Progress Energy

Serial: NPD-NRC-2013-017
April 19, 2013

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

SHEARON HARRIS NUCLEAR POWER PLANT, UNITS 2 AND 3
DOCKET NOS. 52-022 AND 52-023
ROADMAP OF CHANGES IN COMBINED LICENSE APPLICATION, REVISION 5

Reference: Letter from Christopher M. Fallon (PEC) to U.S. Nuclear Regulatory Commission, dated April 15, 2013, "Shearon Harris Nuclear Power Plant Units 2 and 3 Submittal of COL Application, Revision 5", Serial: NPD-NRC-2013-012

The purpose of this letter is to provide information supporting the recent Progress Energy revision of the Combined License Application (COLA) for Shearon Harris Nuclear Power Plant, Units 2 and 3 (see referenced letter). Attached is a "roadmap" of the changes included in the April 15, 2013 submittal along with an enclosure providing an explanation of the information contained in the roadmap.

If you have any questions, or need additional information, please contact me at (704) 382-4046.

Sincerely,

Robert H. Kitchen
Director – Licensing
Nuclear Development

Enclosure/ Attachment

cc : U.S. NRC Region II, Regional Administrator
U.S. NRC Resident Inspector, SHNPP Unit 1
Mr. Brian Hughes, U.S. NRC Project Manager
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Shearon Harris Nuclear Power Plant Units 2 and 3
Roadmap of Changes in Combined License Application Revision 5
Explanation by Column in Attachment 1

Column	Explanation
Change ID#	Unique identifier for tracking purposes
COLA	Identifies the change as STD (standard) or HAR specific
COLA Part	Part 1 through Part 11
Chapter	FSAR or ER Chapter
Section	Section/Subsection of the Chapter or Part
Basis for Change	The source of the change
Change Summary	Short description of the change

Change ID#	COLA	COLA Part	Chapter	Section	Basis for Change	Change Summary
Part 1						
HAR-001	HAR	1		01.01	Progress Energy - Duke Energy merger	Revise Section 1.1, "General Information," to replace the second through fourth paragraphs with the paragraph that follows to reflect the Progress Energy-Duke Energy merger, specifically operating companies, service areas, generating capacity and customer base: "On July 2, 2012, a merger occurred between Duke Energy Corporation and Progress Energy, Inc., the holding company of Progress Energy Carolinas, Inc. Through this merger, Duke Energy Corporation became the holding company of Progress Energy, Inc. Progress Energy, Inc. continues to be the holding company of Progress Energy Carolinas, Inc. Following this merger, Duke Energy Corporation, as the ultimate holding company of Progress Energy Carolinas, Inc., is now the largest electric power holding company in the United States with more than $100 billion in total assets. Duke Energy Corporation is duly organized and existing under the laws of the State of Delaware. The company's general office, and principal place of business, is located in Charlotte, North Carolina, and through its subsidiaries, also transacts business on a regular basis in South Carolina, Kentucky, Ohio, Florida, and Indiana. It is an investor-owned corporation focused on electric power and gas distribution operations, and other energy services in both North and South America. Through its regulated electric and gas utility operating companies, Duke Energy Carolinas, Duke Energy Ohio, Duke Energy Indiana, Duke Energy Kentucky, Progress Energy Carolinas and Progress Energy Florida, Duke Energy Corporation operates more than 57,000 MW of regulated electric generation and 8,100 MW of unregulated electric generation in the United States. A diverse fuel mix of nuclear, coal-fired, hydro-electric and combustion-turbine generation allows Duke Energy Corporation to provide this generating capacity to more than 7 million electric and 0.5 million gas customers located in the combined service territories of these operating companies. Duke Energy Corporation is a Fortune 250 company, and its shares are publicly held and listed for trading on the New York Stock Exchange under the symbol DUK."</u>
HAR-002	HAR	1		01.01	Progress Energy - Duke Energy merger	Revise Section 1.1, "General Information," to delete the fifth paragraph cocnerning Progress Energy corporation's applications for new nuclear plants.
HAR-003	HAR	1		01.01.03	Progress Energy - Duke Energy merger	Revise Section 1.1.3, "Description of Business Occupation of Applicant," first paragraph, to reflect the Progress Energy-Duke Energy merger, specifically to describe the merged company; as follows: "Progress Energy, Inc. is a holding company that includes regulated subsidiaries, Progress Energy Carolinas, Inc. (PEC) and Progress Energy Florida, Inc. (PEF). Progress Energy, Inc. is now a wholly-owned subsidiary of Duke Energy Corporation. PEC, the applicant of the HAR 2 and 3 COLs, is primarily engaged in the generation, transmission, distribution, and sale of electricity in portions of North Carolina and South Carolina. PEC serves approximately 1.4 million customers in a territory encompassing over 34,000 square miles including the cities of Raleigh, Wilmington, Fayetteville, and Asheville in North Carolina, and Florence and Sumter in South Carolina. PEC owns and operates the following nuclear units:"
HAR-004	HAR	1		01.01.03	Editorial	Revise Section 1.1.3, "Description of Business Occupation of Applicant," third bullet after the first paragraph from: "• Robinson - The single-unit, 710-MW Robinson Nuclear Plant is located near Hartsville, S.C. This site also includes a coal-fired unit that generates 180 MW and a combustion turbine unit that generates 15 MW." to read: "• Robinson - The single-unit, 710-MW Robinson Nuclear Plant is located near Hartsville, S.C. In addition to this nuclear unit, this site includes a combustion turbine unit that generates 15 MW."
HAR-005	HAR	1		01.01.03	Progress Energy - Duke Energy merger	Revise Section 1.1.3, "Description of Business Occupation of Applicant," to delete the second paragraph and associated bullet that discuss the PEF nuclear plant and only discuss the PEC nuclear plants based on the Progress Energy-Duke Energy merger.
HAR-006	HAR	1		01.01.03	Progress Energy - Duke Energy merger	Revise Section 1.1.3, "Description of Business Occupation of Applicant," third paragraph, to clarify the holding company, Progress Energy, Inc., and to focus on PEC. Revise this paragraph to read: "Progress Energy, Inc. is duly organized and existing under the laws of North Carolina, and is located in Raleigh, NC. As such, it is subject to regulation by the Federal Energy Regulatory Commission (FERC) under the regulatory provisions of the Public Utility Holding Company Act of 2005 (PUHCA 2005). PEC is a regulated public utility and is subject to the regulatory provisions of the North Carolina Utilities Commission (NCUC), the Public Service Commission of South Carolina (SCPSC), the United States Nuclear Regulatory Commission (NRC) and the FERC."

Change ID#	COLA	COLA Part	Chapter	Section	Basis for Change	Change Summary
HAR-007	HAR	1		01.01.03	Progress Energy - Duke Energy merger	Revise Section 1.1.3 to delete the last paragraph.
HAR-008	HAR	1		01.01.04	Progress Energy - Duke Energy merger	Revise Section 1.1.4, "Organization and Management of Applicant," to reflect the Progress Energy-Duke Energy merger by deleting the information currently in Section 1.1.4 and replacing it with a new subsection 1.1.4.1 as follows: 1.1.4.1 Progress Energy Carolinas, Inc. The business of Progress Energy Carolinas, Inc. is conducted by its own Board of Directors, although for internal governance purposes, the Duke Energy Corporation Board of Directors also has approval authority over certain types of transactions. Insert the business address, names and citizenship of the current directors of Progress Energy Carolinas, Inc. Insert the business address, names, current titles and citizenship of the current executive officers and senior nuclear leadership of Progress Energy Carolinas, Inc.
HAR-009	HAR	1		01.01.04	Progress Energy - Duke Energy merger	Insert a new subsection 1.1.4.2 as follows to reflect the Progress Energy - Duke Energy merger: 1.1.4.2 Parent Company Organization 1.1.4.2.1 Duke Energy Corporation The business of Duke Energy Corporation is conducted by the Duke Energy Corporation Board of Directors. Insert the business address, names and citizenship of the current directors of Duke Energy Corporation. Insert the business address, names, current titles and citizenship of the current executive officers of Duke Energy Corporation. 1.1.4.2.2 Progress Energy, Inc. Progress Energy, Inc. is a direct subsidiary of Duke Energy Corporation. Progress Energy, Inc. is the direct parent of Progress Energy Carolinas, Inc. Progress Energy, Inc. is duly organized and existing under the laws of North Carolina, and is located in Raleigh, NC. The business of Progress Energy, Inc. is conducted by its Board of Directors. Insert the business address, names and citizenship of the current directors of Progress Energy, Inc. Insert the business address, names, current titles and citizenship of the current executive officers of Progress Energy, Inc.

Change ID#	COLA	COLA Part	Chapter	Section	Basis for Change	Change Summary
HAR-010	HAR	1		01.01.04	Progress Energy - Duke Energy merger	Insert a new subsection 1.1.4.3 as follows to reflect the Progress Energy - Duke Energy merger: 1.1.4.3 FOREIGN OWNERSHIP, CONTROL OR DOMINATION Progress Energy Carolinas, Inc., is an indirect, wholly owned subsidiary of Duke Energy Corporation. The shares of common stock of Duke Energy Corporation are publicly traded and widely held. The directors and officers of Duke Energy Corporation, Progress Energy, Inc., and Progress Energy Carolinas, Inc. are U. S. citizens. Duke Energy Corporation, Progress Energy, Inc., and Progress Energy Carolinas, Inc. are not owned, controlled, or dominated by any alien, foreign corporation, or foreign government.
HAR-011	HAR	1		01.01.07	Editorial	Add the following new sentence to the end of the first paragraph of Section 1.1.7, "REGULATORY AGENCIES AND LOCAL PUBLICATIONS", for clarification: "As discussed in Section 1.1.3, PEC is also regulated by the Public Service Commission of South Carolina."
HAR-012	HAR	1		01.01.08	Editorial	Revise the first sentence of Section 1.1.8, "RADIOLOGICAL EMERGENCY RESPONSE PLANS", to clarify that the Emergency Plan is submitted in Part 5 of the COLA by revising "part of the COL application" to read "Part 5 of the COL application".
HAR-013	HAR	1		2.02	Progress Energy - Duke Energy merger	Section 2.2, first paragraph, revise to read as follows: "Progress Energy Carolinas, Inc. (PEC) is a wholly-owned subsidiary of Progress Energy, Inc., which is in turn a wholly-owned subsidiary of Duke Energy Corporation. Progress Energy Carolinas, Inc. is an electric utility as defined in 10 CFR 50.2. PEC generates and distributes electricity and recovers the cost of this electricity through cost-of-service based rates established by the North Carolina Public Utility Commission, South Carolina Public Service Commission, and FERC. Thus, as addressed in 10 CFR 50.33(f), estimates of operating costs for the first 5 years of operation are not required to be submitted."
Part 2						
HAR-014	HAR	2	1	01.01.T/T1.1-201	Progress Energy - Duke Energy merger	On Table 1.1-201, Sheet 16 of 24, delete the abbreviation "PGN Progress Energy, Inc." On Sheet 15 of 24, delete the abbreviation "NGG Nuclear Generation Group"
HAR-015	HAR	2	1	01.01.T/T1.1-201	Progress Energy - Duke Energy merger	On Table 1.1-201, Sheet 4 of 24, add the abbreviation "DEC Duke Energy Corporation"
HAR-016	HAR	PT02	FSAR01	01.01.05	2012 Integrated Resource Plan	Update completion and commercial operation dates in accordance with 2012 Integrated Resource Plan. FSAR Section 1.1.5 will be revised to read: "HAR 2 Construction Completion/Fuel Load 2nd Quarter 2027 (or later) Commercial Operation 1st Quarter 2028 (or later) HAR 3 Construction Completion/Fuel Load 4th Quarter 2028 (or later) Commercial Operation 3rd Quarter 2029 (or later) The dates assume a COL is issued in 2014. A site-specific construction plan and startup schedule will be provided to the NRC after issuance of the COL.

Change ID#	COLA	COLA Part	Chapter	Section	Basis for Change	Change Summary
HAR-017	HAR	2	1	01.04.01	Progress Energy - Duke Energy merger	Revise the 2nd and 3rd paragraphs in Section 1.4.1, "APPLICANT - PROGRAM MANAGER" and add a 4th paragraph to reflect the Progress Energy-Duke Energy merger, as follows: "Progress Energy Carolinas, Inc., (PEC) is the applicant for Combined Licenses for Shearon Harris Nuclear Power Plant Units 2 and 3 (HAR 2 and 3) and will own and operate HAR 2 and 3. PEC is a wholly-owned subsidiary of Duke Energy Corporation, an energy company based in Charlotte, North Carolina. PEC provides electricity and related services in portions of North Carolina and South Carolina, and serves more than 1.4 million customers in the region. Duke has over 45 years of experience in the design, construction, and operation of nuclear power stations, and currently has twelve nuclear operating units. Duke Energy Corporation (DEC), the largest electric power company in the United States, supplies and delivers energy to 7.1 million US customers. The company has over 57,000 megawatts of electric generating capacity in the Midwest, Florida, and the Carolinas."
HAR-018	HAR	2	1	01.06.T/T1.6-201	Update for Emergency Plan revision, and QAPD update per NPD-NRC-2013-002	For Emergency Plan, change revision to 4, change document transmittal date to April 2013, and change ADAMS Accession Number to TBD. For QAPD, change title to "Duke Energy Quality Assurance Topical Report for 10 CFR Part 52 Licenses", update revision number to 6; and change document transmittal date to April 2013
HAR-019	HAR	2	1	1.08.T/T1.8-202 01.09.T/T1.9-201, T1.9-203, T1.9-204	Progress Energy - Duke Energy merger	FSAR Tables 1.8-202, 1.9-201, 1.9-203, and 1.9-204 - correct references to FSAR Chapter 13 subsections due to revision of Chapter 13.
HAR-020	HAR	2	1	App 1AA, RG 1.33	Consistency with QAPD	Appendix 1AA, RG 1.33 Replace conformance statements for RG 1.33 with the following (and include a LMA of HAR COL 1.9-1): Criteria Section – General FSAR Position – Exception Clarification/Summary – The QAPD identified in Section 17.5 follows NQA-1 and NEI 06-14A, August 2010, rather than the older standards referenced in Regulatory Guide 1.33
HAR-200	HAR	2	2	ALL	Editorial	Miscellaneous editorial items throughout Chapter 2.

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HAR-201	HAR	2	2	2.5.4.10.1.4	Calculation HAG-4000-XCC-001	Revise section 2.5.4.10.1.4 from: 2.5.4.10.1.4 Annex Building Bearing Capacity "The bearing capacities of the HAR 2 and HAR 3 Annex Buildings (Seismic Category II structures) have been evaluated based on the preliminary static bearing pressure of 0.070 MPa (1460 psf) provided by Westinghouse. For building foundations on compacted granular fill, concrete, or rock, the static FS are significantly greater than 3.0. Confirmation of final static and dynamic allowable bearing pressures for the Annex Buildings will be completed upon final determination of the Annex Building bearing pressures." To read: 2.5.4.10.1.4 Annex Building and Turbine Building Bearing Capacities "The bearing capacities of the HAR 2 and HAR 3 Annex Buildings and the first bay of the Turbine Buildings (seismic Category II structures) have been evaluated based on static and dynamic loads provided by Westinghouse. For the Annex Buildings, the analyses were based on a static bearing pressure of 0.129 MPa (2700 psf) and a dynamic bearing pressure of approximately 0.152 MPa (3175 psf). For the first bay of the Turbine Buildings, the analyses were based on a static bearing pressure of 0.134 MPa (2800 psf) and a dynamic bearing pressure of approximately 0.579 MPa (12,100 psf). For both structures' building foundations (founded on compacted granular fill, concrete, or rock), the static FS are greater than 3.0 and the dynamic FS are greater than 2.0. Confirmation of final static and dynamic FS against allowable bearing pressures for the Annex and Turbine Buildings will be completed upon final determination of the Annex and Turbine Building bearing pressures."
HAR-202	HAR	2	2	2.5.4.10.3.4	Calculations HAG-4000-XCC-002 and HAG-0000-X7C-043	Revise the second paragraph of Subsection 2.5.4.10.3.4 from: "The subgrades and foundations of structures adjacent to the nuclear islands will be constructed to account for differential settlement with the nuclear islands. For adjacent structures founded on rock or concrete fill over rock, the differential settlements within the nuclear islands are not expected to exceed 13 mm (0.5 in.). For adjacent structures founded on granular fill over rock, the differential settlements with the nuclear islands are not expected to exceed 51 mm (2 in.). These differential settlements are within the acceptable range for the AP1000 under both HAR 2 and HAR 3. Once foundation bearing loads for structures adjacent to the nuclear island are finalized, a detailed analysis of differential settlements between the nuclear islands and adjacent structures will be re-assessed." To read: "The subgrades and foundations of structures adjacent to the nuclear islands will be constructed to account for differential settlement with the nuclear islands. For adjacent structures founded on rock or concrete fill over rock, the differential settlements within the nuclear islands are not expected to exceed 13 mm (0.5 in.). For adjacent structures founded on granular fill over rock, the differential settlements with the nuclear islands are not expected to exceed 76 mm (3 in.). These differential settlements are within the acceptable range for the AP1000 under both HAR 2 and HAR 3. These analyses were based on the foundation loads provided by Westinghouse. Once foundation bearing loads for structures adjacent to the nuclear island are finalized, a detailed analysis of differential settlements between the nuclear islands and adjacent structures will be re-assessed."
HAR-203	HAR	2	2	Table 2.4.3-220 Table 2.4.3-224 Table 2.4.3-226 Table 2.4.3-237	Calculation HAG-0000-X7C-003	Revise tables to be consistent with the FSAR text and calculation package HAG-0000-X7C-003, Rev 6. No new information is provided, this change simply makes the text and tables consistent. - Revise "Residual Area" column in FSAR Table 2.4.3-220 to be consistent with calculation package Table 1. - Revise FSAR Table 2.4.3-224 to be consistent with Appendix 4 of the calculation package. - Revise "Q Total", "W.S. Elev", and "E.G.Elev" columns of FSAR Table 2.4.3-226 to be consistent with the Profile Output Table for Option-3 in the calculation package. - Revise FSAR Table 2.4.3-237 table notes to be consistent with calculation package Table 47.
HAR-204	HAR	2	2	Table 2.0-201	Calculations HAG-4000-XCC-002 and HAG-0000-X7C-043	Under the HAR Site Characteristics, revise the Limits of Acceptable Settlement Without Additional Evaluation to: Differential Between Nuclear Island and Turbine Building: < 3.0 inches (projected) Differential Between Nuclear Island and Other Buildings: < 3.0 inches (projected)

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HAR-205	HAR	2	2	2.5.0.4	Consistency	Revise the second sentence of the 8th full paragraph to read "Likewise, the Annex Buildings and the first bay of the Turbine Buildings (Seismic Category II structures) will be founded on sound rock or concrete fill over sound rock, which will have no potential for liquefaction. "
HAR-206	HAR	2	2	2.5.4.2.1.6.3	Consistency	Revise the second sentence of the first paragraph to read: "The existing soil profile will be removed for construction of the nuclear islands (seismic Category I structures) and the adjacent Annex Buildings and the first bay of the Turbine Buildings (seismic Category II structures), as discussed in Subsection 2.5.4.5."
HAR-207	HAR	2	2	T2.0-201	Consistency with Table 2.4.3-238	Under the HAR Site Characteristics, revise the Flood Level maximum water elevation from 259.44 to 259.39.
HAR-022	HAR	2	8	08.02.01	Consistency with DCD Rev 19	Revise the reference in Section 8.2.1 to refer directly to the National Electric Safety Code referenced in the DCD. Specifically, revise the 4th paragraph on page 8.2-2 from: The new HAR 2 and 3 transmission lines are designed to meet NESC C2 2007, "National Electrical Safety Code". To read: The new HAR 2 and 3 transmission lines are designed to meet or exceed the requirements of the ANSI C2 National Electrical Safety Code (DCD Section 8.2.6 Reference 1).
HAR-023	HAR	2	8	08.02.01.01.04	Progress Energy - Duke Energy merger	In the first paragraph of Section 8.2.1.1.4, change "Transmission Operations and Planning Department" to "Transmission Department".
HAR-024	HAR	2	8	08.02.01.04	Progress Energy - Duke Energy merger	In the second paragraph of Section 8.2.1.4, change "Transmission Operations and Planning" to "Transmission Department".
HAR-025	HAR	2	8	08.02.01.04	Progress Energy - Duke Energy merger	Revise the third paragraph of FSAR Subsection 8.2.1.4 to read: An individual is assigned from the HAR engineering organization to serve as the Switchyard System Engineer (SSE) and an individual is assigned from the HAR maintenance organization to serve as the Plant Transmission Activities Coordinator (PTAC). The oversight responsibilities described below are coordinated and extend beyond the switchyard boundary to include the transmission lines, structures, and relaying from the nuclear plant out to and including the first remote circuit breakers at the opposite end of the transmission lines. The responsibilities include, but are not limited to the following: • Serve as the single point of contact for transmission maintenance activities impacting HAR 2 and 3. (PTAC) • Interface with the local transmission area maintenance and Transmission Asset Management personnel. Monitor inspection schedules, results of inspections and tests, equipment material conditions, and maintenance backlogs to ensure that (SSE): - Appropriate inspections and testing are performed on schedule to ensure reliability. - Results are analyzed and appropriately prioritized actions are taken to resolve any negative findings. - Defective equipment is replaced or repaired before reliability is affected. • Serve as the liaison regarding transmission maintenance interfaces between the nuclear plant organizations and other organizations. (PTAC) • Coordinate transmission engineering activities requiring pre-planning and scheduling among various nuclear and non-nuclear organizations including, but not limited to (SSE): - Transmission Engineering - Power System Operations • Provide system engineering oversight of the switchyard, off-site transmission lines through the next remote circuit breakers, and on-site equipment (transformers, circuit breakers, etc.) that Transmission services. (SSE)
HAR-027	HAR	2	11	11.04	Progress Energy - Duke Energy merger	On page 11.4-2, change "Progress Energy" to "Duke Energy"
HAR-028	HAR	2	11	11.05	Progress Energy - Duke Energy merger	On page 11.5-1, change "Progress Energy" to "Duke Energy"

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HAR-030	HAR	2	11	11.05	Progress Energy - Duke Energy merger	On page 11.5-2, change "Progress Energy" to "Duke Energy"
HAR-031	HAR	2	9	09.05.01.08.01.02 09.05.01.08.02.01 09.05.01.08.07 Table 9.5-201	Progress Energy - Duke Energy merger	References to Chapter 13 subsection numbers have been revised due to revision of Chapter 13. Correct corresponding references: 13.1.2.1.3.9 becomes 13.1.2.1.2.9, 13.1.2.1.6 becomes 13.1.2.1.5, and 13.1.1.3.1.3 becomes 13.1.1.3.1.4.
HAR-068	HAR	2	12	Figure 12.4-202	Editorial	Update title block on Figure 12.4-202 to read "Progress Energy Carolinas" instead of "Progress Energy Florida".
HAR-032	HAR	2	13	All	Progress Energy - Duke Energy merger & consistency with QAPD	Revise organization to reflect the merger, that new plant projects will be managed by Nuclear Development organization rather than PM&C organization when performing construction management, and for consistency with QAPD.
HAR-066	HAR	2	13	Table 13.4-201	NPD-NRC-2013-002	Remove "or prior to initiation of post-COL quality related activities, whichever is later" from the Milestone column of item 16 of Table 13.4-201.
HAR-067	HAR	2	13	13.07	Name change for Shaw and alignment with Lee	Replace references to Shaw Stone & Webster (Shaw) with "primary site contractor".
HAR-033	HAR	2	14	14.02.02.01.01	Progress Energy - Duke Energy merger	In Subsection 14.2.2.1.1, first paragraph, revise the first sentence to read as follows: "The PT&O Manager reports directly to the plant manager. The manager in charge of PT&O manages the ITP."
HAR-034	HAR	2	14	14.02.02.01	Progress Energy - Duke Energy merger	In Subsection 14.2.2.1, remove the horizontal line before 14.2.2.1.1 and after 14.2.2.1.5, and also remove the HAR COL 14.4-1 LMA.
HAR-035	HAR	2	14	14.02.03.02.01	Progress Energy - Duke Energy merger	In Subsection 14.2.3.2.1, third paragraph, last sentence, change "VP-Harris Nuclear Plant" to "The plant manager"
HAR-036	HAR	2	14	14.02.03.02.01	Progress Energy - Duke Energy merger	In Subsection 14.2.3.2.1, third paragraph, remove the horizontal lines above/below paragraph and also remove the HAR COL 14.4-4 LMA.
HAR-038	HAR	2	17	17.01	NPD-NRC-2013-002	Update Section 17.1, "QUALITY ASSURANCE DURING THE DESIGN AND CONSTRUCTION PHASES", to reflect the revised Duke fleet QAPD, including implementation schedule. Specifically, revise the first sentence of the last paragraph of Section 17.1 from: The Progress Energy Quality Assurance Program Description Topical Report (NGGM-PM-0033) discussed in Section 17.5 and provided in Part 11 of the COLA will be implemented for HAR 2 and 3 no later than thirty days following the issuance of the HAR 2 and 3 COL, or prior to the initiation of quality related activities following COL issuance, whichever is later. To read: Thirty days following the issuance of the first Duke Energy COL, Progress Energy Carolinas will implement the Duke Energy Quality Assurance Topical Report for 10 CFR Part 52 Licenses, NGGM-PM-0033, as discussed in Section 17.5 and as provided in Part 11 of COLA.

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HAR-039	HAR	2	17	17.05	NPD-NRC-2013-002	Update Section 17.5, "QUALITY ASSURANCE PROGRAM DESCRIPTION - NEW LICENSE APPLICANTS", to reflect the revised Duke fleet QAPD. Specifically, revise the third paragraph of Section 17.5 from: The QAPD is the Progress Energy New Nuclear Plant Development Quality Assurance Program Description Topical Report. To read: The QAPD is NGGM-PM-0033, Duke Energy Quality Assurance Topical Report for 10 CFR Part 52 Licenses.
Part 3						
HAR-042	HAR	3	9	09.02.01.01.01	Progress Energy - Duke Energy merger	Revise "PGN" to "PEC" in the first sentence of Section 9.2.1.1.1, "Conservation Programs".
HAR-043	HAR	3	9	09.03.01.01	Progress Energy - Duke Energy merger	In the fifth paragraph on page 9-48, revise "PGN" to "Progress Energy".
HAR-044	HAR	3	9	09.03 T/T9.3-1	Progress Energy - Duke Energy merger	In the evaluation discussion under #9 on page 9-83, revise "PGN" to "Progress Energy".
HAR-250	HAR	3	ALL	ALL	Editorial	Miscellaneous editorial items throughout all ER chapters.
HAR-251	HAR	3	2	Table 2.7-18 Table 2.7-44	Editorial	Revise date period in header of table from 2/28/1996 to 2/29/1996 to match the correct date of 2/29/1996 as shown in the table titles.
HAR-252	HAR	3	9	T9.3-1	Editorial	Revise Table 9.3-1 and acronym table to remove NGG
HAR-253	HAR	3	6	F6.6-2	Consistency	Revise the figure to show the cooling towers.
Part 4						
HAR-045	HAR	4	5	05.01.01	Progress Energy - Duke Energy merger	In Subsection 5.1.1, replace "Plant General Manager" with "plant manager" in both the first and second paragraphs.
HAR-046	HAR	4	5	05.02.01b	Progress Energy - Duke Energy merger	In Subsection 5.2.1.b, replace "Plant General Manager" with "plant manager".
HAR-047	HAR	4	5	05.02.02d	Progress Energy - Duke Energy merger	In Subsection 5.2.2.d, replace "Manager – Operations or Manager-Shift Operations" with "operations manager or assistant operations manager".
HAR-061	HAR	4	A	GTS 5.1.1 GTS 5.2.1.b	Progress Energy - Duke Energy merger	In GTS 5.1.1 and GTS 5.2.1.b, replace "Plant General Manager" with "plant manager".
HAR-063	HAR	4	Bases	B 3.5	Editorial	On page B3.5.4-7 in Reference #2, "Accident Analyses" should be "Accident Analysis".
Part 5						
No change.						
Part 6						
No change.						

Change ID#	COLA	COLA Part	Chapter	Section	Basis for Change	Change Summary
Part 7						
No change.						
Part 8						
No change.						
Part 9						
HAR-050	HAR	9		9.01	Update of financial information and Progress Energy - Duke Energy merger	Section 9.1 – Revise Section 2.1, 1st bullet and 2nd bullet, PEC Nuclear Financing Plan, to reflect the merger between Progress Energy and Duke Energy and provide updated financial information. This information is withheld under 10 CFR 2.390 and is incorporated in Part 9 of the COLA.
HAR-051	HAR	9		9.01	Update of financial information and Progress Energy - Duke Energy merger	Section 9.1 – Revise Section 2.1, last bullet, from "The latest published Progress Energy Annual Report as of 12/31/2010 is available at https://www.progress-energy.com/assets/www/docs/company/2010arpgn.pdf." to read "The latest published Progress Energy and Duke Energy Annual Reports as of 12/31/11 are available at http://www.duke-energy.com/investors/financials-sec-filings.asp"
Part 10						
HAR-052	HAR	10		LC#04	Consistency with LNP NPD-NRC-2012-039	The text below will be added in COLA Part 10 following License Condition 4.D: E. At least two (2) years prior to scheduled initial fuel load, PEC shall have performed an assessment of emergency response staffing in accordance with NEI 10-05, "Assessment of On-Shift Emergency Response Organization Staffing and Capabilities", Revision 0.
HAR-053	HAR	10		LC#11	NPD-NRC-2012-024; H-0713 response to HAR-RAI-LTR-082	Revise COLA Part 10 to include a license condition to address mitigation stratgies for beyond-design-basis external events. Specifically, add the following to COLA Part 10, Proposed License Conditions (Including ITAAC), into a new License Condition 11 for Fukushima Response Actions: MITIGATION STRATEGIES FOR BEYOND-DESIGN-BASIS EXTERNAL EVENTS Prior to initial fuel load, PEC shall address the following requirements: a. PEC shall develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment and spent fuel pool cooling capabilities following a beyond-design-basis external event. b. These strategies must be capable of mitigating a simultaneous loss of all ac power and loss of normal access to the normal heat sink and have adequate capacity to address challenges to core cooling, containment, and spent fuel pool cooling capabilities at all units on the Harris site. c. PEC must provide reasonable protection for the associated equipment from external events. Such protection must demonstrate that there is adequate capacity to address challenges to core cooling, containment, and spent fuel pool cooling capabilities at all units on the Harris site. d. PEC must be capable of implementing the strategies in all modes. e. Full compliance shall include procedures, guidance, training, and acquisition, staging, or installing of equipment needed for the strategies. PEC shall within one (1) year after issuance of the HAR COL, submit to the NRC for review an overall integrated plan, including a description of how compliance with the requirements described in this license condition will be achieved. PEC shall provide to the NRC an initial status report sixty (60) days following issuance of the HAR COL and at six (6) month intervals following submittal of the overall integrated plan described above which delineates progress made in implementing the requirements of this license condition.

Change ID#	COLA	COLA Part	Chapter	Section	Basis for Change	Change Summary
HAR-054	HAR		10	LC#11	NPD-NRC-2012-024; H-0714 response to HAR-RAI-LTR-082	Revise COLA Part 10 to include a license condition to address reliable spent fuel pool level instrumentation. Specifically, add the following to COLA Part 10, Proposed License Conditions (Including ITAAC), into a new License Condition 11 for Fukushima Response Actions: RELIABLE SPENT FUEL POOL LEVEL INSTRUMENTATION Prior to initial fuel load, PEC will fully implement the following requirements for spent fuel pool level instrumentation. a. The spent fuel pool level instrumentation shall include the following design features: 1. Arrangement: The spent fuel pool level instrument channels shall be arranged in a manner that provides reasonable protection of the level indication function against missiles that may result from damage to the structure over the spent fuel pool. This protection may be provided by locating the safety-related instruments to maintain instrument channel separation within the spent fuel pool area, and to utilize inherent shielding from missiles provided by existing recesses and corners in the spent fuel pool structure. 2. Qualification: The level instrument channels shall be reliable at temperature, humidity, and radiation levels consistent with the spent fuel pool water at saturation conditions for an extended period. 3. Power supplies: Instrumentation channels shall provide for power connections from sources independent of the plant alternating current (ac) and direct current (dc) power distribution systems, such as portable generators or replaceable batteries. Power supply designs should provide for quick and accessible connection of sources independent of the plant ac and dc power distribution systems. On-site generators used as an alternate power source and replaceable batteries used for instrument channel power shall have sufficient capacity to maintain the level indication function until off-site resource availability is reasonably assured. 4. Accuracy: The instrument shall maintain its designed accuracy following a power interruption or change in power source without recalibration. 5. Display: The display shall provide on-demand or continuous indication of spent fuel pool water level.
HAR-054 (cont'd)	HAR		10	LC#11	NPD-NRC-2012-024; H-0714 response to HAR-RAI-LTR-082	b. The spent fuel pool instrumentation shall be maintained available and reliable through appropriate development and implementation of a training program. Personnel shall be trained in the use and the provision of alternate power to the safety-related level instrument channels. PEC shall within one (1) year after issuance of the HAR COL, submit to the NRC for review an overall integrated plan, including a description of how compliance with the requirements described in this license condition will be achieved. PEC shall provide to the NRC an initial status report sixty (60) days following issuance of the HAR COL and at six (6) month intervals following submittal of the overall integrated plan described above which delineates progress made in implementing the requirements of this license condition

Change ID#	COLA	COLA Part	Chapter	Section	Basis for Change	Change Summary
HAR-055	HAR	10		LC#11	NPD-NRC-2012-024; H-0715 response to HAR-RAI-LTR-082	Revise COLA Part 10 to include a license condition to address emergency planning communications and staffing. Specifically, add the following to COLA Part 10, Proposed License Conditions (Including ITAAC), into a new License Condition 11 for Fukushima Response Actions: a. Communications At least two (2) years prior to scheduled initial fuel load, PEC shall have performed an assessment of onsite and offsite communications systems and equipment required during an emergency event to ensure communications capabilities can be maintained during prolonged station blackout conditions. The communications capability assessment will be performed in accordance with NEI 12-01, "Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities", Revision 0. At least one hundred eighty (180) days prior to scheduled initial fuel load, PEC shall complete implementation of corrective actions identified in the communications capability assessment described above, including any related emergency plan and implementing procedure changes and associated training. b. Staffing At least two (2) years prior to scheduled initial fuel load, PEC shall have performed assessments of the on-site and augmented staffing capability to satisfy the regulatory requirements for response to a multi-unit event. The staffing assessments will be performed in accordance with NEI 12-01, "Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities", Revision 0. At least two (2) years prior to scheduled initial fuel load, PEC shall revise the HAR Emergency Plan to include the following: • Incorporation of corrective actions identified in the staffing assessments described above. • Identification of how the augmented staff will be notified given degraded communications capabilities.
Part 11						
HAR-058	HAR	11		QAPD	NPD-NRC-2013-002	On page i update the QAPD revision to "Revision 6"
HAR-059	HAR	11		QAPD	NPD-NRC-2013-002	Include updated QAPD in COLA Part 11. QAPD revised to be a common fleet QAPD for Duke Energy new nuclear plants, and employs the latest approved version of NEI 06-14A.
HAR-060	HAR	11		QAPD	SUPERCEDED BY NPD-NRC-2013-002 NPD-NRC-2012-034	Include Revision 5 of QAPD in COLA Part 11. Revision 5 reflects the organizational structure of the new Duke Energy Company as a result of the merger between Progress Energy and Duke Energy. The changes made in this revision are editorial in nature and made to reflect changes in organizational position titles, organizational structure, and reporting relationships for organizations responsible for the development and deployment of new nuclear generating plants.
HAR-064	HAR	11		SNM MCA	Progress Energy - Duke Energy merger; title changes	On page i update the SNM MCA revision to "Revision 1"
HAR-065	HAR	11		SNM MCA	Progress Energy - Duke Energy merger; title changes	Include updated SNM MCA in COLA Part 11.