Progress Energy

Serial: NPD-NRC-2012-005
February 8, 2012

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

LEVY NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 52-029 AND 52-030
ROADMAP OF CHANGES IN COMBINED LICENSE APPLICATION, REVISION 4

Reference: Letter from John Elnitsky (PEF) to U.S. Nuclear Regulatory Commission, dated February 2, 2012, "Levy Nuclear Plant Units 1 and 2 Submittal of COL Application, Revision 4", Serial: NPD-NRC-2012-002

Ladies and Gentlemen:

The purpose of this letter is to provide information supporting the recent Progress Energy revision of the Combined License Application (COLA) for Levy Nuclear Plant, Units 1 and 2 (see referenced letter). Attached is a "roadmap" of the changes included in the February 2, 2012 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 (919) 546-6992.

Sincerely,

Robert Kitchen
Manager – Nuclear Plant Licensing
New Generation Programs & Projects

Enclosure/Attachment

cc : U.S. NRC Region II, Regional Administrator
Mr. Brian Anderson, U.S. NRC Project Manager
Mr. Doug Bruner, U. S. NRC Environmental Project Manager

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Levy Nuclear Plant Units 1 and 2
Roadmap of Changes in Combined License Application Revision 4
Explanation by Column in Attachment 1

Column	Explanation
Change ID#	Unique identifier for tracking purposes
COLA	Identifies the change as STD (standard) or LNP specific
COLA Part	Part 1 (PT01) through Part 11 (PT11)
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 2						
LNP-045	LNP	2	1	01.09.T/T1.9-201	NPD-NRC-2011-082, L-0996 response	Revise Part 2, FSAR Chapter 1, Table 1.9-201 to add the following Regulatory Guide: "1.221, Design-Basis Hurricane and Hurricane Missiles for Nuclear Power Plants (Rev. 0, October 2011)" with FSAR Subsection locations of "3.3.2.1, 3.5.1.4, 3.5.2, Table 3.5-202" – this change has a LMA of LNP COL 1.9-1.
LNP-046	LNP	2	1	01.AA RG 1.221	NPD-NRC-2011-082, L-0996 response	Revise Part 2, FSAR Chapter 1, Appendix 1AA, DIVISION 1 – Power Reactors to add the following: "Regulatory Guide 1.221, Rev. 0, 10/11 - Design-Basis Hurricane and Hurricane Missiles for Nuclear Power Plants" Under Criteria, insert "General" and under FSAR Position insert "Conforms." This change has a LMA of LNP COL 1.9-1.
LNP-043	LNP	2	2	02.03.01.02.07.06	Errata to conform this information to the R3 NPD-NRC-2011-056, L0939 response	Revise the text of FSAR Subsection 2.3.1.2.7.6 from: This DCD site parameter is represented by a minimum dry bulb temperature of -10°F, excluding the lowest 1 percent of values. The Minimum Normal temperatures in Table 2.3.1-210, which are based on 99.6-percent annual exceedance temperatures, are well above the DCD site parameter of -10°F dry bulb. The lowest observed Minimum Normal dry bulb temperature at any of the observing stations is only 24°F (Tallahassee). To read: This DCD site parameter is represented by a minimum dry bulb temperature of 10°F. The Minimum Normal temperatures in Table 2.3.1 210, which are based on 99.6-percent annual exceedance temperatures, are well above the DCD site parameter of -10°F dry bulb. The lowest observed Minimum Normal dry bulb temperature at any of the observing stations is only 24°F (Tallahassee).
LNP-017	LNP	2	2	Reference 2.3-232	Editorial corrections to references	Reference previously provided with Rev 1. FSAR citation should state ".html" instead of ."htm"
LNP-018	LNP	2	2	Reference 2.3-233	Editorial corrections to references	Reference previously provided with Rev 1. FSAR citation should state ".html" instead of ."htm"
LNP-019	LNP	2	2	Reference 2.3-234	Editorial corrections to references	Reference previously provided with Rev 1. FSAR citation should state ".html" instead of ."htm"
LNP-020	LNP	2	2	Reference 2.3-235	Editorial corrections to references	Reference previously provided with Rev 1. FSAR citation should state ".html" instead of ."htm"
LNP-021	LNP	2	2	Reference 2.3-236	Editorial corrections to references	Reference previously provided with Rev 1. FSAR citation should state ".html" instead of ."htm" - verify with Dave W. if we should add to Rev 4 roadmap.
LNP-042	LNP	2	2	02.04.06	Editorial corrections to references	Reference 2.4.6-230: Text "draft manuscript, 2011" is replaced with "report prepared by Center for Applied Coastal Research, University of Delaware, Newark, 2011" Reference 2.4.6-231: Text "submitted to" and "June" is deleted from entry Reference 2.4.6-234: Text "Manuscript in preparation for" is deleted from entry
LNP-022	LNP	2	2	Reference 2.5.1-331	Editorial corrections to references	Add missing 2 names in the author list from the document (marked in red): Scott, T.M., K.M. Campbell, F.R. Rupert, J.D. Arthur, R.C. Green, G.H. Means, T.M. Missimer, J.M. Lloyd, J.W. Yon, and J.G. Duncan, "Geologic Map of the State of Florida," Florida Geological Survey Map Series 146, scale approximately 1:1,000,000, 2001. Revised 2006, D. Anderson. Note same reference and same issues for 2.5.1-331, 2.5.1-366, 2.5.3-218, and 2.5.3-227.
LNP-023	LNP	2	2	Reference 2.5.1-335	Editorial corrections to references	Arthur, J.D., **C. Fischler., C. Kromhout.,** J.M. Clayton, G.M.Kelley, R.A. Lee, L. Li, M. O'Sullivan, R.C. Green, and C.L. Werner.......**Delete extra periods after Fischler and Kromhout in citation (column B).** Same as 2.5.1-335, 2.5.1-370 and 2.5.3-217.
LNP-024	LNP	2	2	Reference 2.5.1-338	Editorial corrections to references	Add missing "s" at end of title: "A Revised Seismotectonic Framework for the Charleston, South Carolina Earthquakes,"
LNP-025	LNP	2	2	Reference 2.5.1-343	Editorial corrections to references	The page range should be pp. 11-18, not 11-118. The document uses an "I" in front of the page numbers making it appear as I11-I18. Hamilton, R. M., J.C. Behrendt, and H.D. Ackermann, "Land Multichannel Seismic-Reflection Evidence for Tectonic Features near Charleston, South Carolina," in Gohn, G.S., ed., Studies Related to the Charleston, South Carolina, Earthquake of 1886—Tectonics and Seismicity: U.S. Geological Survey Professional Paper 1313, 1983, pp. 11 - 118.
LNP-026	LNP	2	2	Reference 2.5.1-358	Editorial corrections to references	Add clarification for the citation (remove full page numbers, and extra dates, etc.): Roberts, D.L., Z. Jacobs, P. Karkanas, and C.W. Marean, "Onshore Expression of Multiple Orbitally Driven Late Quaternary Marine Incursions on the Ultra-stable Southern South African Coast," Quaternary International 167-168 Supplement, July 2007, pp. 345. Poster presented at the International Quaternary Association (INQUA) 2007 Congress.
LNP-027	LNP	2	2	Reference 2.5.1-359	Editorial corrections to references	If desired, change period after 1977 to a comma.

Change ID#	COLA	COLA Part	Chapter	Section	Basis for Change	Change Summary
LNP-028	LNP	2	2	Reference 2.5.1-361	Editorial corrections to references	Capitalize "thesis." This reference is also 2.5.1-330 where thesis is capitalized.
LNP-029	LNP	2	2	Reference 2.5.1-366	Editorial corrections to references	Add missing 2 author names: Scott, T.M., K.M. Campbell, F.R. Rupert, J.D. Arthur, R.C. Green, G.H. Means, T.M. Missimer, J.M. Lloyd, J.W. Yon, and J.G. Duncan, "Geologic Map of the State of Florida," Florida Geological Survey Map Series 146, scale approximately 1:1,000,000, 2001. Revised 2006, D. Anderson. Note same reference for 2.5.1-331, 2.5.1-366, 2.5.3-218, and 2.5.3-227.
LNP-030	LNP	2	2	Reference 2.5.1-370	Editorial corrections to references	Arthur, J.D., **C. Fischler., C. Kromhout.,** J.M. Clayton, G.M.Kelley, R.A. Lee, L. Li, M. O'Sullivan, R.C. Green, and C.L. Werner.......**Extra periods after Fischler and Kromhout in citation (column B).** Same as 2.5.1-335, 2.5.1-370 and 2.5.3-217.
LNP-031	LNP	2	2	Reference 2.5.1-373	Editorial corrections to references	Capitalize the "c". Means, H., Personal Communication via email, May 28, 2009.
LNP-032	LNP	2	2	Reference 2.5.1-376	Editorial corrections to references	Add via email to referrence.
LNP-033	LNP	2	2	Reference 2.5.1-377	Editorial corrections to references	Add via email to referrence.
LNP-034	LNP	2	2	Reference 2.5.2-210	Editorial corrections to references	Delete extra period left at end of entry.
LNP-035	LNP	2	2	Reference 2.5.2-225	Editorial corrections to references	The date of the citation should be 2008, not 2007. " .... accessed March 27, 2008."
LNP-036	LNP	2	2	Reference 2.5.3-217	Editorial corrections to references	Delete extra periods after Fischler and Kromhout in citation. Same as 2.5.1-335, 2.5.1-370 and 2.5.3-217.
LNP-037	LNP	2	2	Reference 2.5.3-218	Editorial corrections to references	Add missing 2 author names: Scott, T.M., K.M. Campbell, F.R. Rupert., J.D. Arthur, R.C. Green, G.H. Means, T.M. Missimer, J.M. Lloyd, J.W. Yon, and J.G. Duncan, "Geologic Map of the State of Florida," Florida Geological Survey Map Series 146, scale approx. 1:1,000,000, 2001. Revised 2006, D. Anderson. Same issue for 2.5.1-331, 2.5.1-366, 2.5.3-218, and 2.5.3-227.
LNP-038	LNP	2	2	Reference 2.5.3-225	Editorial corrections to references	"s" after communcations not needed; Revise to read: Upchurch, S.B., Personal Communication via email, June 12, 2009.
LNP-039	LNP	2	2	Reference 2.5.3-227	Editorial corrections to references	Add missing 2 author names: Scott, T.M., K.M. Campbell, F.R. Rupert., J.D. Arthur, R.C. Green, G.H. Means, T.M. Missimer, J.M. Lloyd, J.W. Yon, and J.G. Duncan, "Geologic Map of the State of Florida," Florida Geological Survey Map Series 146, scale approx. 1:1,000,000, 2001. Revised 2006, D. Anderson. Same issue for 2.5.1-331, 2.5.1-366, 2.5.3-218, and 2.5.3-227.
LNP-040	LNP	2	2	02.05.01.02.05.03	Editorial correction from Draft SER review by AMEC and CH2M Hill	Delete the word "conjugate" in the last sentence of the 2nd paragraph of Section 2.5.1.2.5.3.
LNP-041	LNP	2	3	TOC	Editorial	In the Table of Contents in Chapter 3, there needs to be a line added between the entries for Section 3.7 and 3.7.1.1.1 to be consistent with the rest of the TOC.
LNP-013	LNP	2	3	03.03.02.01	NPD-NRC-2011-082, L-0996 response	1) Add the following paragraph at end of Subsection 3.3.2.1. The 10-7 annual non exceedance probability hurricane wind speed of 195 mph at the LNP site based on Regulatory Guide 1.221 is bounded by the design tornado wind speed given in DCD Subsection 3.3.2.1.
LNP-014	LNP	2	3	03.05.01.04	NPD-NRC-2011-082, L-0996 response	2) Add new Subsection 3.5.1.4 with LMAs of LNP COL 3.3-1, LNP COL 3.5-1 3.5.1.4 MISSILES GENERATED BY NATURAL PHENOMENON Add the following text to the end of DCD Subsection 3.5.1.4. Hurricane missiles are defined in accordance with Regulatory Guide 1.221, October 2011. The hurricane missile parameters considered for the LNP site are summarized in Table 3.5-202.
LNP-015	LNP	2	3	03.05.T/T3.5-202	NPD-NRC-2011-082, L-0996 response	3) Add new Table 3.5-202 (see Attachment 19.75 from NPD-NRC-2011-082

Change ID#	COLA	COLA Part	Chapter	Section	Basis for Change	Change Summary
LNP-016	LNP	2	3	03.05.02	NPD-NRC-2011-082, L-0996 response	4) Add new Subsection 3.5.2. 3.5.2 PROTECTION FROM EXTERNALLY GENERATED MISSILES Add the following text to the end of DCD Subsection 3.5.2. Hurricane wind and missile velocities are based on an annual non exceedance probability of 10 7, the same as that for tornados in Regulatory Guide 1.76 Revision 1. Thus, using the tornado missile structural acceptance criteria for the hurricane winds and missiles evaluation is appropriate. The comparison between the DCD Tier 1 Table 5.0-1 tornado generated missile parameters and the Regulatory Guide 1.221, October 2011 (RG 1.221) based LNP site-specific hurricane generated missile parameters are summarized in Table 3.5-202. The hurricane generated missile velocities are based on maximum hurricane wind speed of 195 mph at the LNP site, using the figures and tables in RG 1.221. The LNP site-specific hurricane generated missiles evaluation can be summarized as follows: • For the 1-in steel sphere, the DCD Tier 1 Table 5.0-1 velocity for tornado generated missiles bounds the hurricane generated missile. Thus, no additional evaluation is required. • For the 6.625-in. diameter pipe missile, the LNP site specific hurricane generated missile horizontal velocity is 93 mph. For this missile the minimum concrete (f'c=4,000 psi) thickness required to prevent penetration or scabbing is 17 inches. The LNP site specific hurricane generated missile vertical velocity is 58 mph. For this missile the minimum concrete (f'c=4,000 psi) thickness required to prevent penetration or scabbing is less than 13 inches. As stated in DCD Subsection 3.5.3, the minimum thicknesses of the nuclear island exterior walls above grade and roof is 24 inches and 15 inches respectively. The minimum concrete f'c of 4,000 psi is used for LNP nuclear island structures per DCD Subsection 3.8.4.6.1.1. For impact, the energy of the 8 inch shell tornado missile specified in DCD Tier 1 Table 5.0-1 bounds the energy of the corresponding LNP site specific 6.625 inch pipe missile. Thus, the LNP nuclear island is adequately protected against the 6.625-in. diameter pipe hurricane generated missile. • For the 4,000 lbs automobile missile, the LNP site specific hurricane generated missile vertical velocity is 58 mph. This is bounded by the DCD Tier 1 Table 5.0-1 tornado generated automobile missile vertical velocity of 74 mph and no further evaluation is required. For the 4,000 lbs automobile missile, the LNP site specific hurricane generated missile horizontal velocity is 120 mph. The 120 mph automobile horizontal missile velocity is greater than the DCD Tier 1 Table 5.0-1 tornado generated automobile missile horizontal missile velocity of 105 mph. Thus, for the hurricane generated automobile horizontal missile, an evaluation was performed to determine whether the LNP nuclear island exterior walls are adequate to withstand the effect of the automobile missile impact together with the 195 mph hurricane winds. This evaluation used the same methodology that was used for evaluation of the tornado generated automobile missile in DCD Subsection 3.5.2. Based on the evaluation, it was concluded that the LNP nuclear island is adequately protected against the hurricane generated automobile missile impact.
LNP-001	LNP	2	10	10.04.F/F10.4-201	NPD-NRC-2011-081, L-0995 response	Revised Figure 10.4-201 to show vacuum breaker location on the blowdown line and correctly show tie-ins for WWS and WLS

Change ID#	COLA	COLA Part	Chapter	Section	Basis for Change	Change Summary
LNP-002	LNP	2	11	11.02.01.02.04	NPD-NRC-2011-081, L-0995 response	Revise Subsection 11.2.1.2.4 from: "The exterior radwaste discharge piping is enclosed within a guard pipe and monitored for leakage. The radwaste discharge piping connects to the cooling tower blowdown piping. The double wall radwaste discharge piping terminates at this connection. Dilution of the radwaste with cooling tower blowdown occurs at this connection. Beyond this point of connection, the cooling tower blowdown piping is singlewalled, buried and constructed of High Density Polyethylene. Downstream of the radwaste discharge connection will be one vent valve on each blowdown line. The vents shall be capped and locked closed to prevent inadvertent operation and are capable of manual operation as required for pump startup. The radwaste discharge line will be isolated during pump startup. As required during pump startup, personnel will be present at the vent valves to allow air to escape and then to close the valve when the line fills with water. Any spillage shall be contained and properly managed in accordance with Radiation Protection and ALARA Program requirements. Leak detection of the cooling tower and radwaste mixture will be accomplished by ground water monitoring and periodic walk down of the vent valves in accordance with NEI 08-08A. This reduces the potential for undetected leakage from this discharge to the environment to support compliance with 10 CFR 20.1406. The cooling tower blowdown with the diluted radwaste is discharged to the Crystal River Energy Complex discharge canal." To Read: "The exterior radwaste discharge piping is enclosed within a guard pipe and monitored for leakage. The radwaste discharge piping connects to the cooling tower blowdown piping. The double wall radwaste discharge piping terminates at this connection. Dilution of the radwaste with cooling tower blowdown occurs at this connection. Upstream of the connection point, at the high point on the system, two vacuum breakers exist on the blowdown line to preclude water hammer during pump shutdown and startup and ensure the continued integrity of the line. The vacuum breaker location is shown on Figure 10.4-201; this location ensures liquid radwaste always remains downstream of the vacuum breakers. Planned liquid radwaste releases are only executed with dilution flow established either from the blowdown or Salt Water Sub-System of the Raw Water System. Beyond this point of connection, the cooling tower blowdown piping is singlewalled, buried and constructed of High Density Polyethylene. Downstream of the radwaste discharge connection will be one vent valve on each blowdown line. The vents shall be capped and locked closed to prevent inadvertent operation and are capable of manual operation as required for pump startup. The radwaste discharge line will be isolated during pump startup. As required during pump startup, personnel will be present at the vent valves to allow air to escape and then to close the valve when the line fills with water. Any spillage shall be contained and properly managed in accordance with Radiation Protection and ALARA Program requirements. Leak detection of the cooling tower and radwaste mixture will be accomplished by ground water monitoring and periodic walk down of the vent valves in accordance with NEI 08-08A. This reduces the potential for undetected leakage from this discharge to the environment to support compliance with 10 CFR 20.1406. The cooling tower blowdown with the diluted radwaste is discharged to the Crystal River Energy Complex discharge canal."
LNP-044	LNP	2	13	13.04.T/T13.4-201	Errata to correct LMA	Revise LMA for COLA, Item 16 of Table 13.4-201 from "LNP COL 13.4-201" to "LNP COL 13.4-1."
LNP-003	LNP	2	17	17.04.07.01.06	NPD-NRC-2011-080, L-0992 response	9) Add new Subsection 17.4.7.1.6 with a LMA of LNP SUP 17.4-1 "17.4.7.1.6 Site-Specific SSCs to be Included in D-RAP Table 17.4-201 lists the site-specific SSC (RCC bridging mat) included in the D-RAP. The rationale for inclusion of the SSC and the risk insights and assumptions are also described in the table."
LNP-004	LNP	2	17	17.04.T/T17.4-201	NPD-NRC-2011-080, L-0992 response	10) Add new Table 17.4-201 contained in the L-0992 response with a LMA of LNP SUP 17.4-1
LNP-005	LNP	2	19	19.55.06.03	NPD-NRC-2011-080, L-0992 response	1) Revise last sentence of the 3rd paragraph of Subsection 19.55.6.3 Site-Specific Seismic Margin Analysis from: "Thus, liquefaction potential of soil beyond the nuclear island perimeter which will be left in place will not lower the HCLPF values calculated for the certified design." To read: "Thus, liquefaction potential of soil beyond the nuclear island perimeter which will be left in place has the potential to drive the plant level HCLPF; however the soil liquefaction HCLPF exceeds the 1.67*GMRS goal for the plant level HCLPF."
LNP-006	LNP	2	19	19.55.06.03	NPD-NRC-2011-080, L-0992 response	2) Revise last sentence of the 4th paragraph of Subsection 19.55.6.3 Site-Specific Seismic Margin Analysis from: "Thus, there is no adverse Seismic Category II/I interaction between the NI and the adjacent buildings that would lower the HCLPF values calculated for the certified design." To read: "Thus, Seismic Category II/I interaction between the NI and the adjacent buildings has the potential to drive the plant level HCLPF; however the HCLPF for Seismic Category II/I interaction between the NI and the adjacent buildings exceeds the 1.67*GMRS goal for the plant level HCLPF."

Change ID#	COLA	COLA Part	Chapter	Section	Basis for Change	Change Summary
LNP-007	LNP	2	19	19.55.06.03	NPD-NRC-2011-080, L-0992 response	3) Add the following paragraph after the 4th paragraph of Subsection 19.55.6.3 Site-Specific Seismic Margin Analysis: "The LNP RCC bridging mat is designed to span the postulated (conservative) design basis karst void of 10 ft. The failure of the RCC bridging mat can result in displacement of the AP1000 nuclear island foundation in excess of the maximum 6 in. displacements specified in DCD Tier 1 Table 5.0-1. In the AP1000 PRA-based Seismic Margin Assessment, the RCC bridging mat failure is conservatively assumed to fall within the gross structural collapse event modeled in the hierarchical event tree discussed in DCD Section 19.55. As gross structural collapse is assumed to directly lead to core damage, failure of the RCC bridging mat has the potential to drive the plant level high confidence low probability of failure (HCLPF) value. The HCLPF capacity of the RCC mat was calculated as 0.12g using the conservative deterministic failure margin (CDFM) methodology of Reference 19.55.7-201. The 0.12g HCLPF capacity of the RCC bridging mat is 1.76 times the LNP site-specific GMRS peak ground acceleration; this exceeds the overall plant HCLPF acceptance criteria of 1.67*GMRS. Table 19.55-201 summarizes the HCLPF capacities of the LNP site-specific design features (e.g., RCC bridging mat, potential against soil liquefaction, and seismic category II/I interaction between the nuclear island and the adjacent buildings)."
LNP-008	LNP	2	19	19.55.06.03	NPD-NRC-2011-080, L-0992 response	4) Revise 5th paragraph (now 6th paragraph) of Subsection 19.55.6.3 Site-Specific Seismic Margin Analysis from: "Thus, it can be concluded that the Seismic Margin Assessment analysis documented in Section 19.55 is applicable to the LNP site." To read: "Thus, it can be concluded that the Seismic Margin Assessment analysis documented in Section 19.55 is applicable to the LNP site. Exceeding the HCLPF capacities for soil liquefaction and Seismic Category II/I interaction effects of buildings adjacent to the nuclear island will not affect the plant level HCLPF capacity. The RCC bridging mat HCLPF capacity, while potentially driving the plant-level HCLPF, exceeds the plant level HCLPF goal of 1.67*GMRS."
LNP-009	LNP	2	19	19.55.07	NPD-NRC-2011-080, L-0992 response	5) Add new Subsection 19.55.7 as follows: "19.55.7 REFERENCES Add the following information at the end of DCD Subsection 19.55.7: 201. EPRI Report No. NP-6041-SL, "A Methodology for Assessment of Nuclear Power Plant Seismic Margin", Revision 1, August 1991."
LNP-010	LNP	2	19	19.55.T/T19.55-201	NPD-NRC-2011-080, L-0992 response	6) Add new Table 19.55-201, HCLPF Capacities for LNP Site Specific Design Features, with LMA of LNP COL 19.59.10-6, as shown in attachment 19-75 from L-0992 response
LNP-011	LNP	2	19	19.59.10.5	NPD-NRC-2011-080, L-0992 response	7) Add the following paragraphs to the end of Subsection 19.59.10.5 "In the AP1000 PRA-based Seismic Margin Assessment (SMA), the RCC bridging mat failure is conservatively assumed to fall within the gross structural collapse event modeled in the hierarchical event tree discussed in DCD Section 19.55. As gross structural collapse is assumed to directly lead to core damage, failure of the RCC bridging mat has the potential to drive the plant level high confidence low probability of failure (HCLPF) capacity. The assessment of risk significance of the LNP RCC bridging mat is based on the assumption that events that which result in demand beyond the CDFM HCLPF capacityies of the RCC bridging mat will lead to, gross structural collapse occurs. A more realistic assessment of is that an event beyond the conservative deterministic failure mode (CDFM) HCLPF capacity for the RCC bridging mat may result in some cracking within the RCC bridge mapbridging mat which in turn may result in limited damage to the NI structures. Thus, exceeding the CDFM HCLPF capacity may would only have a limited effect on the NI structure performance. The CDFM HCLPF capacity for soil liquefaction potential is based on no liquefaction potential for the LNP 10^{-5} UHRS. A seismic event larger than the 10^{-5} UHRS seismic event is required for soil liquefaction. For the larger event, liquefaction will be confined to isolated areas under the adjacent Turbine and Annex buildings and may result in damage to these buildings and which in turn may result in limited damage to the NI structures. For Seismic Category II/I interaction between the nuclear island and the adjacent buildings the CDFM HCLPF capacity is based on calculated less than 1 in. relative displacements between the NI and the adjacent buildings for the LNP 10^{-5} UHRS of less than one (1) in. A Ttwo (2) in. gap is provided between the NI and adjacent building foundations. A seismic event larger than the 10-5 UHRS seismic event is required for the relative displacement between the NI and the adjacent structures to exceed the 2 in. gap provided. For the larger event, impact between the NI and the adjacent Turbine and Annex buildings would occur and may result in some local damage to the NI structure. The seismic interaction between the Turbine Building and the NI was evaluated as discussed in DCD Subsection 19.55.2.2.6 and it was determined that the results of the seismic margin assessment, the plant HCLPF capacity, and the insights derived from the seismic margin assessment are not affected. For SMA, the Annex Building and the Radwaste Building are assumed to have failed as described in DCD Subsection 19.55.3.3. Thus, exceeding the CDFM HCLPF capacity for soil liquefaction or for Seismic Category II/I interaction between the nuclear island and the adjacent buildings will not affect the plant level HCLPF capacity. Table 19.59-201 summarizes the PRA-based insight for the RCC bridging mat (site-specific design feature). "
LNP-012	LNP	2	19	19.59.T/T19.59-201	NPD-NRC-2011-080, L-0992 response	8) Add new Table 19.59-201, PRA-Based Insights for Site-Specific SSCs, with a LMA of LNP COL 19.59.10-6, as shown in attachment 19-75 from L-0992 response