



RS-20-153

December 17, 2020

10 CFR 50.4(b)(6)  
10 CFR 50.71(e)  
10 CFR 54.37(b)

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20055

Braidwood Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-72 and NPF-77  
NRC Docket Nos. STN 50-456, STN 50-457 and 72-73

Byron Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-37 and NPF-66  
NRC Docket Nos. STN 50-454, STN 50-455 and 72-68

Subject: Updated Final Safety Analysis Report (UFSAR), Revision 18  
Updated Fire Protection Report (FPR), Amendment 29

In accordance with the requirements of 10 CFR 50.71, "Maintenance of records, making of reports," paragraph (e)(4), Exelon Generation Company (EGC), LLC submits Revision 18 to the Updated Final Safety Analysis Report (UFSAR), Amendment 29 to the Fire Protection Report (FPR) for Braidwood and Byron Stations, and summary of evaluations conducted pursuant to 10 CFR 54.37(b), "Additional records and recordkeeping requirements".

The UFSAR is being submitted on Optical Storage Media (OSM) in its entirety, including documents incorporated by reference (Braidwood Technical Requirements Manual (TRM) updated through Revision 106, Byron TRM updated through Revision 132, Braidwood Technical Specifications Bases (TSB) updated through Revision 133 and Byron TSB updated through Revision 117). All UFSAR pages changed as a result of this update are clearly delineated with "Revision 18 - December 2020" in the page footer. All FPR pages changed as a result of this update are clearly delineated with "Amendment 29 - December 2020" in the page header.

One (1) OSM is included in this submission. The OSM labeled, "Exelon Generation - Braidwood - Byron Stations UFSAR Revision 18, December 2020, contains the following four components:

- 001 BRW-BYR UFSAR Revision 18.pdf, 193 megabytes (MB)
- 002 BRW-BYR FPR, Amendment 29.pdf, 182 MB
- 003 BRW-BYR TRM.pdf, Braidwood 55.2 MB, Byron 23.5 MB
- 004 BRW-BYR Tech Spec Bases.pdf, Braidwood 2.49 MB, Byron 2.47 MB

AD 53  
ADD 6  
NMSSZ6  
NRR  
NMSS

Attachment A provides a brief summary of the changes incorporated into UFSAR Revision 18.  
Attachment B provides a brief summary of the changes incorporated into FPR Amendment 29.  
Attachment C provides a summary report pursuant to 10 CFR 54.37(b).  
Attachment D contains the directory path, filename, and size of each individual file.

As required by 10 CFR 50.71(e)(2)(i), I certify that to the best of my knowledge, the information contained in the Enclosures and Attachments to this letter accurately reflect information and analyses submitted to the NRC or prepared pursuant to NRC requirements, and changes made under the provision of 10 CFR 50.59.

There are no commitments made in this document. Should you have any questions concerning this letter, please contact:

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Respectfully,

Gullott, David

M.

David M. Gullott  
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Enclosure: OSM – Braidwood/Byron Stations UFSAR, Revision 18,  
FPR, Amendment 29, TRM, Tech Spec Bases

Attachments: Attachment A – Draft Revision Packages (DRPs) Incorporated into Braidwood/Byron  
Stations Updated Final Safety Analysis Report – Revision 18

Attachment B - Fire Documentation Revision Packages (FDRPs) Incorporated into  
Braidwood/Byron Stations Fire Protection Report – Amendment 29

Attachment C - 10 CFR 54.37(b) Aging Management Review Summary

Attachment D - OSM Directory Structure

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – Braidwood Station  
NRC Senior Resident Inspector – Byron Station

## Attachment A

### Draft Revision Packages (DRPs) Incorporated into Byron/Braidwood Stations Updated Final Safety Analysis Report - Revision 18

**DRP 14-087** – Revised UFSAR Section 7.7.1.15 to remove description of Traveling Screen CW pump trip due to removal of the Traveling Screen high differential pressure (level) contacts from the CW Pump Trip circuit (EC 388161). (Braidwood only change)

**DRP 16-085** – Revised UFSAR Appendix F to incorporate NSAC 202L-R4 for the Flow Accelerated Corrosion (FAC) Program. Updates Appendix F, Section A.2.1.8 (pp. F.2-5 and F.2-6) and Appendix F, Table A.5-1, No. 8 (p. F.5-3).

**DRP 17-016** – Revised UFSAR Section 7.7.1.2.2, (pp. 7.7-7 and 7.7-8), Figure 7.7-10 and Figure 7.7-10a for Byron U2 only to incorporate changes resulting from Westinghouse Ovation upgrade to the Rod Control Logic Cabinet (2RD07J).

**DRP 17-024** – Updated UFSAR Section 5.4.1.3.10, Section 7.0 TOC and Figures, Section 7.1.2.6, Section 7.2, Section 7.3, Section 7.6, Section 7.7, Section 9.3, Section 10.4 and Section 7 Tables to reflect Braidwood Unit 2 installation of Ovation NSSS/BOP/FW modification under ECs 400436, 404362 and 404363. (Braidwood U2 only change)

**DRP 17-029** – Updated UFSAR Table 3.5-10 to remove the Unit 2 Main Power Transformer as a source of Nitrogen gas storage (EC 396051). (Byron only change)

**DRP 17-041** – Revised UFSAR Appendix F, Section A.2.1.2 (p. F.2-2) to reflect implementation of the Updated EPRI Pressurized Water Reactor (PWR) Secondary Guidelines, Revision 8, at Byron and Braidwood.

**DRP 17-042** – Updated Section 10.2.2.2 (p. 10.2-2) to revise description of excitation switchgear that is being replaced by EC 618133 with a modern two-channel digital Automatic Voltage Regulator (AVR). (Byron U2 only change)

**DRP 17-043** – Revised UFSAR Section 10.2.2.2 (p.10-2.2) description of excitation switchgear that is being replaced by EC 618132 with a modern two channel Digital Automatic Voltage Regulator (AVR) on Unit 1. (Byron only change)

**DRP 17-045** – Updated UFSAR Section 9.4.7.2.2 (p. 9.4-52) to reflect Byron regeneration waste drain tank vent piping does not route to the miscellaneous tank vent filter system per EC 623940 and modification M-06-0-85-305 M-77 sheet 1. (Byron only change)

**DRP 17-050** – Updated UFSAR Section 2.2.3.1.3 (p. 2.2-7) to reference RG 1.196 compliance requirements in lieu of identification of most recent hazard analysis completion date, added additional chemicals that rely on nasal detection (Ref. Calc. BRW-08-0075-M, Rev 0A and Rev 0D) and updated text for better alignment with title of Table 2.2.4. (EC 621772). (Braidwood only change)

**DRP 17-054** - Revised UFSAR Sections 1.6, 4.3, 4.4 and 7.7 for consistency with changes to TS 3.2.3, "Axial Flux Difference," in accordance with Byron Technical Specification Amendment No. 205 and Braidwood Technical Specification Amendment No. 200, issued December 12, 2018.

## Attachment A

### Draft Revision Packages (DRPs) Incorporated into Byron/Braidwood Stations Updated Final Safety Analysis Report - Revision 18

**DRP 17-056** – Updated the short-term pressurization sub-compartment analysis for structural integrity purposes following a high energy line break in the Main Steam Tunnel or a Main Steam Isolation Valve Room. (BYR EC 404484, BRW EC 396348). Updated Sections 3.6 and 3.6.1.3; Figures 3.6-46 and 3.6-55 Sheet 1; Attachment A3.6 (p. A3.6-2); Attachment C3.6 (pp. C3.6-i through C3.6-iii and pp. C3.6-1 through C3.6-21) and Figures C3.6-1 through C3.6-18; and Appendix D (pp. D.0-1, D.33-1 and D.35-1 through D.35-4).

**DRP 17-061** - Revised Table 9.2-4 Note (8) to reflect procedure revisions that permit isolation of the component cooling service loop to ensure required RHR heat exchanger flows and to prevent pump run out during the alignment to cold leg recirculation.

**DRP 17-062** – Revised UFSAR Section 9.4.5.3.1.1 (p. 9.4-31a), 9.4.5.3.2.q (p. 9.4-32a) to reflect EC 624903 which removes existing control rod drive cabinet spot coolers and installs a new auxiliary cooling system for Braidwood Div 22 MEER only. The changes to the identified sections are to note presence of this cooling system and remove mention of spot coolers for the Braidwood Div 22 MEER. A non-regulatory change (rewording/clarification) was made in Section 9.4.5.3.2.c (p. 9.4-32) to improve reader understanding of operation of the Div 12 and 22 MEER Ventilation Systems in "outside air" mode.

**DRP 17-063** – Updated UFSAR Table 3.5-10 (p. 3.5-40a) and Section 8.1 (p. 8.1-5) to remove the Byron Unit 1 Unit Auxiliary Transformers (UAT) as a source of Nitrogen gas storage and to clarify the rating of the Byron U1 UATs due to replacement of Byron U1 UATs with SGB-SMIT Transformers. (Byron U1 only change)

**DRP 17-064** - Revised UFSAR Section 9.2.2.3.5 and Table 9.2-3 to reference the maximum post-LOCA CC supply water temperature at Byron and Braidwood Stations.

**DRP 17-066** – Updated UFSAR Section 9.4.5.3.1.1 (p. 9.4-31a) and Section 9.4.5.3.2.g (p. 9.4-32a) to show modification to Braidwood Division 12 MEER cooling system and removal of spot coolers for control rod drive cabinets under EC 624901. (Braidwood only change)

**DRP 17-067** - Revised UFSAR Sections 9.2.7.2.2, 9.2.7.4.2 and 9.4.1.2 to clarify use of the Service Building Ventilation System (VS) chilled water cross-tie to the Control Room Ventilation System (VC).

**DRP 18-003** – Revised UFSAR Sections: BRW Section 2.3.1.2.2, BYR Section 2.3.1.2.2, BRW Section 2.3.7, TOC 3.0, Section 3.3.2.1, Section 3.5.2, Section 3.5.4, Section 3.5.4.5, Section 3.5.4.6, Section 3.5.5, Section 3.5.5.3, Section 3.5-26c, Section 3.5-26d, Section 3.5.6, Section 9.2.5.3, Section 9.2-46, Section 9.4.1.1.1, Section 9.4.1.2, Section 9.4.5.3.1.1, Section 9.4.5.3.3, Table 3.5-17 (Byron) and Table 3.5-17 (Braidwood) to reflect the implementation of the TORMIS analysis at Braidwood Station in accordance with NRC approved License Amendment No. 199 dated November 8, 2018 (Accession No. ML18291A980).

## Attachment A

### Draft Revision Packages (DRPs) Incorporated into Byron/Braidwood Stations Updated Final Safety Analysis Report - Revision 18

**DRP 18-004** – Reclassified ASME III FP piping/valves/components in seismically qualified areas from Safety Category I ASME Section III, Class 3 (quality group C) to Safety Category II ANSI B31.1 (quality group D). The seismic classification remains unchanged. EC 626662. Updates Table 3.2-1 (pp. 3.2-14 and 3.2-29a), Section 9.1.3.1 (p. 9.1-35a), Section 9.1.3.2 (p. 9.1-36) and Section 9.1.3.3 (p. 9.1-41). (Byron only change)

**DRP 18-005** - Revised UFSAR Section 3.6.1.3.1 to reference UFSAR Section 3.11.10.1 and reflect design calculations for Auxiliary Building Environment after CV Letdown HELB/HELC at Byron Station.

**DRP 18-006** - Revised UFSAR Sections 7.7, 5.4, 9.3, and 10.4 and associated Tables and Figures as a result of a design change to upgrade 7300 NSSS Cabinets, Balance of Plant Cabinets and Feedwater Pump Control Cabinets with the Westinghouse Ovation digital system on Byron Station Unit 1. Reference ECs 617670, 617681 and 617682. (Byron U1 only change)

**DRP 18-008** – Revised UFSAR Section 3.9 Table 3.9-16, Section 6.2 Table 6.2-58 to change classification of containment isolation valves for hydrogen recombiner abandonment. Valves are now maintained locked closed with power removed for Braidwood Station.

**DRP 18-010** – Revised Section 7.1.2.6 (p. 7.1-22) to reflect the Feedwater (FW) isolation scheme for the feedwater regulating valves (FWRV) is being changed from a deenergize-to-actuate design to an energize-to-actuate scheme. (Byron U1 only change)

**DRP 18-012** – Revised UFSAR Section 8.1.20, Chapter 8 of the Table of Contents and Appendix Section E.24 to correct reference of IEEE 387-1972 to IEEE 387-1984 for consistency with UFSAR section 8.3.1.1.2.2 and UFSAR Appendix A, Regulatory Guide 1.9, "Selection, Design, Qualification and Testing of Diesel-Generator Units Used as Class 1E Onsite Electric Power Systems at Nuclear Power Plants", compliance description on page A1.9-1. The TOC for Chapter 8 was revised accordingly. UFSAR Appendix E, "Requirements Resulting from TMI-2 Accident" Section E.24, "Direct Indication of Relief and Safety Valve Position (II.D.3) was revised to correct the reference of the Commission Order, May 13, 1980 (CLI-20-80) to Commission Order, May 13, 1980 (CLI-80-21).

**DRP 18-014** – Updated several sections of the UFSAR to reflect abandonment of the hydrogen recombiners at Braidwood station under EC 357779. (Braidwood only change)

**DRP 18-015** – Revised UFSAR Sections 7.1.2.6 and 7.3.2.2.5 and Figures 7.3-1, 7.3-1A, 7.3-2, 7.3-2A and 7.3-2B for Braidwood Unit 1 to support Unit 1 Ovation post N-Outage backfit under EC 625405. (Braidwood U1 only change)

**DRP 18-017** – Corrected editorial error for UFSAR Table 6.2-55 to correct thickness listed for slab number 10 in the table per Westinghouse letter CAE-19-5/CCE-19-5.

**DRP 18-018** – Revised Sections 8.1.2 and 8.3.1.1.2.2 (pp. 8.1-9, 8.3-9) to add option of using ELMS-AC and/or ETAP for the evaluation of AC load modeling for Byron only.

## Attachment A

### Draft Revision Packages (DRPs) Incorporated into Byron/Braidwood Stations Updated Final Safety Analysis Report - Revision 18

**DRP 18-019** – Revised UFSAR Section 6.5.3 (p. 6.5-33), 9.4.8.2.1 (pp. 9.4-55 & 56), Table 9.4-24 (p. 9.4-144) to indicate removal of the charcoal filter assemblies and abandonment of the associated deluge system from the U1 Containment Charcoal Filter Units. (Byron U1 only change)

**DRP 18-022** – Updated Section 9.3.1.2 (p. 9.3-1) and Section 9.3.1.5 (pp. 9.3-3a & 9.3-4) to show fourth station air compressor installed at Braidwood Station, Unit 2 under EC 627885. (Braidwood U2 only change)

**DRP 18-023** – Updated UFSAR Section 4.2.2.3.4 (p. 4.2-17) to remove statement of how thimble plugs are specifically attached to baseplate, removed specific stainless steel type to stainless steel Series 300 and added statement indicating an additively manufactured thimble plug assembly (AM-TPA) is shown in new Figure 4.2-16A. Added Figure 4.2-16A showing AM-TPA. (Byron only change)

**DRP 18-024** – Revised UFSAR Appendix A (Pg. A1.9-4) to take an exception to the 10 year test interval as the surveillance frequency for this testing is controlled by the Surveillance Frequency Control Program and an exception to the unit operating condition for performance of the Ten-Year Testing as RG 1.9 Revision 3 does not specify a plant operating mode limitation for the surveillance requirement.

**DRP 18-025** – Changed Pressurizer Heater capacity on Table 5.1-1 from 1777kW to 1593kW per EC 630430. (Braidwood Unit 2 only change)

**DRP 18-027** – Corrected typographical error in Table 3.9-6 (p.3.9-111), added general reference to the source document for core power uncertainty value in Section 15.0.3.2 (p.15.0-8) and Section 15.0.15 (p. 15.0-24). (non-regulatory change)

**DRP 18-028** – Updated Appendix F, Section A.2.1.35 (p. F.2-51) and Table A.5-1 (p. F.5-37) to extend frequency of SX fill support beams and air inlet framing to 3 years from 1.5 years per PMMR PMC-20-123976 and 50.59 screening 6E-20-016.

**DRP 18-029** – Updated Section 13.1.3.1 (pp. 13.1-1, 13.1-2, 13.1-3), Section 13.2.1 (p. 13.2-1) and Section 13.2.6.2 (p. 13.2-2) to reflect change to QATR commitment from ANSI/ANS 3.1-1978 and ANSI N18.1-1971 to ANSI/ANS 3.1-2014.

**DRP 18-033** – Revised UFSAR Table 3.2-1 (p. 3.2-19) to correct safety classification of CRDM thermal sleeves.

**DRP 18-034** – Updated UFSAR Appendix E, Section E-19 to reflect EC 631453 for Braidwood U2 2RC014B/D changes. (Braidwood U2 only change).

**DRP 18-035** – Updated UFSAR Section 3.11 and Tables 9.4-12, 9.4-14 and 9.4-16 to restore historical information related to Operator Response to anticipated ventilation fan trip in HELB protected areas. (non-regulatory change)

## **Attachment A**

### **Draft Revision Packages (DRPs) Incorporated into Byron/Braidwood Stations Updated Final Safety Analysis Report - Revision 18**

**DRP 18-037** – Updated UFSAR Section 9.2.5 (p. 9.2-43) and Figure 2.4-46A to clarify the area-capacity curve for the UHS in section 2.4 and 9.2.5. (Braidwood only change)

**DRP 18-039** – Updated UFSAR Section E.31.3.1.2 (p. E.31-11) to reflect installation of temporary change configuration installed in December 2018 on U1 Train A RVLIS under procedurally controlled TCC EC 626390. (Byron U1 only change)

**DRP 18-040** – Updated UFSAR Section 12.5.3.2 (pp. 12.5-2, 12.5-3) to allow use of Self Reading Dosimetry (SRD) only per NISP-RP-102 (Rev 0), RP-AA-210 (Rev 30) and RP-AA-1008 (Rev 9).

**DRP 18-042** – Updated UFSAR Section 4.2.2.1 (p. 4.2-11), Section 4.2.5 (p. 4.2-40), Section 4.3.2.1 (p. 4.3-7) and Section 4.3.5 (p. 4.3-39a) to include reference to Westinghouse Fuel Reconstitution Methodology WCAP-13060-P-A, July 1993.

## Attachment B

### Fire Documentation Revision Packages (FDRPs) Incorporated into Braidwood/Byron Stations Fire Protection Report – Amendment 29

The following Fire Documentation Revision Packages (FDRP) are being incorporated into the 29<sup>th</sup> Amendment of the Braidwood / Byron Fire Protection Report.

**FDRP 27-044** – EC 397984 provides a new deluge system for the 2E and 2W replacements Main Power Transformers. The new deluge system has a different configuration as compared to the original; however, this does not change the function of the fire suppression system. The fire protection report is being revised to include the updated deviations table 3-1 and drawings in appendix 5.4 Figures (BYR).

**FDRP 28-010** – EC 396051 installs the replacement of the 2E and 2W Main Power Transformers. The replacement Hyundai transformers each contain 22,138 gallons of transformer oil. The fire protection report is being revised to include the updates in table 2.2-3 (BYR).

**FDRP 28-016** – EC 618116 installs a wireless radio receiver pigtail for the Unit 1 wireless control system reactor cavity maintenance crane. The fire protection report is being revised to include updated combustible material listing for section 2.3-7 (BRW).

**FDRP 28-023** – EC 621772 installs alternate biocide water treatment system to treat CW, SX and WS systems as well as PLC upgrade to the Nalco chemical feed equipment. The fire protection report is being revised to include updated combustible material listing for table 2.2.-3 (BRW).

**FDRP 28-026** – EC 624903 replaces the existing spot coolers for augmented cooling on Unit 2 rod drive with two roof mounted condenser units and two fan/coil air handling units (BRW)

**FDRP 28-027** – EC 625275 and EC 625276 provides a new deluge system for the 242-2 system auxiliary transformer (SAT). The new deluge system has a different physical configuration as compared to the original system; This does not change the function of the fire suppression system. The fire protection report is being revised to include the updated table 2.2-3, subsection 2.3.18.24 and drawings in appendix 5.4 Figures (BYR).

**FDRP 28-028** – EC 624901 replaces the existing spot coolers for augmented cooling on Unit 1 rod drive with two roof mounted condenser units and two fan/coil air handling units (BRW).

**FDRP 29-001** – EC 626662 reclassifies Asme III FP piping/valves/components in seismically qualified areas. A portion of the FP system was conservatively classified as Safety Category I Quality Group C (ASME section III class 3) and is reclassified to Safety Category II, quality group D. The fire protection report is being revised to update sections 2.1.3.2.3, 2.3.1.3, 2.3.3.4, 2.3.3.5, 2.3.3.8, 2.3.3.10, 2.3.3.13, 2.3.3.20, 2.3.11.29, 3.1.c(4), 3.6.c(4), table 3-1, appendix 5.3 and appendix 5.4 (BYR).



## Attachment B

### Fire Documentation Revision Packages (FDRPs) Incorporated into Braidwood/Byron Stations Fire Protection Report – Amendment 29

**FDRP 29-002** – EC 626870 removes occupant use of fire hose and hose reels from select hose stations. The fire protection report is being revised to update section 2.1.3.2.1, 2.1.3.2.2, section 2.3, 3.6, appendices 5.5 and 5.8 (BYR).

**FDRP 29-003** – EC 625040 replaces the existing Unit 1 McGraw-Edison Unit Auxiliary Transformers (UATs) 141-1 and 141-2 with SGB-SMIT Transformers that contain a larger volume of oil. The fire protection report is being revised to update section 2.3.18.19 and 2.3.18.21 (BYR)

**FDRP 29-004** – EC 626215 provides a new deluge system for the Unit 1 Unit Auxiliary Transformers (UATs) 141-1 and 141-2. The new deluge systems have a different physical configuration as compared to the original system; however, this does not change the function of the fire suppression system. The UATs are replaced as parts of a separate change package (EC 525040 and FDRP 29-003). The fire protection report is being revised to update table 3-1 and appendix 5.4 figures (BYR).

**FDRP 29-005** – EC 626661 permanent removes the charcoal from the Unit 1 containment charcoal filter units and permanently isolates the fire protection deluge system for that system. Per Byron SER Amendment 76 allows the Containment Mini-flow and Post LOCA Purge System to be used to reduce containment airborne radioactivity prior to personnel access. This allows the charcoal adsorbers (1VP05FA/B) to be abandoned and removed along with its associated trays, hardware and test canisters from the CCFUS (1VP01SA/B) while maintaining the ability to reduce containment airborne radioactivity prior to personnel access. Further permitting the abandonment in place and isolation of the deluge system. Isolation will be achieved by removing the ability to open 1FP244A/B from the control room and taking 1FP2245A/B from locked open to closed. The alarm associated with 1FP2245A/B being closed will also be eliminated. The fire protection report is being revised to update figure 2.3-10, table 2.2-3, section 2.3.1.5, section 3.7 and table A5.4-1 (BYR).

**FDRP 29-006** – EC 627474 (DRP 11-039) as described in Byron/Braidwood UFSAR subsection 6.2.5, the hydrogen recombiners and backup hydrogen vent and purge subsystems are no longer required for the Byron and Braidwood combustible gas control system. The fire protection report is being revised to reflect abandonments in table 2.2 and section 2.3 (BYR/BRW).

**FDRP 29-007** – EC 6284881 adds instrument cables associated with Steam Generator (S/G) power operated relief valves (PORVs) analyzed through multiple spurious operation (MSO) scenario 22. The fire protection report is being revised to update table 2.4-4 of the Safe Shutdown Analysis (SSA) to include the instrument cables (BYR).

**FDRP 29-008** – EC 397450 installs permanent robust operation barrier covers on to 480-volt motor control centers in the auxiliary building. The fire protection report is being revised to update table 2.2 and section 2.3 for added combustible materials (BRW).

## Attachment B

### Fire Documentation Revision Packages (FDRPs) Incorporated into Braidwood/Byron Stations Fire Protection Report – Amendment 29

**FDRP 29-009** – EC 626345 abandons select UV detectors. Referring to Byron and Braidwood SER's and supplements thereto, select UV detectors are not required in select fire zones. The UV detectors were installed prior to NRC inspection and approval and are unnecessary or incorrect for the application. Since appropriate detection and/or suppression is already installed at the required locations in addition to the UV detector, the UV detectors are abandoned in place and still comply with the applicable codes and licensing basis. The fire protection report is being revised to update section 2.2, table 2.2, section 2.3, section 3, and section 5.4 (BYR).

**FDRP 29-010** – EC 627885 installs a fourth Station Air Compressor (SAC) in the Unit 2 Turbine building. The fire protection report is being revised to update Section 2.3.8.5, Figures 2.3-12 (sheet 4 of 4) and 2.3-23 (sheet 2 of 2) (BRW).

**FDRP 29-011** – EC 623679 extends the testing frequency of fire detection and CO2 systems on the results of EC #623679, "Performance Based Evaluation of Selected Fire Protection Testing in Order to Extend the Surveillance Testing Interval (Byron)." The fire protection report is being revised to update table 3-1 (BYR).

**FDRP 29-012** – NFPA code date of issue in table 3-1 lists NFPA code 72E as code year 1984. This is incorrect as Byron was reviewed for compliance to the 1982 code. The fire protection report is being revised to update table 3-1 (BYR).

**FDRP 29-013** – Section 3.5(g), Lighting and communication, of the fire protection report only references the power supply for the Unit 1 plant pager system. The referenced circuit, "F3" is not the only circuit providing power, circuit "F2" also supplies power. Unit 2 is supplied from 2 circuits, "F2" and "F3". The select NRC position for section 3.5(g)(3) states "Fixed emergency communications independent of the normal plant communication system should be installed at preselect stations." Under the implementation for noncompliance sections it states that Byron complies and references plant pager system drawings for location and power for Unit 1 only. The additional information regarding drawings and power supplies is not required to prove compliance, the justification will be updated to include unit 2 MCC (231X2) but will remove reference to individual circuits. The fire protection report is being revised to update section 3.5 (BYR).

**FDRP 29-016** – Changed affected page listing to list pages affected by update and not all pages. Updated formatting and corrected spelling errors. Aligned fire zone naming conventions between table 2.2-2 and 2.2-3. Removed listing of combustible loads in table 2.2-3 due to redundancy in section 2.3. Added fire zone floor area to section 2.2 and removed from section 2.3. Clarified Byron or Braidwood specific items in section 2.3. The fire protection report is being revised to update section 1.0, 2.0, 2.1, 2.2, and 2.3 (BYR/BRW).

**Attachment C**

**BRAIDWOOD STATION**

**10CFR 54.37(b) Aging Management Review Summary**

In accordance with 10 CFR 54.37(b) and the guidance specified in Regulatory Issue Summary 2007-16, Revision 1, "Implementation of the Requirements of the 10 CFR 54.37(b) for Holders of Renewed Licenses," the UFSAR update required by 10 CFR 50.71 must include any Structures, Systems or Components (SSCs) newly identified that would have been subject to an aging management review or evaluation of time-limited aging analyses in accordance with 10 CFR 54.21. This UFSAR update must describe how the effects of aging will be managed such that the intended function(s) in 10 CFR 54.4(b) will be effectively maintained during the period of extended operation.

The 10 CFR 54.37(b) review of changes to the plant Current Licensing Basis covered the period of November 9, 2018 to November 4, 2020. The review included:

- Engineering Changes that were installed or completed since the last UFSAR update,
- UFSAR pending change descriptions and revised text, and
- NRC Interim Staff Guidelines (ISGs) related to license renewal.

No "newly identified" SSCs were identified that require aging management or evaluation of TLAA's in accordance with the License Renewal Rule. Therefore, there are no associated updates required to the Braidwood UFSAR and Aging Management Programs.

## **Attachment C**

### **BYRON STATION**

#### **10CFR 54.37(b) Aging Management Review Summary**

In accordance with 10 CFR 54.37(b) and the guidance specified in Regulatory Issue Summary 2007-16, Revision 1, "Implementation of the Requirements of the 10 CFR 54.37(b) for Holders of Renewed Licenses," the UFSAR update required by 10 CFR 50.71 must include any Structures, Systems or Components (SSCs) newly identified that would have been subject to an aging management review or evaluation of time-limited aging analyses in accordance with 10 CFR 54.21. This UFSAR update must describe how the effects of aging will be managed such that the intended function(s) in 10 CFR 54.4(b) will be effectively maintained during the period of extended operation.

The 10 CFR 54.37(b) review of changes to the plant Current Licensing Basis covered the period of November 9, 2018 to November 4, 2020. The review included:

- Engineering Changes that were installed or completed since the last UFSAR update,
- UFSAR pending change descriptions and revised text, and
- NRC Interim Staff Guidelines (ISGs) related to license renewal.

No "newly identified" SSCs were identified that require aging management or evaluation of TLAA's in accordance with the License Renewal Rule. Therefore, there are no associated updates required to the Byron UFSAR and Aging Management Programs.

**Attachment D**

**OSM Directory Structure**

<b>Directory Path</b>	<b>File Name</b>	<b>Size</b>
\001 BRW-BYR UFSAR REV. 18	000 UFSAR Cover and Page Index.pdf	416 KB
\001 BRW-BYR UFSAR REV. 18	001 CH 1 Intro General Plant Description.pdf	250 KB
\001 BRW-BYR UFSAR REV. 18	002 CH 2 Site Characteristics – Braidwood.pdf	63894 KB
\001 BRW-BYR UFSAR REV. 18	003 CH 2 Site Characteristics – Byron.pdf	30620 KB
\001 BRW-BYR UFSAR REV. 18	004 CH 3 Design of SSCs.pdf	27054 KB
\001 BRW-BYR UFSAR REV. 18	005 CH 4 Reactor.pdf	8389 KB
\001 BRW-BYR UFSAR REV. 18	006 CH 5 Reactor Coolant Sys.pdf	2026 KB
\001 BRW-BYR UFSAR REV. 18	007 CH 6 Engineered Safety Features.pdf	13031 KB
\001 BRW-BYR UFSAR REV. 18	008 CH 7 Instrumentation and Controls.pdf	3733 KB
\001 BRW-BYR UFSAR REV. 18	009 CH 8 Electric Power.pdf	1066 KB
\001 BRW-BYR UFSAR REV. 18	010 CH 9 Auxiliary Systems.pdf	6111 KB
\001 BRW-BYR UFSAR REV. 18	011 CH 10 Steam and Power Conversion Sys.pdf	1572 KB
\001 BRW-BYR UFSAR REV. 18	012 CH 11 Radioactive Waste Management.pdf	865 KB
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\001 BRW-BYR UFSAR REV. 18	014 CH 13 Conduct of Operations.pdf	180 KB
\001 BRW-BYR UFSAR REV. 18	015 CH 14 Initial Test Program.pdf	457 KB
\001 BRW-BYR UFSAR REV. 18	016 CH 15 Accident Analyses.pdf	17741 KB
\001 BRW-BYR UFSAR REV. 18	017 CH 16 Technical Specifications.pdf	49 KB
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\001 BRW-BYR UFSAR REV. 18	024 APP F License Renewal.pdf	434 KB
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\002 BRW-BYR FPR AMEND. 29	001 FPR CH 1.0 Introduction.pdf	1054 KB
\002 BRW-BYR FPR AMEND. 29	002 FPR CH 2.0–2.3 Area Design Haz Analysis.pdf	20148 KB
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\002 BRW-BYR FPR AMEND. 29	004 FPR CH 2.3 Figures Part 2 of 2.pdf	70648 KB
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