



**Nebraska Public Power District**

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NLS2010051  
May 26, 2010

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

**Subject:** NPPD Comments on Safety Evaluation Report with Open Items Related to the License Renewal of Cooper Nuclear Station  
Cooper Nuclear Station, Docket No. 50-298, DPR-46

- References:**
1. Letter from Brian E. Holian, U.S. Nuclear Regulatory Commission, to Stewart B. Minahan, Nebraska Public Power District, dated April 6, 2010, "Safety Evaluation Report with Open Items Related to the License Renewal of Cooper Nuclear Station."
  2. Letter from Stewart B. Minahan, Nebraska Public Power District, to U.S. Nuclear Regulatory Commission, dated September 24, 2008, "License Renewal Application" (NLS2008071).
  3. Letter from Brian J. O'Grady, Nebraska Public Power District, to U.S. Nuclear Regulatory Commission, dated April 28, 2010, "Response to Open and Confirmatory Items from the Safety Evaluation Report Related to the License Renewal of Cooper Nuclear Station" (NLS2010044).
  4. Letter from Brian J. O'Grady, Nebraska Public Power District, to U.S. Nuclear Regulatory Commission, dated May 4, 2010, "Response to Open Items from the Safety Evaluation Report and Request for Additional Information Related to the License Renewal of Cooper Nuclear Station" (NLS2010050).

Dear Sir or Madam:

The purpose of this letter is for the Nebraska Public Power District (NPPD) to provide comments on the Nuclear Regulatory Commission Safety Evaluation Report (SER) per Reference 1. This SER was prepared in response to the NPPD License Renewal Application (LRA) for Cooper Nuclear Station (Reference 2). The NPPD comments are itemized in Attachment 1. Attachment 2 contains certain changes to the LRA resulting from the review of this SER. References 3 and 4 were previously submitted relative to the SER Open and Confirmatory Items, and should be considered as part of the NPPD comments on the SER.

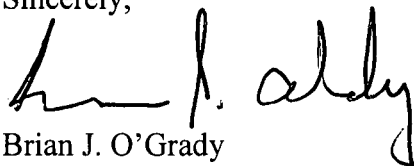
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Should you have any questions regarding this submittal, please contact David Bremer, License Renewal Project Manager, at (402) 825-5673.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 5/26/2010  
(Date)

Sincerely,



Brian J. O'Grady  
Vice President-Nuclear and  
Chief Nuclear Officer

/wv

Attachments

cc: Regional Administrator w/ attachments  
USNRC - Region IV

Cooper Project Manager w/ attachments  
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector w/ attachments  
USNRC - CNS

Nebraska Health and Human Services w/ attachments  
Department of Regulation and Licensure

NPG Distribution w/attachments

CNS Records w/ attachments

ATTACHMENT 3 LIST OF REGULATORY COMMITMENTS<sup>4</sup>

Correspondence Number: NLS2010051

The following table identifies those actions committed to by Nebraska Public Power District (NPPD) in this document. Any other actions discussed in the submittal represent intended or planned actions by NPPD. They are described for information only and are not regulatory commitments. Please notify the Licensing Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITMENT NUMBER	COMMITTED DATE OR OUTAGE
None		

**Attachment 1**

**NPPD Comments on Safety Evaluation Report  
with Open Items Related to the  
License Renewal of Cooper Nuclear Station  
Cooper Nuclear Station, Docket No. 50-298, DPR-46**

Comment Number	Page Number/ Section Number	Comment	Suggested Resolution
1	General	NLS2010044 and NLS2010050 have been submitted which address the Open Items of Section 1.5 and the Confirmatory Item of Section 1.6. If the responses to these Open and Confirmed Items are accepted by the Nuclear Regulatory Commission (NRC) staff, changes should be made to the NRC sections that describe these Open and Confirmatory Items.	
2	1-8/1.7	The text of the third License Condition does not reflect that Cooper Nuclear Station (CNS) participates in the Boiling Water Reactor Vessel and Internals Program (BWRVIP) Integrated Surveillance Program (ISP). The BWRVIP controls the schedule for capsule removal, not CNS. Recommend replacing text with similar verbiage used in the recently issued Fitzpatrick renewed license.	<p>Revise to read: <del>“The third license condition requires that all capsules in the reactor vessel that are removed and tested meet the requirements of American Society for Testing and Materials (ASTM) E 185-82 to the extent practicable for the configuration of the specimens in the capsule. Capsule withdrawal schedule - All capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of the most recent NRC-approved version of the Boiling Water Reactor Vessel and Internals Project (BWRVIP) Integrated Surveillance Program (ISP) appropriate for the configuration of the specimens in the capsule.</del> Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the staff prior to implementation, in accordance with 10 CFR Part 50, Appendix H. All capsules placed in storage must be maintained for future insertion. Any changes to storage requirements must be approved by the staff.”</p> <p>Basis for Change: Per License Amendment 201, CNS is part of the BWRVIP ISP, which should be reflected in the License Condition.</p>
3	1-7/1.5	<p>The last statement made in the paragraph describing Open Item 3.0.3.1-1 warrants clarification.</p> <p>“The applicant has not agreed to include socket weld nor commit to a plant-specific program at CNS.”</p> <p>The Nebraska Public Power District (NPPD) had not agreed to perform volumetric examination of socket</p>	<p>Revise to read: “The applicant has not agreed to <u>include perform socket weld volumetric examinations nor commit to a plant-specific program</u> at CNS.”</p> <p>Basis for Change: Clarification</p>

Comment Number	Page Number/ Section Number	Comment	Suggested Resolution
		welds in the One-time Small Bore Piping Inspection Program. However, NPPD performs VT-2 examinations on small bore socket welds.	
4	2-15/2.1.4.3.1	The paragraph "Scoping for Regulated Events" is quoted as being from the CNS License Renewal Application (LRA) Section 2.1.1.3. However, the quotation is not correct.	<p>Revise to read: "<u>10 CFR 54.4(a)(3) requires that plant SSCs within the scope of license renewal include SSCs relied on in safety analyses or plant evaluations to perform a function that demonstrates compliance with the Commission's regulations for fire protection (10 CFR 50.48), environmental qualification (10 CFR 50.49), pressurized thermal shock (10 CFR 50.61), anticipated transients without scram (10 CFR 50.62), and station blackout (10 CFR 50.63). For each of these regulated events, a report was prepared to provide input into the scoping and screening processes. These reports (1) identified the systems and structures that are relied on for each of the regulated events, and/or (2) either identified specific components, or provided a reference to the documentation to be used as input for screening. The scope of license renewal includes those systems, structures, and components relied on in safety analyses or plant evaluations to perform a function that demonstrates compliance with the Commission's regulations for fire protection (10 CFR 50.48), environmental qualification (10 CFR 50.49), pressurized thermal shock (10 CFR 50.61), anticipated transients without scram (10 CFR 50.62), and station blackout (10 CFR 50.63). This section discusses the approach used to identify the systems and structures within the scope of license renewal based on this criterion. The systems and structures that perform intended functions in support of these regulated events are identified in the descriptions in Sections 2.3, 2.4, and 2.5.</u></p> <p>Basis for Change: Incorrect quotation</p>

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5	2-15/2.1.4.3.1	The paragraph "Fire Protection" purports to have been derived from information in LRA Section 2.1.1.3.1. However, none of this is from the CNS LRA. Recommend revision based on the information contained in the LRA.	
6	2-16/2.1.4.3.1	The second paragraph under "Environmental Qualification" is not derived from the CNS LRA. Recommend its deletion since it does not reflect information in the CNS LRA.	
7	2-17/2.1.4.3.1	Under the discussion of "Station Blackout," the last paragraph begins with the statement, "The LRA further states that..." What is stated in this sentence has already been stated in the paragraph above, which quotes the LRA. Accordingly, this beginning sentence should be deleted. Also, the second sentence appears to be incomplete.	<p>Revise to read: "<del>The LRA further states that the applicant determined the system intended functions supporting 10 CFR 50.63 requirements based on information contained in the CLB. Because a boundingary approach for scoping EIC equipment was used, and the onsite EIC systems and electrical equipment contained in mechanical systems are included within the scope of license renewal by default.</del>"</p> <p>Basis for Change: Clarification</p>
8	2-21/2.1.4.5.1	The quotation from LRA Section 2.1.1 is not a direct quotation. Recommend revision to reflect the salient LRA Section 2.1.1 verbiage.	
9	2-21/2.1.4.5.2	In the second paragraph, the statement "The evaluation boundaries for mechanical systems were documented on license renewal boundary drawings that were created by marking mechanical piping and instrumentation diagrams to indicate the components within the scope of license renewal." is not correct. The highlighted components are those that are both in scope for license renewal and are subject to Aging Management Review.	<p>Revise to read: "The staff determined that the process was based on the review of the USAR, DCDs, the plant equipment database, NRC docketed correspondence and documents, and plant drawings. The evaluation boundaries for mechanical systems were documented on license renewal boundary drawings that were created by marking mechanical piping and instrumentation diagrams to indicate the components within the scope of license renewal and subject to aging management review. <del>The staff determined that components within the evaluation boundary were reviewed to determine whether or not they perform an intended function.</del> Intended functions were established based on if a particular function of a component was</p>

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			<p>necessary to support the system functions that meet the scoping criteria.”</p> <p>Basis for Change: Clarification</p>
10	2-23/2.1.4.6.2	<p>In the second paragraph, the term “screenhouse” is used. This is not used in the CNS LRA, the CNS Updated Safety Analysis Report (USAR), or in the Structures Aging Management Review. Is this referring to the “intake structure?”</p>	
11	2-35/2.3.1.1.1	<p>In the next to last paragraph, first sentence reads: “The RV acts as a boundary for neutrons as well.” While the vessel will attenuate neutron flux it is not considered an actual boundary. However, in conjunction with the remainder of the reactor coolant pressure boundary, it is considered a barrier to the release of radioactive materials from the core.</p>	<p>Revise to read: “<del>The RV acts as a boundary for neutrons as well.</del> <u>The RV provides a barrier to the release of radioactive materials from the core.</u>”</p> <p>Basis for Change: Clarification</p>
12	2-38/2.3.2.1.1	<p>In the last paragraph second sentence the word “inertia” should be “intertie.” “Fuel” is not needed in that sentence.</p>	<p>Revise to read: “The system can be aligned to provide water to the fuel pool diffusers via the RHR-fuel-FPC <del>inertia</del> <u>intertie.</u>”</p> <p>Basis for Change: Grammatical correction</p>
13	2-50/2.3.3.6.2	<p>The second paragraph, next to last sentence, states: “Therefore, since there is no intended function associated with 10 CFR 54.4(a)(2), the 15,000-gallon fire system flushing tank and associated components were correctly excluded from the scope of license renewal and are not subject to an AMR.” The citation should be to 10 CFR 54.4 (a)(3), not 10 CFR 54.4(a)(2).</p>	<p>Revise to read: “Therefore, since there is no intended function associated with 10 CFR 54.4(a)(<del>2</del>3), the 15,000-gallon fire system flushing tank and associated components were correctly excluded from the scope of license renewal and are not subject to an AMR.”</p> <p>Basis for Change: Citation correction</p>
14	2-51 through 2-53/2.3.3.6.2	<p>The 64 hose station listing starting with the bottom paragraph on Page 2-51 is based on information provided in a conference call on October 6, 2009. The intent of the listing was to guide the NRC to where the</p>	



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		<p>in-scope hose stations were on the LRA drawings, rather than to provide the exact locations in the plant. In that light, four of the in-scope hose stations should have their locations relisted (the three hose stations under Instrument Storage should be in the Control Building, and HV-61 FP-547 should be listed as being in the Controlled Corridor).</p> <p>NPPD believes that this listing of hose stations is an unnecessary level of detail, which has not been submitted on the CNS docket. NPPD recommends deletion of the listing and revision of the introductory sentence to read: “The applicant <del>provided</del> <u>discussed in a telephone conference call</u> the LRA drawing numbers, <u>and</u> locations of interior hose stations, and <del>the</del> associated manual isolation valves, <del>as shown below.</del>”</p>	
15	2-66/2.3.3.12	In the first full paragraph; components “AF-V-113” and “AF-V-114” should be “AR-V-113” and “AR-V-114.”	<p>Revise to read: “In its response to RAI 2.3.3.12 AR-1, dated August 17, 2009, the applicant identified the two safety-related valves as <u>ARF</u>-V-113 and <u>ARF</u>-V-114.”</p> <p>Basis for Change: NLS2009063 (ADAMS Accession Number ML092310146)</p>
16	2-88/2.3.4.1.2	In the third paragraph, first sentence, “2.3.4.4-MS-2” should be “2.3.4.1-MS-2.” Typographical error.	
17	2-118/2.5.1.2	In the third paragraph, the first two sentences refer to the applicability of 10 CFR 50 Appendix A General Design Criterion (GDC) 17 to Part 54 scoping and screening. It is not clear how the application of GDC 17 to CNS has a nexus to 10 CFR 54.4(a)(1)/(2)/(3) criteria. Recommend deletion.	

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18	3-2/3.0.1.1	<p>The first paragraph contains the following sentence:</p> <p>“The tables are essentially the same as Tables 1 through 6 in the GALL Report, except that the “Type” column in the Gall Report has been replaced by an “Item Number” column and the “Item Number” in the GALL Report column has been replaced by a “Discussion” column.”</p> <p>The Generic Aging Lessons Learned (GALL) Report Revision 1 no longer has a column labeled “Item Number.” It is more correct to say that the “ID” and “Type” columns in the GALL have been replaced by the “Item Number” column. Also, the "Related Generic Item" and “Unique Item” columns in the GALL have been replaced by a "Discussion" column.</p>	<p>Revise to read: “The tables are essentially the same as Tables 1 through 6 in the GALL Report, except that the “ID” and “Type” columns in the GALL Report have been replaced by an “Item Number” column and the “Item Number/Related Generic Item” and “Unique Item” columns in the GALL Report column have been replaced by a “Discussion” column.”</p> <p>Basis for Change: Clarification</p>
19	3-3/3.0.1.2	<p>The discussion on “Environment” should include a cross-reference to LRA Table 3.0-3.</p>	<p>Revise to read: “Environment – The fourth column lists the environments to which the component types are exposed. Internal and external service environments are indicated with a list of these environments in LRA Tables 3.0-1, and 3.0-2, and 3.0-3.”</p> <p>Basis for Change: Completeness</p>
20	3-3/3.0.1.2	<p>The last paragraph on the page contains the sentence, “The notes, identified by letters, were developed by a NEI work group and will be used in future LRAs.” This should refer to Appendix F of NEI 95-10.</p>	<p>Revise to read: “The notes, identified by letters, were developed by an NEI work group and will be used in future LRAs are standard notes based on NEI 95-10 Table 4-2-2.”</p> <p>Basis for Change: Clarification</p>
21	3-8/3.0.3.1.1	<p>The next to last paragraph refers to “RAI B.34-1.” NPPD has never responded to a Request for Additional Information (RAI) with that designator. It appears that it should be listed as “B.1.1-1.”</p>	

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22	3-19/3.0.3.1.7	The paragraph on Operating Experience does not completely reflect the response to RAI B.1.25-1 provided in NLS2009040.	<p>Revise to read: “In a letter dated June 15, 2009, the applicant responded to RAI B.1.25-1, indicating that <u>as required for all aging management programs, operating experience (plant and industry) is used to enhance program performance. The discovery of abnormal water level in manholes with electric cables would be resolved under the corrective action program.</u>”</p> <p>Basis for Change: Clarification</p>
23	3-19/3.0.3.1.7	The second paragraph under Operating Experience appears to be a quote from the response to RAI B.1.25-1, but the last line is not complete.	<p>Revise to read: “Since these cables are de-energized, they do not perform a license renewal intended function during recovery <u>from SBO.</u>”</p> <p>Basis for Change: Response to RAI B.1.25-1 in NLS2009040</p>
24	3-23/3.0.3.1.10 3-26/3.0.3.1.11 3-60/3.0.3.2.6 3-61/3.0.3.2.6 3-110/3.0.3.2.15 3-117/3.0.3.2.18	The Commitment Numbers with the prefix “NLS2009071-...” are not correct. They should be “NLS20098071-...”	
25	3-28/3.0.3.1.11	<p>The third paragraph under Operating Experience states:</p> <p>“Based on discussions with the applicant, this program [One-Time Inspection – Small Bore Piping Program] was previously a part of the ISI Program.”</p> <p>The One-Time Inspection – Small Bore Piping Program is a new Aging Management Program (AMP). Although it uses some of the same inspection techniques as the Inservice Inspection (ISI) AMP, it is a separate and new program, and has never been part of the CNS ISI Program.</p>	<p>Revise to read: “Based on discussions with the applicant, <del>this program [One-Time Inspection – Small Bore Piping Program]</del> was previously <u>examination of certain Class 1 small bore piping has been a part of the ISI Program.</u>”</p> <p>Basis for Change: Clarification</p>

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26	3-33/3.0.3.1.13	<p>The last paragraph infers that all heat exchangers in the Generic Letter (GL) 89-13 program are tested for heat transfer capabilities. This is not correct.</p> <p>The Reactor Equipment Cooling (REC) and Residual Heat Removal (RHR) heat exchangers are tested for heat transfer capabilities.</p> <p>The Diesel Generator Lube Oil (DGLO), Diesel Generator Jacket Water (DGJW) and Diesel Generator (DG) Intercoolers are not tested for heat transfer capabilities because it is impractical to do so. Instead, the DGLO, DGJW and DG Intercoolers are inspected and cleaned on a periodic basis as allowed by GL 89-13.</p>	<p>Revise to read: “The applicant responded by letter dated June 15, 2009, indicating that heat transfer capabilities are tested for applicable <u>REC and RHR</u> heat exchangers and that cleanliness and material integrity are verified by visual inspection for other components.”</p> <p>Basis for Change: Response to RAI B.1.35-3 in NLS2009040</p>
27	3-42/3.0.3.2.1	<p>In middle of the third paragraph, “EPRI NP-506” should be “EPRI NP-5067.”</p>	<p>Revise to read: “Furthermore, the staff noted that a previous NRC determination of the interchangeability of EPRI NP-5067 was detailed...”</p> <p>Basis for Change: Response to RAI B.1.2-1 in NLS2009040</p>
28	3-50/3.0.3.2.4	<p>The last sentence in the last paragraph states the enhancement is to replace the plugs based on “structural integrity” when actually the LRA commitment states it is based on “qualified life.”</p>	<p>Revise to read: “The enhancement would entail replacement of the plugs in core plate bypass holes based on their <u>structural integrity qualified life</u> (Commitment No. NLS2008071-04).”</p> <p>Basis for Change: Commitment NLS2008071-04 in NLS2008071</p>
29	3-55/3.0.3.2.4	<p>The last sentence in the third paragraph misquoted Commitment NLS2009100-1 (Revision 1).</p>	<p>Revise to read: “By letter dated March 25, 2010, the applicant provided commitment NLS2009100-1 (Revision 1) to <u>provide submit</u> (or otherwise make available for NRC review and approval) a complete proprietary version of the <u>GE report, an analysis of the core plate rim bolts that demonstrates their adequacy considering potential loss of pre-load through the period of extended operation.</u>”</p> <p>Basis for Change: Commitment NLS2009100-1 (Revision 1) in NLS2009100</p>

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30	3-58/3.0.3.2.5 3-59/3.0.3.2.5	<p>The third paragraph on Page 3-58 states:</p> <p>“First, if the CNS standby capsule is removed from the RPV without the intent of testing it, the capsule will be stored in a manner that maintains the capsule in a condition which would permit its future use, including during the period of extended operation if necessary.”</p> <p>CNS does not have a standby capsule. Moreover, the third License Condition described in Section 1.7 subsumes the need to make this commitment should NPPD acquire one in the future. Accordingly, it is being deleted (see Attachment 2, LRA Changes 1 and 2).</p> <p>In the fourth paragraph of Page 3-59, “<u>Conclusion</u>,” the following conforming change should be made to make “enhancements” singular:</p> <p>“Also, the staff reviewed the enhancements and confirmed that the implementation of the enhancements prior to the period of extended operation would result in the existing AMP being consistent with the GALL Report AMP to which it was compared.”</p>	<p>Revise to read: “As an enhancement to the GALL Report AMP, the applicant is determined to implement the following two-monitoring and trending enhancements prior to the period of extended operation. <del>First, if the CNS standby capsule is removed from the RPV without the intent of testing it, the capsule will be stored in a manner that maintains the capsule in a condition which would permit its future use, including during the period of extended operation if necessary.</del> The second <u>This</u> enhancement will ensure that the additional requirements that are specified in the final staff SE for the BWRVIP-116 report will be addressed before the period of extended operation.”</p> <p>Basis for Change: License Condition 3 subsumes the need to make this enhancement.</p>
31	3-61/3.0.3.2.6	<p>In first sentence of the fifth paragraph, the commitment number is not correct.</p>	<p>Revise to read: “In its response dated June 15, 2009, the applicant provided Commitment No. NLS20098071-05 (<u>Revision 1</u>) to performing...”</p> <p>Basis for Change: Commitment No. NLS2008071-05 (Revision 1) in NLS2009040</p>

Comment Number	Page Number/ Section Number	Comment	Suggested Resolution
32	3-88/3.0.3.2.10	<p>The second paragraph, Item (a) states, “Specify the analysis method(s) used for computing CUF for all Class 1 components, and clarify whether or not any of the CUF values shown in LRA were calculated using non-conforming software, FatiguePro, which considers only a single component of a stress tensor instead of all six stress components in accordance with the ASME Code Section III Design Code.” This is an inaccurate paraphrase of the wording in RAI B.1.15-8. Recommend revising to reflect exact wording of the RAI.</p>	
33	3-89/3.0.3.2.10	<p>The third to last sentence of the second paragraph states: “It appears that the applicant has the HWC and NWC coverage periods transposed.” As NPPD accounted for hydrogen water chemistry unavailability in calculating the ratios, the numbers were not transposed. Recommend removing this statement from the SER.</p>	
34	3-90/3.0.3.2.10 3-93/3.0.3.2.10 A-6	<p>Under “Enhancement (a)” of Page 3-90, “<u>USAR Supplement</u>” of Page 3-93, and Commitment 8 on Page A-6, the commitment to enhance the Fatigue Monitoring Program (NLS2008071-08 Revision 1) should incorporate Revision 2 provided in NLS2010044 for use of NUREG/CR-6909.</p>	
35	3-109/3.0.3.2.15	<p>Enhancement 1 states: “LRA Section B.1.20 states an enhancement to the ISI – IWF Program “scope of program” and “detection of aging effects” program elements as follows: “The ISI – IWF Program will be enhanced to include Class metal clad (MC) piping and component supports.” ”</p> <p>The LRA used the term “Class MC.” The words “metal clad” should be “metal containment,” although neither term was included in the LRA.</p>	<p>Revise to read: “LRA Section B.1.20 states an enhancement to the ISI – IWF Program “scope of program” and “detection of aging effects” program elements as follows: “The ISI – IWF Program will be enhanced to include Class <del>metal clad</del> (MC) piping and component supports.” ”</p> <p>Basis for Change: LRA Section B.1.20</p>

Comment Number	Page Number/ Section Number	Comment	Suggested Resolution
36	3-114/3.0.3.2.17 3-115/3.0.3.2.17	The last paragraph on 3-114 that rolls over to the top of page 3-115 is represented as a direct quote from the NPPD response to RAI B.1.22-2 in NLS2009040. This is not a direct quote.	<p>Revise to read: “The effects of the recent bird infestation will not result in a long-term change to the bus duct external environment that could cause degradation <del>rendering the proposed AMP ineffective</del> <u>that will not be adequately managed by the proposed MEB Program.</u> <u>Note, The potentially degraded environment caused by the bird excrement could provide a corrosive environment for aluminum, steel, and steel alloy. However, because the aging effect from this environment is loss of material, which is addressed for the period of extended operation license renewal by visual inspections performed in accordance with the metal-enclosed <del>duct</del> bus program. Therefore, this operating experience would not impact the ability of the metal-enclosed bus program to provide reasonable assurance that the intended functions would be maintained during the period of extended operation.”</u></p> <p>Basis for Change: Response to RAI B.1.22-2 in NLS2009040</p>
37	3-119/3.0.3.2.19	The citation of “NUREG-1802” in the last paragraph should be “NUREG-1801.”	
38	3-130/3.0.3.2.21	In several locations throughout this section the NRC states that the Water Chemistry Control – Closed Cooling Water Program is consistent with the GALL and that issues and RAIs were resolved. However in the Conclusion Section, the Safety Evaluation Report (SER) states that “On the basis of its audit and review of the applicant’s Water Chemistry – CCW Program, including the applicant’s responses to the RAIs, the staff determines that those program elements for which the applicant claimed consistency with the GALL Report are consistent. In addition, the staff reviewed the exceptions and their justifications and determined that the AMP, with exception 1, would not be consistent with the GALL AMP XI.M21 because it does not include non-chemistry monitoring consisting of	

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		inspection and nondestructive evaluations. The staff concludes that the applicant has not demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation in accordance with 10 CFR 54.21(a)(3).” The conclusion does not appear to be consistent with the preceding text for Section 3.0.3.2.21.	
39	3-136/3.0.3.3.2	The last sentence of the third paragraph implies that NPPD will implement the as-written interim staff guidance. That is not what NPPD stated in LRA Section 2.1.3.	<p>Revise to read: “The applicant acknowledged LR-ISG-2007-02 in LRA Section 2.1.3 and stated that it will implement the ISG <del>guidance of a one-time inspection program prior to the period of extended operation for cable connections not subject to 10 CFR 50.49 EQ requirements</del> <u>a one-time inspection program prior to the period of extended operation to confirm the absence of aging effects for applicable electrical cable connections.</u>”</p> <p>Basis for Change: LRA Section 2.1.3</p>
40	3-313/3.5.2.3.7	In the third paragraph of this section, the SER states, “The staff finds that the applicant has not demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, as required by 10 CFR 54.21(a)(3).” This conclusion is inconsistent with the preceding discussion.	<p>Revise to read: “The staff finds that the applicant has <del>not</del> demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, as required by 10 CFR 54.21(a)(3).”</p> <p>Basis for Change: Consistency correction</p>
41	3-320/3.6.2.2.3	The fourth paragraph has an error from the LRA that was corrected in NLS2009061, Attachment 3, dated August 13, 2009.	<p>Revise to read: “The 161-kV overhead transmission conductors are <del>886.4</del> <u>336.4</u> thousand circular mils (MCM) <del>26/4</del> <u>26/7</u> ACSR.”</p> <p>Basis for Change: NLS2009061, Attachment 3, Change 9</p>
42	3-322/3.6.2.2.3	The first bullet in the second paragraph requires a correction.	<p>Revise to read: “<del>336.4</del> <u>336.5</u> MCM 26/7 ACSR: [ultimate strength 14,050 lbs/heavy load 4,327 lbs] Initial design margin 69.2 percent”</p> <p>Basis for Change: Response to RAI 3.6-2 in NLS2009061</p>



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43	3-323/3.6.2.2.3	The fourth sentence of the third paragraph has an error.	<p>Revise to read: “For <del>336.4</del> 336.5 MCM and 397.5 MCM transmission conductors, the ratio between the heavy loading and the ultimate conductor strength....”</p> <p>Basis for Change: Response to RAI 3.6-2 in NLS2009061</p>
44	3-324/3.6.2.2.3	<p>The first sentence of the second paragraph states:</p> <p>“However, the staff noted that failures of Belleville washers (causing loose connections) were noted from industry OE, whereby hydrogen entrapment with plated steel washers caused embrittlement and stress cracking of the plated washer leading to loose connections.”</p> <p>This statement was not part of RAI 3.6-3, and NPPD was not able to find the cited industry Operating Experience. It is recommended that the NRC confirm the accuracy of the above statement or revise as necessary.</p>	
45	4-4/4.2.1.1 4-5/4.2.1.2 4-34/4.6, 4.6.1.2 4-36/4.6.2.2 4-37/4.6.3.1	<p>These sections have specific reference numbers (e.g., “Reference 1”). However, there is no Chapter 4 reference section. The references numbers in Appendix D do not correspond to these reference numbers.</p>	
46	4-16/4.3.1	<p>The words in the last sentence of the second paragraph do not match the wording of the response to RAI 4.3-10(a).</p>	<p>Revise to read: “The applicant stated that according to LRA Table 4.3-1, the projected number of startups for 60 years at CNS is 245, which exceeds the 229 cycles analyzed for the FW nozzle and piping, but it does not exceed the 400 cycles analyzed for the other parts of the reactor vessel, <del>except for the FW nozzles, RPV internals, and Class 1N piping.</del>”</p> <p>Basis for Change: Response to RAI 4.3-10(a) in NLS2009061</p>

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47	4-25/4.3.1.3.2	<p>The first paragraph is nearly identical to the sixth paragraph on the previous page, except for the statement "...the applicant confirmed that its site is <u>not</u> an older vintage plant..." Consider deleting the paragraph or making it consistent with the sixth paragraph on Page 4-24.</p>	
48	4-26/4.3.1.4.2	<p>In the second paragraph of this section, the second and third sentences state:</p> <p>"According to LRA Table 4.3-1, the 60-year projected cycles are less than the 40-year design values. On this basis, the staff finds the applicant's claim that the TLAA for the B31.1 piping remains valid, in accordance with 10 CFR 54.21(c)(1)(i), during the period of extended operation acceptable."</p> <p>For the B31.1 piping, it is recommended that there be a nexus to not exceeding 7,000 cycles rather than the 40-year design values for the NRC acceptance criteria, consistent with wording on page 4-25.</p>	<p>Revise to read: "According to LRA Table 4.3-1, the 60-year projected cycles are less than <del>the 7,000 cycles</del> <u>40-year design values</u>. On this basis, the staff finds <u>acceptable</u> the applicant's claim that the TLAA for the B31.1 piping remains valid, in accordance with 10 CFR 54.21(c)(1)(i), during the period of extended operation <del>acceptable</del>."</p> <p>Basis for Change: Not exceeding individual transient 40-year cycles is not the basis for acceptability for B31.1 piping, per ASME B31.1. Limiting total cycles to below 7,000 is the required acceptance criteria.</p>
49	4-27/4.3.2.2	<p>The third paragraph of this section states:</p> <p>"According to LRA Table 4.3-1, the 60-year projected cycles are less than the 40-year design values. Therefore, the staff finds the applicant's claim that the TLAA for non-Class 1 piping remains valid during the period of extended operation acceptable."</p> <p>For the non-Class 1 piping, it is recommended that there be a nexus to not exceeding 7,000 cycles rather than the 40-year design values for the NRC acceptance criteria, consistent with wording in the previous paragraph.</p>	<p>Revise to read: "According to LRA Table 4.3-1, the 60-year projected cycles are less than <del>the 40-year design values</del> <u>7,000 cycles</u>. Therefore, the staff finds the applicant's claim that the TLAA for the non-Class 1 piping remains valid during the period of extended operation acceptable."</p> <p>Basis for Change: Not exceeding individual transient 40-year cycles is not the basis for acceptability for non-Class 1 piping, as described in LRA Section 4.3.2. Limiting total cycles to below 7,000 is the acceptance criteria.</p>

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50	4-28/4.3.3.2	<p>In the fourth paragraph of this section, the statement is made:</p> <p>“As indicated by the applicant, the use of an inspection program to manage fatigue will require prior staff review and approval.”</p> <p>The LRA B.1.15, Fatigue Monitoring Program (with Enhancements) tracks the number of critical thermal and pressure transients for selected reactor coolant system components. It is not an inspection program and NPPD has not indicated that fatigue would be managed by any other inspection program requiring staff review and approval. Recommend deletion of this sentence.</p>	
51	4-30/4.3.3.2	<p>The description in the third paragraph for Confirmatory Item (CI) 4.3.3.2-1 does not match the description of the CI on Page 1-8 (the CI on Page 1-8 does not specifically list the 1.49 F<sub>en</sub> value but requires demonstration of adequate conservatism). Recommend reconciling the CI wording.</p>	
52	4-31/4.4	<p>The first and second paragraphs of this section require clarification. Time-Limited Aging Analyses (TLAA) are not programs or components, they are analyses. As stated in the LRA Section 4.4, “Equipment qualification evaluations for EQ components that specify a qualification of at least 40 years, but less than 60 years, are considered TLAA for license renewal.”</p> <p>The characterization that Environmental Qualification (EQ) TLAA includes “long-lived” electrical components is not correct. The LRA states: “CNS electrical cables and connections subject to 10 CFR 50.49 EQ requirements are not subject to aging</p>	<p>Revise to read. “The 10 CFR 50.49 Environmental Qualification (EQ) program <u>will manage the aging effects associated with time-limited aging analyses (TLAAs) for environmental qualification of electric equipment for the period of extended operation in accordance with 10 CFR 54.21(c)(1)(iii). is a TLAA for purposes of license renewal.</u> <u>Equipment qualification evaluations for EQ components that specify a qualification of at least 40 years, but less than 60 years, are considered TLAA for license renewal.</u> These TLAAs <del>for of the EQ of</del> electrical components includes <u>all analyses for long-lived, passive, and active electrical instrumentation and control (EIC) components that are important to safety and are located in a harsh environment.</u></p>

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		management review since the components are subject to replacement based on qualified life.” This is also true for EQ components other than cables and connections.	The applicant shall demonstrate that for each type of EQ equipment <u>TLAA</u> , one of the following is true:...”  Basis for Change: Clarification
53	4-32/4.4	The first sentence of the first paragraph should be clarified to refer to time-limited aging analyses, rather than environmental qualifications.	Revise to read: “LRA Section 4.4 summarizes the applicant’s evaluation of <u>TLAAs</u> for the EQs of electric equipment for the period of extended operation and...”  Basis for Change: Clarification
54	4-36/4.6.2.1	The last sentence of the first paragraph states:  “Therefore, main vent intersection with the vent header, vent header miter joint, main vent bellows, and downcomer and tiebars are in accordance with 10 CFR 54.21(c)(1)(ii).”  LRA Sections 4.6.2.1, 4.6.2.2, 4.6.2.3, and 4.6.2.5 collectively cite a combination of 10 CFR 54.21(c)(1)(ii) and 10 CFR 54.21(c)(1)(iii) for the locations in this listing. Note - Any change in wording may also affect wording in Sections 4.6.2.2 and 4.6.2.4.	Revise to read: “Therefore, main vent intersection with the vent header, vent header miter joint, main vent bellows, and downcomer and tiebars are in accordance with 10 CFR 54.21(c)(1)(ii) <u>and 10 CFR 54.21(c)(1)(iii).</u> ”  Basis for Change: LRA Sections 4.6.2.1, 4.6.2.2, 4.6.2.3, and 4.6.2.5
55	A-11	Commitment Number 23 states, in part:  “Enhance the Reactor Vessel Surveillance Program to add that if the CNS standby capsule is removed from the reactor vessel without the intent to test it, the capsule will be stored in a manner which maintains it in a condition which would permit its future use, including during the period of extended operation.”  CNS does not have a standby capsule. Moreover, the third License Condition described in Section 1.7 subsumes the need to make this commitment should	Revise to read: “ <del>Enhance the Reactor Vessel Surveillance Program to add that if the CNS standby capsule is removed from the reactor vessel without the intent to test it, the capsule will be stored in a manner which maintains it in a condition which would permit its future use, including during the period of extended operation.</del>  Enhance the program to ensure that the additional requirements that are specified in the final NRC safety evaluation for BWRVIP-116 will be addressed before the period of extended operation.”  Basis for Change: License Condition 3 subsumes the need to make this commitment.

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		NPPD acquire one in the future. Accordingly, it is being deleted (see Attachment 2, LRA Changes 1 and 2).	