



POINT BEACH NUCLEAR PLANT UNITS 1 & 2
FINAL SAFETY ANALYSIS REPORT

LIST OF EFFECTIVE PAGES

The following is a List of Effective Pages for the Point Beach Nuclear Plant Final Safety Analysis Report (FSAR). This List of Effective Pages should be filed at the front of the FSAR manual.

All holders of this FSAR should check their manuals against this List of Effective Pages to ensure that the FSAR is accurate and complete.

Some figures are identified as for information only because they are updated on a periodic frequency commensurate with the docketed submittal of this FSAR.

The last update submitted to the NRC is identified on the lower-left hand side of each page, followed by the update year, (e.g., UFSAR 2007).



LIST OF EFFECTIVE PAGES

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Appendix A

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Appendix I Tables and Figures-1	Appendix I Tables and Figures-248	2010

Appendix T

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T.1-1	T.1-1	2008



DESCRIPTION OF CHANGES

Table of Contents	
Throughout	Editorial Changes: Editorial changes were made to correct grammar, punctuation, spelling, and to ensure consistency between text headings, table titles, figure titles, table of contents, etc. These changes may not be identified by a revision bar.
<u>Chapter 1</u>	
FSAR 1.2-2	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 1.2-5	Editorial Change: Added new NRC SE regarding the use of optimized ZIRLO™ as reference 5. (LIC 2064578)
<u>Chapter 2</u>	
FSAR 2.5-6	Licensing Basis Change: Updated the rip-rap slopes used in Calculation NEE-094-CALC-001. (LIC 2022012)
FSAR 2.5-15	Licensing Basis Change: Updated Figure 2.5-1 with controlled drawing B-18. (LIC 2021090)
<u>Chapter 3</u>	
FSAR 3.1-1	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 3.1-3	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 3.2-1	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 3.2-8	Licensing Basis Change: Updated for Unit 1 Cycle 37 reload design implementation of PARAGON Code. (LIC 2092524)
FSAR 3.2-9	Licensing Basis Change: Updated for Unit 1 Cycle 37 reload design implementation of PARAGON Code. (LIC 2092524)
FSAR 3.2-10	Licensing Basis Change: Updated for Unit 1 Cycle 37 reload design implementation of PARAGON Code. (LIC 2092524)
FSAR 3.2-17	Licensing Basis Change: Revised to remove Peripheral Power Suppression Assemblies. (LIC 2064578)
FSAR 3.2-17	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 3.2-26	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 3.2-29	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 3.2-36	Editorial Change: Corrected date in reference 17. (LIC 2064578)
FSAR 3.2-36	Editorial Change: Corrected date in reference 21. (LIC 2064578)



<u>Chapter 3</u> <u>continued</u>	
FSAR 3.2-37	Editorial Change: Corrected title in reference 45. (LIC 2064578)
FSAR 3.2-38	Editorial Change: Added reference 55 to Reference Section. (LIC 2092524)
FSAR 3.2-39	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 3.2-47	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 3.2-97	Licensing Basis Change: Revised figure for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 3.3-1	Licensing Basis Change: Revised figure for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO and removed Peripheral Power Suppression Assemblies. (LIC 2064578)
FSAR 3.3-2	Licensing Basis Change: Revised to remove Peripheral Power Suppression Assemblies. (LIC 2064578)
<u>Chapter 4</u>	
FSAR 4.2-7	Licensing Basis Change: Replacement of the #1 seal insert on the RCP with a new Westinghouse shutdown seal via EC 277545. (LIC 1999915)
FSAR 4.2-23	Updated Figure to reflect approved drawing of record.
FSAR 4.2-27	Updated Figure to reflect approved drawing of record.
<u>Chapter 5</u>	
FSAR 5.1-60	Editorial Change: Revised the origianl blind flange with a Westinghouse quick opening transfer tube closure via EC 282573. (LIC 2046249)
FSAR 5.1-109	Editorial Change: Incorporated Figure 5.1-20 into the Permanent Drawing System. (LIC 2046249)
FSAR 5.2-88	Licensing Basis Change: Figure updated for SI-868A to read as closed systems. (LIC 2102267)
FSAR 5.2-103	Editorial Change: Incorporated Figure 5.2-72 into the Permanent Drawing System. (LIC 2046249)
FSAR 5.3-5	Licensing Basis Change: Updated Containment Ventilating System Section, Containment Venting During Normal Operation to read 1 psig for applicability when the RE-211/212 radiation monitoring forced ventilation pump is put into service. (LIC 2113706)
FSAR 5.3-10	Updated Figure to reflect approved drawing of record.
<u>Chapter 6</u>	
FSAR 6.2-12	Licensing Basis Change: Added discussion that pumps are analyzed as degraded to the text of the FSAR/evaluation of components and added new reference. (LIC 2039337)



Chapter 6 continued	
FSAR 6.2-28	Licensing Basis Change: Updated the description of how the safety injection accumulators are opened. (LIC 2108307)
FSAR 6.2-29	Editorial Change: Added new reference 7. (LIC 2039337)
FSAR 6.2-43	Updated Figure to reflect approved drawing of record.
FSAR 6.2-45	Updated Figure to reflect approved drawing of record.
FSAR 6.2-48	Licensing Basis Change: Revised Figure 6.2-4 to remove degraded pump data. (LIC 2039337)
FSAR 6.2-49	Licensing Basis Change: Revised Figure 6.2-5 to remove degraded pump data. (LIC 2039337)
FSAR 6.4-7	Licensing Basis Change: Added discussion that pumps are analyzed as degraded to the text of the FSAR/evaluation of components and added new reference. (LIC 2039337)
FSAR 6.4-14	Editorial Change: Added new reference 11. (LIC 2039337)
FSAR 6.5-10	Updated Figure to reflect approved drawing of record.
Chapter 8	
FSAR 8.0-7	Editorial Change: Revised Figure 8-1 that added new F52-7029 breaker with the existing breaker F52-Q303 in the 345kV Line Q303 to Kewaunee. (LIC 2099619)
FSAR 8.1-4	Editorial Change: Revised Figure 8.1-1 that added 345kV Breaker 7026 upstream of Breaker Q303 on the Kewaunee Line. (LIC 2099619)
FSAR 8.5-2	Editorial Change: Added new tie breaker 1B52-19B to the cross-tie between safeguard buses 1B03 and 1B04 and clarified the existing tie breaker 1B52-16C (Unit 1) and 2B52-40C (Unit 2) is tripped automatically upon receiving bus undervoltage or safety injection signals. (LIC 2064865)
FSAR 8.8-6	Editorial Change: Clarified the existing tie breaker 1B52-16C (Unit 1) and 2B52-40C (Unit 2) is tripped automatically upon receiving bus undervoltage or safety injection signals. (LIC 2064865)
FSAR 8.8-8	Licensing Basis Change: Revised 2nd paragraph to read as “Tests are performed to demonstrate assurance that upon the initiation of a start signal the diesel generator will start and assume the required load in the timing sequence listed above. The frequency for performing surveillances required by Technical Specifications will be in accordance with the Surveillance Frequency Control Program (Reference 10),” for the receipt of NRC Safety Evaluation for License Amendments Nos. 253 and 257 . (LIC 2071025)
FSAR 8.8-9	Editorial Change: Added NRC SE dated 7/28/15 as reference 10 for the receipt of NRC Safety Evaluation for License Amendments Nos. 253 and 257 . (LIC 2071025)



<u>Chapter 9</u>	
FSAR 9.3-6	Licensing Basis Change: Replacement of the #1 seal insert on the RCP with a new Westinghouse shutdown seal via EC 277545. (LIC 1999915)
FSAR 9.3-9	Licensing Basis Change: Revised discussion of charging pump and controls to describe the new low suction pressure trip function. (LIC 2082658)
FSAR 9.3-12	Licensing Basis Change: Revised discussion of charging pump and controls to describe the new low suction pressure trip function. (LIC 2082658)
FSAR 9.3-21	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 9.3-30	Updated Figure to reflect approved drawing of record.
FSAR 9.4-5	Editorial Change: Revised the origianl blind flange with a Westinghouse quick opening transfer tube closure via EC 282573. (LIC 2046249)
FSAR 9.4-9	Editorial Change: Revised the origianl blind flange with a Westinghouse quick opening transfer tube closure via EC 282573. (LIC 2046249)
FSAR 9.4-14	Editorial Change: Incorporated Figure 5.1-20 into the Permanent Drawing System. (LIC 2046249)
FSAR 9.6-5	Licensing Basis Change: Revised 1st paragraph to read as "The SW system components are tested and inspected in accordance with Technical Specification surveillane criteria and surveillane frequencies by the Surveillance Frequency Control Program (Reference 10). Testing verifies motor-driven pump operability, and operability of all required valves" and added NRC SE dated 7/28/15 as reference 10 for the receipt of NRC Safety Evaluation for License Amendments Nos. 253 and 257 . (LIC 2071025)
FSAR 9.6-9	Updated Figure to reflect approved drawing of record.
FSAR 9.6-10	Updated Figure to reflect approved drawing of record.
FSAR 9.9-1 through FSAR 9.9-2	Editorial Change: Updated the description of the SFP cooling system and its capabilities. (LIC 2044893)
FSAR 9.9-7	Editorial Change: Added calculatin PGT-2003-1495 to the Reference section. (LIC 2044893)
<u>Chapter 10</u>	
FSAR 10.1-28	Updated Figure to reflect approved drawing of record.
FSAR 10.2-1	Editorial Change: Provided clairification of the safety-related classification of the MDAFW cross-tie piping. (LIC 2088819)



Chapter 10 continued	
FSAR 10.2-8	Licensing Basis Change: Revised 4th paragraph to read as “The AF system components are tested and inspected in accordance with Technical Specification 3.7.5 surveillance criteria and surveillance frequencies by the Surveillance Frequency Control Program (Reference 22). Testing verifies motor-driven pump operability, turbine-driven pump operability including a cold start, and operability of all required automatic valves. Control circuits, starting logic, and indicators are verified operable by their respective functional test,” for the receipt of NRC Safety Evaluation for License Amendments Nos. 253 and 257 . (LIC 2071025)
FSAR 10.2-10	Editorial Change: Added NRC SE dated 7/28/15 as reference 22 for the receipt of NRC Safety Evaluation for License Amendments Nos. 253 and 257 . (LIC 2071025)
FSAR 10.2-10	Editorial Change: Added reference 23 which provided the basis that added the clarification of the safety-related classification of the MDAFW cross-tie piping. (LIC 2088819)
FSAR 10.2-13	Updated Figure to reflect approved drawing of record.
Chapter 11	
FSAR 11.1-18	Updated Figure to reflect approved drawing of record.
FSAR 11.2-25	Updated Figure to reflect approved drawing of record.
FSAR 11.2-30	Updated Figure to reflect approved drawing of record.
Chapter 14	
FSAR 14.1.2-2	Editorial Change: Corrected reference numbers. (LIC 2064578)
FSAR 14.1.7-1	Licensing Basis Change: Revised paragraph regarding the function of the turbine governor valve position limiter. (LIC 1990553)
FSAR 14.1.8-3	Licensing Basis Change: Replacement of the #1 seal insert on the RCP with a new Westinghouse shutdown seal via EC 277545. (LIC 1999915)
FSAR 14.1.8-6	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 14.1.11-3	Licensing Basis Change: Replacement of the #1 seal insert on the RCP with a new Westinghouse shutdown seal via EC 277545 and added new reference. (LIC 1999915)
FSAR 14.2.4-2	Licensing Basis Change: Clairified the SGTR Operator action. (LIC 2109018)
FSAR 14.2.4-3	Licensing Basis Change: Clairified the SGTR Operator action. (LIC 2109018)
FSAR 14.3.1-2	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 14.3.1-5	Editorial Change: Added new reference for Optimized ZIRLO™. (LIC 2064578)



Chapter 14 <u>continued</u>	
FSAR 14.3.1-6	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 14.3.2-4	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 14.3.2-9	Editorial Change: Added new NRC SE regarding the use of optimized ZIRLO™ as reference 9. (LIC 2064578)
FSAR 14.3.2-10	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 14.3.2-11	Licensing Basis Change: Revised for Unit 2 Cycle 35 reload design implementaiton of Optimized ZIRLO. (LIC 2064578)
FSAR 14.3.4-22	Licensing Basis Change: Updated LOCA M&E evaluation against the NSAL-14-2. (LIC 2092524)
<u>Chapter 15</u>	
FSAR 15.2-1	Editorial Change: Deleted the word “all” in front of “Class 1, 2, and 3 pressure-retaining components” to add clarification. (LIC 2105913)
FSAR 15.2-6	Editorial Change: Added Reference 6 to the end of sub-section 15.2.17. (LIC 2105913)
FSAR 15.2-8	Editorial Change: Added Reference 6 to the end of the Reference section to provide a historic basis for the details. (LIC 2105913)
<u>Appendix A.7</u>	
FSAR A.7-1	Licensing Basis Change: Added a specific statement for providing an internal flood relief path and added new protection methods and associated references. (LIC 2002571)
FSAR A.7-2	Licensing Basis Change: Added new section on flood levels and associated references for safe shutdown being the event end point and the basis for the flood levels. (LIC 2002571)
FSAR A.7-3	Licensing Basis Change: Added new protection method, re-phrased , guideline 1 in NRC letter dated 12-10-1974, added Bullet discussing auxiliary feedwater separation, added Bullet discussing vital switchgear separation, added discussion regarding Category 1 seismic SSCs not being considered flood sources, added discussion regarding the main condensers and associated piping and deleted summary statement regarding non-category 1 (seismic) SSCs. (LIC 2002571)
FSAR A.7-3	Editorial Change: Re-located LOOP discussion from A.7.1, added detail to the definition of what sources were evaluated, removed previous listing of evaluated systems, and added reference to the evaluation/calculation which provides more detail. (LIC 2002571)



Appendix A.7 continued	
FSAR A.7-5	Editorial Change: Re-formatted table to match that of recently updated table A.7-2, updated table title, deleted the column listing the flood source, Circulating Water Pump House/Service Water Pump Area: re-statement of information from table A.7-2 for external flooding, and split compound sentence into separate bullets and updated the reference in the second bullet to Reference 28 (Calculation 2014-0007). (LIC 2002571)
FSAR A.7-5	Licensing Basis Change: Circulating Water Pump House/Service Water Pump Area: reduced the number of louvers from 6 to 2 based on the results of calculation 2009-0008. (LIC 2002571)
FSAR A.7-5	Licensing Basis Change: Updated Table A.7-1 that the NVSGR wall is a credited desing design feature to mitigate plant internal flooding. (LIC 2019391)
FSAR A.7-5	Licensing Basis Change: Auxiliary Feedwater Pump Area: Added new discussion bullets. (LIC 2002571)
FSAR A.7-5	Licensing Basis Change: Vital Switchgear Room: Added new discussion bullets, added new discussion regarding door 18, added new discussion regarding door 14, separated this from the bullet above because of the physical difference implemented by EC 282394, added detail to discussion regarding manhole covers, and added the limiting equipment height. (LIC 2002571)
FSAR A.7-5 through FSAR A.7-6	Licensing Basis Change: Changed the design feature for the Emergency Diesel Generator G-01/02 Rooms and and the Vital Switchgear Room. Updated associated references. (LIC 1985139)
FSAR A.7-5 through FSAR A.7-7	License Basis Change: Updated Table A.7-1 for Comprehensive Internal Flooding for Turbine Hall via EC 282394 and Flood Mitigation Strategy-DGB, NVSGR, and HVAC Room via EC 283362. (LIC 2135046)
FSAR A.7-6	Licensing Basis Change: Emergency Diesel Generator G-01/02 Room: Added new discussion bullets and added the limiting equipment height. (LIC 2002571)
FSAR A.7-6	Editorial Change: Computer Room: Replaced "berm" with 8" high curb to provide a more accurate description and created second bullet to discuss Door-075. (LIC 2002571)
FSAR A.7-6	Licensing Basis Change: Control Room: Added details that were discussed in the SER but were not in the FSAR. (LIC 2002571)
FSAR A.7-6	Editorial Change: Auxiliary Building: Deleted existing note 2 as this note added no value to the understanding of plant design. (LIC 2002571)
FSAR A.7-6	Licensing Basis Change: Auxiliary Building: Added new discussion bullet. (LIC 2002571)
FSAR A.7-6	Editorial Change: Tendon Gallery: Removed existing note 2 as this note added no value to the understanding of plant design and added strategy as a header. (LIC 2002571)



Appendix A.7 <u>continued</u>	
FSAR A.7-7	Licensing Basis Change: Documented the internal flooding from a failure of the fire protection piping in the G03/04 building as stated in docketed correspondence. (LIC 2055230)
FSAR A.7-7	Editorial Change: Residual Heat Removal Pump Cubicles: Added strategy as a header. (LIC 2002571)
FSAR A.7-10	Editorial: Added new Reference 10. (LIC 1985139)
FSAR A.7-11	Editorial: Added new Reference 29. (LIC 2019391)
FSAR A.7-12	Editorial Change: Added new References 43, 47 through 52. (LIC 2002571)
FSAR A.7-12	Editorial Change: Added Reference 53 for EC 283362. (LIC 2135046)



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