

Appendix A: Commitment Listing

During the review of the RNP LRA by the NRC staff, the applicant made commitments to provide aging management programs (AMPs) to manage aging effects of structures and components (SCs) prior to the period of extended operation. The following table lists these commitments, along with the implementation schedule and the source of the commitment.

ITEM NUMBER	COMMITMENT	UPDATED FINAL SAFETY ANALYSIS REPORT (UFSAR) SUPPLEMENT LOCATION	IMPLEMENTA- TION SCHEDULE	SOURCE
1. Quality Assurance Program	Quality Assurance Program. Existing program is credited. See note below.	A.3.1		
2. 10 CFR 54.37(b) Requirements	Upon issuance of the renewed license, guidance will be incorporated into administrative control procedures that manage the RNP configuration control process to ensure that the requirements of 10 CFR 54.37(b) are met.	A.3.1	Following issuance of renewed license	Request for Additional Information (RAI) 2.1.1-2

3. NUREG-1801 GALL Report	Prior to the period of extended operation, a statement will be incorporated into the UFSAR Supplement description of the programs to document consistency of RNP AMP with programs defined in NUREG-1801, "Generic Aging Lessons Learned (GALL) Report." For RNP programs that are consistent with NUREG-1801, the program description will be revised to state "This program is consistent with the corresponding program described in the GALL Report."	A.3.1	Prior to the period of extended operation	RAI B.1-1
4. ASME Section XI, Subsection IWB, IWC, and IWD Program	ASME Section XI, Subsection IWB, IWC, and IWD Program. Existing program is credited. No changes required. See note below.	A.3.1.1		
5. Water Chemistry Program	Water Chemistry Program. Existing program is credited. No changes required. See note below.	A.3.1.2		
6. Reactor Head Closure Studs Program	Reactor Head Closure Studs Program. Existing program is credited. No changes required. See note below.	A.3.1.3		
7. Steam Generator Tube Integrity Program	Steam Generator Tube Integrity Program. Existing program is credited. No changes required. See note below.	A.3.1.4		

8. Closed-Cycle Cooling Water System Program	Closed-Cycle Cooling Water System Program. Existing program is credited. No changes required. See note below.	A.3.1.5		
9. ASME Section XI, Subsection IWF Program	ASME Section XI, Subsection IWF Program. Existing program is credited. No changes required. See note below.	A.3.1.6		
10. 10 CFR 50, Appendix J Program	10 CFR 50, Appendix J Program. Existing program is credited. See note below.	A.3.1.7		
11. Flux Thimble Eddy Current Inspection Program	Flux Thimble Eddy Current Inspection Program. Existing program is credited. See note below.	A.3.1.8		
12. Fire Protection Program	The Fire Protection Program will be enhanced to note that concrete surface inspections performed under structures monitoring procedures are credited for inspection of fire barrier walls, ceilings, and floors.	A.3.1.9	Prior to the period of extended operation	LRA, Appendix B, Section B.3.1

13. Boric Acid Corrosion Program	The scope of the Boric Acid Corrosion Program will be expanded to (1) ensure that the mechanical, structural, and electrical components in scope for license renewal are addressed and (2) identify additional areas in which components are susceptible to exposure from boric acid.	A.3.1.10	Prior to the period of extended operation	LRA, Appendix B, Section B.3.2
14. Flow-Accelerated Corrosion Program	The Flow-Accelerated Corrosion Program will be modified to (1) include additional components potentially susceptible to flow-accelerated corrosion and/or erosion, and (2) clarify when condition reports shall be initiated.	A.3.1.11	Prior to the period of extended operation	LRA, Appendix B, Section B.3.3
15. Bolting Integrity Program	The following will be implemented: (1) administrative controls for bolting will be modified to prohibit the use of MoS ₂ compounds in high-strength bolting applications, and (2) an inspection and evaluation will be performed on high-strength bolting used on one motor-operated valve to determine susceptibility for cracking.	A.3.1.12	Prior to the period of extended operation	LRA, Appendix B, Section B.3.4
16. Open-Cycle Cooling Water System Program	An activity will be scheduled in the site Preventive Maintenance Program to replace cooling coils in the emergency core cooling system room coolers on a prescribed frequency.	A.3.1.13	Prior to the period of extended operation	LRA, Appendix B, Section B.3.5

17. Inspection of Overhead Heavy Load and Light Load Handling	Administrative controls for inspection of overhead heavy load and light load handling will be enhanced to (1) include requirements for inspecting the turbine gantry crane in addition to the other cranes that require inspection, (2) note that cranes are to be inspected using the attribute inspection checklist for structures, and (3) revise the attribute inspection checklist for structures to include GALL terminology such as wear.	A.3.1.14	Prior to the period of extended operation	LRA, Appendix B, Section B.3.6 RAI B.3.6-2
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<p>18. Fire Water System Program</p>	<p>The Fire Water System Program will be modified to include—<u>Fire Protection Sprinkler Systems</u> (1) For sprinkler heads in service for 50 years, either sprinkler head replacement or sampling/field service testing of heads in accordance with National Fire Protection Association (NFPA) 25 requirements based on the inservice date of the affected systems, and (2) prior to the period of extended operation, either full flow testing of portions of fire protection wet pipe sprinkler systems through the system cross mains, which are not routinely subject to flow, at the greatest flow and pressure allowed by the design of the systems or, alternatively, inspections or ultrasonic (UT) testing of a representative sample of these systems. Results from initial tests or inspections, reflecting 40 years of service, will be used to determine the scope and subsequent test/inspection intervals. The intervals are not expected to exceed 10 years.</p> <p><u>Fire Protection Suppression Piping</u> Prior to the period of extended operation, UT examination on a representative sampling of the above ground fire protection piping normally containing water will be performed. Each sampling will include different sections of piping. Alternatively, internal inspections may be conducted on a representative sampling of these piping systems. Results from initial tests or inspections, reflecting 40 years of service, will be used to determine the scope and subsequent test/inspection intervals. The intervals are not expected to exceed 10 years.</p> <p><u>Halon/Carbon Dioxide Fire Suppression Systems</u> The NRC staff guidance with respect to halon/carbon dioxide fire suppression systems will be implemented prior to the period of extended operation. The guidance is documented in a letter from C. Grimes (NRC) to A. Nelson</p>	<p>A.3.1.15</p>	<p>As noted in the commitment</p>	<p>LRA, Appendix B, Section B.3.7</p> <p>CP&L letter to NRC, RNP-RA/02-0159: Supplement to Application for Renewal of Operating License, dated October 23, 2002</p>
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	of Concerned Scientists) Proposed Staff Guidance on Aging Management of Fire Protection Systems for License Renewal, January 28, 2002.			
19. Buried Piping and Tanks Surveillance Program	A review will be performed to ascertain the need to update, as necessary, administrative controls for the Buried Piping and Tanks Surveillance Program to ensure consistency with National Association of Corrosion Engineers (NACE) Standard RP-0169-96 regarding acceptance criteria for the cathodic protection system, and additional leak testing provisions for underground piping will be incorporated.	A.3.1.16	Prior to the period of extended operation	LRA, Appendix B, Section B.3.8
20. Above Ground Carbon Steel Tanks Program	Administrative controls for the Above Ground Carbon Steel Tanks Program will be revised to indicate that the external surfaces of the fuel oil tanks are to be inspected periodically and to incorporate corrective action requirements.	A.3.1.17	Prior to the period of extended operation	LRA, Appendix B, Section B.3.9
21. Fuel Oil Chemistry Program	Administrative controls for the Fuel Oil Chemistry Program will be enhanced to (1) improve sampling and de-watering of selected storage tanks, (2) formalize existing practices for periodically draining and filling the diesel fuel oil storage tank, (3) formalize bacteria testing for fuel oil samples from various tanks, and (4) incorporate quarterly trending of fuel oil chemistry parameters.	A.3.1.18	Prior to the period of extended operation	LRA, Appendix B, Section B.3.10

22. Reactor Vessel Surveillance Program	Reactor Vessel Surveillance Program administrative controls will be revised to require surveillance test samples to be stored in lieu of optional disposal.	A.3.1.19	Prior to the period of extended operation	LRA, Appendix B, Section B.3.11
23. Buried Piping and Tanks Inspection Program	The Buried Piping and Tanks Inspection Program will be enhanced to (1) require that an appropriate as-found pipe coating and material condition inspection is performed whenever buried piping within the scope of this program is exposed, (2) add precautions to ensure backfill with material that is free of gravel or other sharp or hard material that can damage the coating, (3) require that the coating inspection be performed by qualified personnel to assess its condition, and (4) require that a coating engineer assist in evaluation of any coating degradation noted during the inspection.	A.3.1.20	Prior to the period of extended operation	LRA, Appendix B, Section B.3.12
24. ASME Section XI, Subsection IWE Program	ASME Boiler & Pressure Vessel Code, Section XI, Subsection IWE Program administrative controls will be enhanced to (1) specify the requirements for conducting reexaminations, and (2) document that repairs meet the specified acceptance standards.	A.3.1.21	Prior to the period of extended operation	LRA, Appendix B, Section B.3.13

<p>25. ASME Section XI, Subsection IWL Program</p>	<p>ASME Boiler & Pressure Vessel Code, Section XI, Subsection IWL Program enhancements will be made to require supervisors to notify civil/structural design engineering of the location and extent of proposed excavations of foundation concrete, to require inspection of below-grade concrete when excavated for any reason to monitor for potential effects and to inspect above-grade accessible concrete, and include trending requirements for structures based on aggressive ground water.</p>	<p>A.3.1.22</p>	<p>Prior to the period of extended operation</p>	<p>LRA, Appendix B, Section B.3.14</p> <p>CP&L letter to NRC, RNP-RA/02-0159: Supplement to Application for Renewal of Operating License, dated October 23, 2002</p> <p>Confirmatory Item 3.5-1</p>
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<p>26. Structures Monitoring Program</p>	<p>Structures Monitoring Program administrative controls will be enhanced to (1) include buildings and structures and associated acceptance criteria in scope for license renewal but outside the scope of the Maintenance Rule, (2) identify interfaces between structures monitoring inspections of concrete surfaces and the Fire Protection Program requirements for barriers, (3) state clearly the boundary definition between systems and structures, (4) revise administrative controls to provide inspection criteria for portions of systems covered by structures monitoring and require corrective action(s) to be initiated for unacceptable inspection attributes, (5) expand system walkdown inspection criteria to include observation of adjacent components, (6) inspect above-grade accessible concrete, and (7) revise personnel responsibilities to include providing assistance in evaluating structural deficiencies when requested by the responsible engineer, inspecting excavated concrete to monitor for potential aging effects, and notifying civil/structural design engineering of the location and extent of proposed excavations, and (8) include trending requirements for structures based on aggressive ground water and lake water.</p>	<p>A.3.1.23</p>	<p>Prior to the period of extended operation</p>	<p>LRA, Appendix B, Section B.3.15</p> <p>CP&L letter to NRC, RNP-RA/02-0159: Supplement to Application for Renewal of Operating License, dated October 23, 2002</p> <p>Confirmatory Item 3.5-1</p>
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27. Dam Inspection Program	To enhance the Dam Inspection Program, the system monitoring administrative controls will be revised to (1) identify the "Recommended Guidelines for Safety Inspection of Dams" as the required management program document for the dam, (2) require the responsible system engineer to review the inspection report and initiate corrective actions for any unacceptable attributes, (3) include "Recommended Guidelines for Safety Inspections of Dams" as the applicable inspection guidance in the inspection procedure for RNP, (4) inspect above-grade accessible concrete, (5) inspect submerged spillway concrete on a frequency not to exceed (10) ten years and (6) include trending requirements for structures based on aggressive ground water and lake water..	A.3.1.24	Prior to the period of extended operation	<p>LRA, Appendix B, Section B.3.16</p> <p>CP&L letter to NRC, RNP-RA/02-0159: Supplement to Application for Renewal of Operating License, dated October 23, 2002</p> <p>Confirmatory Item 3.5-1</p>
28. Systems Monitoring Program	Systems Monitoring Program administrative controls will be enhanced to (1) include aging effects identified in the aging management reviews (AMRs), (2) identify inspection criteria in checklist form, (3) include guidance for inspecting connected piping/components, (4) require that the extent of degradation be recorded and that appropriate corrective action(s) be taken, (5) add a section specifically addressing corrective actions, and (6) ensure "Loss of Material due to Wear" is specifically included as an aging effect/mechanism identified in the system walkdown checklist.	A.3.1.25	Prior to the period of extended operation	<p>LRA, Appendix B, Section B.3.17</p> <p>RAI B.3.17-1</p>

29. Preventive Maintenance Program	Preventive Maintenance Program administrative controls will be enhanced to (1) include aging effects/mechanisms identified in the AMRs and (2) incorporate specific aging management activities identified in the AMRs into the program.	A.3.1.26	Prior to the period of extended operation	LRA, Appendix B, Section B.3.18
30. Metal Fatigue of Reactor Coolant Pressure Boundary (Fatigue Monitoring Program)	The Fatigue Monitoring Program load/unload transient limit will be reduced to provide the margin needed for consideration of reactor water environmental effects.	A.3.1.27	Prior to the period of extended operation	LRA, Appendix B, Section B.3.19

<p>31. Nickel-Alloy Nozzles and Penetrations Program</p>	<p>The Nickel-Alloy Nozzles and Penetrations Program is a new program that will incorporate the following: (1) evaluations of indications will be performed under the ASME Boiler & Pressure Vessel Code, Section XI program, (2) corrective actions for augmented inspections will be performed in accordance with repair and replacement procedures equivalent to those requirements in ASME Boiler & Pressure Vessel Code, Section XI, (3) RNP will maintain its involvement in industry initiatives and will systematically assess for implementation applicable programmatic enhancements, that are agreed upon between the NRC and the nuclear power industry to monitor for, detect, evaluate, and correct cracking in the vessel head penetration (VHP) nozzles, specifically as the actions relate to ensuring the integrity of VHP nozzles in the RNP upper reactor vessel head during the extended period of operation, and (4) RNP will submit, for review and approval, its inspection plan for the Nickel-Alloy Nozzles and Penetrations Program, as it will be implemented from the applicant's participation in industry initiatives, prior to July 31, 2009.</p> <p>Revised commitment</p>	<p>A.3.1.28</p>	<p>As noted in the commitment</p>	<p>LRA, Appendix B, Section B.4.1</p> <p>RAI B.4.1-1</p> <p>RNP-RA/03-0154</p>
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32. Thermal Aging Embrittlement and Cast Austenitic Stainless Steel (CASS) Program	The Thermal Aging Embrittlement and Cast Austenitic Stainless Steel (CASS) Program is a new program applied to CASS components within Class 1 boundaries of the reactor coolant system and connected systems where operating temperature exceeds the threshold criterion.	A.3.1.29	Prior to the period of extended operation	LRA, Appendix B, Section B.4.2
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<p>33. Pressurized Water Reactor Vessel Internals Program</p>	<p>The Pressurized Water Reactor (PWR) Vessel Internals Program is a new program that will incorporate the following—(1) RNP will continue to participate in industry programs to investigate aging effects and determine the appropriate AMP activities to address baffle and former assembly issues, and to address change in dimensions due to void swelling, (2) as Westinghouse Owners Group and Electric Power Research Institute MRP research projects are completed, RNP will evaluate the results and factor them into the PWR Vessel Internals Program as appropriate, and (3) RNP will implement an augmented inspection during the license renewal term. Augmented inspections, based on required program enhancements resulting from industry programs, will become part of the ASME Boiler & Pressure Vessel Code, Section XI program. Corrective actions for augmented inspections will be developed using repair and replacement procedures equivalent to those requirements in ASME Boiler & Pressure Vessel Code, Section XI. RNP will submit, for review and approval, its inspection plan for the PWR Vessel Internals Program, as it will be implemented from the applicant's participation in industry initiatives, 24 months prior to the augmented inspection.</p>	<p>A.3.1.30</p>	<p>As noted in the commitment</p>	<p>LRA, Appendix B, Section B.4.3 RAI B.4.3-2</p>
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35. Selective Leaching of Materials Program	The Selective Leaching of Materials Program is a new program to determine the properties of selected components that may be susceptible to selective leaching. The program will ascertain whether loss of material is occurring and whether the process will affect the ability of the components to perform their intended function for the period of extended operation.	A.3.1.32	Prior to the period of extended operation	LRA, Appendix B, Section B.4.5
36. Non-Environmentally Qualified Insulated Cables and Connections Program	The Non-Environmentally Qualified Insulated Cables and Connections Program is a new program and involves inspecting accessible power and instrument and control cables at least once every 10 years. The technical basis for selecting a sample of cables to be inspected will be defined prior to the period of extended operation. The sample locations will consider the location of cables inside and outside containment, as well as any known adverse localized environments.	A.3.1.33	As noted in the commitment Prior to the period of extended operation	LRA, Appendix B, Section B.4.6 RAI 3.6.1-2 B4.6-3 Confirmatory Item 3.6.2.3.1.2-1

37. Aging Management Program for Non-EQ Electrical Cables Used in Instrumentation Circuits	The Aging Management Program for Non-EQ Electrical Cables Used in Instrumentation Circuits is a new program that uses calibration or surveillance testing programs to identify the potential existence of aging degradation of cables. This program applies to the cables used in containment high-range radiation monitoring instrumentation circuits. The program has a 10-year frequency.	A.3.1.34	As noted in the commitment Prior to the period of extended operation	RAI 3.6.1-2 RAI B.4.6-3
38. Aging Management Program for Neutron Flux Instrumentation Circuits	The Aging Management Program for Neutron Flux Instrumentation Circuits is a new program that will employ insulation resistance or other testing to identify the potential existence of aging degradation of cables in neutron monitoring circuits. The program has a 10-year frequency.	A.3.1.35	As noted in the commitment Prior to the period of extended operation	RAI 3.6.1-2 RAI B.4.6.-3

39. Aging Management Program for Fuse Holders	The Aging Management Program for Fuse Holders is a new program applicable to fuse holders located outside of active devices. The program utilizes thermography or other appropriate test methods to identify the potential existence of aging degradation. The program has a 10-year frequency.	A.3.1.36	As noted in the commitment Prior to the period of extended operation	RAI 2.5.2-1
40. Aging Management Program for Bus Duct	The Aging Management Program for Bus Duct is a new program for inspecting bus duct for signs of cracks, corrosion, foreign debris, excessive dust buildup or discoloration which may indicate overheating, loosening of bolted connections, or water intrusion. The program applies to the iso-phase bus duct as well as to all nonsegregated 4.16 kV and 480 V bus duct within the scope of license renewal. The program has a 10-year frequency.	A.3.1.37	As noted in the commitment Prior to the period of extended operation	RAI 2.5.2-2
41. Environmental Qualification of Electric Equipment Program	Credit is taken for existing Environmental Qualification (EQ) of Electric Equipment activities. EQ is an ongoing program. EQ packages are undergoing revision to incorporate increased radiation values resulting from power uprate and will be updated prior to the end of the current license term.	A.3.1.38	As noted in the commitment	RAI 4.4-2 RAI 4.4.1-2

42. Time-Limited Aging Analysis (TLAA) - Reactor Vessel Neutron Embrittlement	Time-Limited Aging Analysis (TLAA) - Reactor Vessel Neutron Embrittlement. Existing program is credited. See note below.	A.3.2.1		
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<p>43. TLAA - Metal Fatigue</p>	<p>Based upon the most recent fatigue analysis performed to date for the three auxiliary feedwater (AFW)-to-feedwater (FW) line connections downstream of the steam-driven pump, transient limits have been reduced in the RNP Fatigue Monitoring Program. These reduced limits are based upon inputs used in the analysis and are more conservative than the original limits. The reduced limits will remain in effect until the connections are further analyzed, repaired, or replaced to assure the connections remain within their design basis through the period of extended operation.</p> <p>Based upon the fatigue analyses performed to consider environmentally assisted fatigue, the load/unload transient limit has been reduced in the RNP Fatigue Monitoring Program. The reduced limits are based upon inputs used in the analyses and will remain in effect permanently unless the components are reanalyzed. The reduced time limit is not expected to be approached through the period of extended operation, because the original limit was established at a high value to account for load following, which is not necessary at RNP.</p> <p>Further action is required for management of environmental fatigue of the surge line for the period of extended operation. Therefore, fatigue of the surge line will be managed using one or more of the following options.</p> <ol style="list-style-type: none"> 1. Further refinement of the fatigue analyses to maintain the EAF-adjusted CUF below 1.0. 2. Repair of the affected locations. 3. Replacement of the affected locations. 	<p>A.3.2.2</p>	<p>As noted in the commitment</p>	<p>LRA, Section 4.3</p> <p>RAI 4.3-2</p> <p>RAI 4.3-7</p> <p>RAI 4.3-10</p>
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	<p>reviewed and approved by the NRC. This includes periodic surface and volumetric examinations of the limiting locations at inspection intervals to be determined by a method accepted by the NRC. If this option is selected, the scope, qualification, method, and frequency will be provided to the NRC for review and approval prior to the period of extended operation.</p>			
44. TLAA - Environmental Qualification	<p>In accordance with the requirements of the Environmental Qualification Program, any component that is not qualified through the period of extended operation will be refurbished or replaced prior to exceeding its qualified life. Prior to the period of extended operation, certain motor-operated valve actuators will either be reevaluated to demonstrate acceptable wear-cycle qualifications or they will be replaced.</p>	A.3.2.3	As noted in the commitment	LRA, Sections 4.4 and 4.4.1.3

45. TLAA - Containment Tendon Loss of Prestress	To provide additional assurance of the tendons design capacity, testing (at integrated leak rate test pressure) similar to the Structural Integrity Test performed in 1992 will be scheduled to coincide with Appendix J containment integrated leak rate testing conducted during the period of extended operation (required frequency in accordance with 10 CFR 50, Appendix J). The monitoring criteria for these tests will be limited to deformations and cracking associated with the vertical prestressed tendons, and will not include radial monitoring. Guidelines for performing the IWL examinations for these tests will include additional emphasis on looking for a pattern of horizontal cracks, and additional cracking in the discontinuity areas.	A.3.2.4	As noted in commitment	RAI 4.5-2
46. TLAA - Containment Tendon Loss of Prestress	Information from the response to RAI 4.5-1 will be incorporated into Section 3.8.1.4.7 of the UFSAR. This will include initial average prestressing force, losses, and final average prestressing force at 50 and 60 years as discussed in the response to RAI 4.5-1. This commitment supersedes the proposed changes shown on LRA Page A-6 for UFSAR Section 3.8.1.4.7.	A.3.2.4	Prior to the period of extended operation	RAI 4.5-3

47. TLAA - Aging of Boraflex in Spent Fuel Pool	<p>Prior to the period of extended operation, the Boraflex Monitoring Program will be modified to (1) include neutron attenuation testing, called blackness testing, to determine gap formation in Boraflex panels; (2) include trending the results for silica levels by using the EPRI RACKLIFE predictive code or equivalent, and (3) include measurements of boron areal density by techniques such as the BADGER device, RNP has requested, by letter dated May 28, 2003, Serial: RNP-RA/03-0038, an amendment to the Technical Specifications to eliminate the need to credit Boraflex neutron absorbing material for reactivity control. The Boraflex Monitoring Program will be eliminated upon NRC approval of this amendment or upon implementation of another option(such as re-racking the spent fuel pool) which eliminates the need to credit Boraflex for reactivity control.</p> <p>Revised commitment</p>	A.3.2.8	Prior to the period of extended operation	<p>LRA, Section 4.6.4</p> <p>RNP-RA/03-0154</p>
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NOTE: Not listed in this table. Consistent with guidance provided by letter from Pao-Tsin Kuo (NRC) to Alan Nelson (NEI) and David Lochbaum (Union of Concerned Scientists), "CONSOLIDATED LIST OF COMMITMENTS FOR LICENSE RENEWAL," dated December 16, 2002.