</u>
Page 1.1-2	Revised fuel load date for Byron-1
Page 2.1-1 (Br)	Revised site acreage
Pages 2.1-13 through 2.1-17 (Br)	Redistribution of 188 persons from the 4-5 mile zone to the 2-3 mile zone of the WSW sector. Note that WSW sector totals have not changed.
Page 2.3-23a (By)	Editorial
Page 2.3-25a (Br)	
Pages 2.4-4, 2.4-4a, 2.4-5, 2.4-5a, 2.4-15, 2.4-30, 2.4-30a, 2.4-38, 2.4-39, and 2.4-39a (Br)	Revised per Braidwood probable maximum precipitation analysis
Page 3.2-4	Revised to clarify RWST design
Page 3.2-8	Revised to reflect upgraded incore thermocouple system design. (See also page 3.10-1, -2, and 7.7-14, -15.)
Page 3.2-11	Clarification of electrical classification for RCFC control and instrumentation
Page 3.6-36	Text reference added for figures
Page 3.6-58	Corrected FW line number designation
Figures 3.6-1, 3.6-2, 3.6-4, 3.6-5 (Sh. 5), 3.6-6, 3.6-9 (Sh. 1) and 3.6-11 (Sh. 4)	Revised to reflect current design (high-energy lines)
Pages 3.8-5, -34b	Revised to be consistent with T3.8-2
Page 3.8-13	Revised to reflect status of referenced nuclear stations
Page 3.8-25	Text reference added for figures

PAGE, FIGURE, OR
TABLE NUMBER

DESCRIPTION OF CHANGES

Page 3.8-47	Change reflects current design; see also Page 3.10-6 (weld criteria)
Pages 3.8-59 and 3.8-59a	Change reflects current design (containment structural acceptance test)
Table 3.8-12	Change reflects current design
Figure 3.8-36	Tangential deflection meter added to legend
Page 3.9-17	Editorial
Pages 3.9-55, 3.9-55a, 3.9-55b, 3.9-98a, and 3.9-100b	Changes reflect current design (pressurizer safety and relief valves)
Page 3.9-82	Editorial
Table 3.9-16	Revised to reflect current design (active valves)
Pages 3.10-1, 3.10-2	Revised to reflect upgraded incore thermocouple system. (See also pages 3.2-8, 7.7-14 and 7.7-15)
Page 3.10-6	Change reflects current design; see also Page 3.8-47 (weld criteria)
Page 3.11-6	Editorial
Pages 4.1-4, -5, -6, -7, 4.4-47, -48, -49, Figure 4.4-9, pages 5.1-4, -8, -9, Figure 5.1-2 (Sheet 2), pages 5.4-15, -16, -16a	Changes reflect current design (RC thermal and hydraulic design, and steam generator mechanical and flow induced vibration).
Pages 4.2-22, 4.2-26, 4.2-41, 4.3-6, 4.3-23, 4.3-54, and 4.4-10a	Changes reflect current design; includes evaluation of rod bow effects; see also response to Q221.5
Pages 4.4-29, 4.4-42, 4.4-46, and 5.1-8	Editorial
Figures 5.1-3 and 5.1-4	Thermal sleeves deleted

PAGE, FIGURE, OR
TABLE NUMBER

DESCRIPTION OF CHANGES

Pages 5.4-1, 5.4-2, 5.4-25,
5.4-26, 5.4-27, 5.4-30,
Figures 5.4-7 and 5.4-8,
and Page 6.1-3

Changes reflect current design (safety grade indication for loss of CCW flow to RCP's, RHR cooldown times, and RHR interlock setpoints)

Pages 6.2-35 and 6.2-51

Changes reflect current design (RCFC's)

Page 6.2-57

Changes reflect preoperational test procedure (containment leak test)

Page 6.2-74

Corrected steamline rupture analysis data (agrees with current FSAR Figures 6.2-13 and 6.2-14)

Pages 6.2-167, 6.3-31, and 6.3-32

Changes reflect current design (RCFC's, recirculation sump level instrumentation, and accumulator isolation valve position indication)

Page 6.2-171

Note added to indicate that closure times are estimated closure times.

Page 6.2-175c

Changes reflect current FW system design.

Pages 6.3-16, 6.3-46a, 6.3-46c,
and 6.3-48

Changes reflect current design of containment spray system and RWST volume (Note: Page 6.3-46c was inadvertently removed from FSAR due to error in Amendment 43)

Figure 6.3-2

Changes reflect current RHR design (Sheet 3 change is editorial)

Page 6.5-12

Changes reflect current design (fuel handling building exhaust system)

Pages 6.5-19, 6.5-20, 6.5-21,
6.5-22, and 6.5-25 and Figure
6.5-1

Changes reflect current design (containment spray system and RWST capacity)

Pages A6.5-2 and A6.5-7

Editorial

Pages 7.1-22, 7.1-22a, 7.2-10,
7.2-39, and 7.3-25

Changes reflect current design (shared systems, reactor trip interlocks, and HVAC)

PAGE, FIGURE OR
TABLE NUMBER

DESCRIPTION OF CHANGES

Page 7.3-30	Change reflects current design (essential switchgear and battery rooms HVAC)
Page 7.3-34	Editorial
Pages 7.3-36, 7.3-37, and 7.6-1	Changes reflect current design (containment spray system and RHR interlock setpoints)
Page 7.6-5	Editorial
Figure 7.6-4	Status light added to MCB to indicate retention of 'S' signal
Page 7.7-11	Turbine loading stop interlock (C-16) not used. See also Page 7.7-26. (FSAR Figure 7.2-1 to be revised also)
Pages 7.7-14, -15	First change on p. 7.7-14 is editorial; other changes reflect upgraded incore thermocouple design (See also pages 3.2-8, 3.10-1, and 3.10-2)
Page 7.7-17d	Editorial
Page 7.7-26	Interlock C-16 not used
Pages 8.3-28, 8.3-29, 9.1-33, and 9.1-41	Changes reflect current design (loading on ESF buses and spent fuel pit bridge crane)
Page 9.2-13	Editorial
Pages 9.2-40, 9.2-44, 9.2-50, and 9.2-67	Changes reflect current design (chilled water)
Page 9.2-79	Station heating lines do not penetrate containment
Figures 9.2-9 through 9.2-14 (Br)	Revised per Braidwood ultimate heat sink analysis
Pages 9.3-24, -25, -26, -33, -34	Changes reflect current Boron thermal regeneration system design.
Pages 9.4-19 and 9.4-47	Changes reflect current design (HVAC)
Pages 10.4-11, -12, -12a Figure 10.4-1 (Sheet 1)	Changes reflect current design for FW water hammer prevention

PAGE, FIGURE, OR
TABLE NUMBER

DESCRIPTION OF CHANGES

Pages 10.3-5, 10.3-9, 10.A-1,
10.A-2, 10.A-3, 10.A-4,
10.A-6, 10.A-8, 10.A-9,
and 10.A-10

Westinghouse Owner's Group
no longer requires free
hydroxide specification
(secondary side water chemistry)

Page 11.1-2

Editorial

Pages 11.2-5, -6, -9
-10, -13, Table 11.2-5

Changes due to NRC request
for additional information
(ammonia/gas stripper system)

Page 11.3-4

Change reflects current
design (waste gas; see
also revised Figure 11.3-1)

Page 11.3-26

Editorial

Figure 11.3-1

Changes reflect current
design (waste gas)

Subsection 11.4.4:

Pages 11.4-9 through 11.4-23,
Pages 11.4-26 through 11.4-31,
and Page 11.4-34

Revised to reflect current
design (Polymer/volume
reduction product drumming)

Pages 11.5-1, -3, -4, -5,
-6, -8, -8a, 8b, -12, and -16

Revisions reflect current
design (rad. monitoring and
sampling systems)

Page 12.2-3

Revisions reflect current
design (use of hafnium
control rods)

Page 12.2-16

Editorial

Page 12.2-36a

New table added (hafnium
control rods)

Tables 12.2-46, 12.2-47,
and 12.2-48

Revisions made to agree
with changes made in the
HVAC design.

Pages 12.3-18, 12.3-19,
12.3-21, -38, -39, -39a, -40
and -42

Changes reflect current
design (rad. protection)

Page 12.3-20

Editorial

Pages 12.5-2 through 12.5-8,
13.1-11, and 13.1-12

Changes reflect current
design and/or current practice;
no longer a radiation-chemistry
foreman.

PAGE, FIGURE, OR
TABLE NUMBER

DESCRIPTION OF CHANGES

Figure 13.2-2 (Braidwood)

Revised to reflect current training practice.

Pages 14.2-1a, 14.2-2, and 14.2-3

Editorial

Tables 14.2-3, 14.2-8, 14.2-9, 14.2-11, 14.2-14, 14.2-30, 14.2-39, 14.2-72, 14.2-73, and 14.2-90

Changes reflect preoperational test objectives and acceptance criteria (IT, AR, PR, AP, RH, VQ, FW, and RC systems)

Page 15.0-8

Changes reflect current accident analysis assumptions

Pages 15.0-20 and 15.2-2

Editorial

Subsection 15.4.3:

Pages 15.4-12 through 15.4-19, 15.4-44, 15.4-51, and Figure 15.4-12a

Revisions due to resolution of Westinghouse rod drop issue

Pages 15.4-47, 15.4-48 and 15.4-49

Time sequence of events for boron dilution events has been deleted since no longer applicable. This is due to "Boron dilution fix" and reanalysis of boron dilution transients.

Pages 15.6-23 and 15.7-6

Editorial

Pages A1.82-1, A1.82-2, and A1.82-3

Some changes are Editorial: Regulatory Guide 1.82 was quoted incorrectly. Other changes reflect current design.

Page E.30-1a

Changes reflect current design of MS system noble gas effluent monitoring

Page E.69-1

Current status concerning resolution of NUREG-0737 Item II.K.3.30

Page E.75-3

Corrected distances from B/B Stations to respective EOF's

Q22.25-2

Editorial

Q40.17-1

Change reflects current practice (fuel oil)

Q40.62-1

Changes reflect revision to FPR

TABLE, FIGURE, OR
TABLE NUMBER

DESCRIPTION OF CHANGES

Q40.92, Q40.93, Q40.99, Q40.101, Q40.103, and Q40.112	These question responses were revised as a result of Q40.189
Q40.167, Q40.184, Q40.185, and Q40.187	Changes reflect revision to FPR
Q40.189	Response to recent Power Systems Branch question
Q212.63-1	Editorial
Q212.68-1	Changes reflect current design (sump instrumentation)
Q221.5-1	Evaluation of rod bow effects; see also Pages 4.2-22, 4.2-26, 4.2-41, and 4.4-10a
Q280.1-1	Response to recent CMEB question on fire suppression system
Q311.12-2 and Q311.12-3	Changes reflect current HVAC design (VQ)
Q362.1-2, Figure Q362.1-20 (Br)	Revised due to NRC request for additional information (geotechnical engineering)