

APPENDIX C

DISPOSITION OF WRITTEN PUBLIC COMMENTS

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C.1. INTRODUCTION

On August 31, 2000, four documents comprising the draft license renewal guidance documents for implementation of 10 CFR Part 54 were made available for public comment on the Web site page <http://www.nrc.gov/NRC/REACTOR/LR/guidance.html>.

The public was requested to submit comments on the Draft Regulatory Guide DG-1104, the draft SRP-LR, the draft GALL report, and NEI 95-10 (Revision 2), by October 16, 2000. In addition, the NRC invited public comments on all information contained in these draft documents, but particularly solicited responses to the four questions described fully in the Federal Register Notice of August 31, 2000 (65 FR 53047).

Table C, at the end of Appendix C, contains the written comments or a summary of the written comments received. This Appendix C includes 226 written comments, with 153 from individuals representing public interest groups, 70 from individuals representing industry groups, and 3 from the ACRS.

C.2. EVALUATION AND DISPOSITION OF COMMENTS

Table C, at end of Appendix C, contains comments received from various public interest groups, industry groups, the Advisory Committee on Reactor Safeguards, and individuals.

The column heading, "Comment Number," is primarily intended to identify the source of the comment (i.e., the organization or individual that submitted the comment). For example, DP-3 indicates that the comment was made by Duke Power Company, and the "3" distinguishes this comment from all other Duke Power Company comments. The exceptions are the comments from Indiana and Michigan Power (DG-1104-1 through DG-1104-2, GALL-1 through GALL-17, and SRP-LR-1 through SRP-LR-2); the comment from Omaha Public Power District (H. Kenneth-1); and those from the 113 individuals, which were numbered as originally submitted. The abbreviations used in this appendix are listed in the front matter of this NUREG. The numbers on the first line for each line item under the column heading, "Item Number," indicate the listing number of a particular group of comments identified in Section C.3. The items on the second or subsequent lines for each line item under this column heading concern the applicable section of a license renewal guidance document on which a comment was made. References for all comments listed in Section C.3 are provided in Section C.4.

All comments are in alphanumerical order. These comments were not always dispositioned in the order in which they appear. For example, the disposition for comment "CAN-1" may refer to the disposition for comment "CAN-3" for its resolution, which means "CAN-1" was dispositioned after "CAN-3" even though it precedes "CAN-3" in the alphanumerical order presented.

C.3. ORIGIN OF COMMENTS

1. <u>ACRS-2 through ACRS-4</u>	See Section C.4, Reference No. 1
2. <u>CAN-1 through CAN-11</u>	See Section C.4, Reference No. 2
3. <u>C&PL-1</u>	See Section C.4, Reference No. 3
4. <u>COMED-1 through COMED-4</u>	See Section C.4, Reference No. 4
5. <u>DG-1104-1 through DG-1104-2</u>	See Section C.4, Reference No. 5
6. <u>DP-1 through DP-10</u>	See Section C.4, Reference No. 6
7. <u>GALL-1 through GALL-17</u>	See Section C.4, Reference No. 7
8. <u>General Public Comments</u>	See Section C.4, Reference No. 8
9. <u>HKenneth-1</u>	See Section C.4, Reference No. 9
10. <u>I&M-1 through I&M-17</u>	See Section C.4, Reference No. 10
11. <u>KDrey-1 through KDrey-13</u>	See Section C.4, Reference No. 11
12. <u>KOPEC-1</u>	See Section C.4, Reference No. 12
13. <u>NIRS-1 through NIRS-8</u>	See Section C.4, Reference No. 13
14. <u>NMC-1 through NMC-8</u>	See Section C.4, Reference No. 14
15. <u>PECO-1</u>	See Section C.4, Reference No. 15
16. <u>SRP-LR-1 through SRP-LR-2</u>	See Section C.4, Reference No. 16
17. <u>UCS-1 through UCS-5</u>	See Section C.4, Reference No. 17
18. <u>UCS-6 through UCS-9</u>	See Section C.4, Reference No. 18
19. <u>VP-1</u>	See Section C.4, Reference No. 19
20. <u>WESCO-1</u>	See Section C.4, Reference No. 20
21. <u>W&S-1 through W&S-4</u>	See Section C.4, Reference No. 21

C.4. REFERENCES

Letter to Chairman Meserve, NRC, from Dana Powers, ACRS, dated November 15, 2000.

Letter to David Meyers, NRC, from Citizens Awareness Network, dated October 16, 2000.

Letter to Secretary of the Commission, NRC, from Terry C. Morton, Carolina Power and Light Company, dated October 16, 2000.

Letter to Chief, Rules and Directives Branch, NRC, from R.M. Krich, Commonwealth Edison Company, dated October 16, 2000.

Letter to Chief of Rules and Directives, NRC, from M.W. Rencheck, Indiana Michigan Power, dated October 14, 2000.

Letter to David Meyers, NRC, from M. S. Tuckman, Duke Power Company, dated October 16, 2000.

Letter to Chief of Rules and Directives, NRC, from M.W. Rencheck, Indiana Michigan Power, dated October 14, 2000.

Letters emailed or submitted by 104 individuals.

Email from Henry Kenneth, dated October 4, 2000.

Letter to Chief of Rules and Directives, NRC, from M.W. Rencheck, Indiana Michigan Power, dated October 14, 2000.

Letter to David Meyers, NRC, from Kay Drey, University City, Missouri, dated October 16, 2000.

Letter (emailed) to David Meyers, NRC, from Hagki Youm, Korea Power Engineering Company, dated December 20, 2000.

Letter to David Meyers, NRC, from Paul Gunter, Nuclear Information and Resource Service, dated October 16, 2000.

Letter (emailed) to David Meyers, NRC, from Douglas F. Johnson, Nuclear Management Company, dated October 26, 2000.

Letter to Secretary, Rulemaking and Adjudications Staff, NRC, from James A Hutton, PECO Nuclear, dated October 16, 2000.

Letter to Chief of Rules and Directives, NRC, from M.W. Rencheck, Indiana Michigan Power, dated October 14, 2000.

Letter to Chief of Rules and Directives, NRC, from David A. Lochbaum, Union of Concerned Scientists, dated October 6, 2000.

Letter to Chief of Rules and Directives, NRC, from David A. Lochbaum, Union of Concerned Scientists, dated December 4, 2000.

Letter to Chief, Rules and Directives Branch, NRC, from William F. Renz, Virginia Power, dated October 16, 2000.

Letter to Sam Lee, NRC, from Arnold. H. Fero, Westinghouse Electric Company LLC, dated December 22, 2000.

Letter to David Meyers, NRC, from Kathryn M. Sutton, Winston & Strawn, dated October 16, 2000.

Table C: Disposition of Written Public Comments

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
ACRS-2	C.3.1	The staff should update the Generic Aging Lessons Learned (GALL) report as lessons are learned from reviewing future license renewal applications and as the staff approves new editions of codes and standards.	<p>Since the preparation and review of future applications are likely to result in a significant number of new lessons learned, the staff should update the GALL report to incorporate the lessons learned.</p> <p>The provisions of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code have been codified in 10 CFR 50.55a. The staff has been amending 10 CFR 50.55a periodically to incorporate later editions of the ASME code. During periodic revision of 10 CFR 50.55a, the staff plans to evaluate the adequacy of these later editions for license renewal using the criteria described in the SRP-LR. We believe this process is appropriate for the period of extended operation. The staff should update the GALL report to incorporate new editions of codes and standards for which a similar process does not exist.</p>	<p>After resolution of stakeholder comments in April of 2001, GALL will be periodically updated as lessons are learned through subsequent license renewal reviews. The staff is evaluating the frequency by which updates will be made.</p> <p>In an August 31, 2000, <i>Federal Register</i> Notice (65 FR 53047), the NRC solicited comments on how to update the codes and standards referenced in GALL. The NRC has a process to periodically incorporate updated versions of the ASME Code into the regulation in accordance with 10 CFR 50.55a. To ensure that the GALL report conclusion will remain valid when further editions of the ASME Code are incorporated into the NRC regulation by the 10 CFR 50.55a rulemaking, the staff will evaluate the adequacy of these later editions for license renewal. However, there are other national codes and standards that are not subject to the Commission approval process in 10 CFR 50.55a.</p> <p>The most flexible approach is to specify in GALL the elements of the codes and/or standards that are required to provide aging management, rather than just referencing the code or standard as</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
ACRS-2 (cont.)				<p>providing an adequate aging management program. Where GALL references a code or standard as providing an acceptable aging management program, an applicant could compare the two codes or standards and show in its application how a later version of the code or standard provides an equivalent aging management program.</p> <p>Another approach which has also been recommended by one member of the public in response to the Federal Register solicitation, would be to call out the codes and standards as providing an acceptable aging management program and then have the staff review revisions to codes and standards referenced by GALL as they are published and update GALL, as necessary. This might require license renewal applicants to describe comparisons with later versions if the staff had not yet revised GALL to reflect later versions. Both approaches would be acceptable.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
ACRS-3	C.3.1	The staff should validate that the artificially aged cables used in the studies conducted to address GSI-168 issues are representative of 30-40 year old cables.	Until GSI-168, which deals with environmental qualification of low-voltage instrumentation and control cables, is resolved, aging management of such cables will continue to be addressed through plant-specific programs. It does not appear that condition monitoring is a reliable predictor of future performance of cables under accident conditions. Testing of cables, which have undergone accelerated aging, identified severe degradation. The staff should validate that the artificially aged cables used in the accelerated aging studies conducted to address the issues of GSI-168 are representative of 30-40 year old cables. We plan to review this issue during our review of the proposed resolution of GSI-168.	<p>The intent of this ACRS recommendation has been addressed in conjunction with the research activities completed in support of the resolution of GSI-168 on Environmental Qualification of Low-Voltage Instrumentation and Control (I&C) Cables. That research included direct comparisons between artificially and naturally aged cables, where the naturally aged cables with 10 and 24 years of service were acquired from decommissioned nuclear power plants.</p> <p>The operating thermal and radiation environment for the naturally aged cables was determined from plant records. Six sets of loss-of-coolant-accident (LOCA) tests provided data to validate that the artificially aged cables are representative of 20–40-year-old cables. The LOCA tests were conducted on three different groups of cables; new cables, cables artificially aged to simulate 20, 40, and 60 years of equivalent service life, and naturally aged cables retrieved from decommissioned plants after 10 and 24 years of service.</p> <p>The results showed that with the exception of Okonite and Samuel Moore cables, all three groups of</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
ACRS-3 (cont.)				<p>cables passed the LOCA tests for equivalent of 20 and 40 years of service life. Failures observed for the Okonite and Samuel Moore cables are currently being addressed through the GSI-168 resolution process. The research showed that the naturally aged cables, when subjected to equivalent years of service life conditions in terms of thermal and radiation environment, performed better in terms of their ability to withstand LOCA conditions than the artificially aged cables.</p> <p>Therefore, additional testing to further validate the artificially aged cables representative of 30–40-year-old cables is not warranted.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
ACRS-4	C.3.1	The staff and the industry should provide consistent guidance of the use of emergency operating procedures (EOPs) and severe accident management guidelines (SAMGs) as possible information sources to verify that equipment important to safety has not been inadvertently left out by the license renewal rule scoping process.	The SRP-LR provides guidance to review the adequacy of the scoping and screening processes used by the licensees to identify structures and components that are subject to an aging management review. As the first two applications demonstrated, the scoping process for older plants is a challenging task that does not lend itself to a standard procedure. Systems and components in scope are identified	<p>EOPs and SAMGs are potential information sources for identifying the structures, systems, and components within the scope of the license renewal rule.</p> <p>EOPs are listed in SRP-LR Table 2.1-1, "Sample Listing of Potential Information Sources."</p> <p>In a public meeting on February 7, 2000, the staff asked NEI to add</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
ACRS-4 (cont.)			<p>based on a review of accident analyses that are part of the current licensing basis (CLB) of the plant. The accident analyses, especially those of older plants, provide abbreviated descriptions of events and seldom identify all of the equipment required to achieve safe shutdown. More detailed information is contained in the emergency operating procedures (EOPs) that are referenced in the Final Safety Analysis Report and, thus, are part of the CLB of the plant. However, the scoping process defined by the license renewal rule does not explicitly include the EOPs as a source of information to identify equipment in scope. In contrast, the maintenance rule explicitly includes the EOPs as a source of information to identify equipment in scope. As a result, there may be equipment whose active components are within the scope of the maintenance rule but its passive long-lived components are not within the scope of the license renewal rule.</p> <p>We recognize that most of the equipment used in the EOPs will be identified by the license renewal rule scoping process. The EOPs are already listed in Table 2.1-1 of the SRP-LR as a possible information source. However, they are not listed</p>	<p>these documents to NEI 95-10, Table 3.1-1, "Sample Listing of Potential Information Sources," as potential information sources. NEI 95-10 was since revised accordingly.</p> <p>SRP-LR was revised to address this comment by adding the SAMGs to Table 2.1-1 but GALL was not revised.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
ACRS-4 (cont.)			<p>as a possible information source in the corresponding Table 3.1-1 of NEI 95-10. We recognize that the EOPs are not within the scope of the license renewal rule. However, we believe that it would be prudent for the industry and the staff to include the EOPs in the guidance documents as a possible information source. This would confirm that equipment important to safety has not been omitted inadvertently in the scoping process, rather than leaving it to the individual reviewers to deal with this issue. Severe Accident Management (SAM) guidelines are currently implemented at all plants, are part of the CLB, and are tied to the EOPs. Operators are routinely trained on their use. However, SAM guidelines were developed as a voluntary industry initiative. The equipment used to support these guidelines is not necessarily within the scope of the license renewal rule. The SAM guidelines should be identified as a potential source of information in Table 2.1-1 of the SRP-LR and Table 3.1-1 of NEI 95-10 to confirm that equipment important to safety has not been omitted inadvertently in the scoping process.</p>	

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
CAN-1	C.3.2	Based on industry experience with aging reactor degradation and embrittlement, and the ongoing erosion of hearing rights and democratic safeguards afforded the public in the Atomic Energy Act, CAN opposes a generic relicensing program. This easing of regulatory burden has truncated the ability for public to participate in matters of vital importance to their communities	None Provided.	See NRC dispositions of comments KDrey-1 and KDrey-12 in this Table C.
CAN-2	C.3.2	CAN believes that the NRC's proposal for a generic relicensing process will jeopardize the health and safety of workers and the public. The absence of effective regulatory oversight has in fact compromised the health and safety in numerous communities in the Northeast. The process of evaluating whether a reactor should win approval from the NRC to relicense is complex and should be determined on a case by case basis, since most reactors in the U.S. have individual designs, management processes, and associated problems. We do not believe that the regulatory burden on licensees should be eased. In fact, CAN believes as reactors age and deteriorate more regulatory oversight is required to protect the worker and public health and safety and the environment. This move	None Provided.	See NRC dispositions of comments KDrey-1 and KDrey-13 in this Table C. The review of a license renewal application is done on a case-by-case basis. Also see NRC dispositions to comments NMC-1 and NMC-2 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
CAN-2 (cont.)		increasingly toward industry self-regulation and the curtailing of NRC's regulatory authority to intervene is also undermining the democratic safeguards provided for by the Atomic Energy Act.		
CAN-3	C.3.2	In fact, had effective oversight occurred through vigilant routine inspection, Yankee Rowe may not have received its original relicensing approval.	None Provided.	Yankee Rowe did not receive a renewed operating license. Yankee Rowe did not apply for a license extension in accordance with 10 CFR Part 54. Yankee Rowe's owner was one of several utilities that initially explored license renewal, but decided against it in part because of costs associated with resolving questions surrounding the Yankee Rowe reactor vessel. The GALL report and SRP-LR were not revised to address this comment.
CAN-4	C.3.2	After Yankee Rowe and problems at other stations became known, NRC began requiring inspection of age-related degradations at reactors across the U.S. Through the program, NRC and industry discovered that components which were not included in original safety analyses and licensing bases were becoming dangerously embrittled.	None Provided.	In 1992, the NRC issued Generic Letter 92-01, "Reactor Vessel Structural Integrity," as part of a program to evaluate reactor vessel integrity and take regulatory actions, if needed, to ensure that licensee and permit holders were complying with 10 CFR 50.60 and 50.61, and were fulfilling commitments made in response to an earlier generic letter, GL88-11. Revision 1 was issued to better reflect information gained by the staff regarding Yankee Nuclear Power Station reactor vessel integrity, and highlighted that

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
CAN-4 (cont.)				<p>concerns raised in the staff's review of reactor vessel integrity for the Yankee Nuclear Power Station is what lead to the generic letter. All licensees submitted information requested by July 2, 1992. In December 1994, the NRC staff issued its documented review of the licensee responses in NUREG-1511, "Reactor Pressure Vessel Status Report." As a result of its review the NRC did not subject licensees to any new requirements, but as a result of reviewing data relevant to several pressurized thermal shock evaluations from several plants the NRC staff concluded that licensees might not have considered all pertinent data in the responses to GL 92-01, Revision 1.</p> <p>Therefore, in 1995 the NRC issued GL 92-01, Revision 1, Supplement 1, to all reactor licensees requesting additional reactor pressure vessel data. In the fall of 1996, the NRC staff issued closeout letters on GL 92-01, Revision 1, Supplement 1, which stated that no immediate safety issues were associated with the structural integrity assessments for U.S. light-water reactors. Since the issuance of GL 92-01, Revision 1, Supplement 1, the industry owners</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
CAN-4 (cont.)				<p>groups have completed a major initiative to collect all available alloying chemistry and material property data for the various forging, plate, and weld material used in the fabrication of U.S. reactor pressure vessels. In addition, no new requirements were identified as a result of the response reviews.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
CAN-5	C.3.2	<p>Nevertheless, a 1999 NRC report on the core shroud at Nine Mile Point Unit 1 – the oldest reactor still operating in the U.S., and the worst example of age-related degradation among BWRs noted that the chances of catastrophic failure of the core shroud in the case of a design basis earthquake were 1:100,000. NMP's companion reactor, Nine Mile Point Unit 2, is 10 years younger, but showed similar signs of significant core shroud cracking after only 10 years of operation, with no history of poor water chemistry: 25% through-wall cracks, spanning 80% of the horizontal beltline weld. Cracking of the core shroud can lead to a loss of coolant accident, as can be embrittled reactor vessel.</p>	See previous column.	<p>In a letter dated November 29, 1999, from Brian W. Sheron, Acting Director Office of Nuclear Reactor Regulation, to Mr. Tim Judson, Syracuse Peace Council, 924 Burnet Avenue Syracuse, NY 13203 (ADAMS document accession Number ML993340201), the NRC forwarded the "Final Director's Decision Under 10 CFR 2.206," (ADAMS document accession Number ML993340208) related to these matters concerning Nine Mile Point Unit 1.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
CAN-6	C.3.2	The basis for a generic environmental impact statement on license renewal is nonexistent, since existing material conditions monitoring programs are unable to keep pace with aging-related degradation at current reactor sites.	None Provided.	<p>The generic environmental impact statement is required by 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions." Aging management of structures, systems, and components within the scope of the license renewal rule is not required by 10 CFR Part 51, but rather 10 CFR Part 54.</p> <p>See NRC disposition of comment KDrey-1 in this Table C.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
CAN-7	C.3.2	The NRC has only managed to effectively regulate aging reactors such as Yankee Rowe, Main Yankee, Connecticut Yankee, and Millstone Units 1, 2 and 3, and Vermont Yankee through intensive oversight necessitated by site-specific review of plant operations and material condition and the pressure of the public and public interest groups intent on protecting their communities from nuclear devastation.	None Provided.	<p>In accordance with the NRC's Revised Reactor Oversight Program (RROP), the NRC focuses its inspection resources commensurate with licensee performance. Licensee's that have more issues or problems receive more NRC attention. For a detailed description of the RROP see NRC web page address http://www.nrc.gov/NRR/OVERSIGHT/index.html.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
CAN-8	C.3.2	Furthermore, NRC's existing methods for mitigating the safety significance of material degradation problems have already proven to be inadequate, because of the pace of embrittlement and the changing conditions of nuclear power operations.	The steam generator tube rupture at Indian Point Unit 2 in February 2000 is an excellent example of the present lack of adequate NRC oversight at nuclear stations and the need for more stringent NRC oversight of material condition problems.	See NRC dispositions of comments KDrey-12 and NIRS-6 through NIRS-8 in this Table C.
CAN-9	C.3.2	Leak-before-break standard for mitigating accident scenarios have proved unrealistic, endangering workers as well as the public.	None Provided.	Previously addressed in a letter described in NRC disposition of comment CAN-5 in this Table C.
CAN-10	C.3.2	The issuance of a generic environmental impact statement on license renewal also impacts decommissioning and the ultimate disposition of reactor sites. Industry officials have stated that licensees may only be interested in operating reactors for a portion of the twenty years of extended license life, allowing Decommissioning trust funds to accrue in order to ensure adequate funding before beginning cleanup. However this option is still available under the existing license through the NRC approved SAFSTOR method, since license termination is not mandated until 60 years after licensed operation has ceased. Yet NRC regulations have changed to permit a wide range of decommissioning activities to occur under the normal operating license, which creates a potential for licensees constructing new	None Provided.	Licensees who make certifications in accordance with 50.82(a)(1)(i) and (ii) are precluded from restarting. If a utility wanted to construct a new reactor on the site of a currently decommissioned reactor they would have to apply for a new operating license in accordance with the requirements of 10 CFR Part 50 or 10 CFR Part 52. The GALL report and SRP-LR were not revised to address this comment.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
CAN-10 (cont.)		generating stations on-site before decommissioning and site cleanup have even been completed. This regulatory morass has the potential to allow the construction of new reactors on the old sites under the extended license – without the necessity of applying for the new license – and therefore effectively block the democratic participation of affected communities mandated under the Atomic Energy Act section 189a.		
CAN-11	C.3.2	Setting aside the licensed authority set forth in the Atomic Energy Act would undermine the Commission's ability to oversee the construction and operation of new nuclear reactors, prohibit the proper decommissioning on of the originally licensed facilities, and thereby endanger the worker and public health and safety and the environment.	None Provided.	See NRC dispositions of comments KDrey-1 and CAN-10 in this Table C. In addition, the license renewal rule, 10 CFR Part 54, does not automatically remove the requirement to decommission a reactor at the end of its operating license. The GALL report and SRP-LR were not revised to address this comment.
COMED-1	C.3.4	Com Ed has been actively involved with the Nuclear Energy Institute (NEI) on this issue and endorses the industry comments submitted by the NEI.	None Provided.	See NRC dispositions of NEI comments in Appendix B of this NUREG.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
COMED-2	C.3.4	ComEd is concerned about how the GALL Report and the associated guidance for its use will treat plants that are not subject to the GDC of 10 CFR Part 50, Appendix C A, or the Standard Review Plan (NUREG-0800 SRP-LR). It is very likely that an applicant will reference, in whole or part, the report in its license renewal application.	Thus, it is important that the GALL Report and its associated guidance recognize that differences exist in licensees' current licensing basis and provide flexibility to accommodate these differences.	See NRC dispositions to comments NMC-1, NMC-2, and NMC-3 in this Table C.
COMED-3	C.3.4	As it stands now, the GALL Report and its associated guidance more frequently reference the most current version of codes, standards and other guidance.	This may limit the usefulness of the GALL Report and its associated guidance for older plants, such as Dresden and Quad Cities. This is because some programs for these older plants do not incorporate all of the features subsequently required by the NRC for newer plants and may not fully meet all ten of the criteria in the SRP- LR.	See NRC dispositions to comments ARCS-2, NMC-1, NMC-2, and NMC-3 in this Table C.
COMED-4	C.3.4	Consequently, ComEd believes that the GALL Report and its associated guidance should clarify that aging management programs based on earlier versions of codes, standards and other guidance document are not excluded from use by these older plants.	This flexibility could be incorporated by expanding the scope of the GALL Report to either include previously approved programs or to modify the acceptance criteria by which plants can certify that their programs are adequate for purposes of the GALL Report.	See NRC disposition to comment ARCS-2 in this Table C.
CP&L-1	C.3.3	CP&L endorses NEI comments transmitted by NEI letter dated October 13, 2000.	None Provided.	See NRC dispositions of NEI comments in Appendix B of this NUREG.
DG-1104-1 (I&M)	C.3.5 Paragraph C.1	Contents of an Application: Consider adding a section that would refer to the more detailed guidance on use of the GALL report.	DG-1104 is the instruction to potential license renewal applicants. It should contain instructions on the proper use of the GALL report.	See NRC disposition to comment NMC-2 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
DG-1104-2 (I&M)	C.3.5 Paragraph C3.2	Physical Specifications: Please consider adding specifications for electronic submittal of applications (e.g. CDROM).	Electronic transmittal of submittals such as the UFSAR is now accepted. It is much more efficient to submit a large document such as a License Renewal Application on CDROM.	DG-1104 has been finalized as RG 1.188, and that regulatory guide provides guidance for electronic formats for electronic submittals. RG 1.188 addresses this issue but the GALL report and SRP-LR were not revised to address this comment.
DP-1	C.3.6	Duke agrees with NEI's comments on these draft license renewal implementation documents.	None Provided.	See NRC dispositions of NEI comments in Appendix B of this NUREG.
DP-2	C.3.6	What actions are required to be taken in order to certify that an existing, plant-specific program matches the corresponding program described in the GALL report. What statement should be included in the application itself?	As currently drafted in both the GALL report and in the SRP-LR, the expectations are not clear on this most important point.	See NRC disposition to comment NMC-2 in this Table C.
DP-3	C.3.6	The Methodology discussed in the SRP-LR, Section 2.1 does not currently acknowledge the use of a broader, more comprehensive scoping approach. SRP-LR Section 2.1 should clearly state that a system scoping is not required in conjunction with a commodity approach or plant spaces approach to the integrated plant assessment.	Experience with Oconee license renewal indicates a need to make this understanding clear to reviewers of renewal applications.	The SRP-LR currently does not require system scoping in conjunction with a commodity approach or plant spaces approach in the integrated plant assessment. The GALL report and SRP-LR were not revised to address this comment.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
DP-4	C.3.6 SRP-LR, A.1	<p>The process to identify those aging effects that require aging management during the period of extended operation is described in SRP-LR Appendix C A.1. Currently, this process does not discuss the necessary distinction between “aging effects that cause degradation” and “aging effects that cause degradation that could result in loss of structure or component intended function(s).</p> <p>The discussion in SRP-LR Appendix C A.1.1 needs to be revised to clearly state the expectations for identification of aging effects that require management during the period of extended operation; i.e., those that cause degradation that could result in loss of structure or component intended function. This revised discussion in Appendix C A.1.1 should then be applied to all listings in the GALL report to confirm that identified aging effects could result in a loss or intended function if left unmanaged during the period of extended operation.</p>	The criteria contained in SRP-LR Appendix C A.1 are overly broad, and are not linked to intended function, which could result in the implementation of new aging management programs and activities prematurely.	<p>The effects of aging are related to intended function of structures and components. As stated in SRP-LR, Appendix A, subsection A.1.2.1, item 1, the last sentence: “The effects of aging on the intended functions of structures and components should also be considered.”</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
DP-5	C.3.6 SRP-LR, A.1.2	The process to describe and demonstrate the effectiveness of aging management programs is contained in SRP-LR Appendix C A.1.2. The guidance in this Appendix C needs to be clarified. Specifically, the guidance for "Detection of Aging Effects" and "Monitoring and Trending" needs to be revised to clearly state the expectations for each of the four types of aging management programs.	Duke's experience during the Oconee license renewal effort indicates the importance of having a clear understanding of the intent of each program attribute prior to describing the aging management programs.	See NRC dispositions of NEI comments SA.1-4 and SA.1-5 in Appendix B, Table B.2.14
DP-6	C.3.6 SRP-LR, A.1.2	The GALL report program descriptions need to be re-written to better reflect the attributes contained in SPR Appendix C A.1.2.	<p>Currently, there are program descriptions in the GALL report that do not fully address each attribute. For example, the operating experience provided in the GALL program descriptions typically states that the effect has occurred and, thus, that the program is needed. However, the guidance in Appendix C A.1.2 provides that operating experience should provide objective evidence of program effectiveness.</p> <p>The "Detection of Aging Effects" and "Monitoring and Trending" portions of many program descriptions are unclear.</p>	<p>The aging management program evaluations were enhanced and clarified as appropriate to better address the attributes contained in SPR Appendix A, subsection A.1.2.</p> <p>See NRC dispositions of NEI comments SA.1-4 and SA.1-5 in Appendix B, Table B.2.14.</p> <p>The GALL report was revised to address this comment but not the SRP-LR.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
DP-7	C.3.6 SRP-LR, A.1.2	Technical references providing the foundation for additional requirements need to be provided.	Technical references providing the foundation for additional requirements need to be provided.	<p>The evaluation in GALL and the guidance in the SRP-LR follow the requirements of the license renewal rule as stated in Part 54. That is the determination 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.</p> <p>The GALL report reviews the material, environment, and the extensive compilation of data and experience to identify applicable aging effects. It builds on a previous report, NUREG/CR-6490, which was based on information in over 500 documents. It includes NPAR program reports, NUMARC Industry Reports, LER, information notices, generic letters, and bulletins. The staff has also considered information contained in the reports provided by the UCS in a May 5, 2000, letter.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
DP-8	C.3.6 SRP-LR, A.1.2	Duke suggests that each program in the GALL report contains two distinct discussions. The first would be a clear description of “what” the program is; the second would be “why” the program is effective. The Oconee license renewal safety evaluation report (NUREG-1723) presents the credited aging management programs and activities in this manner.	Clear program descriptions in the GALL report are one essential requirement for a future applicant to utilize the GALL report as part of its application.	<p>Each aging management program in the GALL report contains a section titled Program Description. This section describes “what” the program is. The Program Description sections were reviewed and revised where appropriate to clarify “what” the program is.</p> <p>The 10 element attributes contained in each program state “why” the program is effective. These 10 elements provide a description of “why” the programs are effective. The program evaluations were reviewed and revised where appropriate to clarify “why” the programs are effective.</p> <p>See NRC disposition of comment DP-6 in this Table C.</p> <p>The GALL report was revised to address this comment but not the SRP-LR.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
DP-9	C.3.6	A better explanation of how license renewal applicants are expected to use and cross-reference the GALL report in plant-specific license renewal applications needs to be provided. A clear statement of the process to compare its plant-specific programs to those in the GALL report is a second essential requirement for a future applicant to utilize the GALL report as part of its application.	As currently drafted in both the GALL report and in the SRP-LR, the expectations are not clear on this most important point. Duke is unsure of exactly what actions are required to be taken in order to certify that an existing, plant-specific program matches the corresponding program described in the GALL report, and what statement should be included in the application itself.	See NRC dispositions to comments NMC-2 and NMC-8 in this Table C.
DP-10	C.3.6	The current contents of Chapter 3 of the application include a listing of the credited aging management programs. In order to identify those programs that fit into each of the four types of program reviews described clear guidance must be provided. Clear guidance needs to be provided for all possible situations where a program may fit under multiple headings. Clarifying the expectations for this portion of Chapter 3 of the application is a third essential requirement for a future applicant to utilize the GALL report as part of its application.	The guidance should cover situations where a single program may fit under heading (3) and (4), and where the QA requirements for non safety-related components must be reviewed, as well as requirements for new components or aging effects. As an alternative, it may be appropriate to simply have two headings: (1) 'Aging Management Programs Evaluated in the GALL Report that are Relied on for License Renewal,' and (2) "Further Evaluation of Aging Management Programs Recommended required," and not attempt to subdivide those programs that require further staff review evaluation any further. This alternative would simplify the process for both the applicant as well as the staff reviewer.	See NRC disposition to comment NMC-2 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
GALL-1 (I & M)	C.3.7 Page 3	<p>The section "Application of GALL Report" should be expanded include additional licensing guidance for:</p> <ol style="list-style-type: none">1. Referencing portions of the GALL report.2. Demonstrating that existing programs, previously approved by NRC in an SER, a TER, or Inspection Report, are adequate for aging management.3. In taking credit for a program as described in the GALL report. " the conditions at the plant must be bounded by the conditions for which the GALL program was evaluated." This needs more specific explanation for each program.	Older pre-SRP-LR plants do not have programs that are consistent with all those described in the GALL report. The referenced codes and standards in the GALL report are in many cases, the most recent and therefore go beyond the CLB of these older plants.	See NRC dispositions to comments NMC-1, NMC-2, ACRS-2, and I&M-9 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
GALL-2 (I & M)	C.3.7 Page 4	The Section "Summary and Recommendations" states that the report "... also contains recommendations on specific areas for which generic existing programs should be augmented for license renewal." These recommendations are based on an assumed scope and content of existing programs that may go well beyond the programs presently incorporated in the CLB. For such cases, additional licensing guidance is needed to ensure that applicants identify and properly augment existing programs.	Criteria for determining if a specific program requires augmentation should be provided.	<p>See NRC disposition to comment DP-7 in this Table C.</p> <p>Criteria for determining if a specific program requires augmentation is provided in each table in Chapters I through XIII in Volume 2 of GALL. In each table there is a column titled "Further Evaluation" which is used to indicate if program augmentation is necessary. See "GALL Evaluation Process" section Summary in Volume 1 of GALL for complete explanation.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
GALL-3 (I & M)	C.3.7 Table 3, "Summary of AMPs for Auxiliary Systems Evaluated in Chapter V11 of the GALL Report"	Clarify the methodology for addressing unanticipated cyclic loading when calculating the Cumulative Fatigue Damage for the various Heat-Exchanger components in CVCS (Tube/Tube Sheet, Channel/Cover, Channel/Welds, Shell, and Closure bolting).	Aging Effects/Mechanism for CVCS heat exchanger includes unanticipated cyclic loading with no reference guidance regarding acceptable detection or evaluation methods.	<p>Unanticipated cyclic loading is not a valid aging mechanism. The term "unanticipated" was eliminated because if a mechanism is not anticipated, then it cannot be managed in anticipation. Fatigue is a TLAA and is to be evaluated based on cyclic loads specified in the plant's CLB.</p> <p>The GALL report was revised to address this comment but not the SRP-LR.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
GALL-4 (I & M)	C.3.7 Section X.M1	This program description does not address unanticipated cyclic loading yet. Table 1, "Summary of AMPs for RCS Evaluated in Chapter IV of the GALL Report," includes a requirement to address unanticipated cyclic loading. Please provide additional guidance on methodology and criteria to be used.	None Provided.	<p>Cyclic loading is not addressed in Chapter X as a fatigue AMP. The AMP for cyclic loading, typically, is ASME Section XI ISI. Specific guidance is provided in Chapters II through Chapter VIII to address cyclic loading. When ISI alone was not found to be adequate, additional guidance on the methodology and criteria was provided in the Aging Management Program column of these chapters.</p> <p>The GALL report was revised to address this comment but not the SRP-LR.</p>
GALL-5 (I & M)	C.3.7 Section X1.M2 Thermal Aging & Neutron Irradiation Embrittlement of CASS (RV Internals)	See WOG comments.	I&M participates in the WOG/NEI integrated inspection program. Please refer to the June II 1999 response letter to the NRC's RAI with respect to CL 97-01. I&M considers the WOG/NEI recent comments as continuation of the integrated inspection effort.	<p>WOG did not provide any comments. WOG comments were incorporated in the NEI comments. NEI also did not provide any specific comments on AMP XI.M2.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
GALL-6 (I & M)	C.3.7 Section XI. M4 CCCW System	Modify item (4) "Detection of Aging effects" to omit monitoring the flow, inlet and outlet temperatures, differential pressure for heat exchangers.	Heat exchanger thermal monitoring, results may be inconclusive. The monitoring of heat exchangers should follow GL 89-13 requirements.	<p>The aging management program relies on preventive measures to minimize corrosion by maintaining inhibitors and by performing non-chemistry monitoring consisting of inspection and nondestructive evaluations based on the guidelines of EPRI-TR-107396 for closed-cycle cooling water (CCCW) systems. The inspections for monitoring, other than chemistry, includes data collection and analyses to predict the potential problems such as loss of structural integrity and reduced heat transfer caused by corrosion and/or deposition. These measures will ensure that the CCCW systems and components serviced by the CCCW system are performing their function acceptably. The requirement for performance of functional tests per ASME OM S/G Part 2 was deleted in the AMP "Closed-Cycle Cooling Water" (XI.M21 in NUREG-1801, Vol. 2).</p> <p>The GALL report was revised to address this comment.</p>
GALL-7 (I & M)	C.3.7 Section XI.M8 Outer Surface of Buried Piping and Components	Modify item (4) "Detection of Aging effects" to state: Inspection of a sample of buried components is one way to provide for detection of aging effects. Another way is to conduct a system leakage test in accordance with ASME Section XI requirements.	Provides flexibility in selection of methods for detection of aging effects.	<p>System leakage tests are complementary to inspection but not necessarily a substitute. If a leakage test is positive, an inspection still needs to be performed.</p> <p>The GALL report was not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
GALL-8 (I & M)	C.3.7 Section XI.M9 Fuel Oil Chemistry	Modify item (4), "Detection of aging Effects" to state: Specify that UT thickness measurements of tank bottom is a one time inspection.	Thickness measurement of tank bottom may result in equipment out-of-service duration exceeding allowed outage time in Technical Specification LCO. This will potentially increase EDG unavailability.	<p>The AMP program XI.M32 "One-Time Inspections" is also required. A statement was added in the AMP program XI.M30 "Fuel Oil Chemistry" to reflect that UT thickness measurement of tank bottoms is a one-time inspection.</p> <p>The GALL report was revised to address this comment but not the SRP-LR.</p>
GALL-9 (I & M)	C.3.7 Section XI.M14 Inspection of Class 1 Pump Casing & Valve Bodies	Propose to combine with Section G-XI.M1. as appropriate.	Defect inspection requirements are very similar to inspection requirements in for thermal aging embrittlement of CASS addressed in Section G-X1.M1.	<p>Appropriate requirements were incorporated in XI.M12, "Thermal Aging Embrittlement of CASS," and XI.M12, "ASME Section XI Inservice Inspection," and the program XI.M14, "Inspection of Class 1 Pump Casings and Valve Bodies," was deleted.</p> <p>The GALL report was revised to address this comment but not the SRP-LR.</p>
GALL-10 (I & M)	C.3.7 Section XI.S2 ASME Section XI, Subsection IWL	Modify item (1), "Scope of Program," to: Clarify the sentence beginning with NUREG 1611 concerning accessibility inaccessibility requirements. Similarly, modify SRP-LR, Page 3.5-7, Paragraph 3.5.3.2.1.1, to provide the same clarification (last 2 sentences in the paragraph).	GALL requirements go beyond the requirements in 10 CFR 50.55a(b)(2)(viii), greatly expand the required work scope by the licensee.	<p>See NRC disposition of NEI comment G.X1.S1-2 of Appendix B, Table B.2.9-3.</p> <p>SRP-LR, page 3.5-7 was revised to address this comment by a similar clarification but not the GALL report.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
GALL-11 (I & M)	C.3.7 Section XI.S6 Structural Monitoring	Please provide an alternate set of references for pre-SRP-LR plants instead of recent Codes and Standards.	CNP is not committed to RG 1.54 Rev. 1(07/00) or ACI 349.3R-96 and it is unlikely that other pre-SRP-LR plants would have committed to this revision of the RG either.	See NRC disposition to comment NMC-1 in this Table C.
GALL-12 (I & M)	C.3.7 Section XI.S7 RG 1.127 Inspection of Water-Control Structures	Please allow risk significance to be considered in defining this program.	Inspection of structures below the surface water level on a 5 year frequency may impose excessive burden without commensurate safety improvement.	See NRC disposition to comment NMC-3 in this Table C.
GALL-13 (I & M)	C.3.7 Section XI. S8 (Coating)	This program references RG 1.54, Revision1 as a technical basis, yet this standard was issued in July 2000. Also, Table 2, "Summary of AMPs for Engineered Safety features Evaluated in Chapter V of the GALL Report," references atmospheric corrosion monitoring. Both are expansions of existing approved programs for which there is no technical basis.	None provided.	No one currently uses RG 1.54. Rev 1. RG 1.54, Rev 0, and ANSI 101.2 are added as references. These documents date back to the early 1970s. The GALL report was revised to address this comment but not the SRP-LR.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
GALL-14 (I & M)	C.3.7 Section XI.E1 Non-EQ Electrical Cables and Connections	Please provide the technical bases for the requirements for future discussion.	None provided.	<p>Aging management of electrical cables and connections not subject to the environmental qualification requirements of 10 CFR 50.49 was identified as being necessary in reviews, analyses, and field inspections performed in support of previous license renewal applications. This aging management program in GALL was proposed by a previous license renewal applicant, and was subsequently reviewed and accepted by the staff to satisfy aging management. Because the program was needed by one of the first applicants, the program was included in GALL as a generically approved aging management program for use by future applicants, if needed. There is no requirement for applicants to implement all aging management programs included in the GALL report.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
GALL-15 (I & M)	C.3.7 Section XI.E2 Non-EQ Electrical Cables in Instrumentation Circuits	Please provide the technical bases for the requirements for future discussion.	None Provided.	See NRC disposition of comment GALL-14 in this Table C.
GALL-16 (I & M)	C.3.7 Section XI.E3 Non-EQ Inaccessible Medium Voltage Cables	Please provide the technical bases for the requirements for future discussion.	None Provided.	See NRC disposition of comment GALL-14 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
GALL-17 (I & M)	C.3.7 Section XI.E4	Please provide the technical bases for the requirements for future discussion.	None Provided.	See NRC disposition of comment GALL-14 in this Table C.
	Borated Water Leakage Surveillance for Non-EQ Electrical Connectors	Propose to add Section G-XI.E4 as an augmentation to the BA Corrosion Program in Section XI.M5.	None Provided.	The GALL report was revised to address this comment by deleting Section XI.E4 and referencing Section XI.M10 (previously XI.M) for the Boric Acid Corrosion program as the aging management program for electrical connectors exposed to borated water leakage. As noted in other comments received, inspection of electrical connectors for exposure to borated water leakage is already included in the Boric Acid Corrosion program, and there is no need to include a separate program for these components.
		NUREG/CR-5643, " Insights Gained from aging research, " March, 1992. Is this intended to be back-fit to Section G- XI. M5?	None Provided.	The GALL report was revised to address this comment to clarify the reference to NUREG/CR-5643 in sections XI.E1, E2 and E3. The section XI.E4 will be deleted in response to the previous comment. The reference to NUREG/CR-5643 is not intended to be a back-fit to Section G-XI.M10 (previously XI.M). The reference is to indicate that relevant technical information and guidance provided in that report has been considered in the preparation of this aging management program.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
General Public Comments	C.3.8	A large number of comments received in response to the August 31, 2000, Federal Register notice solicitation (65FR53047) on license renewal misinterpreted the purpose of the comment period in that it was the only opportunity to comment on the “generic” relicensing of nuclear power reactors. The comments ranged from requesting an extension to the public comment period to not allowing for extension to the operating licenses. The specific comments can be viewed by accessing the NRC document management system, ADAMS, using advance search and specify Property= “Case/Reference Number” and Value=“*65FR53047*”		<p>To disposition these comments from 113 individuals, which include 12 individuals representing public interest groups, the staff responded directly to each commenter with a description of the license renewal process and references for additional information. The following is the compendium of the staff responses to these comments.</p> <p>Thank you for your comments on the renewal of nuclear power plants operating licenses received via the NRC Web site.</p> <p>The Atomic Energy Act established a 40-year license term for power reactors, but also provided that such licenses could be renewed. Public comment was sought when the regulations were amended in 1991 and 1995 to include a process for renewal in Part 54 of Title 10 of the Code of Federal Regulations, “Requirements for Renewal of Operating Licenses for Nuclear Power Plants.” Public comment was also sought when the associated environmental impact requirements in Part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions,” were amended for license renewal in 1996.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
General Public Comments (cont.)				<p>The license renewal requirements provide for a plant-specific determination that aging effects can be adequately managed during the period of extended operation. The NRC is currently seeking public comment on updated guidance for the evaluation of plant-specific applications for license renewal, including a report on generic aging lessons learned (GALL). Recent media reports erroneously described this guidance as the only opportunity for public comment for license renewal. The NRC requested comments on the updated renewal guidance by October 16, 2000, in preparation for a meeting of the Nuclear Regulatory Commission planned for December 5, 2000, to specifically discuss the extent to which existing inspection and maintenance activities need to be augmented for license renewal.</p> <p>In addition, each license renewal applicant must include a supplement to the environmental report, which contains an analysis of the plant's impact on the environment if allowed to continue operation beyond the initial license. The NRC performs plant-specific reviews of environmental impacts of operating life extension in accordance with</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
General Public Comments (cont.)				<p>National Environmental Policy Act (NEPA) and the requirements of 10 CFR Part 51.</p> <p>Comments on the license renewal guidance submitted after that date will be considered to the extent practical up to the time the proposed final guidance is submitted to the Commission for approval, presently scheduled for March 2001.</p> <p>The license renewal process provides for individual hearings, public meetings and a request for public comment in the vicinity of each plant that submits a license renewal application.</p> <p>Additional information about the license renewal process and related evaluation guidance is available on the NRC Web site at http://www.nrc.gov/NRC/REACTOR/LR/index.html.</p> <p>Specific information on issues surrounding high level radioactive waste is available on the NRC Web site at <http://www.nrc.gov/OPA/gmo/tip/tip14.htm> in Technical Issue Paper 14, "High Level Radioactive Waste."</p> <p>With respect to "low-level" radiation, NRC regulations require licensees</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
General Public Comments (cont.)				to have effluent and environmental monitoring programs (to quantify releases and their impact on the environment) to ensure that the impacts from plant operations are minimized. The results of these programs are reported annually and available to the public. The permitted effluent releases result in very small doses to members of the public living around the plants (small fractions of the public dose limit). Regional NRC inspectors routinely inspect these monitoring programs to ensure continued compliance with regulatory requirements. Licensees are required to participate in an interlaboratory comparison program, which provides an independent check on the accuracy and precision of the environmental measurements. Additionally, the National Cancer Institute, at the request of Congress, conducted a study (Cancer in Populations Living Near Nuclear Facilities, Jablon, et al., National Cancer Institute, July 1990. [NIH Publication No. 90-874] Mary Ruth Craven, 1304 Winchester Dr., Charleston, SC 29407) of 52 nuclear power stations and 10 Department of Energy facilities. The study concluded that there was no increase in cancers in the communities surrounding the nuclear power plants.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
General Public Comments (cont.)				<p>In addition to its mission of protecting public health and safety under the Atomic Energy Act, the U.S. Nuclear Regulatory Commission (NRC) is charged with protection of the environment in the use of nuclear materials. Each license renewal applicant must include a supplement to the environmental report, which contains an analysis of the plant's impact on the environment if allowed to continue operation beyond the initial license. The NRC performs plant-specific reviews of environmental impacts of operating life extension in accordance with National Environmental Policy Act (NEPA) and the requirements of 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions." This review continues on a separate "track" from the safety reviews of the technical information. Environmental requirements for the renewal of power reactor operating licenses are contained in NRC's regulations, 10 CFR Part 51. The environmental protection regulations in 10 CFR Part 51 were revised on December 18, 1996, to improve regulatory efficiency in environmental reviews for license renewal and codify the findings</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
General Public Comments (cont.)				<p>documented in the Generic Environmental Impact Statement for License Renewal of Nuclear Plants, (NUREG-1437).</p> <p>The Generic Environmental Impact Statement (GEIS) examines the possible environmental impacts that could occur as a result of renewing any commercial nuclear power plant license, and, to the extent possible, establishes the bounds and significance of these potential impacts. For each type of environmental impact, the GEIS attempts to establish generic findings covering as many plants as possible. While plant and site-specific information is used in developing an envelope of generic findings, the NRC does not intend for the GEIS to be a compilation of individual plant environmental impact statements. Instead, this report may be incorporated, by an applicant, into a license renewal application environmental report. The GEIS makes maximum use of environmental and safety documentation from original licensing proceedings and information from state and Federal regulatory agencies, the nuclear utility industry, the open literature, operating experience, and professional contacts. It allows the</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
General Public Comments (cont.)				<p>applicant to concentrate on those impacts that must be evaluated on a plant-specific basis. Information provided on the plant specific issues will either disposition the issue as not applicable or present an analysis of the issue using site-specific information. Mitigation and alternatives to reduce adverse impacts must also be discussed. This approach, the use of a generic environmental impact statement with a plant-specific supplement, improves the efficiency of the licensing process for licensees and the NRC.</p> <p>A scoping process is conducted to define the proposed action, to determine the scope of the EIS and identify the significant issues to be analyzed in depth. A public scoping meeting is held near the nuclear plant seeking license renewal. Based on this process and the staff's independent review, the NRC will issue a preliminary recommendation on the acceptability of a license renewal action with regard to environmental impact. A draft plant-specific supplement to the GEIS is released for public comment and a public meeting is then held to discuss the findings. After comments are addressed, the NRC publishes a</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
General Public Comments (cont.)				<p>final plant-specific supplement to the GEIS and provides a final recommendation regarding the license renewal application to the Commission. Transcripts of environmental scoping meetings and public meeting on the draft supplements related to license renewal are available through the NRC Public Document Room.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
HKenneth-1 (OPPD)	C.3.9	Item C2.6.1 in Chapter V11 of the August Draft of the GALL (Page V11 C2-4) identifies an Aging Effect for Lube Oil Coolers. However, there is no program information on the next page (C2-5) as there is for the other items on page C2-4) It appears the last row of the table on page C2-5 related to item C2.6.1 was inadvertently omitted.		See NRC disposition to NEI comment G-VIIC2-7 in Appendix B, Table B.2.6 of this NUREG.
I&M-1	C.3.10	NRC incorporate additional licensing guidance into Draft Regulatory Guide DG-1104, the SRP-LR, and the GALL report to clarify how the GALL report will be used in the license renewal process for plants designed and licensed in accordance with regulations, codes, and standards different from those cited in the SRP-LR and the GALL report.	None Provided.	See NRC dispositions to comments ARCS-2, NMC-1, NMC-2, and NMC-3 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
I&M-2	C.3.10	I&M also endorses the comments being submitted by the NEI and the Westinghouse Owners Group.	None Provided.	See Appendix B of this NUREG for NRC dispositions to individual NEI comments.
I&M-3	C.3.10	In general, the GALL report provides sufficiently detailed information regarding program attributes. The report also identifies program areas that require augmenting, and discusses the aspects to be augmented.	The referenced codes, standards, and regulatory guidance are frequently the most recent version and the basis for requiring a program to be augmented is not always clear or sufficiently linked to aging management. As such, the report may be of limited value to older plants such as CNP. This vintage plant, with an operating license based on pre-GDC, simply may not have all the programs as described, or they may be defined by other equally valid versions of the codes and standards.	See NRC dispositions to comments ARCS-2, NMC-1, NMC-2, and NMC-3 in this Table C.
I&M-4	C.3.10	The introductory section to the GALL report is expanded to provide additional licensing guidance on how the report will be applied in the license renewal process. This guidance on the use of the GALL report should also be included in the SRP-LR and DG-1104.	The licensing guidance should address several issues that are important to ensuring that the GALL report is useful for the greatest number of prospective applicants.	See NRC disposition to comment NMC-2 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
I&M-5	C.3.10	The GALL report should provide recognition of the fact that plants have CLB that differ significantly.	For example, CNP and a number of other plants, due to their vintage, are not subject to the GDC of 10 CFR Part 50, Appendix A, or the Standard Review Plan (NRREG-0800). As noted in SECY-92-223, "Resolution of Deviations Identified During the Systematic Evaluation Program," the GDC do not apply to plants with construction permits issued prior to May 21, 1971.	See NRC disposition to comment NMC-1 in this Table C.
I&M-6	C.3.10	I&M supports the Staff's plan to revise and expand the GALL report as additional experience is gained through review and approval of other applicants' AMPs.	In this way, the GALL report will be expanded over time to encompass additional programs, activities, codes, and standards that the Staff finds acceptable for plants of different designs and vintages.	See NRC dispositions to comments NMC-1 and ACRS-2 in this Table C.
I&M-7	C.3.10	Second, the GALL report should not be treated as, in effect, the only set of regulatory requirements and guidance for adequate aging management programs. Thus, guidance should be added to the SRP-LR, the GALL report, and DG-1104 to clarify.	If this were the case, any variation from a program as described in the GALL report, or any area where an applicant is not utilizing all the aging management programs or activities listed in the GALL report for a given structure or component, could result in a need to augment existing programs or add new programs.	See NRC disposition to comment NMC-2 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
I&M-8	C.3.10	While the report does reference a set of regulatory requirements and guidance for aging management programs applicants are free to use alternative approaches (e.g., different programs or different combinations of programs and activities) from those described in the report.	Staff should consider adding a methodology and criteria to allow an applicant to demonstrate equivalency with the GALL report by showing that the primary objective of managing the effects of aging is being met by an alternative program or activity. I&M also recommends that the criteria for demonstrating equivalency of AMPs should include the use of risk insights.	See NRC dispositions to comments NMC-2 and NMC-3 in this Table C.
I&M-9	C.3.10	At CNP many of these existing programs required by the NRC effectively manage aging and maintain the CLB, whether this purpose is explicit in the requirement or not. For example, the ISI program is credited for monitoring certain components and is designed to inspect for and address the effects of aging so that the CLB is maintained.	The NRC through a Safety Evaluation Report, a Technical Evaluation Report or in an Inspection Report has accepted existing CLB programs. An applicant should be able to rely on these programs as appropriate for managing the effects of aging.	See NRC disposition to comment NMC-2 in this Table C. The SRP-LR Section 1.1.3, "Review Procedures," contains guidance that an applicant may incorporate (by reference) ... or other information contained in previous applications for licenses, license amendments, statements or correspondence filed with NRC provided the references are clear and specific.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
I&M-10	C.3.10	Third, the GALL report suggests that certain existing programs, including some programs mandated by binding regulatory requirements (e.g., Inservice Inspection and Inservice Testing programs under 10 CFR 50.55a and containment inspection programs under Subsections IWE and IWL of the ASME Code Section XI), may not be adequate aging management programs for Part 54 purposes without some augmentation.	Programs mandated by regulatory requirements or Technical Specifications should be adequate for Part 54 purposes. Where the NRC believes that some augmentation of an existing program is necessary, the GALL report should clearly explain the technical basis for this position and the relation to aging management. As an example the GALL report goes beyond the requirements in 10 CFR 50.55a(b)(2) and requires inspection of inaccessible areas of concrete containments and buried pipe without a detailed technical basis.	<p>See NRC disposition to comment DP-7 in this Table C.</p> <p>The staff found from operating experience that there are cases where degradation occurred in inaccessible areas that were not evident from observation of adjacent accessible areas surrounding the inaccessible areas. To address these situations, the staff proposed that inspection in the inaccessible areas is warranted. However, the applicant has the option of providing the staff with justification explaining why an inspection would not be necessary.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
I&M-11	C.3.10	To clarify the NRC should incorporate into DG-1104, the SRP-LR, and the GALL report an augmented section providing licensing guidance for how the GALL report will be applied. The guidance should provide the following clarifications: The applicability of the GALL report should be adjusted based on the plant-specific CLB. Pre-GDC and pre-SRP-LR plants are not expected to demonstrate all program attributes assumed in the GALL report.	For a particular plant, a program can be an acceptable aging management program even without meeting all 10 criteria specified in the SRP-LR, provided the applicant demonstrates that the existing program meets the fundamental objectives and has appropriate acceptance criteria. In this regard programs that have been previously approved by NRC (e.g. in an SER or IR), and which manage the effects of aging should be accepted for the renewal period.	See NRC dispositions to comments NMC-1, NMC-2, NMC-3, and ARCS-2 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
I&M-12	C.3.10	The GALL report does not represent a single binding set of regulatory requirements and guidance for aging management programs. Applicants have flexibility to use alternative approaches from those described in the GALL report. For any particular structure or component.	Aging can be adequately managed through use of a program or combination of programs and activities that are different from those listed in the GALL report.	See NRC disposition to comment NMC-2 in this Table C.
I&M-13	C.3.10	Applicants have the flexibility to reference the GALL report or to demonstrate that their programs and activities are equivalent to the reference programs described in the GALL report. For some plants, programs and activities not described in the GALL report may be credited for aging management purposes.	For example, activities such as plant restart reviews, design basis reviews, system readiness reviews. And system walkdowns are valid assessment methods. The NRC should also include the methodology and criteria by which an applicant can demonstrate the equivalency of its AMPs and activities and credit those versions of codes and standards that are part of the CLB for their respective plant.	See NRC dispositions to comments NMC-1, NMC-2, NMC-3, and ACRS-2 in this Table C.
I&M-14	C.3.10	The NRC should provide clarification as to how an applicant is to make the judgment as presently stated on page 3 of the GALL report, that "the conditions at its plant are bounded by all conditions assumed in the GALL report for a particular program.	None Provided.	See NRC dispositions to comments NMC-2, NMC-3, and NEI-5 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
I&M-15	C.3.10	I&M suggests that the GALL report be enhanced to provide more focus on programs rather than specific structures and components. As stated purpose of the GALL report is to assess the adequacy of existing programs for purposes of managing aging, and provide the Staff's generic conclusion as to which programs are deemed adequate for license renewal purposes. Given this purpose, it would be appropriate to add tables to the GALL report that focus on programs, as opposed to a component-by- component format.	If Table 3 data were reformatted as a list of programs with the other data displayed for each program one could see the aging mechanisms and applicable components encompassed by each program. This would give the GALL report greater utility for the applicant's reviews and expedite preparation of a license renewal application. The review of specific structures and components in the GALL report would still be useful to confirm that the programs have adequate breadth and depth in managing the effects of aging.	See NRC dispositions to comments NIRS-1 and NMC-5 in this Table C.
I&M-16	C.3.10	The NRC should clarify the schedule for initial implementation of the GALL report to make clear when applicants are expected to begin referencing the report in their applications.	The Staff should recognize that there is considerable lead-time required to develop an application. Work on a renewal application generally must begin two to three years prior to the expected submittal date. For licensees that are in the process of developing an application at the time the GALL report is finalized (expected in 2001), it may not be realistic for them to "retrofit" their applications to address the GALL report.	An applicant can reference the GALL report after the Commission approves it for final issuance. The GALL report and SPR-LR were not revised to address this comment.
I&M-17	C.3.10	The Statement of Considerations to the 1995 license renewal rule recognized that PRA techniques "may assist in developing an approach for aging management adequacy" published in 60 Fed. Reg. at 22468.	I&M believes that the use of PRA techniques has advanced to the point where licensees should be able to employ risk insights in aging management reviews and in the detailed evaluation of TLAA.	See NRC dispositions to comments UCS-3 and NMC-3 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-1	C.3.11	If the NRC and the nuclear industry are successful in finalizing the proposed expedited license renewal procedures, and thus are able to discount generically the effects of aging on a wide range of SSC, the NRC's approval of LRs would become standardized. And the safety of complex, fallible components could be ruled to be immune to public review and challenges.	None Provided.	<p>Also see NRC disposition of comment NIRS-2 in this Table C. The Atomic Energy Act established a 40-year license term for power reactors, but also provided that such licenses could be renewed. Public comment was sought when the regulations were amended in 1991 and 1995 to include a process for license renewal in Part 54 of Title 10 of the Code of Federal Regulations, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants." The license renewal requirements provide for a plant-specific determination that aging effects can be adequately managed during the period of extended operation. The license renewal applicant is required to demonstrate aging for those SSCs within the scope of license renewal will be achieved. Public comment was also sought when the associated environmental impact requirements in Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," were amended for license renewal in 1996.</p> <p>The NRC requested public comment (August 31, 2000, Federal Register Notice 65FR53047) on updated guidance for the evaluation of</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-1 (cont.)				<p>plant-specific applications for license renewal, including a report GALL. GALL is intended to provide the NRC staff with efficiencies in reviewing license renewal applications if applicants can certify that their aging management programs meet those described in GALL. However, applicants are free to propose alternative aging management programs, which the staff would review on a case-by-case basis. Recent media reports erroneously described this guidance as the only opportunity for public comment for license renewal. The NRC requested comments on the updated renewal guidance by October 16, 2000, in preparation for a meeting of the Nuclear Regulatory Commission held on December 5, 2000, to specifically discuss the extent to which existing inspection and maintenance activities need to be augmented for license renewal.</p> <p>Also see NRC disposition to comment NIRS-2 in Table C of this NUREG for discussion of hearing process applicable to license renewal application reviews. In addition, each license renewal applicant must include a supplement to the environmental report, which contains an analysis of the plant's impact on the environment if</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-1 (cont.)				<p>allowed to continue operation beyond the initial license. The NRC performs plant-specific reviews of environmental impacts of operating life extension in accordance with National Environmental Policy Act (NEPA) and the requirements of 10 CFR Part 51.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
KDrey-2	C.3.11	Surely, sound <u>fiscal</u> reasons exist that may explain why NRC is seeking ways to streamline its oversight and regulation of the 103 reactors that are still operating in the U.S. But can anybody point to sound <u>safety</u> reasons?	None Provided.	<p>See NRC disposition of comment KDrey-1 in this Table C.</p> <p>The NRC did initiate developing the GALL report in part because it would provide one previously approved method for demonstrating that aging could be managed. However, the applicant must verify its aging management programs are bounded by those described in GALL. It was hoped that if the applicant could certify that their AMPS were equivalent to those described in GALL the staffs review could be reduced in that area.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-3	C.3.11	The NRC should demand from Congress and should receive funding for an augmented oversight staff and stricter regulatory authority – not contrive ways to simplify and cut back.	In order to cope with the increasing levels of complexity; the pervasive presence of corrosion, thinning, cracking and other forms of materials aging; and the decreasing supply of training and experienced nuclear engineers and workers (both at the NRC and at power plants).	The purpose for NRC's establishment of the SRP-LR and GALL is to gain efficiencies for the review of future license renewal applications in order to utilize NRC resources most effectively. Effectiveness means performing the work necessary to support the NRC missions and goals in a thorough, disciplined, and timely manner. As a result, the NRC must periodically challenge the value of NRC programs and activities based on how they contribute to the achievement of goals. As part of implementing a Planning, Budgeting, and Performance Management (PBPM) process, the NRC prepares a Strategic Plan that focuses on desired outcomes and provides visibility to our goals and measures. We will manage outcomes and establish goals to measure and report on our performance (to Congress). We will use performance feedback in our planning process, and identify the work necessary to produce the desired outcomes. We will meet our commitments in a predictable and timely manner. If the NRC foresees future number of license renewal applications exceeding the NRC's capacity to implement a thorough and/or timely review, the NRC can request additional resources of

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-3 (cont.)				<p>Congress. In accordance with the NRC's Strategic Plan (NUREG-1614), "We will ensure that safety is maintained as licenses are renewed by ensuring that aging effects will be adequately managed and that the licensing basis related to the present plant design and operation will be maintained. We will authorize license renewal only after we have determined that aging effects have been and are being adequately managed. We will ensure that the licensing basis related to the present plant design and operation will be maintained throughout the period of extended operation. We will perform inspections to support the review of license renewal applications by verifying the acceptability of licensee aging management control processes."</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p> <p>Also see NRC disposition of comment KDrey-1 in this Table C.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-4	C.3.11	The basic purpose of the proposed regulatory changes seems to be to enable the NRC staff to expedite the approval of the extended duration of each of the operating U.S. reactors with few, if any, requirements for site-specific aging management review of each reactor's individual SSC. An NRC licensee's promise of being able to operate his plant safely for another 20 years is clearly ingenuous, at best.	None Provided.	See NRC dispositions of comments KDrey-1 and KDrey-3 in this Table C.
KDrey-5	C.3.11	The NRC should sharpen its focus on defects and toughen its safety requirements.	Now that the plants have already operated longer than they should have, rigorous NRC oversight is more important, not less.	<p>Before license renewal became an option, plants were initially licensed for 40 years of operation. No plants under the pre-license renewal requirements operated longer than their licensed life of 40 years. The NRC has a rigorous license renewal process. The license renewal rule, 10 CFR Part 54, has been established to focus the staff's review on aging management of plant structures and components for the period of extended operation.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p> <p>Also see NRC dispositions of comments KDrey-1 and KDrey-3 in this Table C.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-6	C.3.11	No safe site or technology has been found any place on or off the plant Earth to isolate the high-level radioactive waste (the irradiated fuel rods) to the highly radioactive “low-level” waste (everything else) of the current generation of operating and decommissioned nuclear power plants – or of the wastes generated at the uranium mines and mills and at the conversion, enrichment, and fuel fabrication plants; that is, the wastes from the rest of the uranium fuel cycle. And no safe way or people-less route has been found to transport the wastes to their non-existent burial grounds. Nuclear workers are exposed to levels of radiation that may be permissible, but are not safe.	None Provided.	<p>Specific information on issue surrounding high-level waste and transportation of waste is available on the NRC Web site at http://www.nrc.gov/OPA/gmo/tip/issues.htm.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p> <p>Also see NRC disposition of comment KDrey-13 in this Table C regarding radiation effects to workers.</p>
KDrey-7	C.3.11	Should the NRC be allowed to write a regulatory blank check or issue use-as-is permission for its licensees to continue to operate their nuclear power plants beyond the design life of the plant and its components?	None Provided.	See NRC dispositions of comments KDrey-1 and KDrey-3 in this Table C.
KDrey-8	C.3.11	A few Additional questions: (1) Is the real driver of these proposed regulatory changes the NRC’s effort to improve its licensee’s ability to compete in the new deregulated market.	None Provided.	See NRC disposition of comment KDrey-1 in Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-9	C.3.11	A few Additional questions: . . . (2) . . . But speaking of multinational corporations, can anyone explain how a consortium of corporations with headquarters in various countries would be allowed to apply for and obtain a license renewal for a reactor in the United States?	According to 10 CFR 54.17 (b); "Any person who is a citizen, national, or agent of a foreign country, or any operations, or other entity which the Commission knows or has reason to know is owned, controlled, or dominated by an alien, foreign corporation, or a foreign government is ineligible to apply for an obtain a renewed license."	<p>The Atomic Energy Act (AEA) of 1954, as amended, forms the basis for regulatory requirements promulgated in 10 CFR Part 50. Section 103d of the AEA, specifically provides that no license may be issued to an alien or to a corporation owned, controlled, or dominated by an alien, foreign corporation, or foreign government.</p> <p>The Standard Review Plan on Foreign Ownership, Control, or Domination, dated August 31, 1999, that is used by NRC staff to review applications for power plant licenses that may involve issues relating to foreign interests, outlines certain conditions by which some degree of foreign ownership or control of an applicant may be consistent with the AEA (See <i>Federal Register</i> Notice Vol. 64. No. 187, Tuesday, September 28, 1999). The purpose of the conditions is to ensure that foreign ownership or control of a licensee would be limited such that it would not be inimical to the common defense and security. Copies of this SRP-LR (to review the detailed explanation of the conditions for limited foreign involvement) can be obtained from the NRC's electronic document management system accessible at</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-9 (cont.)				<p>www.nrc.gov or from the NRC Public Document Room at 11555 Rockville Pike, Rockville Maryland 20852-2738, 301-415-7000.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
KDrey-10	C.3.11	Some specific concerns about extending the duration of the operating licenses – 1. <u>Steam generators</u> : Major, controversial, unresolved, safety issues remain about the design, fabrication, operation, repair, and safe shutdown of the steam generators – one of the most essential pieces of equipment in pressurized reactors.	In spite of concerns submitted by NRC staff member, Joram Hopenfeld (Ph.D. in Engineering, UCLA), dating back as early as 1991, the potential for multiple steam generator tube ruptures and/or leaks is basically being ignored. According to Dr. Hopenfeld's Differing Professional Opinion on steam tube integrity, presented on October 11 to an ad-hoc review panel of the NRC's Advisory Committee on Reactor Safeguards: as of July 1999 the NRC was permitting 17 reactors to operate with severely degraded steam generators, using NRC Generic Letter 95-05 guidelines.	<p>See NRC dispositions of comments NIRS-7, NIRS-8, and UCS-4 in this Table C.</p> <p>The staff has incorporated lessons learned from the Indian Point 2 tube failure into its review and inspection activities. The NRC staff has issued to licensees a regulatory issue summary (2000-22 - Issues Stemming from NRC Staff Review of Recent Difficulties Experienced in Maintaining Steam Generator Tube Integrity available at http://www.nrc.gov/NRC/GENACT/GC/RI/2000/indexhtml or through the NRC document system ADAMS). The NRC staff has continued to conduct phone calls with select licensees that have very similar operating conditions (although no licensees currently have the same model steam generators as Indian Point 2) to discuss their SG inspections and now requests licensees to address any steps that they have taken, or</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-10 (cont.)				<p>plant to take, in response to the industry lessons-learned from the Indian Point 2 tube failure (see document accession No. ML003765272).</p> <p>In addition, in a letter dated November 1, 2000, from the NRC's Executive Director of Operations, William Travers, to the Commissioners (see document accession No ML003765272), Mr. Travers stated "Based on our review of the lessons-learned report, we have concluded that there are no safety concerns that have been identified that require immediate action with respect to the industry."</p> <p>While the GALL report and SRP-LR were not revised to address this comment the GALL steam generator aging management program was reviewed by staff familiar with lessons learned from Indian Point 2.</p>
KDrey-11	C.3.11	Some specific concerns about extending the duration of the operating licenses – 2. <u>Radioactive corrosion products</u> : I am enclosing a copy of a letter I sent to the NRC on July 16, 1980 --- twenty years ago! - -- about the proposed use of chelating-agent solvents for the chemical decontamination of Dresden Unit One in Illinois.	As you know, the continuing buildup of radioactive corrosion products – which emit highly penetrating gamma rays – causes the radiation fields within which workers must inspect, repair and replace equipment to become higher and therefore potentially more harmful to the workers. As a nuclear plant ages, and as the corrosion products (crud and the green grunge)	In response to a petition from Ms. Kay Drey and the Citizens for a Better Environment, the NRC prepared an environmental impact statement to address the potential impacts from a plant modification at Dresden Unit No. 1. Because of high residual radiation levels, the licensee, Commonwealth Edison Company, had proposed by letter dated December 19, 1974, a project

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-11 (cont.)			increase – sometimes in inaccessible location – the only way a licensee is often able to reduce the resulting high radiation fields is to flush solvents through the piping or other corroded components. The result is dissolved radioactive wastes (bonded to the solvents) that are difficult, if not impossible, to isolate from the biosphere for the requisite millennia.	to chemically decontaminate the primary cooling system at Dresden Nuclear Power Station, Unit No. 1. The “Final Environmental Statement related to Primary Cooling System Chemical Decontamination at Dresden Nuclear Power Station, Unit No. 1” was published as NUREG-0686 in October 1980. The final environmental EIS (NUREG-0686) addressed concerns raised by Mrs. Drey’s in her July 16, 1980 letter. Therefore, this comment has previously been addressed. The GALL report and SRP-LR were not revised to address this comment.
KDrey-12	C.3.11	Some specific concerns about extending the duration of the operating licenses – 3. <u>Reactor Pressure Vessel</u> : . . . The steel of the pressure vessel is subject to radiation effects due to its location near the reactor core.	Neutron radiation causes the brittle-to-ductile transition temperature to increase significant, leading to the increased possibility of fracture, for example during a refueling operation. In fact, the extension of reactor life beyond the traditional 40 years (and perhaps even sooner) depends critically on knowledge of the embrittlement characteristic of the pressure vessel and on the ability to offset the embrittlement by an annealing process.	Neutron Radiation Embrittlement of the Reactor Vessel is addressed in the GALL report. The existing reactor vessel material surveillance program must provide sufficient material data and dosimeters to monitor irradiation embrittlement at the end of the period of extended operation, and to determine the need for operating restrictions on the inlet temperature, neutron spectrum, and neutron flux. If surveillance capsules are not withdrawn during the period of extended operation, operating restrictions must be established to ensure that the plant is operated under the conditions to which the

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-12 (cont.)				<p>surveillance capsules were exposed.</p> <p>Reactor vessel surveillance programs are plant-specific, depending on matters such as the composition of limiting materials, availability of surveillance capsules, and projected fluence levels. In accordance with Appendix H to 10 CFR Part 50, an applicant must submit its proposed withdrawal schedule for approval prior to implementation. Thus, staff evaluation of the applicants program is required for license renewal.</p> <p>The reactor vessel surveillance program (XI.M31) described in the GALL report and SRP-LR were revised but not to address this comment.</p>
KDrey-13	C.3.11	Some specific concerns about extending the duration of the operating licenses: <u>Release of radioactive gases and liquids to the environment</u> : As a nuclear power plant gets older, its filtering and monitoring mechanisms, reactor coolant systems, piping, cooling water intake structures, and other systems inevitably wear out. Some can be maintained, refurbished, or replaced; some cannot. The gaseous and liquid radioactive waste detection and processing	None Provided.	With respect to "low-level" radiation, NRC regulations require licensees to have effluent and environmental monitoring programs (to quantify releases and their impact on the environment) to ensure that the impacts from plant operations are minimized. The results of these programs are reported annually and available to the public. The permitted effluent releases result in very small doses to members of the public living around the plants (small fractions of the public dose limit).

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-13 (cont.)		mechanisms become less effective, increasing the amounts of unfiltered and unmonitored gases, liquids and particulate materials released to the air and to the plant's cooling water source (the lake, ocean or river) during the routine operating of the plant. And even more critically, during an accident.		Regional NRC inspectors routinely inspect these monitoring programs to ensure continued compliance with regulatory requirements. Licensees are required to participate in an inter-laboratory comparison program, which provides an independent check on the accuracy and precision of the environmental measurements. Additionally, the National Cancer Institute, at the request of Congress, conducted a study of 52 nuclear power stations and 10 Department of Energy facilities ("Cancer in Populations Living Near Nuclear Facilities," Jablon, et al., National Cancer Institute, July 1990. [NIH Publication No. 90-874]). The study concluded that there was no increase in cancers in the communities surrounding the nuclear power plants. Regarding the potential for releases during accidents, the NRC has promulgated Emergency Preparedness requirements that licensees must adhere to so that actions will be taken to protect the public from a release during an accident. Licensees are required to drill on their preparations with offsite authorities and the NRC routinely inspects licensee emergency preparedness programs.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KDrey-13 (cont.)				The GALL report and SRP-LR were not revised to address this comment.
KOPEC-1 Hagki Youn	C.3.12	<p>On the GALL report (pp IV C2-28, Item C2.5.10), the SCC and PWSCC aging mechanism are used for Austenite SS and Alloy 600, respectively.</p> <p>Could you explain the reason and background why other AMP shall be applied?</p>	I know PWSCC is a SCC aging mechanism. Thus, it seems that same AMP can be used.	<p>GALL recommends that the aging management program for SCC of austenitic stainless steel heater sheaths and sleeves is ASME Section XI Inservice Inspection, Subsection IWB and Water Chemistry. ASME Section XI Inservice Inspection, Subsection IWB and Water Chemistry are also recommended for Heater sheaths and sleeves made from Alloy 600. However for Alloy 600 Heater sheaths, sleeves, and the Inconel 182 welds require further evaluation.</p> <p>The reason for the different GALL recommendation for the Alloy 600 components is the operating experience. This operating experience is described in detail in Information Notice 90-10 and 96-11, and Generic Letter 97-01. Thus, the susceptibility of Alloy 600 to PWSCC has not been fully addressed by inservice inspection and chemistry. Therefore GALL recommends that the applicant should perform a susceptibility study of all Ni-alloy components to identify the most susceptible locations and to determine whether an augmented inspection program is necessary. The applicant should review the</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
KOPEC-1 (cont.)				<p>scope and schedule of inspection, including leakage detection system, to assure detection of cracks before the loss of intended function of the penetrations. The applicant should either provide the technical basis that justifies the adequacy of the program or develop an integrated long-term program that includes periodic inspection of the most susceptible locations to detect the occurrence of PWSCC. The frequency of subsequent inspections should be based on the finding of the initial inspections and crack growth rate models for Ni alloys. The applicant should provide information on crack initiation and growth models and the data used to validate these models to verify adequacy of the inspection program and acceptance criteria.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
NIRS-1	C.3.13	While reading over the transcript of the License Renewal Workshop Public Meeting dated September 28, 2000, I noted with concern that Mr. Yung Liu of the Argonne National Laboratory (ANL) indicates that his lab has been contracted by the NRC to reformat the Draft GALL Report. ANL is proposing to accomplish this task by modifying, compressing and	<p>This raises a significant concern that the public is being asked to provide comments on material that is already dated by NRC for which the agency has no intention of issuing.</p> <p>Considering the density and complexity of the material presented by the GALL Report, it is grossly unfair to ask the public to comment</p>	The NRC reformatted information in the GALL report to make it easier to understand and use. The content of the information available for public comment has not changed. If public commented on information that changed substantially, the NRC will evaluate whether the comment would be pertinent to the changed information and publish its

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-1 (cont.)		eliminating existing columns and information from various tables.	on a roughly hewn document for the sake of meeting NRC timelines, knowing that agency does not intend on issuing the document in this format. As Mr. Grimes states in the transcript, "I had originally envisioned that the reformatting would be intended to make it easier for people to follow the material rather than to confuse them." However, it is not reasonable for NRC to solicit public comments on a document that it already views as confusing and in need of reformatting. If NRC were sincere in this endeavor, it clearly would have waited to provide the public with final draft of the report for comment.	<p>evaluation with the final publication of these documents. The staff will address public comments received on the August 2000 version of the GALL report, SRP-LR, and Draft Regulatory Guide "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses (DG-1108) because the staff documents any changes and the basis for the change in this report.</p> <p>The staff's contractor, ANL, changed the format of the table as Mr. Liu indicated and the information previously in columns "Structure and Component" and "Region of Interest" has been combined into one column titled "Structure and/or Component." Information in columns "Aging Effect" and "Aging Mechanism" has been combined into one column titled "Aging Effect/Mechanism." In addition, the staff relocated the information in columns "References" and "Evaluation and Technical Basis" into Chapter XI under the various aging management programs which are still listed in the table for the various aging effect they are to manage. The information in the Aging Management Program has been simplified by pointing to the corresponding program in Chapter</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-1 (cont.)				<p>XI. One may refer to a row in the table that identifies the aging management program of interest and then go to Chapter XI and look up the "References" and "Evaluation of Technical Basis" for that program. The information was combined and relocated in order to make the table easier to use and understand, but the technical substance was not affected.</p> <p>As a result, the relevancy of stakeholders' comments regarding the technical basis relied on to generically credit the various aging management programs for license renewal would not be affected because there has been no substantive change to the information in GALL.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
NIRS-2	C.3.13	The agency's stated goal is to make the re-licensing process more predictable and streamlined. This is, without mistake, a process that is designed to facilitate a more predictable for re-licensing applicants. Central to making the re-licensing process predictable to licensees is the need to remove what is viewed by industry and regulator as time and cost	NIRS rejects the generic approach to age-related degradation issues for reactor licensing extension as a construct to solely benefit the nuclear industry economically while undermining public health and safety. This approach effectively eliminates site specific public participation and intervention in the re-licensing proceedings on aging issues. In turn, this approach	<p>The GALL report does not affect the public's ability to comment on site-specific concerns related to safe operation of a nuclear facility undergoing a license renewal review by the NRC.</p> <p>Public comment was sought when the regulations were amended in 1991 and 1995 to include a process for renewal in Part 54 of Title 10 of</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-2 (cont.)		consuming impediments or licensing burdens raised through site specific re-licensing proceedings brought forward by the affected public regarding age-related degradation of systems, structures and components (SSC). The re-categorization of site-specific contestable issues to generic non-contestable issues is the central advantage gained by the agency and the licensees to make the re-licensing process predictable through the Generic Aging Lessons Learned or GALL approach.	eliminates independent experts and public review of the potential impact of age-related degradation issues from the license extension process. It is fundamentally undemocratic to remove the affected public's discovery process and their ability to scrutinize and cross-exam industry and regulatory assumptions pertaining to aging safety components and public safety within the context of an adjudicatory proceeding. By removing age-related degradation issues from the independent scrutiny of a site-specific proceeding, the GALL approach strengthens and perpetuates the historically cozy industry/regulatory relationship and systematically obfuscates safety issues through a host of mechanisms including corporate proprietary non-disclosures tactics.	the Code of Federal Regulations. Public comment was also sought when the associated environmental impact requirements in Part 51 were amended for license renewal in 1996. The public has the opportunity to provide site-specific comments regarding a license renewal application in response to a notice of opportunity for hearing issued pursuant to 10 CFR 54.27. A notice of opportunity for a hearing will be published in the <i>Federal Register</i> in accordance with 10 CFR 2.105. Any person whose interest may be affected by the proceedings may file a request for a hearing or a petition for leave to intervene. Hearing notices have been published regarding past license renewal applications that the NRC has received thus far and will continue to be posted as new license renewal applications are received. In addition, any person may file a request to institute a proceeding pursuant to 10 CFR 2.202 to modify, suspend, or revoke a license, or for any other action as may be proper. The request must specify the action requested and set forth the facts that constitute the basis for the request. In summary, GALL is a guidance document that does not affect opportunities to raise site-specific concerns regarding license

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-2 (cont.)				<p>renewal.</p> <p>GALL does not alter the requirement for a licensee to demonstrate that the effects of aging [10 CFR 54(a)(3)] for SSCs with the scope of license renewal will be managed during the renewal term. The license renewal rule requires a plant-specific determination that aging effects can be adequately managed for the renewal term. If a licensee intends to reference an AMP in GALL it must certify that its AMP at a minimum manages the applicable aging effects. The GALL report was published so that the public had the opportunity to comment on the aging management programs described in it.</p> <p>Appendix A, Section A.1.2.2 of the SRP-LR provides a summary description of how the staff would review each aging management program contained within a license renewal application. Also see NRC disposition of comment KDrey-1 in this Table C of this NUREG.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-3	C.3.13	The GALL approach provides for far too much credit and confidence to be given to the regulator and industry towards the “generic” nature of age-related degradation the licensing basis.	<p>In fact U.S. reactors have incorporated many design and component features that are unique within their pressurized and boiling water reactor licensing basis. As one NRC official told the McGraw Hill publication, Inside NRC (October 9, 2000, p.10), “You are talking about a licensing basis as if it were one thing,” said David Weiss, “when, in fact, nuclear power plants are like snowflakes. Each one is different. It makes the job very difficult. If you pick on one particular issue at a plant and you throw enough resources at it you can figure out what the licensing basis is.”</p> <p>It is the NIRS contention that the GALL approach significantly limits the overall effort to ascertain the real effects of aging on the over all licensing basis as it pertains to license extension. As a consequent, this generic approach constitutes a non-conservative approach to the re-licensing process and further undermines public health and safety.</p>	<p>While design basis for plants may differ, the aging mechanisms for plant equipment are very similar at many plants. The intent of the GALL report is only to review in advance programs, which the NRC would find acceptable for managing the applicable aging effects on the applicable SSCs. The aging effects and aging management programs described in the GALL report are a reflection of those reviewed in the first few renewal applications; therefore, the staff would expect to see them addressed. However, GALL does not provide the only way to demonstrate aging management required by 10 CFR 54 (a)(3). Applicants can either reference a previously approved program in GALL or they can propose their own AMP. Also see NRC disposition of comment NIRS-2 in Table C of this NUREG.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-4	C.3.13	Additionally, the NRC and industry have provided no “lessons learned” in their GALL approach for assessing demonstrated short falls, failures and differing professional opinions in the current process to evaluate aging for the current licensing basis.	These failures and shortfalls can compound to adversely impact the scope and accuracy of generic evaluations within the context of license renewal when overlooked in the evaluation program of the adequacy of generic age management programs.	<p>The GALL, SRP-LR, and Draft RG have the benefit of the experience of the staff members who are part of the current process in evaluating aging for the current license term and also conducted the review of the initial license renewal applications. Therefore, lessons learned from the current process and from an efficiency and effectiveness standpoint in addressing unique issues related to license renewal from the first reviews have been incorporated into these documents.</p> <p>The GALL, SRP-LR, and Draft RG have been revised to address this issue but not specifically for this comment.</p>
NIRS-5	C.3.13	The GALL process is therefore fundamentally flawed in assuming that the NRC staff and industry have assembled and are practicing from an adequate and accurate body of knowledge and experience to evaluate the adequacy of each generic aging management program from aging effects for SSC. NIRS cites several of the “10 program attributes,” used to generically categorize the SSC for GALL as fundamentally flawed. These program attributes include but are not limited to:	For example, it is generally recognized that within a single operational cycle, steam generator tube cracking can increase from tens to hundreds to thousands of cracks as a result of intergranular stress corrosion cracking without any degree of certainty that can predict this jump in crack growth. With regard to age-related degradation, NIRS contends that the industry and regulatory are placing an undue amount of confidence and credit in unproven and theoretical assumptions espousing that you can know where you are going by	<p>This comment questions the adequacy of NRC and industry with respect to aging management programs, particularly steam generators. The GALL report was developed based on over 5,000 nuclear plant aging reports. This body of knowledge and experience included information from the nuclear plant aging research program and operating experience from licensee event reports.</p> <p>The 10 element aging management program evaluation demonstrates the effectiveness of an aging</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-5 (cont.)		#5 Monitoring and Trending. There is a distinct lack of assessment within the context of GALL for "lessons learned" from the apparent and significant degree of uncertainty for predicting degradation mechanisms (i.e. crack growth rates, embrittlement) over operational cycles of 15, 18 and 24 month operational cycles, let alone 20 year license extensions.	looking at where you have been. This is a lot like driving your car through the rear view mirror, which does not instill confidence for either the passengers of the vehicle or communities living downwind of nuclear power stations. Those of us who are being taken for a ride with the industry and regulator are increasingly alarmed by this practice as a continued justification for operational exemptions, as most recently exemplified by reduced inspection schedules leading up to Indian Point Unit 2 steam generator tube accident in February, 2000. NIRS now sees this same practice to be used generically applied to justify 20-year license extension without an avenue for public challenge.	<p>management program. One of these attributes includes monitoring and trending. Parameters are monitored, inspected, and/or tested, that provide direct information about the relevant aging effect(s), and their impact on intended functions. One or more of the credited programs detects the aging effect(s) before there is a loss of the structure's or component's intended function. Monitoring and trending is to provide an adequate predictability and to provide for timely corrective or mitigative actions. Also, in this evaluation operating experience of the program/activity, including past corrective actions resulting in program enhancements, is considered. It provides objective evidence that the effects of aging have and will continue to be adequately managed.</p> <p>In the case of the Indian Point 2 steam generator incident, the state of knowledge regarding steam generator tube inspection programs was found to be adequate; however, the staff concluded that implementation of the program was not effective (See the Indian Point 2 Steam Generator Tube Failure Lessons-Learned Report dated October 23, 2000, for more information.) Ineffective</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-5 (cont.)				<p>implementation results in increased oversight by the NRC and, if appropriate, penalties are also assessed. This NRC oversight practice is expected to continue into the license renewal term.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
NIRS-6	C.3.13	<p>Additionally, NIRS notes with alarm that the NRC and industry are interested in expanding the number of SSC that would be approved for one time inspections” as an acceptable alternate to periodic inspections to assess age-related degradation. NIRS is astounded by the NRC premise that a one time inspection will be sufficient to verify that age-related degradation of various SSC is sufficient to satisfy the license renewal basis, particularly when these inspection verifications are to occur a decade or more in advance of the license renewal date.</p>	None Provided.	<p>It is not necessary to establish a restriction on how early the one-time inspections can be performed. When the Commission established the license renewal rule in 1991, it determined that renewal applications could be submitted as early as 20 years before expiration of the current operating license because that would be sufficient operating experience to disclose plant-specific, age-related degradation. Therefore, if an aging effect is occurring, performance of the inspection after 20 years of operation but before the end of the current term should identify the aging effect. Also, these one-time inspections are intended to confirm that aging effects are not occurring. For example, when staff had concerns regarding whether an aging effect was occurring at the Calvert Cliff Nuclear Power Plant or whether a one-time inspection was sufficient, the one-time inspections</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-6 (cont.)				<p>originally proposed by Baltimore Gas and Electric Company were converted into periodic inspections. Additionally, if operating experience reveals an emerging concern, whether before or after the one-time inspection is performed, the licensee must investigate and take any required corrective action in accordance with the requirements of Appendix B to 10 CFR Part 50.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
NIRS-7	C.3.13	<p>The GALL process is therefore fundamentally flawed in assuming that the NRC staff and industry have assembled and are practicing from an adequate and accurate body of knowledge and experience to evaluate the adequacy of each generic aging management program from aging effects for SSC. NIRS cites several of the "10 program attributes," used to generically categorize the SSC for GALL as fundamentally flawed. These program attributes include but are not limited to:</p> <p>#6 Corrective Actions. The existing 40% plugging criteria (40% PC) for steam generators in pressurized water reactors has imposed a heavy financial burden on the industry</p>	<p>As a result, despite a lack of technical justification, the industry insisted and the regulator acquiesced to a position that it is safe to operate steam generators with defective tubes. This flawed policy effectively allowed the steam generator tube rupture to occur at Indian Point Unit 2. The affected public views this as one of many examples of a collapsed and ineffective corrective action program. Again, NIRS sees this same practice to be incorporated generically to justify 20-year license extensions without an avenue for public challenge.</p>	<p>The 1997 inspections of the Indian Point 2 SG tubes missed detecting the tube in SG 24, which had the crack, that lead to the leakage in February 2000. In addition, after re-looking at the data from 1997 inspections (after correcting for high signal to noise ratio) the licensee has subsequently determined that the crack was greater than 40% through wall and would have been plugged if it had been detected as required in Regulatory Guide 1.121, "Bases for Plugging Degraded Steam Generator Tubes." As a result of not detecting the indication during the 1997 outage the NRC has initiated enforcement action for those performance issues associated with the licensee not recognizing and taking appropriate</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-7 (cont.)		much to their dissatisfaction. In view of this dissatisfaction, NRC has made many attempts over the past decade and failed to formulate a meaningful alternative to the 40%PC. Despite this effort, the industry does not want to be constrained by the 40% PC and is requiring unlimited flexibility in making decisions regarding steam generator fitness for service.		<p>corrective actions for significant conditions adverse to quality that affected the SG inspection program (see ADAMS document accession number ML003770186).</p> <p>The NRC and Industry are being proactive in addressing steam generator tube integrity. Examples of industry initiatives include a revision to NEI 97-06 that provides guidance for improving steam generator tube integrity. This document is currently under NRC staff review. The NRC is also addressing steam generator tubes as a generic safety issue (GSI-163, ADAMS accession number ML003762242). As for the Indian Point 2 steam generator tube incident, a task group was formed and a lessons learned report was issued (ADAMS accession number ML00376242). To further improve public confidence in the SG tube integrity area, the NRC has posted a steam generator tube action plan on the NRC Web site. Results from this action plan will be periodically updated to provide the public with current information from the achievement of the milestones. To further increase stakeholder input and confidence, steam generator tube public workshops and meetings are planned.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-7 (cont.)				<p>In the current term, the NRC provides regulatory guidance, inspection, and enforces penalties or increased oversight to ensure steam generator tube integrity. When events occur, investigations are performed; root causes and corrective action are sought and implemented. This information and guidance provides feedback to improve the reliability of other plants. The steps that the NRC takes in this corrective action process are publicly available (at the NRC home page www.nrc.gov and ADAMS) and are subject to public challenge. This process will continue in the license renewal period.</p> <p>The GALL and SRP-LR were not modified specifically as a result of this comment. Members of the Indian Point 2 steam generator tube integrity task force reviewed the GALL report and their comments were incorporated.</p>
NIRS-8	C.3.13	The GALL process is therefore fundamentally flawed in assuming that the NRC staff and industry have assembled and are practicing from an adequate and accurate body of knowledge and experience to evaluate the adequacy of each generic aging management program from aging effects for SSC. NIRS	One recent example is contained within the NRC Office of the Inspector General Event Inquiry "NRC's Response to the February 15, 2000, Steam Generator Tube Rupture At Indian Point Unit 2 Power Plant," August 29, 2000. Despite long standing industry and regulatory concerns regarding the	The NRC staff reviewed the OIG report findings and bases for the findings and has determined that some of the findings portrayed an inaccurate picture regarding facts surrounding the information contained in "Consolidated Edison's 1997 inspection report" and the staff's review of Con Ed's license

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-8 (cont.)		<p>cites several of the "10 program attributes," used to generically categorize the SSC for GALL as fundamentally flawed. These program attributes include but are not limited to:</p> <p>#9 Administrative Controls. There is a demonstrated lack of adherence to administrative controls on the part of the industry and enforcement by NRC with regard to age-related degradation issues.</p>	<p>loss of steam generator tube integrity, the report identified a number of missed opportunities by NRC to catch degradation of a steam generator tube. The report concluded that NRC staff could have flagged the problem tube if it had conducted a technical review of Consolidated Edison's 1997 inspection report and that staff missed another opportunity when it reviewed Con Ed license amendment request for a one-year extension of the steam generator inspection, which was deferred in the summer of 1999. Additional, NRC engineering staff were hampered by senior management in following up with additional questions to Con Ed regarding the inspection extension which resulted in the February, 2000 tube rupture. NIRS has no confidence that current administrative controls in neither industry nor NRC enforcement of administrative controls are adequate and can be generically categorized to place age management issues beyond public scrutiny and intervention within the context of license extension.</p>	<p>amendment request, both, which preceded the Indian Point 2 tube leak in February 2000. The basis for the NRC staff's disagreement with the OIG's findings related to the inspection report and the amendment request is documented in a November 3, 2000, letter from NRC's Executive Director of Operations, William Travers to NRC Commissioners, "Staff Review of OIG Report on the NRC's Response to the Steam Generator Tube Failure at Indian Point 2 and Related Issues" (see document ADAMS accession number ML003753067).</p> <p>On page 4 of ML003753067 Mr. Travers stated: "The results of the licensee's 1997 steam generator inspection were provided to the staff in an inspection summary report from the licensee dated July 29, 1997, and as stated above, the NRC did not review this report for the reasons discussed previously. However, this summary report did not provide information identifying the flaw in the U-bend of the row 2, column 5 tube in SG 24 because the licensee's inspections did not identify this subject defect in 1997. The existence of the flaw that lead to the tube failure was only discovered after the February 2000</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-8 (cont.)				<p>tube failure when a detailed review of the 1997 eddy current test data, which was not previously submitted to the NRC, was performed at the location at which the failure occurred. The 1997 summary inspection report did identify a U-bend defect in a different tube in SG 24 and this tube was plugged. However, in 1997 the licensee was not aware of the flaw that led to the tube failure and the staff could not have identified the flaw in the U-bend of the row 2 column 5 tube in SG 24 based on the information provided by the licensee in 1997.”</p> <p>The November 3, 2000, Travers letter (ML003753067) also includes additional information clarifying the NRC’s activities with respect to Indian Point 2. Because license technical specifications typically require licensees to submit reports summarizing the results of their steam generator inspections within 12 months following the inspection the NRC staff routinely engages in conference calls with licensees as they are conducting their inspections to obtain real-time information to assess the results of inspections. The information contained in these summary reports does not include the detailed eddy current inspection data, which is</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-8 (cont.)				analyzed to determine if there are flaws in SG tubes. Therefore, it is not possible with this data for the NRC staff to identify flaws that the licensee might have missed. The NRC does provide training on the review and interpretation of eddy current data to the NRC staff involved in steam generator activities and maintains specialized contractor support in this areas. However, because of resources the NRC conducts sampling reviews of SG inspection data. As part of the lessons learned from the Indian Point 2 failure, the NRC plans to reassess the best approach to applying NRC resources in this area. Regarding the need to obtain more real-time information on Indian Point 2 SG inspection results as they were being evaluated, the NRC staff held four conference calls to discuss the 1997 inspection results. The NRC staff cannot recollect that during any of the calls the licensee informed the staff that a crack had been found in a U-bend tube. As a result of this lesson learned, outlined in Attachment 3 of the November 3, 2000, letter, the staff plans to reassess the need for the summary inspection report and conference calls during the outages to determine the most effective approach for providing NRC

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-8 (cont.)				<p>oversight of SG inspections by February 2001.</p> <p>The basis for the staff's disagreement regarding the amendment request is (see page 5 of ML003753067): "Although the NRC review could have been more thorough, we disagree that the review was inadequate because the scope and depth of the review conformed to staff guidance and was commensurate with the level of technical complexity and safety significance of the licensee's request. The purpose of the amendment request submitted by the licensee was to reschedule their upcoming SG inspection to a later date to take credit for the fact that the plant had been shut down for an extended period of time (approximately 10 months). During that shut down period the SGs had been placed in a "lay-up" condition. Under this "lay-up" condition the atmosphere inside the SGs was inerted (i.e., filled with a cover gas so the tubes are not exposed to oxygen) and the steam generators were at a low temperature. Operating experience has shown and it is well accepted technically that the SG tubes will not degrade under these conditions. In addition to crediting the period of time that</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-8 (cont.)				<p>the plant was shut down, the revised inspection schedule from the licensee also proposed to extend the actual period of SG operation at power by about two months." While the tube rupture did not occur during the extended SG operation period granted by the NRC staff and the very complex nature of the casual factors that lead to the tube failure makes it unclear whether the NRC staff might have determined the existence of the flaw had they looked further, the staff is assessing the SG review guidance for improvements.</p> <p>Regarding whether NRC engineering staff were hampered by NRC management in following up to questions to Con Ed regarding the inspection extension request, the Director of NRR has taken additional steps to reiterate the guidance in the office procedure governing licensing reviews does not absolutely limit staff to one round of questions. The office procedure only requests that staff focus questions in an attempt to reasonably limit the number of rounds of questions. However, the same office procedure also provides guidance to staff to so that they may obtain necessary information from licensees when responses to the</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NIRS-8 (cont.)				<p>first round of questions are not responsive. This additional guidance includes, conference calls, public meetings with NRC and licensee management, and if necessary a second round of questions.</p> <p>The GALL report and SRP-LR were not specifically revised as a result of this comment; however, staff involved with developing lessons learned from Indian Point 2 reviewed the aging management program for SG tub inspections.</p>
NMC-1	C.3.14	The license renewal applicants must know how to use the guidance and what the NRC will expect to see in the applications relative to the guidance. In addition, the supporting bases referred to in these documents should be constructed in a way that allows both plants which were licensed prior to the present GDCs and SRP-LR and those licensed under the GDCs and SRP-LR to benefit from the work done in the Generic Aging Lessons Learned and Standard Review Plan for License Renewal.	None Provided.	<p>GALL was drafted to evaluate aging management of SSCs in particular environments irrespective of the vintage of a plant. The staff has reviewed AMPs described in the GALL report to ensure programs apply to both pre- and post-GDC licensed plants. For example, the coating program described in Chapter XI, Section S.8, has been revised to incorporate older and newer versions of referenced regulatory guides.</p> <p>The GALL report and SRP-LR were revised to address this issue but not specifically for this comment.</p>
NMC-2	C.3.14	Despite the interactions between NEI and the NRC, we do not fully understand how a license renewal applicant would use the GALL and the SRP-LR; nor are we certain how		On November 9, 2000, representatives from NEI and other interested industry groups met with the Nuclear Regulatory Commission (NRC) staff in Rockville, Maryland,

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NMC-2 (cont.)		the NRC would use the documents in the review of a renewal application. We have noted that there is language in the August version of the GALL and SRP-LR, which discusses the purpose, and use of these documents. However, we believe uncertainty still exists.		to discuss use of the draft GALL and SRP-LR. NEI stated that the purpose of the meeting was to clarify the NRC's expectations for the application of the GALL report and the SRP-LR. Applicants submitting license renewal applications in 2000 and 2001, will use the GALL report primarily as an information source on the types of components, aging effects/mechanisms, and programs to be considered in a license renewal application. In this context, the GALL report will help focus the presentation of information in a license renewal application and the basis to resolve questions and open items. For 2002, and beyond, after Commission approval, an applicant may use GALL as an approved topical report that is generically applicable. The industry representatives explained that they wanted the NRC to better define both how an applicant, will utilize the GALL report during the preparation of a license renewal application, and how the NRC staff will use it to facilitate the review of an application. The industry representatives stated that neither the GALL report nor the Standard Review Plan adequately described how to appropriately employ the GALL report to an applicant's

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NMC-2 (cont.)				advantage. The industry representatives were particularly concerned about the staff's expectation for the level of detail associated with the certification that an applicant's programs conformed to the program descriptions in GALL and how exceptions to the GALL report would be described in an application. The staff stated that an applicant who references GALL in a license renewal application would be expected to verify that the programs relied on for a specific structures or components is bounded by the program evaluated in GALL, in order to use GALL as a reference for an acceptable program in the same way that topical reports are used as references for accepted programs. The staff review would intend to use GALL to focus on the areas where further evaluation is recommended or a plant-specific aging management program is proposed. By referencing the GALL, the staff expects that an applicant would decrease the volume of the application and the level of effort required for the staff review. The references along with exceptions to the GALL report may be in tables, footnotes to tables, or in a separate section in the front or the back of the application. The FSAR supplement that is included in the application

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NMC-2 (cont.)				<p>needs to reflect a summary description of the aging management programs, but it may take the form of the tables for components and aging management programs covered by GALL as described in Chapter 3 of the SRP-LR. The industry representatives stated that NEI 95-10 would be revised to state how to use the GALL report and the SRP-LR. As discussed in a January 31, 2001, public meeting, NEI committed to conduct demonstration project with plant examples to further define implementation details and expectations. The NRC and NEI agreed that the generic license renewal guidance document would not be modified further at this time and that current guidance regarding the application of GALL in the SRP-LR and GALL report was adequate. Both the NRC and NEI agreed to consider lessons learned from the demonstration project that might provide additional clarification regarding the application of GALL. The lessons learned could then be factored back into the SRP-LR and NEI 95-10.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NMC-3	C.3.14	The flexibility to provide for acceptance of functionality equivalent programs does not appear to be written into the SRP-LR.		The NRC has built in flexibility for evaluations of AMPs. It is described in Appendix A, Section A.1.2.2 of the SRP-LR, and briefly summarized as follows: An acceptable aging management program should consist of the 10 elements described in Table A.1-1, as appropriate (Ref. 1). These program elements/attributes are discussed further in Position A.1.2.3 below. All programs and activities that are credited for managing a certain aging effect for a specific structure or component should be described. These aging management programs/activities may be evaluated together for the 10 elements described in Table A.1-1 (in SRP-LR), as appropriate. The risk significance of a structure or component could be considered in evaluating the robustness of an aging management program. Probabilistic arguments may be used to assist in developing an approach for aging management adequacy. However, use of probabilistic arguments alone is not an acceptable basis for concluding that, for those structures and components subject to an aging management review, the effects of aging will be adequately managed in the period of extended operation. Thus, risk significance may be

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NMC-3 (cont.)				considered in developing the details of an aging management program for the structure or component for license renewal, but may not be used to conclude that no aging management program is necessary for license renewal. The GALL report and SRP-LR were not revised to address this comment.
NMC-4	C.3.14	The supporting basis should avoid using references to the GDCs and SRP-LR so that plants that were licensed prior to the GDCs and SRP-LR being established can more fully utilize the GALL.	Many of the underlying discussion in the GALL are tied to the GDCs and SRP-LR.	See NRC disposition of comment NMC-1 in this Table C.
NMC-5	C.3.14	We like the use of Chapter XI because it provides a repository for one-time evaluations of aging management programs. We have noticed that there are programs discussed in the body of the GALL report that are not listed in Chapter XI. We suggest that those programs not now listed in Chapter XI be included.	See previous column.	The NRC has modified GALL to list and describe all the applicable AMPs in Chapter XI. A central location of the aging management programs provides for easy of reference and reduces redundancy and potential inconsistencies. The GALL report and SRP-LR were revised to address this issue but not specifically for this comment.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NMC-6	C.3.14	<p>Licensees that are of pre-GDC and SRP-LR vintage should support the attributes of programs contained in GALL independently of reference to the GDC or SRP-LR to allow use.</p> <p>Flexibility must be provided to allow some differences for those plants that do not fit the generic definition.</p>	See previous column.	See NRC dispositions of comments NMC-1, NMC-3 ,and NMC-4 in this Table C.
NMC-7	C.3.14	<p>We agree with the NEI response that, if a specific revision of a code; say those published by the American Concrete Institute (ACI), is referenced and evaluated in GALL, a renewal applicant can indicate that they use the same program at their facility and rely on the GALL evaluation for NRC acceptance of the code. If the ACI standard used by an applicant is different from that in the GALL, then the applicant must demonstrate that its program is adequate in the areas, which differ between the standard revisions, contained in GALL and the revision of the standard, which the applicant uses.</p> <p>Additionally we believe that the applicant should be able to use the edition of the ASME code that is applicable to the licensee in its current licensing basis or a more recent edition of the code. A more</p>		See NRC disposition of comment ACRS-2 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NMC-7 (cont.)		recent edition of the code would be applicable if the licensee plans to use it in the future.		
NMC-8	C.3.14	Nuclear Management Company, LLC, agrees with the NEI suggestion as discussed in the question. Given a robust process for identification of aging affects, the justification of any aging effect not requiring management would be part of the process documentation and is not required to be separately documented in the application.	It appears that the GALL identified aging effects are to be used by the staff as a checklist of those that require management. This implies that it would be possible for an applicant to use the GALL to determine which aging effects require management. We do not believe it should be acceptable for an applicant to use the GALL to determine which aging effects require management. The applicant must make use of the licensee's engineering analyses to determine which aging effects do and do not require management. The licensee will need to document in the application the applicable aging effects requiring management. Those that do not require management will be documented in the supporting documentation kept on site.	<p>Pursuant to 10 CFR 54.21(a)(3), a license renewal applicant is required to demonstrate that the effects of aging on structures and components subject to an aging management review will be adequately managed so that their intended functions will be maintained consistent with the current licensing basis (CLB) for the period of extended operation.</p> <p>The SRP-LR Section A.1.2.1 No.1, page A.1-2, provides further clarification that the staff is only interested in applicable aging effects based on experience to date. To provide further clarification the NRC staff has modified No. 3 as follows: "If operating experience or other information indicates that certain aging effects may be applicable and an applicant does not justify the absence of the aging effect in its application, it may be appropriate to question its absence. However, in questioning the absence of the aging effect, a reference and/or basis, which provide relevance to aid the applicant in addressing the question, shall be provided. For example, the question could cite a previous application review, NRC generic communications,</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
NMC-8 (cont.)				<p>engineering judgment, relevant research information, or other industry experience as the basis for the question. Simply citing that the aging effect is listed in GALL is not a sufficient basis. For example, the aging effect is applicable to a PWR component, but the applicant's plant is a BWR and does not have such a component. In this example, using the GALL report merely as a check list is not relevant."</p> <p>The SRP-LR was revised to address this comment.</p>
PECO-1	C.3.15	PECO Energy appreciates the opportunity to comment on this petition for rulemaking. We endorse the comments provided by the Nuclear Energy Institute.	None Provided.	See Appendix B of this NUREG for NRC dispositions to individual NEI comments.
SRP-LR-1 (I&M)	C.3.16 Section 3	Add a section on references explaining that the SRP-LR and GALL report both have adopted current references in many cases and this is not intended to exclude earlier versions or other codes, standards, or guidance documents that are currently part of the CLB. A procedure for review and comparison with the GALL requirements would be an option that would preserve the utility of the GALL.	See GALL-1 and GALL-2 comments.	See NRC dispositions to comments NMC-2 and ACRS-2 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
SRP-LR-1 (I&M)	C.3.16 Paragraph 3.5.2.3	This section references the BTP RLSB-I in Appendix A.I of the SRP-LR for the acceptance criteria for programs that are different from those described in the GALL report. Appendix A.I describes a means to review and demonstrate that a program meets the general requirements for AMPs. Please consider adding a methodology that would allow a licensee to demonstrate equivalency with the GALL by showing that a primary objective is met or that alternative codes and standards to those referenced in the GALL report are met.	See GALL-1 and GALL-2 comments.	See NRC dispositions to comments NMC-1, NMC-2, and NMC-3 in this Table C.
UCS-1	C.3.17	UCS attended the public workshop conducted by the NRC staff on September 25, 2000. After the preliminary opening remarks, Mr. Yung Liu of the ANL made the first formal presentation. Apparently, ANL had been contracted by NRC to evaluate reformatting the Generic Aging Lessons Learned (GALL) report. Mr. Liu outlined the results of ANL's evaluation. Mr. Liu displayed -- but did not provide copies of -- proposed revamped table for the GALL report. The revamped table purportedly saves paper by eliminating many of the existing columns in the table. Combining information with information in other columns eliminates some of the	While the format, style, and font size of the GALL report are clearly within the purview of the NRC staff; it is outrageous that the NRC staff would ask the public to review and comment on one draft GALL report (ADAMS as session number ML003742594) while concurrently contracting for a substantial revision of that document. This act amounts to 'bait and switch.'" The NRC staff has a self-imposed deadline of August 31, 2000 for seeking public comments. In order to meet that artificial deadline, the NRC staff apparently released for public comment a premature draft of the GALL report it intends to issue. Thus, the public will be reviewing a	See NRC disposition of comment NIRS-1 in this Table C.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
UCS-1 (cont.)		columns. Other columns, such as references, are just eliminated. UCS finds references very useful and would not want to see this valuable information discarded or relocated.	draft report that the NRC has no real intention of issuing. The NRC staff should not place schedule ahead of quality. The NRC staff should wait until it has developed a draft GALL report it can support and then publish that document for public comment. The public has a right to review and comment on the document the NRC intends to issue, not the document the NRC staff hurriedly puts out just to meet some silly deadline.	
UCS-2	C.3.17	Section 3.2 of Draft Regulatory Guide DG-I 104, "Standard Format and Content for Applications to Renew Nuclear Plant Operating Licenses," needs to be more explicit. It specifies that the license renewal application documents may be mechanically or photographically reproduced.	However reproduced, the documents ultimately end up on the NRC's Agency wide Document Access and Management System (ADAMS). Members of the public can (with a certain amount of good karma) download the documents and print out copies for purposes of review/comment. A color printer is not standard equipment. Thus, this regulatory guide should specify that the original documents might be in color, but that no essential information shall be lost when the document is output to a black & white printer.	In the interest of making information publicly available, color drawings and documents must be distinguishable when printed out in black and white so that no essential information is lost. The staff will pursue with the Nuclear Energy Institute adding this clarification to NEI 95-10, "Industry Guideline on Implementing the Requirements of 10 CFR Part 54, The License Renewal Rule," which DG-1104, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses" endorses. RG 1-188 (formally DG-1104) was revised to include this clarification.
UCS-3	C.3.17	The NRC is presently attempting to risk-inform various things. For example, there's an initiative on risk informing special treatment		The risk significance of a structure or component could be considered in evaluating the robustness of an aging management program.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
UCS-3 (cont.)		requirements. If adopted, this initiative would enable plant owners to classify components by safety significance and by safety class (i.e., safety related or non-safety related). It is not clear from the draft regulatory guide, the draft standard review plan, or the draft GALL report how the agency will reconcile a plant getting a non-risk informed license extension under GALL-like provisions with subsequent substantial changes to that plant's licensing bases.		<p>Probabilistic arguments may be used to assist in developing an approach for aging management adequacy. However, use of probabilistic arguments alone is not an acceptable basis for concluding that, for those structures and components subject to an aging management review, the effects of aging will be adequately managed in the period of extended operation. Thus, risk significance may be considered in developing the details of an aging management program for the structure or component for license renewal, but may not be used to conclude that no aging management program is necessary for license renewal.</p> <p>Currently 10 CFR Part 54 does not specifically address licensees who voluntarily chose to follow any new regulatory requirements such as the risk-informing special treatment requirements initiative relief from the scope of 10 CFR Part 54 requirements. However, Part 50.54 assumes the current licensing basis carries forward. If a license renewal applicant had implemented risk-informing its SSCs in accordance with a voluntary risk-informed initiative, then the new SSC classifications would constitute its new current licensing basis.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
UCS-3 (cont.)				<p>Therefore, the license renewal applicant would then apply Part 50.54 against this new set of SSCs.</p> <p>The GALL report and SRP-LR were not revised to address this comment. The current license renewal guidance documents do not clearly articulate how this situation should be handled. The staff will evaluate which document or other license renewal guidance document might be appropriate for documenting the clarification to this comment.</p>
UCS-4	C.3.17	The Federal Register notice posed the question, "Did the NRC staff provide sufficient credit for existing [aging management] programs in the draft GALL report?" UCS believes that the evidence shows NRC is giving too much credit for existing aging management programs.	For example, the NRC's Office of the Inspector General released a report dated August 29, 2000, "NRC's Response to the February 15, 2000, Steam Generator Tube Rupture at Indian Point Unit 2 Power Plant," concluded: QIG determined that the NRC and nuclear industry had long-standing concerns about the loss of integrity of steam generator tubes used on PWRs due to a variety of degradation mechanisms. Degradation problems particular to Westinghouse Model 44 steam generators resulted in all plants with this model steam generator replacing their steam generators, except IP2. The NRC has also been long aware of steam generator tube	<p>See NRC disposition to comment NIRS-5, NIRS-6, NIRS-7, and NIRS-8 in this Table C.</p> <p>These comments address concerns related to aging management programs and Indian Point 2 SG issues. The staff cannot address other examples which "clearly demonstrate the difference between having an aging management program and having an effective aging management program" because these examples have not been provided.</p> <p>The NRC staff does not simply assume without a demonstration that any applicant's aging management programs are</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
UCS-4 (cont.)			and other problems at IP2. Nevertheless, the NRC did not conduct a technical review of the July 29, 1997, IP2 steam generator inspection report when it was submitted to NRR. This OIG report for IP2 and other examples clearly demonstrate the difference between having an aging management program and having an effective aging management program. The NRC staff should not simply assume that any applicant's aging management programs are effective.	<p>effective. The license renewal rule (10 CFR Part 54) requires applicants to demonstrate that their aging management programs are effective. GALL does not assume licensee aging management programs are effective, but reviews current industry practices and documents what aspects of current industry practices make an effective aging management program so that applicants will know one way the NRC will find the demonstration acceptable. However, applicants are free to propose other aging management programs than are listed in GALL, but they must demonstrate why they would be effective in managing aging.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
UCS-5	C.3.17	The draft GALL report specifies ten attributes or elements that are to be addressed for each aging management program. One of these elements, Monitoring and Trending, defines the inspection method, frequency, and sample size that provide reasonable assurance of timely detection of aging effects. During the September 25, 2000, workshop, Ms. Tammy Bloomer of the NRC staff made a formal presentation on the use of one time inspections as an acceptable surrogate for periodic inspections. The license renewal application submitted by the owner of the Hatch nuclear plant (which generally conformed with the concepts specified in the draft GALL report) specified one-time inspections for many components. The NRC staff is giving too much credit for one-time inspections.	The first of the two license renewals granted by the NRC thus far does not enter the renewal period for over a decade. None, or at least very few, of the one-time inspections have yet been conducted. Thus, the NRC has little to no evidence to support its bold assumption that one-time inspections will verify lack of aging. If, on the other hand, the one-time inspections reveal far more aging than is expected or permissible, all of the license renewals granted in the meantime will have been upon invalid bases. The NRC staff must judiciously accept one-time inspections. In addition, the NRC staff must consider whether selective one-time inspections should be performed now rather than waiting more than a decade to confirm well-intended guesses.	<p>The purpose of one time inspections normally is to confirm that while aging degradation would not be expected for a particular SSC (because industry experience does not provide sufficient evidence that aging would occur), or an aging effect is expected to progress very slowly. Licensee corrective action programs would require upon finding evidence of aging effects, that the causes be investigated further and if necessary provide a ongoing aging management program for the time following the inspection.</p> <p>In addition, 10 CFR 50.109, "backfitting" provides a formal process for the NRC to implement new requirements when warranted to maintain safety. If new aging mechanisms were to be discovered at a later time, the NRC would impose new requirements in accordance with this process.</p> <p>Also see NRC disposition of comment NIRS-6 in this Table C.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
UCS-6	C.3.18	Is the GALL report rendered obsolete or invalid when a plant owner adopts a voluntary regulatory initiative (such as risk-informed special treatment requirements) before submitting the license renewal application?		<p>Voluntary initiatives affect a plant's current licensing basis (CLB). The CLB is plant-specific and is carried into license renewal unchanged. If an applicant does rely on certain components through a voluntary initiative to perform intended functions as defined in the license renewal rule and they have become part of the CLB, these components will be in the scope of license renewal and the applicant will describe programs to manage aging for license renewal.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
UCS-7	C.3.18	Is a license renewal granted based upon the GALL report invalidated when that plant owner subsequently adopts a voluntary regulatory initiative?		<p>Subsequent to granting a renewed license, if a licensee adopts new voluntary initiatives that result in additional components having intended functions as defined in the license renewal rule, 10 CFR 54.37 requires the licensee to document the corresponding aging management program in an FSAR update. The staff is currently working with stakeholders on the details of how to implement the license renewal rule with risk-informed initiatives, but currently the staff believes that if the new initiative would result in the removal of SSCs from the scope of those previously within the scope of license renewal, the licensee would perform a 10 CFR 50.59 evaluation to control changes.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
UCS-8	C.3.18	Is the regulatory endpoint for a plant adopting voluntary initiative X before submitting a GALL-based license renewal application equivalent to that for a plant submitting a GALL-based license renewal application before adopting voluntary initiative X?		See NRC dispositions of comments UCS-6 and UCS-7 in this Table C which indicates, the answer is yes.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
UCS-9	C.3.18	When the voluntary regulatory initiatives spawn a spectrum of regulatory schemes, as suggested by Figure 1, what does Generic mean?		<p>The License Renewal Rule principles acknowledge that the plant's CLB is specific. However, we will continue our dialog with stakeholders on risk-informed special treatment requirements regarding license renewal implications.</p> <p>The GALL report and SRP-LR were not revised to address this comment.</p>
VP-1	C.3.19	We have reviewed and concur with the comments submitted on behalf of the nuclear utility industry by the Nuclear Energy Institute (NEI).	None Provided.	See Appendix B of this NUREG for NRC dispositions to individual NEI comments.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
WESCO-1	C.3.20	If an applicant has a surveillance program that consists of capsules with a projected fluence exceeding the 60-year fluence at the end of 40 years, the applicant withdraws one capsule at an outage in which the capsule receives a neutron fluence equivalent to 60-year fluence and tests the capsule in accordance with the requirements of ASTM E185. If available, one capsule should remain in the vessel at all times. Additional capsules should be removed and placed in storage, depending on whether the licensee is considering a second renewal period (i.e. 80 years of operation). Any changes in anticipation of additional renewals, should be discussed with the staff.	A further clarification of the intent of this paragraph would be important to Westinghouse as well as to utilities that operate Westinghouse 3-loop and 4-loop reactors that have neutron pad style reactor internals structures. The key characteristic (from a reactor vessel surveillance viewpoint) of these reactor internals designs is that the surveillance capsule lead factor (for all capsule positions) is quite large, e.g. on the order of 3.5 to 5.0. Recall that the lead factor is the ratio of the fast neutron exposure rate seen by the surveillance capsules to that seen by the peak location at the inner surface of the reactor vessel. Two different interpretations of the above paragraph from the GALL report have been voiced. At issue is whether or not to leave a surveillance capsule in the reactor and whether or not to irradiate a surveillance capsule to an 80-year-equivalent fluence now. We would appreciate it very much if you would review these comments and provide clarification of the NRC's intent.	<p>The GALL report was revised to address this comment to clarify the capsule removal strategy to account for both high and low lead factor plants. It is recognized that plants with a lead factor of 4 will have 80 years of exposure in the capsule after being in the vessel for only 20 years.</p> <p>The GALL report and SRP-LR were revised to address this comment.</p>
W&S-1	C.3.21	We endorse those NEI comments.	None Provided.	See Appendix B of this NUREG for NRC dispositions to specific NEI comments.

Table C: Disposition of Written Public Comments (continued)

Comment Number	Item Number	Comment/Proposed Change	Basis For Comment	NRC Disposition
W&S-2	C.3.21	License renewal applicants who elect to use the GALL Report should not be required to perform an actual or de facto certification of their aging management programs against the program descriptions and attributes set forth in the document.	None Provided.	See NRC disposition to comment NMC-2 in this Table C.
W&S-3	C.3.21	Nor should there be any required "mapping" between aging effects addressed in a license renewal application versus the GALL Report.	Instead, the GALL Report should only be treated as a reference tool, both by applicants and the NRC Staff.	See NRC dispositions to comments NMC-2 and NMC-8 in this Table C
W&S-4	C.3.21	We strongly urge the staff to better define, in the document, how it is to be used by license renewal applicants.	We believe that it is most important to explain that a license renewal applicant's aging management program need not be identical to that described in the GALL Report in order to take credit for the conclusions reached in the report.	See NRC disposition to comment NMC-2 in this Table C.

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