ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES: 1 | 30

IMPORTANT: Mark all packages and papers with contract and/or order numbers. BPA NO.

1. DATE OF ORDER: 03-03-2006	2. CONTRACT NO. (If any): GS10F0092J
3. ORDER NO.: DR-03-06-030 MODIFICATION NO.	4. REQUISITION/REFERENCE NO.: NRC-03-06-030 DTD 12/20/05

5. ISSUING OFFICE (Address correspondence to)
U.S. Nuclear Regulatory Commission
Div. of Contracts#2
Attn: Michael Mills
Mail Stop T-7-I-2
Washington, DC 20555-0001

6. SHIP TO:
a. NAME OF CONSIGNEE: U.S. Nuclear Regulatory Commission
b. STREET ADDRESS:
c. CITY: Washington | d. STATE: DC | e. ZIP CODE: 20555-0001

7. TO:
a. NAME OF CONTRACTOR: ADVANCED TECHNOLOGIES AND LABORATORIES (ATL) INTERNATIONAL,
b. COMPANY NAME:
c. STREET ADDRESS: 20010 CENTURY BLVD STE 500
d. CITY: GERMANTOWN | e. STATE: MD | f. ZIP CODE: 208744111

f. SHIP VIA: Sally Adams M/S O-12E7

8. TYPE OF ORDER
[ ] a. PURCHASE — Reference your _____ Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.
[X] b. DELIVERY — Except for billing instructions on the reverse, this delivery/task order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA See CONTINUATION Page $100,000.00
B&R: 62015112130, Job Code: J-3253, BOC: 252A
APPN. NO.: 30X0200.620

10. REQUISITIONING OFFICE: RES
Sally Adams M/S O-12E7 (301) 415-0209

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[ ] a. SMALL [ ] b. OTHER THAN SMALL [ ] c. DISADVANTAGED [ ] g. SERVICE-DISABLED VETERAN-OWNED
[X] d. WOMEN-OWNED [ ] e. HUBZone [ ] f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: Destination

13. PLACE OF		14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	16. DISCOUNT TERMS
a. INSPECTION	b. ACCEPTANCE		See SOW	

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	DUNS No. 827013467				See CONTINUATION Page	

Accepted
3/6/06
Date

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.		17(h) TOTAL (Cont. pages)
	21. MAIL INVOICE TO:				
	a. NAME: U.S. Nuclear Regulatory Commission, Payment Team, Mail Stop T-7-I-2				
	b. STREET ADDRESS (or P.O. Box)			$266,921	17(i). GRAND TOTAL
	c. CITY: Washington	d. STATE: DC	e. ZIP CODE: 20555-0001	$100,000.00	

22. UNITED STATES OF AMERICA BY (Signature): Donald A. King

23. NAME (Typed): Donald A. King
Contracting Officer
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION IS NOT USABLE

OPTIONAL FORM 347 (REV. 3/2005)
PRESCRIBED BY GSA - FAR 48 CFR 53.213(e)

TEMPLATE - ADM001

SISP REVIEW COMPLETE

ADM002

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TASK ORDER TERMS AND CONDITIONS

NOT SPECIFIED IN THE CONTRACT

A.1 NRC Acquisition Clauses - (NRCAR) 48 CFR Ch. 20
A.2 Other Applicable Clauses

[] See Addendum for the following in full text (if checked)

[] 52.216-18, Ordering

[] 52.216-19, Order Limitations

[] 52.216-22, Indefinite Quantity

[] 52.217-6, Option for Increased Quantity

[] 52.217-7, Option for Increased Quantity Separately Priced Line Item

[] 52.217-8, Option to Extend Services

[] 52.217-9, Option to Extend the Term of the Contract

A.3 SEAT BELTS

Contractors, subcontractors, and grantees, are encouraged to adopt and enforce on-the-job seat belt policies and programs for their employees when operating company-owned, rented, or personally owned vehicles.

DR-03-06-030
SCHEDULE A

CONTINUATION PAGE

SCHEDULE OF SUPPLIES OR SERVICES AND
PRICE/COSTS

1 PROJECT TITLE

The title of this project is as follows:

Technical Assistance Support for Safety Review and On-Site Audit of License Aging

2. BRIEF DESCRIPTION OF WORK

a) Brief description of work:

The U.S. Nuclear Regulatory Commission requires contractor expert technical services and technical writing and editing services to support RLRC staff safety review of the application for license renewal for an Entergy Plant. Specifically, the contractor is to (1) prepare an audit plan for performing the audit and review, (2) perform on-site audits and safety reviews of the AMRs and AMPs associated with the LRA and the supporting documents to determine whether the applicant has made the appropriate determination regarding the consistency with the GALL Report or previous staff-approved positions or precedents, (3) support on-site audits of the applicant's TLLAs, (4) prepare license renewal audit and review report based on technical evaluations, and if requested, the safety evaluation report (SER) input, 5) if necessary, develop request for additional information and review the applicant's responses, and (6) if requested, provide support to Advisory Committee on Reactor Safeguards (ACRS) meeting.

(b) Only Contracting Officers of the NRC or other individuals specifically authorized under this task order may authorize the initiation of work under this delivery order. The provisions of this delivery order shall govern all required work hereunder.

DR-03-06-030
SCHEDULE A

3. SCHEDULE

The Contractor shall provide expert technical services and technical writing and editing support services to NRC in accordance with the "DESCRIPTION/SPECIFICATIONS/WORK STATEMENT" for the deliver order period of performance at the rates as set forth below.

PROJECTED TASK

CLIN NO. 0001 - Audit Plan Development/Audit Preparation

Labor Category	Labor Rate	Estimated Hours	Estimated amount
Project Manager	[redacted]		[redacted]
Principal I	[redacted]		[redacted]
Principal II	[redacted]		[redacted]
Subtotal		[redacted]	[redacted]

CLIN NO. 0002 - Conduct and Document AMP Audit

Labor Category	Labor Rate	Estimated Hours	Estimated amount
Principal I	[redacted]		[redacted]
Principal II	[redacted]		[redacted]
Admin Spec II	[redacted]		[redacted]
Subtotal		[redacted]	[redacted]

CLIN NO. 0003 - Conduct and Document AMR Review

Labor Category	Labor Rate	Estimated Hours	Estimated amount
Principal I	[redacted]		[redacted]
Principal II	[redacted]		[redacted]
Admin Spec II	[redacted]		[redacted]
Subtotal		[redacted]	[redacted]

DR-03-06-030
SCHEDULE A

CLIN NO. 0004 - Support and Document the TLAA Reviews

Labor Category	Labor Rate	Estimated Hours	Estimated amount
Principal I	[redacted]		
Principal II			
Subtotal			

CLIN NO. 0005 - Develop RAIs and Review Responses

Labor Category	Labor Rate	Estimated Hours	Estimated amount
Principal I	[redacted]		
Principal II			
Subtotal			

CLIN NO. 0006 - Final Audit and Review Report

Labor Category	Labor Rate	Estimated Hours	Estimated amount
Project Manager	[redacted]		
Policy Analyst			
Subtotal			

DR-03-06-030
SCHEDULE A

OPTIONAL CLINS 0007, 0008 and 0009

CLIN NO. 0007 - Prepare SER Input

Labor Category	Labor Rate	Estimated Hours	Estimated amount
Project Manager	[redacted]		[redacted]
Principal II	[redacted]		[redacted]
Policy Analyst	[redacted]		[redacted]
Subtotal		[redacted]	[redacted]

CLIN NO. 0008 - ACRS Meeting Support

Labor Category	Labor Rate	Estimated Hours	Estimated amount
Principal II	[redacted]		[redacted]
Subtotal		[redacted]	[redacted]

CLIN NO. 0009 - Conduct a Third AMR Reviews

Labor Category	Labor Rate	Estimated Hours	Estimated amount
Principal I	[redacted]		[redacted]
Principal II	[redacted]		[redacted]
Subtotal		[redacted]	[redacted]

TASK NO. 0010 - Monthly Status Report

Labor Category	Labor Rate	Estimated Hours	Estimated amount
Project Manager	[redacted]		[redacted]

DR-03-06-030
SCHEDULE A

Admin Spec II	[redacted]		[redacted]
Project Coordination			
Project Manager	[redacted]		[redacted]
Subtotal		[redacted]	[redacted]

TOTAL ESTIMATED LABOR [redacted] $279,367

CLIN NO. 0011 - ESTIMATED TRAVEL

Category		Total Estimated Costs
Travel (Cost Reimbursable) The government will pay up to the rates specified in the Government Federal Travel Regulations (FTR) for travel destination. Hotel reservations will be made by the contractor anc will be reimbursed for actual costs only, with back up documentation/ receipts attached to the invoice. NO PAYMENT WILL BE MADE WITHOUT BACK UP DOCUMENTATION/ RECIPTS.		$20,000.00

CLIN NO. 0012 - Other Direct Cost

Category	Estimated Quantity	Unit Price	Total Estimated Costs
Copy/Reproduction	[redacted]	[redacted]	[redacted]
Phone/ Telecommunications	[redacted]	[redacted]	[redacted]
G&A 11.50%			[redacted]
Subtotal			[redacted]

ESTIMATED TOTAL - Labor and Travel and Other direct cost $299,921

The fixed unit price of each line item shown above to meet requirements as delineated in Section entitled "Statement of Work," shall include all cost deemed necessary by the contractor.

(c). Place of Delivery

The support services shall be delivered to the NRC headquarters office located at the following address:

U. S. Nuclear Regulatory Commission
Two White Flint North
11545 Rockville Pike
Rockville, Maryland 20852-2738

STATEMENT OF WORK DR-03-06-030

Technical Assistance Support for Safety Review and On-Site Audit of License Renewal Aging Management Program - Entergy Plant

1. BACKGROUND

The U.S. Nuclear Regulatory Commission (NRC) has developed an improved process for reviewing license renewal applications (LRA). The improved process promotes efficiency to allow the staff to manage peak workloads, and conduct a large number of reviews concurrently. For each license renewal application, a project team from License Renewal Branch C (RLRC) of the Division of License Renewal (DRL) audits and reviews aging management programs (AMPS), aging management reviews (AMRs), and time-limited aging analyses (TLAAs) that were submitted by the applicant. Each project team is led by a team leader from RLRC. The project team includes individuals knowledgeable and experienced in the subjects of material, mechanical, electrical, plant systems, and civil/structural engineering, as applicable to license renewal activities.

The project team performs its work in accordance with the requirements of Title 10 of the *Code of Federal Regulations*, Part 54 (10 CFR Part 54), "Requirements for Renewal of Operating Licenses for Nuclear Power Plants;" the guidance provided in NUREG-1800, "Standard Review Plan for Review of License Renewal Application for Nuclear Power Plants", Revision 1, (SRP-LR), dated September 2005; the guidance provided in NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," Revision 1, (GALL Report) dated September 2005; and an audit plan that the project team prepares for each LRA audit and review.

In general, the project team reviews the AMPs that the applicant determined are consistent with the GALL Report and certain plant-specific AMPs. For its assigned scope of work, the project team determines that the applicant's aging management activities and programs will adequately manage the effects of aging on systems, structures, and components, so that their intended functions will be maintained consistent with the plant's current licensing basis (CLB) for the period of extended operation. Consistent with the SRP-LR criteria, the project team also reviews the applicant's updated final safety analysis report (UFSAR) supplement which summarizes the applicant's programs and activities for managing the effects of aging for the period of extended operation.

For its AMR reviews, the project team reviews the AMRs reported by the applicant to be consistent with the GALL Report to determine whether or not these AMRs are consistent with the GALL Report. In addition, the project team reviews the AMRs that the applicant justified on the basis of NRC-approved precedents, to determine whether or not these AMRs are technically acceptable and applicable. For component groups evaluated in the GALL Report for which the applicant claimed consistency with the GALL Report, and for which the GALL Report recommends further evaluation, the project team reviews the applicant's evaluation to determine whether or not it adequately addressed the issues for which the GALL Report recommends further evaluation.

For the TLAA, the project team reviews the information provided by the applicant that addresses the GALL Report and plant-specific TLAAs and determines whether the applicant had provided adequate information to meet the requirements of 10 CFR54.21.

RLRC is forming a project team to ensure that the applicant has made the appropriate determinations regarding the ability of its activities and programs to adequately manage the effects of aging on structures and components, so that their intended functions will be maintained for the period of extended operation.

The purpose of this contract is to obtain expert technical assistance in support of the RLRC review of the LRA for an Entergy Plant. The project team will be comprised of NRC and contractor's staff. The project team members will typically include a team leader and a project manager from the NRC and will include a mixture of both NRC and contractor technical staff with expertise in area such as materials, mechanical, electrical, reactor/plant systems (e.g., reactor operations), and civil/structural engineering, as applicable to license renewal activities. As required, either NRC technical staff or contractor staff may be assigned as project team members to cover one or more of the five engineering disciplines.

2. CONTRACT OBJECTIVES

The objective of this contract is to obtain from the contractor expert technical services and technical writing and editing services to support RLRC staff safety review of the application for license renewal for an Entergy Plant. Specifically, the contractor is to (1) prepare an audit plan for performing the audit and review, (2) perform on-site audits and safety reviews of the AMRs and AMPs associated with the LRA and the supporting documents to determine whether the applicant has made the appropriate determination regarding the consistency with the GALL Report or previous staff-approved positions or precedents, (3) support on-site audits of the applicant's TLLAs, (4) prepare license renewal audit and review report based on technical evaluations, and if requested, the safety evaluation report (SER) input, 5) if necessary, develop request for additional information and review the applicant's responses, and (6) if requested, provide support to Advisory Committee on Reactor Safeguards (ACRS) meeting.

3. TECHNICAL AND OTHER SPECIAL QUALIFICATION REQUIRED

The contractor shall provide personnel, (a project team of up to four (4) engineers/technical specialists), who are knowledgeable and experienced in the subjects of material, mechanical, electrical, reactor/plant systems (reactor operations), and civil/structural engineering, as applicable to license renewal activities. The contractor shall provide a senior member to serve as a project coordinator to oversee the efforts of the contractor team and to ensure the timely submittal of quality deliverables such that all information is accurate and complete. The project coordinator shall serve as one of the project team member and shall meet the required project team member qualifications. The contractor shall identify a corporate manager to be responsible for quality and contractual issues, to assure that the NRC requirements are fulfilled. The contractor shall also provide administrative support personnel while the project team is on-site performing the audit. The administrative support personnel shall be obtained from a suitable vendor located within the vicinity of the audit site. The contractor shall also provide technical editors to prepare, edit, and incorporate NRC staff's review comments on all technical reports and contract deliverables.

It is the responsibility of the contractor to assign the technical staff, employees, subcontractors, or specialists who have the required educational background, work experience, or a combination thereof to meet both the technical and regulatory objectives of the work specified in this SOW. The NRC will rely on representations made by the contractor concerning the qualifications of the personnel assigned, including assurance that all information contained in the technical and cost proposal, including resumes, is accurate and truthful. All contractor personnel shall remain available to provide support until all final deliverables are accepted. The use of particular personnel on this project is subject to the NRC TM's approval. This includes proposed changes to personnel during the life of the contract.

If any work will be subcontracted or performed by subcontractors or consultants, the contractor shall obtain the NRC TM's written approval of the subcontractor or consultant prior to the initiation of the subcontracted effort.

4. SCOPE OF WORK

The contractor shall furnish personnel, a team of up to four (4) members, and administrative services to support the audit and review activities for an Entergy Plant to be named in January 2006.

The contractor shall ensure that each project team member reviews and becomes familiar with the plant-specific LRA with emphasis on aging management programs (AMPs), aging management reviews (AMRs), and time-limited aging analyses (TLAAs) described in the LRA. The contractor shall ensure that each project team member reviews, for familiarization, (1) the audit and review report and (2) Sections 3 and 4 of a SER (final SER or SER with open items) that were recently-issued by the NRC. The NRC TM will identify the specific audit and review reports and SERs for review.

The estimated duration for completion of Tasks 1 through 6 is seven (7) months from the receipt of the LRA. Task 7 is optional, and if requested, shall be completed within eight (8) months from the receipt of the LRA. Task 8 is also optional and is subject to the PO's discretion. If requested, this task will take place approximate fifteen (15) months after the receipt of the LRA. Task 9 is a recurring task. The actual schedule for performing these tasks will be agreed upon between the NRC project team leader and the contractor project coordinator within two (2) weeks of receiving the NRC authorization to begin work.

For planning purposes, the nominal duration of each task is discussed in the following task description and an estimated schedule is provided under Section 10, "Deliverables," of this SOW.

Task 1 Audit Plan Development

The contractor shall prepare an audit plan that addresses the contract objectives and the plant-specific LRA review and audit activities. The NRC project team leader will provide an audit plan template and a recently-issued audit plan. Using this template, the contractor shall insert LRA-specific information, where applicable. The contractor shall determine the applicable AMPs worksheets template, provided by the NRC project team leader, to be included in the audit plan. In addition, the contractor shall insert the project team work assignments and the specific team

member that will perform each assignment. The NRC project team leader will provide information on the work assignments, e.g., the split of work between the project team members and other NRC technical staff. Since the template contains a significant amount of necessary information to develop the audit plan, the effort for this task is minimal.

The deliverables for this task are (1) a draft audit plan and (2) a technical edited, final audit plan that will address the project objectives.

The schedule for completing the draft audit plan will be mutually agreed upon between the NRC TM or project team leader and the contractor project coordinator. For planning purposes, the contractor shall deliver the draft audit plan to the NRC project team leader for review and comment no later than five (5) working days after receiving the work split table from the NRC TM or project team leader. The NRC project team leader will coordinate any internal NRC staff review of the draft audit plan and will prepare a consolidated set of NRC staff comments. The NRC project team leader will provide the comments to the contractor project coordinator and will discuss these items with the contractor no later than five (5) working days of receiving the draft audit plan. The contractor shall revise the draft audit plan to reflect the NRC staff comments and deliver the final audit plan no later than five (5) working days after receipt of the NRC's comments on the draft audit plan.

Task 2 Conduct and Document the AMPs Audit

The contractor shall provide up to four (4) qualified professionals to participate, in an NRC-led project team audit, of up to five (5) days to determine whether the applicant has sufficient on-site documentation, as indicated in its LRA, to demonstrate that the AMPs, which are determined to be consistent with the GALL Report or previously approved staff positions by the applicant are actually consistent. The contractor shall also provide an administrative support personnel while the project team is on-site performing the audit. The administrative support personnel shall be obtained from a suitable vendor located within the vicinity of the audit site.

The contractor shall perform the front end work associated with the preparation of AMPs/AMRs audit and review that will be performed at the applicant's site right after receiving the NRC authorization to initiate the work. The front end work includes, but is not limited to: rolling up the LRA AMR Table 2 to the Table 1 format and order; sorting the roll-up tables for parameters important to the audit and review.

As part of the front end work, the contractor shall prepare an audit and review report shell using the NRC provided safety evaluation report (SER) shell, the LRA, and the "Writing Guide and Template for Preparing License Renewal Application Audit and Review Report." The audit and review report shell shall contain the LRA-specific information extracted from the LRA or from the SER shell that are related to the audit. Audit and review report shell construction is appropriate for completion by administrative support staff. The audit and report shell will aid the project team member in the pre-write of their assigned evaluation portion of the audit and review report.

In addition, the contractor shall ensure that each project team members (1) reviews her/his portion of the assignments (AMPs and AMRs), develops her/his worksheets, (2) develops her/his first round of questions to be provided to the applicant one (1) week prior to the on-site

audit, and (3) review and pre-write the evaluation of her/his portion the AMP/AMR sections of the audit and review report.

The NRC project team leader will provide the "Writing Guide and Template for Preparing License Renewal Application Audit and Review Report" to the project team members to aid in the pre-write of the audit and review report. The contractor shall complete the roll-up table before the first AMP audit. This will allow the project team members to consider AMRs, which credit certain AMPs to manage certain aging effects, during the AMP audit. The contractor should ensure that each project team member prepares his/her typed questions and provides these questions to the NRC project team leader to be forwarded to the applicant (through the NRC Project Manager), before each break out meeting with the applicant. The contractor shall document the results of the project team's audit and review activities in accordance with the audit plan.

The deliverables for this task are (1) completed audit worksheets, (2) draft AMP report sections and (3) technically edited final AMP report sections.

The schedule for completing the audit worksheets, draft AMPs and final AMPs sections of the audit and review report will be mutually agreed upon between the NRC project team leader and the contractor project coordinator. For planning purposes, the completed AMPs worksheets and draft AMPs section of the audit and review report shall be delivered to the TM no later than ten (10) working days after the first on-site visit. The contractor shall revise the draft AMPs section to reflect the NRC staff comments and shall deliver the final AMPs section of the audit and review report no later than five (5) working days after receipt of the NRC's comments on the draft AMPs section.

Task 3 Conduct and Document the AMRs Review

The contractor shall provide up to four (4) qualified professionals to participate, in an NRC-led project team audit, of up to five (5) days to determine whether the applicant has sufficient on-site documentation, as indicated in its LRA, to demonstrate that the AMRs which are claimed to be consistent with the GALL Report or previously approved staff positions by the applicant are actually consistent. The contractor shall also provide administrative assistance to the project team during the on-site audit. The administrative assistance shall be obtained from a suitable vendor located within the vicinity of the audit site.

The contractor should ensure that each project team member prepares his/her typed questions and provides these questions to the NRC project team leader to be forwarded to the applicant (through the NRC Project Manager), before each break out meeting with the applicant. The contractor shall document the results of the project team's audit and review activities in accordance with the audit plan.

The audit and review report shell shall contain the LRA-specific information extracted from the LRA or from the SER shell that are related to the audit. The audit and review report shell will aid the project team member in the pre-write of her/his assigned evaluation portion of the audit and review report. The NRC project team leader will provide the "Writing Guide and Template for Preparing License Renewal Application Audit and Review Report" and a recently-issued audit and review report. The contractor shall prepare the draft audit and review report in

accordance with the writing guide provided. The audit and review report shall include both the AMP sections and AMR sections.

The deliverables for this task is a (1) draft audit and review report. The schedule for completing the draft AMPs and final AMPs sections will be mutually agreed upon between the NRC project team leader and the contractor project coordinator. For planning purposes, the draft audit and review report shall be delivered to the TM no later than fifteen (15) working days after the second on-site visit.

Task 4 Support TLAAs Audit

Contractor team members shall support the RLRC staff on the project team in collecting information for the LRA TLAA reviews. This task shall be performed in conjunction with the on-site AMPs and AMRs audits. The contractor may be requested to support specific TLAA reviews and prepare portions of the draft TLAA sections of the audit and review report.

The deliverables for this task are inputs to the draft TLAA sections of the audit and review report. The schedule for completing the draft TLAA sections will be mutually agreed upon between the NRC project team leader and the contractor project coordinator. For planning purposes, the draft TLAA sections of the audit and review report shall be delivered to the TM no later than fifteen (15) working days after the second on-site visit. Additionally, for planning purposes, the level of effort for this task shall not exceed 400 hours.

Task 5 Develop Request for Additional Information and Review Applicant's Responses

The contractor shall provide qualified professionals to prepare formal request for additional information (RAI), when determined appropriate, to obtain additional information to continue with the LRA safety review. The RAI shall cite the technical and regulatory basis for requesting the information. The contractor shall also provide qualified professionals to review applicant's responses to the RAI and to determine whether the applicant's responses are acceptable.

The deliverables for this task, if applicable, are (1) draft RAIs, (2) technical edited final RAIs, and (3) documentation of acceptability for incorporating into the draft audit and review report (unless the report has been completed before the RAI response is received) and the SER input.

The schedule for completing the draft RAIs and final RAIs sections will be mutually agreed upon between the NRC project team leader and the contractor project coordinator. For planning purposes, the contractor shall deliver the draft RAI the TM no later than five (5) working days after assigned. The contractor shall revise the draft RAIs to reflect the NRC staff comments and deliver the final RAIs no later than three (3) working days after receipt of the NRC's comments on the draft RAIs. The contractor shall deliver the documentation of acceptability to the NRC TM no later than seven (7) working days after receiving responses from the applicant.

Task 6 Final Audit and Review Report

The contractor shall provide qualified professional to prepare the audit and review report as described in Tasks 2, 3, and 4. The final audit and review report shall incorporate comments from the peer review, comments from the NRC staff, and responses from the RAIs. The

contractor shall also provide technical writing and editing services to prepare the final audit and review report.

The deliverable for this task is the quality-reviewed and technical-edited final audit and review report.

For planning purposes, the contractor shall deliver the final audit and review report to the TM no later than ten (10) working days after receiving consolidated comments from the TM.

Optional Tasks

The following tasks are optional, subject to exercise by written approval of the NRC PO. Exercise of Optional Tasks 7 and 8 is subject to availability of funds and management approval to proceed. The NRC reserves the right to not exercise one, or both, of the optional tasks. Should the task(s) be exercised, the NRC PO will provide written approval (by e-mail) to initiate the efforts.

Optional Task 7 Prepare SER Input

If requested in writing by the PO, the contractor shall provide qualified professional staff as well as technical writing and editing services to prepare the draft and final SER input that incorporates the results of the AMPs, AMRs, and TLAAs audits and reviews, performed by the project team, as documented in the final audit and review report.

The SER input shall be prepared in accordance with the writing guidelines provided in the audit plan and the "Writing Guide and Template for Preparing License Renewal Application Safety Evaluation Report Input." It should be noted that the information and materials needed to prepare the SER input is largely taken directly from the audit and review report. Thus, this task is less technical effort and more formatting, writing, and editing. The NRC project team leader will provide the SER input template and a recently-issued SER input to the contractor prior to the start of this Task.

The deliverables for this task are (1) draft SER input and (2) technical edited final SER input.

The schedule for completing the draft SER input will be mutually agreed upon between the NRC project team leader and the contractor PM. However, no later than fifteen (15) working days after receipt of written authorization from the NRC PO, the contractor shall deliver a draft of the SER input to the NRC project team leader for review and comment. The NRC project team leader will coordinate any internal NRC staff review of the draft SER input and will prepare a consolidated set of NRC staff comments. The project team leader will provide the comments to the contractor and will discuss them with the contractor. The contractor shall revise the draft SER input to reflect the NRC staff comments and deliver the final technical edited SER input no later than five (5) working days after receipt of the NRC project team leader's comments on the draft SER input.

Optional Task 8 ACRS Meeting Support

If requested in writing by the PO, the contractor shall provide one key personnel (specialist) to support RLRC staff during the ACRS meeting to present the results of the LRA safety review. The activities could include: providing information, preparing input for the staff's presentation, and participating in the dry run and the ACRS meeting. The ACRS meeting is normally held several months after the completion of the audit and review report and the SER inputs. The estimated effort should include refreshing of the specialist on the review and any technical issues. The dry run could be accomplished through telephone conference, if required. A two-day trip to Rockville, MD shall be included in the estimate to support the ACRS meeting.

The deliverable for this task is contractor staff support for the duration of the ACRS meeting at NRC Headquarters and support services for the dry run via telephone conference.

Task 9 Status Reports

For cost control purposes, the contractor shall prepare a spending plan. This spending plan shall contain the estimated number of hours to be spent by each project team member for each associated task. Each project team member is to sign the initial spending plan to acknowledge the ceiling for their specific effort.

Also, the contractor shall submit bi-weekly time and labor support documentation. This includes itemization of time spent by individual project team member in performing assigned tasks. The NRC TM will provide a time and labor form to the contractor and using this form the contractor shall provide the applicable information. The completed time and labor form can be e-mail to the NRC PM and TM.

5. Deliverables and Reporting Requirements

Technical Reporting Requirements

Unless otherwise specified above, the contractor shall provide all deliverables as draft products. The NRC TM or project team leader will review all draft deliverables (and coordinate any internal NRC staff review, if needed) and provide comments back to the contractor. The contractor shall revise the draft deliverable, based on the comments provided by the NRC TM or team leader, and then deliver the final technical edited version of the deliverable. When mutually agreed upon between the contractor project coordinator and the NRC project team leader, the contractor may submit preliminary or partial drafts to help gauge the contractor's understanding of the particular work requirement. More than one round of drafts may be needed if the contractor does not successfully incorporate the NRC TM's comments on previous draft.

The contractor shall provide the following deliverables in hard copy and electronic formats. The electronic format shall be provide in WordPerfect 8.0 or other word processing software approved by the NRC TM, and in Adobe Acrobat file (pdf). For each deliverable, the contractor

shall provide one hard copy to both the NRC project team leader and the NRC TM and upon request, electronic copies to the NRC TM on CD-ROM.

Task	Deliverable	Nominal Schedule
Audit Plan Development	Draft Audit plan	5 days after receiving work split table
	Final Audit Plan	5 days after receiving NRC comments
Conduct and Document the AMP Audit	Completed AMP Worksheets	10 days after the first on-site visit
	Draft AMP Sections	10 days after the first on-site visit
	Final AMP Sections	5 days after receiving NRC comments
Support and Document the TLAA Reviews	Draft TLAA Sections of the Audit and Review Report	15 days after the last on-site visit
Conduct and Document the AMR Reviews	Draft Audit and Review Report	15 days after the last on-site visit
Develop RAI and Review Applicant's Response	Draft RAIs	5 days after assigned
	Final RAIs	3 days after receiving NRC comments
	Documentation to be included in the audit and review report	7 days after receive response from the applicant
Final Audit and Review Report	Final audit and review report	10 days after receiving consolidated NRC comments
SER Input	Draft SER input	15 days after authorization to start
	Final SER input	5 days after receiving consolidated comments on draft SER input
ACRS Meeting Support	ACRS meeting support	Attending ACRS Meeting
Status Report	Bi –weekly time and labor form	Bi-weekly
	Technical Status Report	15th of the month

Monthly Status Report

The contractor shall provide a Monthly Status Report to the NRC Project Officer (PO), Technical Monitor (TM) and Contracting Officer (CO) by the 15th of each month. The report should be transmitted electronically to the PO and TM, with a hard copy sent to the CO. The report shall provide the technical and financial status of the effort.

The technical status section of the report shall contain a summary of the work performed under each task/task order during the reporting period, and milestones reached, or if missed, an explanation why; any problems or delays encountered or anticipated with recommendations for resolution; and plans for the next reporting period. The status shall include information on travel during the period to include trip start and end dates, destination, and travelers for each trip.

The financial status section of the report shall include the total contract award amount and funds obligated to date; total costs incurred in the reporting period, broken down by direct and indirect costs, and total cumulative costs incurred to date. The status shall also contain the balance of obligations remaining at the end of the period and balance of funds required to complete the contract/task order. Additionally, the report shall address the status of the Contractor Spending Plan (CSP), showing the percentage of project completion and any significant changes in either projected expenditures or percentage of completion. The report should also identify the acquisition cost, description (model number, manufacturer) and acquisition date of any property/equipment acquired for the project during the month with an acquisition cost more than $500.

If the data in this report indicates a need for additional funding beyond that already obligated, this information may only be used as support to the official request for funding required in accordance with the Limitation of Cost (LOC) Clause (FAR 52.232-20) or the Limitation of Funds (LOF) Clause FAR 52.232-22.

License Fee Recovery Cost Status Report

The work for all Tasks is license fee recoverable.

Pursuant to the provisions on fees of 10 CFR Parts **170** and **171,** provide the total amount of funds costed during the period and cumulative to date for each task/task order by facility. The License Fee Recovery Status Report must be on a separate page, as part of the monthly status report, in the format provided on the following page.

There should be only one License Fee Recovery Cost Status (LFRCS) table per contract each month. Unit numbers, for example, Beaver Valley 2, should be identified for each facility included in each table, the facilities should be sorted by docket number, and costs should be reported as whole numbers rounded to the nearest dollar. For work that involves more than one unit at the same site, each unit should be listed separately and the costs should be split appropriately between the units. Common costs, as defined below, must be identified separately in the LFRCS table each month and must be divided among all plants worked on under the program during the month. The total of the period costs reported in the LFRCS table should equal the total of the period costs reported in the Financial Status report. In the event the totals of the costs reported in these two tables are not equal, an explanation for the variance should be given as a footnote to the LFRCS table.

"Common costs" are those costs associated with the performance of an overall program that benefit all similar licensees covered under that program or that are required to satisfactorily carry out the program. Common costs include costs associated with the following: preparatory or startup efforts to interpret and reach agreement on methodology, approach, acceptance

criteria, regulatory position, or technical reporting requirements; efforts associated with the lead-plant concept that might be involved during the first one or two plant reviews; meetings and discussions involving the above efforts to provide orientation, background knowledge, or guidance during the course of a program; any technical effort applied to a category of plants; and project management.

Sample

LICENSE FEE RECOVERY COST STATUS

Contract No:
Job Code:
Title:
Period:

Task/ Task Order	Facility Name and Unit	Docket Number	Identification (TAC) Number	Costs	
				Period	Cumulative

Common Costs

No license fee recoverable costs were incurred during the reporting period.

6. MEETINGS AND TRAVEL

The following meetings and travel are anticipated. The travel costs related to these meetings and on-site audits shall not exceed $20K.

Meetings with the NRC

1. One, half-day working meeting with the NRC project team leader to finalize the audit plan and prepare for the audit. This meeting will be led by the NRC project team leader at the contractor's office. The contractor shall provide a facility for this meeting.

2. One, three-day working meeting to support pre-writing of the audit and review report. Assume that the project team members, including the coordinator, will participate for 50 percent the meeting and that a technical writer and editor will participate for 75 percent of the meeting. This meeting will be led by the NRC project team leader at the contractor's office. The contractor shall provide a facility for this meeting.

3. One, three-day working meeting to support writing of the SER input, if required. Assume that the contractor team coordinator and selected project team members will participate for 50 percent of the meeting and that a technical writer and editor will participate for 75 percent of the meeting. This meeting will be led by the NRC project team leader at the contractor's office. The contractor shall provide a facility for this meeting.

4. One, one-day progress meeting to review and adjust the schedule between the NRC technical monitor, the NRC project team leader, and the contractor team coordinator (and the project team members, as appropriate). This meeting will be led by the NRC project team leader at the contractor's office. The contractor shall provide a facility for this meeting. If practical, this meeting should be combined with one of the meetings specified above.

5. One, two-day meeting with the NRC staff and the ACRS members at Rockville, MD to support the ACRS meeting, if required.

At the discretion of the NRC TM, meetings may be conducted via teleconference or video conference.

Travel

1. Two, five-day trips for up to four staff, to the applicant's offices located at or near the plant site to perform audits and technical reviews. (Typically, Sunday afternoon and Friday will be travel days. However, some project team activities will end Friday afternoon.) If required, a third trip (one, five-day trip) to the plant site will be taken to continue and complete the audits and technical reviews.

2. One, two-day, one-person trip to the applicant's offices located at or near the plant site, to perform final audits and technical reviews, if required. This trip may be combined with the public exit meeting for the audit and review activities.

3. Two, one-day, one-person trips to NRC Headquarters to discuss status and plans.

4. One, two-day, one-person trip to NRC Headquarters to support the ACRS meeting, if required.

7. PERIOD OF PERFORMANCE

The period of performance is 18 months from initiation of the order.

8. NRC FURNISHED MATERIALS

1. Paper copies and electronics copies of the applicable LRA.
2. Audit plan template, AMPs Worksheet template and a recently-issued audit plan.
3. The split-of-work table.
4. "Writing Guide and Template for Preparing License Renewal Application Audit and Review Report" and a recently-issued audit and review report.
5. "Writing Guide and Template for Preparing License Renewal Application Safety Evaluation Report Input" and SER input examples. Issued SERs are available on the NRC website.
6. Other applicable background information and reference documentation, including the GALL Report, SRP-LR, and NUREG 1833, "Technical Basis for Revision to the License Renewal Guidance Documents," is available on the NRC website.

9.0 ORDER TERMS, CONDITIONS, AND REQUIREMENTS

A. PROJECT OFFICER

The Contracting Officer's authorized technical representative hereinafter referred to as the project officer for this order is:

Project Officer: Sally Adams

Technical Monitor:

a. Performance of the work under this order is subject to the technical direction of the NRC project officer and technical monitor. The term "technical direction" is defined to include the following:

1. Technical direction to the contractor which shifts work emphasis between areas of work or tasks, authorizes travel which was unanticipated in the Schedule (i.e., travel not contemplated in the Statement of Work or changes to specific travel identified in the Statement of Work), fills in details, or otherwise serves to accomplish the contractual statement of work.

2. Provide advice and guidance to the contractor in the preparation of drawings, specifications, or technical portions of the work description.

3. Review and, where required by the order, approval of technical reports, drawings, specifications, and technical information to be delivered by the contractor to the Government under the order.

b. Technical direction must be within the general statement of work stated in the order. The project officer and technical monitor do not have the authority to and may not issue any technical direction which:

1. Constitutes an assignment of work outside the general scope of the order

2. Constitutes a change as defined in the "Changes" clause of the GSA contract.

3. In any way causes an increase or decrease in the total fixed price or the time required for performance of any orders.

4. Changes any of the expressed terms, conditions, or specifications of the order or associated BPA.

5. Terminates the order, settles any claim or dispute arising under the order, or issues any unilateral directive whatever.

c. All technical directions must be issued in writing by the technical monitor or project officer or must be confirmed by the project officer in writing within ten (10) working days after verbal issuance. A copy of the written direction must be furnished to the CO. A

copy of NRC Form 445, Request for Approval of Official Foreign Travel, which has received final approval from the NRC must be furnished to the CO.

d. The contractor shall proceed promptly with the performance of technical directions duly issued by the project officer in the manner prescribed by this clause and within the project officer's authority under the provisions of this clause.

e. If, in the opinion of the contractor, any instruction or direction issued by the project officer is within one of the categories as defined in paragraph (c) of this section, the contractor may not proceed but shall notify the CO in writing within five (5) working days after the receipt of any instruction or direction and shall request the CO to modify the order or associated BPA accordingly. Upon receiving the notification from the contractor, the CO shall issue an appropriate modification or advise the contractor in writing that, in the CO's opinion, the technical direction is within the scope of this article and does not constitute a change under the "Changes" clause.

f. Any unauthorized commitment or direction issued by the project officer may result in an unnecessary delay in the contractor's performance and may even result in the contractor expending funds for unallowable costs under the order or associated BPA.

g. A failure of the parties to agree upon the nature of the instruction or direction or upon the contract action to be taken with respect thereto is subject to 52.233-1 - Disputes.

h. In addition to providing technical direction as defined in paragraph (b) of the section, the project officer shall:

1. Monitor the contractor's technical progress, including surveillance and assessment of performance, and recommend to the CO changes in requirements.

2. Assist the contractor in the resolution of technical problems encountered during performance.

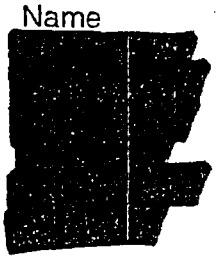
3. Review all costs requested for reimbursement by the contractor and submit to the CO recommendations for approval, disapproval, or suspension of payment for supplies and services required under orders.

4. Assist the contractor in obtaining the badges for the contractor personnel.

5. Immediately notify the Personnel Security Branch, Division of Facilities and Security (PERSEC/DFS) (via e-mail) when a contractor employee no longer requires access authorization and return the individual's badge to PERSEC/DFS within three days after their termination.

B. KEY PERSONNEL

(a) The following individuals are considered to be essential to the successful performance of the work hereunder:

Name	Role
	Project Coordinator/Mechanical Engineer Electrical Engineering Civil/Structural Engineering Technical Editor Publications Staff Corporate Manager

The contractor agrees that personnel may not be removed from the contract work or replaced without compliance with paragraphs (b) and (c) of this section.

(b) If one or more of the key personnel, for whatever reason, becomes, or is expected to become, unavailable for work under this contract for a continuous period exceeding 30 work days, or is expected to devote substantially less effort to the work than indicated in the proposal or initially anticipated, the contractor shall immediately notify the contracting officer and shall, subject to the concurrence of the contracting officer, promptly replace the personnel with personnel of at least substantially equal ability and qualifications.

(c) Each request for approval of substitutions must be in writing and contain a detailed explanation of the circumstances necessitating the proposed substitutions. The request must also contain a complete resume for the proposed substitute and other information requested or needed by the contracting officer to evaluate the proposed substitution. The contracting officer and the project officer shall evaluate the contractor's request and the contracting officer shall promptly notify the contractor of his or her decision in writing.

(d) If the contracting officer determines that suitable and timely replacement of key personnel who have been reassigned, terminated, or have otherwise become unavailable for the contract work is not reasonably forthcoming, or that the resultant reduction of productive effort would be so substantial as to impair the successful completion of the contract or the service order, the contract may be terminated by the contracting officer for default or for the convenience of the Government, as appropriate. If the contracting officer finds the contractor at fault for the condition, the contract price or fixed fee may be equitably adjusted downward to compensate the Government for any resultant delay, loss, or damage.

C. BILLING INSTRUCTIONS

General: The contractor shall prepare vouchers or invoices as prescribed herein. FAILURE TO SUBMIT VOUCHERS/INVOICES IN ACCORDANCE WITH THESE INSTRUCTIONS WILL RESULT IN REJECTION OF THE VOUCHER/INVOICES AS IMPROPER.

Form: Claims shall be submitted on the payee's letterhead, voucher/invoices, or on the Government's Standard Form 1034, "Public Voucher for Purchases and Services Other than Personal," and Standard Form 1035, "Public Voucher for Purchases Other than Personal--Continuation Sheet." These forms are available from the U.S. Government Printing Office, 710 North Capitol Street, Washington, DC 20401.

Number of Copies: An original and three copies shall be submitted. Failure to submit all the required copies will result in rejection of the voucher/invoice as improper.

Designated Agency Billing Office: Vouchers/Invoices shall be submitted to the following address:

U.S. Nuclear Regulatory Commission
Division of Contracts - T-7-I-2
Washington, DC 20555-0001

A copy of any invoice which includes a purchase of property valued at the time of purchase at $5,000 or more, shall additionally be sent to:

Chief, Property Management Branch
Division of Facilities and Property Management
Mail Stop - T-7-D-27
Washington, DC 20555-0001

HAND-DELIVERY OF VOUCHERS/INVOICES IS DISCOURAGED AND WILL NOT EXPEDITE PROCESSING BY THE NRC. However, should you choose to deliver vouchers/invoices by hand, including delivery by any express mail service or special delivery service which uses a courier or other person to deliver the vouchers/invoices in person to the NRC, such vouchers/invoices must be addressed to the above Designated Agency Billing Office and will only be accepted at the following location:

U.S. Nuclear Regulatory Commission
One White Flint North - Mail Room
11555 Rockville Pike
Rockville, MD 20852

HAND-CARRIED SUBMISSIONS WILL NOT BE ACCEPTED AT OTHER THAN THE ABOVE ADDRESS

Note that the official receipt date for hand-delivered vouchers/invoices will be the date it is received by the official agency billing office in the Division of Contracts.

Agency Payment Office: U.S. Nuclear Regulatory Commission
Division of Accounting and Finance GOV/COMM
Mail Stop T-9H4
Washington, DC 20555

Frequency: The contractor shall submit a voucher or invoice monthly only after the NRC's acceptance of services rendered or products delivered in performance of the delivery order unless otherwise specified in the contract.

Preparation and Itemization of the Voucher/Invoice: To be considered a proper voucher/invoice, all of the following elements must be included:

1. Contract number and delivery order number.

2. Sequential voucher/invoice number.

3. Date of voucher/invoice.

4. Payee's name and address. (Show the name of the contractor and its correct address. In addition, when an assignment of funds has been made by the contractor, or a different payee has been designated, include the name and address of the payee). Indicate the name and telephone number of the individual responsible for answering questions which the NRC may have regarding the voucher/invoice.

5. Description of articles or services, quantity, unit price, total amount, and cumulative amount.

   For labor-hour delivery orders with a ceiling, provide a breakdown by task of labor hours by labor category, hours, fixed rate, current period dollars, and cumulative hours and dollars billed to date as authorized under the delivery order. For example:

Category	Current Hours	Fixed Rate	Current Billed	Cumulative	
				Hours	Total Billed
Sr. Scientist	100	35.00	$3,500.00	500	$ 17,500.00
Engineer	100	25.00	$2,500.00	100	$ 2,500.00
Totals:			$6,000.00		$ 20,000.00

Invoices for the order shall be broken down by task. You must also provide a consolidated summary (cover sheet) of the total amount billed inclusive of all tasks. The summary must contain the cumulative amount invoiced to date.

6. For contractor acquired property list each item purchased costing $50,000 or more and having a life expectancy of more than 1 year and provide: (1) an item description, (2) manufacturer, (3) model number, (4) serial number, (5) acquisition cost, (6) date of purchase, and (7) a copy of the purchasing document.

7. Weight and zone of shipment, if shipped by parcel post.

8. Charges for freight or express shipments. Attach prepaid bill if shipped by freight or express.

9. Instructions to consignee to notify the Contracting Officer of receipt of shipment.

10. Travel Reimbursement (if applicable)

The contractor shall submit claims for travel reimbursement as a separate item on its fixed-price invoice/voucher in accordance with the following:

Travel reimbursement. Total costs associated with each trip must be shown in the following format:

Start Date	Destination	Costs
From:	From:	
To:	To:	$

Provide supporting documentation (receipts) for travel expenditures in excess of $75.00 in an attachment to the invoice/voucher.

Billing of Cost After Expiration of Order: If costs are incurred during the delivery order period and claimed after the order has expired, the period during which these costs were incurred must be cited. To be considered a proper expiration voucher/invoice, the contractor shall clearly mark it "EXPIRATION VOUCHER" or "EXPIRATION INVOICE."

Currency: Billings may be expressed in the currency normally used by the contractor in maintaining his accounting records and payments will be made in that currency. However, the U.S. dollar equivalent for all vouchers/invoices paid under the order may not exceed the total U.S. dollars authorized under the order.

Supersession: These instructions supersede any previous billing instructions.

2052.209-71 Contractor organizational conflicts of interest (representation).

Contractor Organizational Conflicts of Interest Representation (Oct 1999)

I represent to the best of my knowledge and belief that:

The award to _____ of a contract or the modification of an existing contract does / / does not / / involve situations or relationships of the type set forth in 48 CFR 2009.570-3(b).

(a) If the representation, as completed, indicates that situations or relationships of the type set forth in 48 CFR 2009.570-3(b) are involved, or the contracting officer otherwise determines that potential organizational conflicts of interest exist, the offeror shall provide a statement in writing that describes in a concise manner all relevant factors bearing on his representation to the

contracting officer. If the contracting officer determines that organizational conflicts exist, the following actions may be taken:

(1) Impose appropriate conditions which avoid such conflicts;

(2) Disqualify the offeror; or

(3) Determine that it is otherwise in the best interest of the United States to seek award of the contract under the waiver provisions of 48 CFR 2009-570-9.

(b) The refusal to provide the representation required by 48 CFR 2009.570-4(b), or upon request of the contracting officer, the facts required by 48 CFR 2009.570-3(b), must result in disqualification of the offeror for award.

(End of Provision)

2052.209-72 CONTRACTOR ORGANIZATIONAL CONFLICTS OF INTEREST (JAN 1993)

(a) Purpose. The primary purpose of this clause is to aid in ensuring that the contractor:

(1) Is not placed in a conflicting role because of current or planned interests (financial, contractual, organizational, or otherwise) which relate to the work under this contract; and

(2) Does not obtain an unfair competitive advantage over other parties by virtue of its performance of this contract.

(b) Scope. The restrictions described apply to performance or participation by the contractor, as defined in 48 CFR 2009.570-2 in the activities covered by this clause.

(c) Work for others.

(1) Notwithstanding any other provision of this contract, during the term of this contract, the contractor agrees to forego entering into consulting or other contractual arrangements with any firm or organization the result of which may give rise to a conflict of interest with respect to the work being performed under this contract. The contractor shall ensure that all employees under this contract abide by the provision of this clause. If the contractor has reason to believe, with respect to itself or any employee, that any proposed consultant or other contractual arrangement with any firm or organization may involve a potential conflict of interest, the contractor shall obtain the written approval of the contracting officer before the execution of such contractual arrangement.

(2) The contractor may not represent, assist, or otherwise support an NRC licensee or applicant undergoing an NRC audit, inspection, or review where the activities that are the subject of the audit, inspection, or review are the same as or substantially similar to the services within the scope of this contract(or task order as appropriate) except where the NRC licensee or applicant requires the contractor's support to explain or defend the contractor's prior work for the utility or other entity which NRC questions.

(3) When the contractor performs work for the NRC under this contract at any NRC licensee or applicant site, the contractor shall neither solicit nor perform work in the same or similar technical area for that licensee or applicant organization for a period commencing with the award of the task order or beginning of work on the site (if not a task order contract) and ending one year after completion of all work under the associated task order, or last time at the site (if not a task order contract).

(4) When the contractor performs work for the NRC under this contract at any NRC licensee or applicant site,

(i) The contractor may not solicit work at that site for that licensee or applicant during the period of performance of the task order or the contract, as appropriate.

(ii) The contractor may not perform work at that site for that licensee or applicant during the period of performance of the task order or the contract, as appropriate, and for one year thereafter.

(iii) Notwithstanding the foregoing, the contracting officer may authorize the contractor to solicit or perform this type of work (except work in the same or similar technical area) if the contracting officer determines that the situation will not pose a potential for technical bias or unfair competitive advantage.

(d) Disclosure after award.

(1) The contractor warrants that to the best of its knowledge and belief, and except as otherwise set forth in this contract, that it does not have any organizational conflicts of interest as defined in 48 CFR 2009.570-2.

(2) The contractor agrees that if, after award, it discovers organizational conflicts of interest with respect to this contract, it shall make an immediate and full disclosure in writing to the contracting officer. This statement must include a description of the action which the contractor has taken or proposes to take to avoid or mitigate such conflicts. The NRC may, however, terminate the contract if termination is in the best interest of the Government.

(3) It is recognized that the scope of work of a task-order-type contract necessarily encompasses a broad spectrum of activities. Consequently, if this is a task-order-type contract, the contractor agrees that it will disclose all proposed new work involving NRC licensees or applicants which comes within the scope of work of the underlying contract. Further, if this contract involves work at a licensee or applicant site, the contractor agrees to exercise diligence to discover and disclose any new work at that licensee or applicant site. This disclosure must be made before the submission of a bid or proposal to the utility or other regulated entity and must be received by the NRC at least 15 days before the proposed award date in any event, unless a written justification demonstrating urgency and due diligence to discover and disclose is provided by the contractor and approved by the contracting officer. The disclosure must include the statement of work, the dollar value of the proposed contract, and any other documents that are needed to fully describe the proposed work for the regulated utility or other regulated entity. NRC may deny approval of the disclosed work only when the NRC has issued a task order which includes the technical area and, if site-specific, the site, or has plans to issue a task order which includes the technical area and, if site-specific, the site, or when the work violates paragraphs (c)(2), (c)(3) or (c)(4) of this section.

(e) Access to and use of information.

(1) If in the performance of this contract, the contractor obtains access to information, such as NRC plans, policies, reports, studies, financial plans, internal data protected by the Privacy Act of 1974 (5 U.S.C. Section 552a(1988)), or the Freedom of Information Act (5 U.S.C. Section 552 (1986)), the contractor agrees not to:

(i) Use this information for any private purpose until the information has been released to the public;

(ii) Compete for work for the Commission based on the information fora period of six months after either the completion of this contract or there lease of the information to the public, whichever is first;

(iii) Submit an unsolicited proposal to the Government based on the information until one year after the release of the information to the public; or

(iv) Release the information without prior written approval by the contracting officer unless the information has previously been released to the public by the NRC.

(2) In addition, the contractor agrees that, to the extent it receives or is given access to proprietary data, data protected by the Privacy Act of 1974(5 U.S.C. Section 552a (1988)), or the Freedom of Information Act (5 U.S.C. Section 552 (1986)), or other confidential or privileged technical, business, or financial information under this contract, the contractor shall treat the information in accordance with restrictions placed on use of the information.

(3) Subject to patent and security provisions of this contract, the contractor shall have the right to use technical data it produces under this contract for private purposes provided that all requirements of this contract have been met.

(f) Subcontracts. Except as provided in 48 CFR 2009.570-2, the contractor shall include this clause, including this paragraph, in subcontracts of any tier. The terms contract, contractor, and contracting officer, must be appropriately modified to preserve the Government's rights.

(g) Remedies. For breach of any of the above restrictions, or for intentional non-disclosure or misrepresentation of any relevant interest required to be disclosed concerning this contract or for such erroneous representations that necessarily imply bad faith, the Government may terminate the contract for default, disqualify the contractor from subsequent contractual efforts, and pursue other remedies permitted by law or this contract.

(h) Waiver. A request for waiver under this clause must be directed in writing to the contracting officer in accordance with the procedures outlined in 48 CFR 2009.570-9.

(I) Follow-on effort. The contractor shall be ineligible to participate in NRC contracts, subcontracts, or proposals therefor (solicited or unsolicited),which stem directly from the contractor's performance of work under this contract. Furthermore, unless so directed in writing by the contracting officer, the contractor may not perform any technical consulting or management support services work or evaluation activities under this contract on any of its products or services or the products or services of another firm if the contractor has been substantially involved in the development or marketing of the products or services.

(1) If the contractor, under this contract, prepares a complete or essentially complete statement of work or specifications, the contractor is not eligible to perform or participate in the initial contractual effort which is based on the statement of work or specifications. The contractor may not incorporate its products or services in the statement of work or specifications unless so directed in writing by the contracting officer, in which case the restrictions in this paragraph do not apply.

(2) Nothing in this paragraph precludes the contractor from offering or selling its standard commercial items to the Government.

FAR 52.232-7, "PAYMENTS UNDER TIME-AND-MATERIAL AND LABOR-HOUR CONTRACTS"

FAR 52.232-7 is applicable and hereby incorporated by reference into this order.

Attachment 1:Template For Audit and Review Plan for Plant Aging Management Programs and Reviews

Attachment 2:Plain English Guidelines for Preparing Audit and Review Reports

Attachment 3 BILLING INSTRUCTIONS FOR LABOR HOUR TYPE CONTRACTS

Attachment 1

FINAL DRAFT

Template For Audit and Review Plan for Plant Aging Management Programs and Reviews

July 23, 2004

This plan template should be used to prepare a plant-specific audit and review plan for RLEP-B. Text shown in blue italics is explanatory text and should be deleted from the plant-specific audit and review plan. Red bracketed text should be replaced with plant-specific information, as shown in the plan template.

This cover page should not be included with the plant-specific audit and review plan.

Audit and Review Plan for Plant Aging Management Programs and Reviews

[PLANT NAME], Units [NUMBERS]
Docket No.: [NUMBERS]

[DATE]

Revision [No.]

Prepared by
[CONTRACTOR NAME]
[CONTRACTOR ADDRESS]
Contract No. [NUMBER]

Prepared for
License Renewal and Environmental Impacts Program
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

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1. Introduction

By letter dated [DATE] (ADAMS Accession Number ML [NUMBER]), [APPLICANT'S NAME] ([APPLICANT'S ACRONYM], the applicant) submitted to the U.S. Nuclear Regulatory Commission (NRC) its application for renewal of Operating License [LICENSE NUMBER] for [PLANT NAME AND UNITS] (ML [NUMBER]). The applicant requested renewal of the operating license for an additional 20 years beyond the 40-year current license term.

In support of the staff's safety review of the license renewal application (LRA) for [PLANT NAME AND UNITS *or* PLANT ACRONYM AND UNITS], the License Renewal and Environmental Impacts Program, Section B (RLEP_B), will lead a project team that will audit and review selected aging management reviews (AMRs) and associated aging management programs (AMPs) developed by the applicant to support its LRA for [PLANT ACRONYM]. The project team will include both NRC staff and engineers provided by [CONTRACTOR'S NAME], RLEP_B's technical assistance contractor. Appendix A, "Project Team Membership," lists the project team members. This document is the RLEP-B plan for auditing and reviewing plant aging management reviews and aging management programs for [PLANT ACRONYM].

The project team will audit and review its assigned AMPs and AMRs against the requirements of Title 10 of the *Code of Federal Regulations*, Part 54 (10 CFR Part 54), "Requirements for Renewal of Operating Licenses for Nuclear Power Plants;" the guidance provided in NUREG-1800, "Standard Review Plan for Review of License Renewal Application for Nuclear Power Plants" (SRP-LR), dated July 2001; the guidance provided in NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," dated July 2001; and this plan. For the scope of work defined in this audit plan, the project team will verify that the applicant's aging management activities and programs will adequately manage the effects of aging on structures and components, so that their intended functions will be maintained consistent with the [PLANT ACRONYM] current licensing basis (CLB) for the period of extended operation.

The team will perform its work at NRC Headquarters, Rockville, Maryland; at [CONTRACTOR'S] offices in [CITY, STATE]; and at the applicant's offices [or at the [PLANT ACRONYM] plant site] in [CITY, STATE]. The project team will perform its work in accordance with the schedule shown in Appendix B, "Schedule." The team will conduct a public exit meeting at the applicant's offices in [CITY, STATE], after it completes its on-site work.

This plan includes the following information:

- **Introduction and background.** Summary of the license renewal requirements, as stated in the *Code of Federal Regulations,* and a summary of the documents that the project team will use to conduct the audit and review process described in this plan.

- **Objectives.** The objectives of the audits and reviews addressed by this plan.

- **Summary of Information Provided in License Renewal Application.** Description of the information contained in the license renewal application for [PLANT ACRONYM] that is applicable to this plan.
- **Overview of the Audit, Review, and Documentation Procedure.** Summary of the process the project team will follow to audit and review the LRA information that is within its scope of review.

- **Planning, Audit, Review, and Documentation Procedure.** The procedure that the project team will use to plan and schedule its work, to audit and review the LRA information that is within its scope of review, and to document the results of its work.

- **Appendices.** Supporting information. The project team membership is shown in Appendix A and the schedule is shown in Appendix B. The team's work assignments are shown in Appendix C, "Aging Management Program Assignments," and Appendix D, "Aging Management Review Assignments." Appendices E, F, and G are the worksheets that the individual team members use to informally document the results of their review and audit work. The application of these worksheets is discussed in Section 6 or this plan. Appendix H is a list of the acronyms, abbreviations, and initialisms used in this plan.

2. Background

In 10 CFR 54.4, the scope of license renewal is defined as those structures, systems, and components (SSCs) (1) that are safety-related, (2) whose failure could affect safety-related functions, and (3) that are relied on to demonstrate compliance with the NRC's regulations for fire protection, environmental qualification, pressurized thermal shock, anticipated transients without scram, and station blackout. An applicant for a renewed license must review all SSCs within the scope of license renewal to identify those structures and components (SCs) subject to an AMR. SCs subject to an AMR are those that perform an intended function without moving parts or without a change in configuration or properties (passive), and that are not subject to replacement based on qualified life or specified time period (long-lived). Pursuant to 10 CFR 54.21(a)(3), an applicant for a renewed license must demonstrate that the effects of aging will be managed in such a way that the intended function or functions of those SCs will be maintained, consistent with the CLB, for the period of extended operation. 10 CFR 54.21(d) requires that the applicant submit a supplement to the final safety analysis report (FSAR) that contains a summary description of the programs and activities that it credited to manage the effects of aging during the extended period of operation.

The SRP-LR provides staff guidance for reviewing applications for license renewal. The GALL Report is a technical basis document. It summarizes staff-approved AMPs for the aging management of a large number of SCs that are subject to an AMR. It also summarizes the aging management evaluations, programs, and activities acceptable to the NRC staff for managing aging of most of the SCs used in commercial nuclear power plants, and serves as a reference for both the applicant and staff reviewers to quickly identify those AMPs and activities that the staff has determined will provide adequate aging management during the extended period of operation. If an applicant commits to implementing these staff-approved AMPs, the time, effort, and resources needed to review an applicant's LRA will be greatly reduced, thereby improving the efficiency and effectiveness of the license renewal review process. The GALL Report identifies (1) systems, structures, and components, (2) component materials, (3) the environments to which the components are exposed, (4) the aging effects associated with the materials and environments, (5) the AMPs that are credited to manage the aging effects, and (6) recommendations for further applicant evaluations of aging effects and their management for certain component types.

The GALL Report is treated in the same manner as an approved topical report that is generically applicable. An applicant may reference the GALL Report in its LRA to demonstrate that its programs correspond to those that the staff reviewed and approved in the GALL Report. If the material presented in the LRA is consistent with the GALL Report and is applicable to the applicant's facility, the staff will accept the applicant's reference to the GALL Report. In making

this determination, the staff considers whether the applicant has identified specific programs described and evaluated in the GALL Report but does not conduct a re-review of the substance of the matters described in the GALL Report. Rather, the staff confirms that the applicant verified that the approvals set forth in the GALL Report apply to its programs.

If an applicant takes credit for a GALL AMP, it is incumbent on the applicant to ensure that the plant AMP contains all the program elements of the referenced GALL AMP.[1] In addition, the conditions at the plant must be bounded by the conditions for which the GALL AMP was evaluated. The applicant must certify in its LRA that it completed the verifications and that they are documented on-site in an auditable form.

3. Objectives

The overall objective of the audit and review described in this plan is to verify compliance with 10 CFR 54.21(a)(3). Therefore, the audit and review process helps ensure that for each structure and component within the scope of the project team's review, the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation.

The audit and review procedure for [PLANT ACRONYM] is described in Sections 5 and 6 of this plan. It is intended to accomplish the following objectives:

- For plant AMPs that the applicant claims are consistent with GALL AMPs, verifying that the plant AMPs contain the program elements of the referenced GALL AMP (for the seven program elements that are within the scope of review of the project team) and that the conditions at the plant are bounded by the conditions for which the GALL AMPs were evaluated.

- For plant AMPs that the applicant claims are consistent with GALL AMPs with exceptions, verifying that the plant AMPs contain the program elements of the referenced GALL AMPs and that the conditions at the plant are bounded by the conditions for which the GALL AMPs were evaluated. In addition, verifying that the applicant has documented an acceptable technical basis for each exception.

- For plant AMPs that the applicant claims will be consistent with GALL AMPs after specified enhancements are implemented, verifying that the plant AMPs, with the enhancements, will be consistent with the referenced GALL AMPs,or are acceptable on the basis of a technical review. In addition, verifying that the applicant identified the enhancements as commitments in the Updated Final Safety Analysis Report (UFSAR) or other docketed correspondence.

[1] Table 1 of this plan shows the 10 program elements that are used to evaluate the adequacy of each aging management program. These program elements are presented in Branch Technical Position (BTP) RLSB_1, "Aging Management Review - Generic," in Appendix A of the SRP_LR, and are summarized in the GALL Report. The project team's scope of review includes 7 of the 10 elements: 1 through 6, and 10. The Division of Inspection Program Management (DIPM), Office of Nuclear Reactor Regulation (NRR) will review program elements 7, "corrective actions;" 8, "confirmation process;" and 9, "administrative controls." Therefore, the project team will not review these three elements. The DIPM review will be documented in Section 3 of the license renewal safety evaluation report for the plant.

- For plant-specific AMPs that the applicant claims are consistent with AMPs that the staff has previously approved for another plant, verifying the AMPs are acceptable on the basis of a technical review.

- For AMRs that the applicant claims are consistent with the GALL Report, verifying that the plant AMRs are consistent with the criteria of the GALL Report or can be accepted on the basis on an NRC-approved precedent.

- For AMR line items for which the GALL Report recommends further evaluation, verifying that the applicant has addressed the further evaluation, and evaluating the AMRs in accordance with the SRP-LR.

4. Summary of Information Provided in the License Renewal Application

[The text in this section of the plan template is based on information taken largely from the ANO-2 LRA. As it may differ from the plant for which a plan is being prepared, it should be reviewed against the plant-specific LRA and revised as appropriate to reflect the plant for which the plan is being prepared.]

The [PLANT ACRONYM] LRA closely follows the standard LRA format presented in NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 – The License Renewal Rule," Revision 3, April 2001. Section 3 of the LRA provides the results of the aging management review for structures and components that the applicant identified as being subject to aging management review.

LRA Table 3.0-1, Table 3.0-2, and Table 3.0-3 provide descriptions of the mechanical, structural, and electrical service environments, respectively, used in the AMRs to determine the aging effects requiring management. Results of the AMRs are presented in two different types of tables. The applicant refers to the two types of tables as Table 1 and Table 2.

The first table type is a series of six tables labeled Table 3.X.1, where "X" is the system/component group number (see table below), and "1" indicates it is a Table 1 type. For example, in the reactor coolant system subsection of the LRA Section 3, this is Table 3.1.1, and in the engineered safety features subsection of LRA Section 3, this is Table 3.2.1.

X	Definition
1	Reactor Coolant System
2	Engineered Safety Features Systems
3	Auxiliary Systems
4	Steam and Power Conversion Systems
5	Structures and Component Supports
6	Electrical and Instrumentation and Controls

The second table type is a series of tables labeled Table 3.X.2-Y, where "X" is the system/component group number, "2" indicates it is a Table 2 type, and "Y" indicates the subgroup number within group "X". For example, within the "reactor coolant system" (group 1),

the AMR results for the reactor vessel and control element drive mechanism pressure boundary (subgroup 1) are presented in LRA Table 3.1.2-1, and the results for the reactor vessel internals (subgroup 2) are presented in LRA Table 3.1.2-2. Under the "engineered safety features system" (group 2), the emergency core cooling system (subgroup 1) results are presented in Table 3.2.2-1 of the LRA, and the containment spray system (subgroup 2) is in Table 3.2.2-2 of the LRA.

The applicant compared the [PLANT ACRONYM] AMR results with information set forth in the tables of the GALL Report and provided the results of its comparisons in two table types that correlate with the two table types described above.

LRA Tables 3.1.1 through 3.6.1 (Table 1 types) provide a summary comparison of how the [PLANT ACRONYM] AMR results align with Tables 1 through 6 of the GALL Report, Volume 1. These LRA tables are essentially the same as Tables 1 through 6 of the GALL Report, Volume 1, except that the "Type" column has been replaced by an "Item Number" column, the GALL Volume 2 Item Number column has been deleted, and a "Discussion" column has been added. The "Item Number" column provides a means to cross-reference between an LRA Table 3.X.2-Y (Table 2 type) and an LRA Table 3.X.1 (Table 1 type). The "Discussion" column includes further information. The following are examples of information that might be contained within the "Discussion" column:

- Any "Further Evaluation Recommended" information or reference to the location of that information
- The name of a plant-specific program being used
- Exceptions to the GALL Report assumptions
- A discussion of how the line item is consistent with the corresponding line item in the GALL Report, when it may not be intuitively obvious
- A discussion of how the line item differs from the corresponding line item in the GALL Report, when it may appear to be consistent.

LRA Table 2 types provide the detailed results of the AMRs for those SCs that are subject to an aging management review. There is a Table 2 for each subgroup within the six system/component groups. For example, the engineered safety features system group contains tables specific to emergency core cooling, containment spray, containment cooling, containment penetrations, and hydrogen control. Table 2 of the LRA consists of the following nine columns.

- *Component Type.* Column 1 identifies the component types that are subject to an AMR. The component types are listed in alphabetical order. In the structural tables, component types are sub-grouped by material.

- *Intended Function.* Column 2 identifies the license renewal intended functions for the listed component types. Definitions and abbreviations of intended functions are listed in Table 2.0-1 in Section 2 of the LRA.

- *Material.* Column 3 lists the particular materials of construction for the component type being evaluated.

- *Environment.* Column 4 lists the environment to which the component types are exposed. Internal and external service environments are indicated. A description of these environments is provided in LRA Table 3.0-1, Table 3.0-2, and Table 3.0-3 for mechanical, structural, and electrical components, respectively.

• *Aging Effect Requiring Management.* Column 5 lists the aging effects identified as requiring management for the material and environment combinations of each component type.

• *Aging Management Programs.* Column 6 lists the programs used to manage the aging effects requiring management.

• *GALL Report (Vol. 2) Item.* Each combination of the following factors listed in LRA Table 2 is compared to the GALL Report to identify consistencies: component type, material, environment, aging effect requiring management, and aging management program. Column 7 documents identified consistencies by noting the appropriate GALL Report item number. If there is no corresponding item number in the GALL Report for a particular combination of factors, column 7 is left blank.

• *LRA Table 1 Item.* Each combination of the following that has an identified GALL Report item number also has a Table 1 line item reference number: component type, material, environment, aging effect requiring management, and aging management program. Column 8 lists the corresponding line item from Table 1. If there is no corresponding item in the GALL Report (Volume 1), column 8 is left blank.

• *Notes.* Column 9 contains notes that are used to describe the degree of consistency with the line items in the GALL Report. Notes that use letter designations are standard notes based on the letter from A. Nelson, NEI, to P. T. Kuo, NRC, "U.S. Nuclear Industry's Proposed Standard License Renewal Application Format Package, Request NRC Concurrence," dated January 24, 2003 (ML030290201).[2] These standard notes are shown in Table 2 of this plan. Notes that use numeric designators are specific to [PLANT ACRONYM].

LRA Table 2 contains the aging management review results and indicates whether the results correspond to line items in Volume 2 of the GALL Report. Correlations between the combination in LRA Table 2 and a combination for a line item in Volume 2 of the GALL Report are identified by the GALL Report item number in column 7. If column 7 is blank, the applicant did not identify a corresponding combination in the GALL Report. If the applicant identified a GALL Report line item, the next column provides a reference to a Table 1 row number. This reference corresponds to the GALL Report, Volume 2, "roll-up" to the GALL Report, Volume 1, tables. Many of the GALL Report evaluations refer to plant-specific programs. In these cases, the applicant considers the [PLANT ACRONYM] evaluation to be consistent with the GALL Report if the other elements are consistent. Any appropriate AMP is considered to be a match to the GALL program for line items referring to a plant-specific program.

5. Overview of Audit, Review, and Documentation Procedure

The project team will follow the procedure specified in Section 6 of this plan to perform its audits and reviews and to document the results of its work. The process covered by the procedure is summarized below.

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[2] The staff concurred with the standardized format for license renewal applications by letter dated April 7, 2003, from P.T. Kuo, NRC, to A. Nelson, NEI (ML030990052).

5.1. Aging Management Programs

Table 1 of this plan summarizes the program elements that comprise an aging management program. Of these 10 elements, elements 1 through 6, and element 10 are within the project team's scope of review.[3] For the [PLANT ACRONYM] AMPs for which the applicant claimed consistency with the AMPs included in the GALL Report, the project team will review the [PLANT ACRONYM] AMP descriptions and compare program elements 1 through 6, and program element 10 for the [PLANT ACRONYM] AMPs to the corresponding program elements for the GALL AMPs. The project team will verify that the [PLANT ACRONYM] AMPs contain the program elements of the referenced GALL program and that the conditions at the plant are bounded by the conditions for which the GALL program was evaluated.

For each [PLANT ACRONYM] AMP that has an exception or an enhancement, the project team will determine whether it is acceptable, and whether the AMP, as modified by the applicant, will adequately manage the aging effects for which it is credited. If the project team identifies differences between a GALL AMP credited by the applicant and the [PLANT ACRONYM] AMP, which the applicant did not address in the LRA, the project team will review the difference to determine whether the [PLANT ACRONYM] AMP, as modified by the difference, will adequately manage the aging effects for which it is credited.

For those [PLANT ACRONYM] AMPs that are not included in the GALL Report (i.e., plant-specific AMPs), the project team will review the AMP against the seven program elements that are within its scope of review. On the basis of its reviews, the project team will determine whether these AMPs will manage the aging effects for which they are credited.

5.2. Aging Management Reviews

The AMRs in the GALL Report fall into two broad categories: (1) those that the GALL Report concludes are adequate to manage aging of the components referenced in the GALL Report, and (2) those for which the GALL Report concludes that aging management is adequate, but further evaluation is recommended for certain aspects of the aging management process. For its AMR reviews, the project team will determine (1) whether the AMRs reported by the applicant to be consistent with the GALL Report are indeed consistent with the GALL Report, and (2) whether the plant-specific AMRs reported by the applicant to be based on a previously-approved precedent are technically acceptable and applicable. For component groups evaluated in the GALL Report for which the applicant claimed consistency with the GALL Report, and for which the GALL Report recommends further evaluation, the project team will review the applicant's evaluation to determine if it adequately addressed the issues for which the GALL Report recommended further evaluation.

5.3. NRC-Approved Precedents

To help facilitate the staff review of its LRA, the applicant referenced NRC-approved precedents to demonstrate that certain non-GALL AMPs correspond to programs that the staff had approved for other plants during its review of previous applications for license renewal. Using the precedent information, the project team will (1) determine whether the material presented in the precedent is applicable to the applicant's facility; will (2) determine whether the applicant's

[3] As noted in Section 2 of this plan, DIPM will review program elements 7, 8, and 9. The results of these reviews will be documented in Section 3 of the plant safety evaluation report.

AMP is bounded by the conditions for which the precedent was evaluated and approved; and (3) verify that the applicant's AMP contains the program elements of the referenced precedent. In general, if the project team determines that these conditions are satisfied, it will use the precedent to frame and focus its review of the applicant's AMP.

It is important to note that precedent information is not a part of the license renewal application; it is supplementary information voluntarily provided by the applicant as a reviewers' aid. The existence of a precedent, in and of itself, is not a sufficient basis to accept the applicant's AMP. Rather, the precedent facilitates the review of the substance of the matters described in the applicant's AMP. As such, in the project team's documentation of its reviews of AMPs that are based on precedents, the precedent information is typically implicit in the evaluation, rather than explicit. If the project team determines that a precedent identified by the applicant is not applicable to the particular plant AMP for which it is credited, then the project team reviews the AMP as a plant-specific AMP, without consideration of the precedent information.

5.4. UFSAR Supplement Review

Consistent with the SRP-LR, for the AMRs and associated AMPs that it will review, the project team will review the UFSAR supplement that summarizes the applicant's programs and activities for managing the effects of aging for the extended period of operation. The project team will also review any commitments associated with its programs and activities made by the applicant and verify that they are acceptable for the stated purpose.

5.5. Documents Reviewed by the Project Team

In performing its work, the project team will rely heavily on the LRA, the audit and review plan, the SRP-LR, and the GALL Report. The project team will also examine the applicant's precedent review documents, its AMP and AMR basis documents (catalogs of the documentation used by the applicant to develop or justify its AMPs and AMRs), and other applicant documents, including selected implementing procedures, to verify that the applicant's activities and programs will adequately manage the effects of aging on structures and components.

5.6. Public Exit Meeting

After it completes its audits and reviews, the project team will hold a public exit meeting to discuss the scope and results of its audits and reviews.

5.7. Documentation Prepared by the Project Team

The project team will prepare an audit and review plan, worksheets, work packages, requests for additional information (RAIs), an audit and review report, and a safety evaluation report (SER) input. The project team will also prepare questions during site visits and will track the applicant's responses to the questions.

5.7.1. Audit and review plan

The project team leader will prepare a plant-specific audit and review plan as described herein.

5.7.2. Worksheets

Each project team member will informally document the results of his or her work on a variety of worksheets. The worksheets are shown in Appendix E, "Consistent with GALL Report AMP Audit/Review Worksheet"; Appendix F, "Plant-Specific AMP Audit/Review Worksheet"; and Appendix G, "Aging Management Review Worksheets." The use of the worksheets is described in Section 6 of this plan.

5.7.3. Questions

As specified in Section 6 of this plan, the project team members will ask the applicant questions during while on-site audits, as appropriate, to facilitate its audit and review activities. The team will also track the applicant's answers to the questions.

5.7.4. Work packages

After each site visit, the project team leader, in conjunction with the project manager, will assemble work packages for any work that the team will refer to the NRR Division of Engineering (DE) for review. Each work package will include a work request and any applicable background information on the review item that was gathered by the project team.

5.7.5. Requests for additional information

The review process described in this plan is structured to resolve as many questions as possible during the site visits. As examples, the site visits are used to obtain clarifications about the LRA and explanations as to where certain information may be found in the LRA or its associated documents. Nevertheless, there may be occasions where an RAI is appropriate to obtain information to support an SER finding. The need for RAIs will be determined by the project team leader during the site visits through discussions with the individual project team members. When the project team leader determines that an RAI is needed, the project team member who is responsible for the area of review will prepare the RAI. RAIs will include the technical and regulatory basis for requesting the information.

After the NRC receives a response to an RAI from the applicant, the team leader will provide the response to the team member who prepared the RAI. The team member will review the response and determine if it resolves the issue that was the reason for the RAI. The team member will document the disposition of the RAI in the audit and review report (unless the report was issued before the RAI response was received) and in the SER input. If the audit report was issued before the applicant submitted its response to an RAI, the review of the response will be documented in the SER.

5.7.6. Audit and review report

The project team will document the results of its work in an audit and review report. The team will prepare its report as described in Section 6.4.1 of this plan and the latest version of the *RLEP-B Guidelines For Preparing Audit and Review Reports.*

5.7.7. Safety Evaluation Report input

The project team will prepare SER input, based on the audit and review report, as described in Section 6.4.2 of this plan.

6. Planning, Audit, Review, and Documentation Procedure

This section of the audit and review plan contains the detailed procedures that the project team will follow to plan, perform, and document its work.

6.1. Planning Activities

6.1.1. Schedule for key milestones and activities

The project team leader will establish the schedule for the key milestones and activities, consistent with the overall schedule for making the licensing decision. Key milestones and activities include, as a minimum:

A. receiving the LRA from the applicant
B. receiving work split tables from the project manager
C. making individual work assignments
D. training project team members
E. holding the project team kickoff meeting
F. preparing the audit and review plan
G. scheduling site visits
H. scheduling in-office review periods
I. preparing questions
J. preparing RAIs
K. preparing draft and final audit and review report
L. preparing draft and final SER input

Site visits will be scheduled on the basis of discussions between the project team leader, the NRC license renewal project manager, and the applicant.

Appendix B of this plan contains the target schedule for the key milestones and activities.

6.1.2. Work assignments

The technical assistance contractor will propose team member work assignments to the NRC project team leader. The NRC project team leader will approve all work assignments. After the audit plan is issued, the team leader may reassign work as necessary.

The contractor will develop assignment tables that show which project team member will review each AMP and AMR. Appendix A of this plan shows the project team membership. Appendix C shows the team member assignments for the AMPs. Appendix D of this plan shows the team member assignments for the AMRs.

6.1.3. Training and preparation.

The training and preparation will include the following:

1. A description of the audit and review process.

2. An overview of audit/review-related documentation and the documentation that the project team will audit and review.

A. GALL Report
B. SRP-LR
C. Interim Staff Guidance (ISG)
C. LRA AMPs
D. LRA AMRs
E. basis documents (catalogues of information assembled by the applicant to demonstrate the bases for its programs and activities)
F. implementing procedures
G. operating experience reports
H. RAIs, audit reports, and SERs for other plants
I. applicant's UFSAR

3. The protocol for interfacing with the applicant.

4. Administrative issues such as travel, control of documentation, work hours, etc.

5. Process for preparing questions, RAIs, the audit and review report, and SER input.

6. Process for interfacing with DE technical reviewers.

6.2. Aging Management Program Audits and Reviews

6.2.1. Types of AMPs

There are two types of AMPs: those that the applicant claims are consistent with AMPs contained in the GALL Report, and those that are plant-specific. The process for auditing and reviewing both types of AMPs is presented in the following sections of this plan.

6.2.2. Scope of AMP elements to be audited and reviewed

Table 1 of this plan shows the 10 program elements that are used to evaluate the adequacy of each aging management program. These program elements are presented in Branch Technical Position (BTP) RLSB-1, "Aging Management Review - Generic," in Appendix A of the SRP-LR, and are summarized in the GALL Report. The project team's scope of review includes 7 of the 10 elements: 1 through 6, and 10.[4]

The program elements audited or reviewed is the same for both AMPs that are consistent with the GALL Report and for plant-specific AMPs.

6.2.3. Plant AMPs that are consistent with the GALL Report

Figure 1, "Audit of AMPs That Are Consistent With the GALL Report," is the process flowchart that shows the activities and decisions used by the project team to review and audit each plant AMP that the applicant claims is consistent with the GALL Report.

Preparation.

[4] DIPM will review program elements 7, 8, and 9. The DIPM review will be documented in Section 3 of the plant safety evaluation report.

A. For the plant AMP being reviewed, identify the corresponding GALL AMP.
B. Review the associated GALL AMP and identify those elements that will be audited.

C. Identify the documents needed to perform the audit. These may include, but are not limited to, the following:

(1) GALL Report
(2) SRP-LR
(3) ISGs
(4) RAIs and SERs for similar plants
(5) LRA
(6) basis documents
(7) implementation procedures
(8) operating experience reports (plant-specific and industry)
(9) UFSAR

Audit/Review

A. Confirm that the seven plant AMP elements are consistent with the corresponding elements of the GALL Report AMP by answering the following questions and then following the process shown in Figure 1.

(1) Did the applicant identify any exceptions to the GALL Report AMP?
(2) Are the elements consistent with the GALL Report AMP?

B. If either of the above questions results in the identification of an exception or a difference to the GALL AMP, determine whether it is acceptable on the basis of an adequate technical justification.

C. If an acceptable basis exists for an exception or difference, document the basis in the worksheet and later in the audit and review report and the SER input.

D. Review the industry and plant-specific operating experience associated with the AMP. This is an area of review emphasis. They require review to identify aging effects requiring management that are not identified by the industry guidance documents (such as EPRI tools) and to confirm the effectiveness of aging management programs. The team members should consider the industry guidance when assessing operating experience and formulating questions for the applicant. The industry guidance (from NEI 95-10, Revision 3) is as follows:

(1) *Operating Experience - Aging Effects Requiring Management.* A plant-specific operating experience review should assess the operating and maintenance history. A review of the prior five to 10 years of operating and maintenance history should be sufficient. The results of the review should confirm consistency with documented industry operating experience. Differences with previously documented industry experience such as new aging effects or lack of aging effects allow consideration of plant-specific aging management requirements.
(2) Operating Experience With Aging Management Programs. Plant-specific operating experience with existing programs should be considered. The operating experience of aging management programs, including past corrective actions resulting in program enhancements or additional programs, should be considered. The review

should provide objective evidence to support the conclusion that the effects of aging will be managed so that the intended function(s) will be maintained during the extended period of operation. Guidance for reviewing industry operating experience is presented in BTP RLSB-1 in Appendix A.1 of the Branch Technical Positions in NUREG-1800.

(3) Industry Operating Experience. Industry operating experience and its applicability should be assessed to determine whether it changes plant-specific determinations. NUREG-1801 is based upon industry operating experience prior to its date of issue. Operating experience after the issue date of NUREG-1801 should be evaluated and documented as part of the aging management review. In particular, generic communications such as a bulleting or an information notice should be evaluated for impact upon the AMP. The evaluation should check for new aging effects or a new component or location experiencing an already identified aging effect.

E. If it is necessary to ask the applicant a question to clarify the basis for accepting a program element, or an exception or a difference to the GALL Report AMP, follow the logic process shown in Figure 1.

F. If it is necessary for the applicant to submit additional information to support the basis for accepting a program element, an exception, or a difference, the applicant may agree to voluntarily submit the required information as a supplement to the LRA. If not, the NRC may issue an RAI to obtain the information.

AMP audit worksheets

Document the audits/reviews using the worksheet provided in Appendix E, "Consistent with GALL Report AMP Audit/Review Worksheet."

6.2.4. Plant-specific AMPs

Figure 2, "Audit of Plant-Specific AMPs," is the process flowchart that shows the activities and decisions used to audit/review each plant-specific AMP.

Pre-review preparation

A. Review Section A.1.2.3 of the SRP-LR and identify those element criteria that will be reviewed in conjunction with each of the seven elements.

B. Identify the documents needed to perform the audit. These may include, but are not limited to, the following:

(1) GALL Report
(2) SRP-LR
(3) ISGs
(4) RAIs and SERs for similar plants
(5) LRA
(6) basis documents
(7) implementation procedures
(8) operating experience reports (plant-specific and industry)
(9) UFSAR

Audit/review

A. Audit/review the seven plant AMP program elements and verify that they are consistent with the corresponding elements of Section A.1.2.3 of the SRP-LR.

B. Review the industry and plant-specific operating experience associated with the AMP. This is an area of review emphasis. They require review to identify aging effects requiring management that are not identified by the industry guidance documents (such as EPRI tools) and to confirm the effectiveness of aging management programs. The team members should consider the industry guidance when assessing operating experience and formulating questions for the applicant. The industry guidance (from NEI 95-10, Revision 3) is as follows:

   (1) Operating Experience - Aging Effects Requiring Management. A plant-specific operating experience review should assess the operating and maintenance history. A review of the prior five to 10 years of operating and maintenance history should be sufficient. The results of the review should confirm consistency with documented industry operating experience. Differences with previously documented industry experience such as new aging effects or lack of aging effects allow consideration of plant-specific aging management requirements.
   (2) Operating Experience With Aging Management Programs. Plant-specific operating experience with existing programs should be considered. The operating experience of aging management programs, including past corrective actions resulting in program enhancements or additional programs, should be considered. The review should provide objective evidence to support the conclusion that the effects of aging will be managed so that the intended function(s) will be maintained during the extended period of operation. Guidance for reviewing industry operating experience is presented in BTP RLSB-1 in Appendix A.1 of the Branch Technical Positions in NUREG-1800.
   (3) Industry Operating Experience. Industry operating experience and its applicability should be assessed to determine whether it changes plant-specific determinations. NUREG-1801 is based upon industry operating experience prior to its date of issue. Operating experience after the issue date of NUREG-1801 should be evaluated and documented as part of the aging management review. In particular, generic communications such as a bulleting or an information notice should be evaluated for impact upon the AMP. The evaluation should check for new aging effects or a new component or location experiencing an already identified aging effect.

C. If the audit/review results in the identification of an exception or a difference from the GALL Report AMP, determine whether it is acceptable on the basis of an adequate technical justification. If an acceptable basis exists for the difference from Section A.1.2.3 of the SRP-LR, document the basis in the worksheet and later, in the audit and review report and the SER input.

D. If it is necessary to ask the applicant a question, follow the logic process shown in Figure 2.

E. If it is necessary for the applicant to submit additional information to resolve a question or an issue or to support the basis or conclusion, the applicant may voluntarily submit the information as a supplement to the. If not, the NRC may issue an RAI to obtain the information.

AMP review worksheets

Document the audit/review using the worksheet provided in Appendix F, "Plant-Specific AMP Audit/Review Worksheet."

6.3. AMR Audits and Reviews

There are two types of AMRs: those that the applicant claims are consistent with the GALL Report, and those that are plant-specific. Audit and review of both types of AMRs are discussed below. In general, the project team will review AMRs that are consistent with the GALL Report and AMRs that are based on an NRC-approved precedent that the applicant has identified.

6.3.1. Plant AMRs that are consistent with the GALL Report

Figure 3, "Review of AMRs That Are Consistent With the GALL Report," is the process flowchart that shows the activities and decisions used to audit/review each AMR that the applicant claims is consistent with the GALL Report.

Preparation

A. For the plant AMRs that the applicant claims are consistent with the GALL Report, identify the corresponding AMRs in Volume 2 of the GALL Report.

B. Review the associated GALL AMRs and identify those line items that will be audited/reviewed in conjunction with each of the plant AMRs.

C. Identify the documents needed to perform the review. These may include, but are not limited to, the following:

(1) GALL Report
(2) SRP-LR
(3) ISGs
(4) RAIs and SERs for similar plants
(5) LRA
(6) basis documents
(7) implementation procedures
(8) operating experience reports (plant-specific and industry)
(9) UFSAR

Audit/review

A. Each AMR line item is coded with a letter which represents a standard note designation.[5] The letter notes are described in Table 2 of this plan. Notes that use numeric designators are plant-specific. The note codes A though E are classified as "consistent with the GALL Report," and will be reviewed in accordance with the guidance contained in this plan.

[5] The AMR line item letter notes are based on a letter from A. Nelson, NEI, to P. T. Kuo, NRC, "U.S. Nuclear Industry's Proposed Standard License Renewal Application Format Package, Request NRC Concurrence," dated January 24, 2003 (ML030290201). The staff concurred in the format of the

B. The AMR review involves verification that the applicant has satisfied the requirements of 10 CFR 54.21(a)(3). This requirement states that, for "each structure and component [within the scope of license renewal], demonstrate that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the extended period of operation."

C. Verify compliance by following the process shown in Figure 3. The process is summarized below:

(1) For each AMR line item, perform the review associated with the letter note (A through E) assigned to the AMR line item. Specifically, determine if the AMR is consistent with the GALL Report for the elements associated with its note
(2) If Note A applies, and the applicant uses a plant-specific AMP[6], determine if the component is within the scope of the cited plant AMP. If the component is within the scope of the plant AMP, the AMR line item is acceptable. If not acceptable, go to Step (7) below.
(3) If Note B applies, review the LRA exceptions and document the basis for acceptance in the worksheet, and later in the audit and review report. If not acceptable, go to Step (7) below.
(4) If Note C or D applies, determine if the component type is acceptable for the material, environment, and aging effect. If Note D applies, also review the LRA exceptions and document the basis for acceptance in the worksheet, and later in the audit and review report. If not acceptable, go to Step (7) below.
(5) If Note E applies, review the AMP audit report findings to determine if the scope of the alternate AMP envelopes the AMR line item being reviewed and satisfies 10 CFR 54.21(a)(3). If it does not, go to Step (7) below.
(6) Review the corresponding LRA Table 3.X.1entry that is referenced in LRA Table 3.X.2.Y. If applicable, determine whether the applicant's "Further Evaluation Recommended" response in LRA Section 3.X.2.2.Z is enveloped by Section 3.X.2.2.Z of the SRP-LR. If not, go to Step (7) below. If the LRA section does not meet the acceptance criteria of Appendix A of the SRP-LR, go to Step (7) below.
(7) If during the review a difference is identified, prepare a question to the applicant, in order to obtain clarification.

(a) Review the applicant's response to the question. If it appears acceptable, re-start the audit/review for the AMR line item from Step (1) above..
(b) If the applicant's response does not resolve the question or issue, prepare an additional question to obtain the information needed to achieve resolution. Review the applicant's response to the second question. If it appears acceptable, re-start the audit/review for the AMR line item from Step (1) above.
(c) If it is necessary for the applicant to submit additional information to resolve a question or an issue or to support a basis or conclusion, the applicant may submit the information as a supplement to the LRA or the NRC may issue an RAI

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standardized format for LRAs by letter dated April 7, 2003, from P.T. Kuo, NRC, to A. Nelson, NEI (ML030990052).

[6] Some GALL AMRs reference the use of a plant-specific AMP. In such cases the AMR audit requires the project team member to confirm that the plant-specific AMP is appropriate to manage the aging effects during the period of extended operation.

to obtain the information. The team leader should be consulted if docketed information may be needed.

AMR audit/review worksheets

Document the audits/reviews of plant AMRs using the worksheet provided in Appendix G, "Aging Management Review Worksheets."

6.3.2. AMRs based on NRC-approved precedents

Figure 4, "AMR Review Using NRC-Approved Precedent," is the process flowchart that shows the activities and decisions used to review plant AMRs that the applicant has identified as being consistent with an NRC-approved precedent.[7]

Preparation

Identify the documents needed to perform the audit/review. These may include, but are not limited to, the following:

(1) GALL Report
(2) SRP-LR
(3) ISGs
(4) RAIs and SERs for similar plants
(5) LRA
(6) basis documents
(7) implementation procedures
(8) operating experience reports (plant-specific and industry)
(9) UFSAR

Audit/review

A. The AMR audit/review involves verification that the requirements of 10 CFR 54.21(a)(3) are satisfied. This criterion states that, "For each structure and component [within the scope of license renewal], demonstrate that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation."

B. For AMRs with an NRC-approved precedent, this may be achieved by answering the following questions while following the assessment process shown in Figure 4.

   (1) Is the precedent appropriate for the LRA AMR being reviewed?
   (2) Is the NRC-approved precedent sufficiently documented or understood to technically support the adequacy of the LRA AMR being reviewed?
   (3) Is the LRA AMR within the bounds of the chosen NRC-approved precedent?
   (4) If any of these questions results in a 'No' answer, then additional information is required to make a determination that the AMR is acceptable.

[7] Applicant identified NRC-approved precedents are only to be used as an aid for performing AMR audits. The audit conclusions will be based on the technical basis of the AMR and its applicability to the plant being reviewed. It is not acceptable to simply cite the NRC-approved precedent as its basis.

(5) If it is necessary to ask the applicant a question to obtain clarification on the basis for accepting the AMR, the process shown in Figure 4 should be used.
(6) If it is necessary for the applicant's response to be docketed as a basis for accepting the exception or difference, the applicant may voluntarily docket the response or the NRC may issue an RAI.

AMR audit/review worksheets

Document the audits/reviews using the worksheet provided in Appendix G, "Aging Management Review Worksheets."

6.4. Audit and Safety Review Documentation

As noted in Section 5.7 of this plan, the project team will prepare an audit and review plan, worksheets, work packages, requests for additional information, an audit and review report, and a SER input. This section of the plan addresses the preparation of the audit and review report and the SER input.

6.4.1. Audit and review report

1. Format and content of the audit and review report. The report should include the following:
   A. Cover page
   B. Table of Contents
   C. Section 1, Introduction
   D. Section 2, Background
   E. Section 3, Summary of Information in the License Renewal Application
   F. Section 4, Audit and Review Scope
   G. Section 5, Audit and Review Process
   H. Section 6, Exit Meeting
   I. Section 7, Audit and Review Results
      (1) Section 7.1, Aging Management Programs
      (2) Section 7.2, Aging Management Reviews
   J. Attachment 1, Abbreviations, Acronyms and Initialisms
   K. Attachment 2, Project Team and Applicant Personnel
   L. Attachment 3, Elements of an Aging Management Program for License Renewal
   M. Attachment 4, Disposition of Requests for Additional Information, LRA Supplements, and Open Items
   N. Attachment 5, List of Documents Reviewed
   O. Attachment 6, List of Commitments

2. The following paragraphs describe, in general, the type of information and the level of detail necessary for each report section.

   A. Cover page that identifies the following:

      (1) Name of the plant and units

(2) Docket number of the plants
(3) Organization preparing the report
(4) Contract number under which the work was performed
(5) Acknowledgement that the report was prepared for the License Renewal and Environmental Impacts Program, Division of Regulatory Improvement Programs, Office of Nuclear Reactor Regulation
(6) Date of the report

B. Table of Contents.

C. Section 1, Introduction. This section of the report should provide an overview of the audit and review conducted by the project team. It should also list key audit and review activities, including site visits and the organizations supporting the audit and review. This information should be taken largely from the audit and review plan.

D. Section 2, Background. This section of the report should include a summary of the license renewal requirements as stated in the Code of Federal Regulations and a summary of the documents that the project team used to carry out the audit and review. This information should be taken largely from the audit and review plan.

E. Section 3, Summary of Information in the License Renewal Application. This section of the report should include a description of the information contained in the license renewal application that is applicable to the audit and review. This information should be taken largely from the audit and review plan.

F. Section 4, Audit and Review Scope. This section of the report should indicate that the AMRs and associated AMPs that the project team reviewed are identified in the audit and review plan. It should also include a general statement of the types and numbers of AMRs and AMPs that the team audited and reviewed. This section of the report is largely boilerplate. The boilerplate text should be taken from a previously published report and revised to match the plant that is the subject of the audit and review report.

G. Section 5, Audit and Review Process. This section of the report should state that the audit and review was performed in accordance with the processes defined in the audit and review plan and should summarize the audit and review process for AMPs, AMRs, and the UFSAR supplement. This section of the report (and its subsections) is largely boiler plate. The boilerplate text should be taken from a previously published report and revised to match the plant that is the subject of the audit and review report. This section of the report should include the following subsections.

(1) 5.1. AMPs Consistent With the GALL Report
(2) 5.2. AMRs in the GALL Report
(3) 5.3. NRC-Approved Precedents
(4) 5.4. UFSAR Supplement
(5) 5.5. Documents Reviewed by the Project Team
(6) 5.6. Commitments to be Included in the Safety Evaluation Report

H. Section 6, Exit Meeting. This section should include an acknowledgement of and a brief summary of the public exit meeting.

I. Section 7, Audit and Review Results. This section of the report contains the main body of the report. The two subsections, 7.1, "Aging Management Programs," and 7.2, "Aging Management Reviews," contain the team's documentation of the results of its audits and reviews of the AMPs and AMRs. It should include:

(1) Section 7.1. "Aging Management Programs," containing:

(a) AMPs consistent with the GALL Report. The team's audit and review of each AMP that the applicant identified as consistent with the GALL Report should be documented in the report. Each AMP should have an individual subsection in the report that includes the following:

i. A subsection (e.g., 7.1.X, AMP Name (AMP Number)) that identifies the plant AMP name and number and the section of the LRA (number and title) that includes the AMP.

ii. A subsection (e.g., 7.1.X.1, Program Description) that describes the plant AMP.

iii. A subsection (e.g., 7.1.X.2, Consistency with the GALL Report) that describes the plant AMP consistency with respect to the GALL Report AMP, the documents reviewed, and the applicant staff interviewed.

iv. A subsection (e.g., 7.1.X.3, Exceptions to the GALL Report) that lists any exceptions to the GALL Report AMP, a restatement of the GALL Report AMP program element criteria that apply to the exception, and an evaluation that clearly explains why any exceptions (identified by either the applicant or the project team) to the plant AMP are acceptable.

v. A subsection (e.g., 7.1.X.4, Enhancements to the GALL Report) that lists any enhancements to the GALL Report AMP, a restatement of the GALL Report AMP program element criteria that apply to the enhancement, and an evaluation that clearly explains why any enhancements to the plant AMP are acceptable.

vi. A subsection (e.g., 7.1.X.5, Operating Experience) that documents the team's review of the plant specific and industry operating experience associated with the AMP.

vii. A subsection (e.g., 7.1.X.6, UFSAR Supplement) that documents the team's review of the adequacy of the applicant's commitment to revise the UFSAR.

viii. A subsection (e.g., 7.1.X.7, Evaluation) that documents the team's evaluation and basis for concluding that the plant AMP is consistent with the GALL Report AMP. The evaluation should address any amendments or supplements to the LRA. If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution. The evaluation should also address any RAIs. If an RAI was issued concerning the AMP, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant

has submitted a response. If the applicant submitted a response, include the date and the ADAMS accession number and state whether or not the RAI resolved the issue. If so, document the basis for its acceptance.

ix. A subsection (e.g., 7.1.X.8, Conclusions) that documents the team's conclusions regarding the AMP.

(b) Plant-specific AMPs. The team's audit and review of each AMP that the applicant identified as a plant specific AMP should be documented in the report. Each plant-specific AMP should have an individual subsection in the report that includes the following:

i. A subsection (e.g., 7.1.Y, AMP Name (AMP Number)) that identifies the plant AMP name and number and the section of the LRA (number and title) that includes the AMP.

ii. A subsection (e.g., 7.1.Y.1, Review of the AMP against the Program Elements) that introduces the team's review of the plant-specific AMP program elements against the program element criteria in the SRP-LR.

iii. Subsections (e.g., 7.1.Y.1.1, Scope of Program, through 7.1.Y.1.10, Operating Experience) that document the team's audit and review of each of the plant-specific program elements against the SRP-LR criteria. For each of the seven program elements audited and reviewed by the project team, the team should summarize the SRP-LR criteria, followed by a discussion of how the applicant stated that it met the criteria (including any exceptions or enhancements), followed by an evaluation and the basis for concluding that the particular AMP program element is acceptable. The evaluation should also include the basis for accepting any exceptions or enhancements to the program element criteria. The evaluation should also address any LRA amendments or supplements that the applicant submitted to resolve questions or issues. If so, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution. Similarly, if the team issued an RAI concerning the AMP, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.

iv. A subsection (e.g., 7.1.Y.2, UFSAR Supplement) that documents the team's review of the adequacy of the applicant's commitment to revise the UFSAR.

v. A subsection (e.g., 7.1.Y.3, Conclusions) that documents the team's overall conclusions regarding the plant-specific AMP.

(2) Section 7.2, "Aging Management Reviews," of the report should include the following information.

(a) A summary of the documents that the project team reviewed to perform the audit and review, i.e., the LRA, the SRP-LR, and the applicant's basis documents

(b) A summary review of the AMR notes (A through J) used by the applicant to classify the AMR line items used in the LRA Tables 3.X.2-Y.

(c) The basis for accepting any exceptions to GALL AMRs that were identified by the applicant or the project team reviewer.

(d) Information about any applicant-submitted amendments or supplements. If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.

(e) Information about any RAIs. If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.

(f) An introductory section for each LRA Section 3.X that contains the LRA section reviewed and a summary of the type of information provided in the section of the LRA reviewed, including a listing of the AMPs reviewed for this LRA section.

(3) AMRs consistent with the GALL Report for which no further evaluation is recommended. This section shall include the following:

(a) The project team will document information on AMRs consistent with the GALL Report for which no further evaluation is required only if it had an audit finding that resulted in an open item requiring a docketed response from the applicant or an RAI.

(b) Information about any applicant-submitted amendments or supplements. If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.

(c) Information about any RAIs. If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.

(d) An evaluation verifying that:

(i) The applicant identified the applicable aging effects.

(ii) The applicant defined the appropriate combination of materials and environments.

(iii) The applicant specified acceptable AMPs.

(e) A conclusion stating that, if appropriate, the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, and that 10 CFR 54.21(a)(3) has been satisfied.

(4) AMRs consistent with the GALL Report for which further evaluation is required. This section of the report should include:

(a) A subsection for each of the LRA sections (3.X.2.2.Y) containing the applicant's further evaluations of AMRs for which further evaluation is recommended.

(b) For each LRA Section 3.X.2.2.Y containing the applicant's further evaluations, the following:

(i) A statement that the project team audited the applicant's further evaluations against the criteria contained in Section 3.X.2.2.Y of the SRP-LR.

(ii) The SRP-LR Section 3.X.2.2.Y criteria.

(iii) The basis for concluding that the applicant's evaluation of the aging effect satisfies the criteria contained in Section 3.X.2.2.Y of the SRP-LR.

(iv) Information about any applicant-submitted amendments or supplements. If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.

(v) Information about any RAIs. If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.

(vi) A concluding paragraph summarizing the project team evaluation of the particular aging effect.

(5) AMR results that are not consistent with GALL. This section of the audit and review report documents reviews of AMRs that are not consistent with the GALL Report and should include the following:

(a) A summary of the type of information provided in the section of the LRA reviewed. Identify the LRA Tables 3.X.2-Y listed in this section.

(b) For each LRA Table 3.X.2-Y in LRA Section 3.X, the results and findings of NRC-approved precedents that were reviewed.

(c) An evaluation and finding that verifies that:

(1) The applicant identified the applicable aging effect.

(2) The applicant listed the appropriate combination of materials and environments.

(3) The applicant identified acceptable AMPs.

(d) Information about any applicant-submitted amendments or supplements. If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.

(e) Information about any RAIs. If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.

(f) A conclusion stating, if appropriate, that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, and 10 CFR 54.21(a)(3) has been satisfied.

J. Attachment 1, Abbreviations, Acronyms, and Initialisms. This attachment should identify the abbreviations, acronyms, and initialisms used in the audit and review report.

K. Attachment 2, Project Team and Applicant Personnel. This attachment should identify the project team members, the key applicant personnel who were consulted during the audit and review, and the individuals that attended the exit meeting.

L. Attachment 3, Elements of an Aging Management Program for License Renewal. This attachment is a standard table of the 10 program elements that are used to evaluate the adequacy of each AMP as presented in Branch Technical Position (BTP) RLSB-1, "Aging Management Review - Generic," in Appendix A of the SRP-LR.

M. Attachment 4, Disposition of Requests for Additional Information, LRA Supplements, and Open Items.

(1) Include a list of the formal RAIs that were issued as a result of the audit/review and a summary of the disposition of the applicant's response to each RAI.
(2) Include a list of issues that the applicant agreed to formally address through a supplement or an amendment to its LRA and a summary of the disposition of each issue.
(3) For each RAI and LRA supplement, identify the applicable AMP or AMR.
(4) Possible dispositions could include open, closed, or confirmatory items. The genesis of each RAI and LRA supplement, as well as their dispositions should be clearly documented in conjunction with the audit and review results in the applicable AMP or AMR sections of the report.

N. Attachment 5, List of Documents Reviewed. This attachment should list all of the documents reviewed by the project team to support its AMP and AMR audits and reviews and to support its evaluations and conclusions.

(1) Indicate which documents were reviewed for each AMP or AMR section.
(2) Include both docketed documents (e.g., the license renewal application) and non-docketed documents (e.g., basis documents, condition reports, and implementing procedures).
(3) Include both licensee-controlled documents (e.g., basis documents, condition reports, and implementing procedures) and other documents (e.g., topical reports and industry codes and standards).

O. Attachment 6, List of Commitments. This attachment should list and summarize all commitments made by the applicant that were reviewed by the project team, including any commitments that the applicant made in response to the team's audit and review. This information can be subsequently excerpted for the SER report.

6.4.2. Safety evaluation report input

1. General guidance

   A. Each project team member should prepare the SER input for the AMP and AMR audits and reviews that he or she performed. The technical assistance contractor shall collect, assemble, and prepare the complete SER input.

   B. In general, the data and information needed to prepare the SER input should be available in the project team's audit and review report and the team member's worksheets.

   C. SER inputs are to be prepared for:

      (1) each AMP that was determined to be consistent with the GALL Report, which has no exceptions or enhancements.
      (2) each AMP that was determined to be consistent with the GALL Report, which has exceptions (identified by either the applicant or the project team) or enhancements.
      (3) each plant-specific AMP
      (4) AMRs that are consistent with the GALL Report
      (5) project team AMR review results[8]

   D. The SER input should contain the following sections. (Note: The following section numbers (3. through 3.X.3) are based on the numbering system for the SER input. They are not a continuation of the numbering convention used throughout this plan.)

      3. Aging Management Review Results
         3.0 Applicant's Use of the Generic Aging Lessons Learned Report
         3.0.1 Format of the LRA
         3.0.2 Staff's Review Process
            3.0.2.1 AMRs in the GALL Report
            3.0.2.2 NRC-Approved Precedents
            3.0.2.3 UFSAR Supplement
            3.0.2.4 Documentation and Documents Reviewed
         3.0.3 Aging Management Programs
            3.0.3.1 AMPs that are Consistent With the GALL Report
            3.0.3.2 AMPs that are Consistent With GALL Report With Exceptions or Enhancements
            3.0.3.3 AMPs that are Plant-Specific
         3.0.4 Quality Assurance Program Attributes Integral to Aging Managemnent Programs
      3.X.[9] Aging Management of _____
         3.X.1. Summary of Technical Information in the Application

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[8] AMRs that are not consistent with the GALL Report.

[9] The LRA AMR results are broken down into six sections and address the following system/structure groups: (1) Section 3.1, reactor vessel, internals and reactor coolant system, (2) Section 3.2, engineering safety features systems, (3) Section 3.3, auxiliary systems, (4) Section 3.4, steam power and conversion systems, (5) Section 3.5, structures and component supports, (6) Section 3.6, electrical and instrumentation and controls.

3.X.2. Staff Evaluation
- 3.X.2.1. Aging Management Evaluations that are Consistent with the GALL Report, for Which Further Evaluation is Not Required
- 3.X.2.2. Aging Management Evaluations that are Consistent with the GALL Report, for Which Further Evaluation is Recommended
- 3.X.2.3 AMR Results that are Not Consistent with or Not Addressed in the GALL Report

3.X.3 Conclusion

E. For each AMP audited/reviewed by the project team, the SER shall include a discussion of the team's review of the operating experience program element.

F. If the applicant submitted an amendment or a supplement to its LRA that is associated with the project team's audit or review activities, document the submittal (include the date and ADAMS accession number) and explain the issue that the submittal resolved and discuss the basis for the resolution.

G. If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant response has been received and accepted. If the response was acceptable, identify the submittal (including the date and the ADAMS accession number) that provided the response and document the basis for its acceptance.

H. Issues (e.g., RAIs) that have not been resolved by the applicant at the time the SER input is prepared should be identified as open items.

2. SER input

A. For AMPs determined to be consistent with the GALL Report, without exceptions, include the AMP title, the plant AMP paragraph number, and a discussion of the basis for concluding that the UFSAR update (Appendix A of the LRA) is acceptable. This SER input documents that the AMP is consistent with the GALL Report.

B. For AMPs determined to be consistent with the GALL Report, with exceptions or enhancement, the SER input should include a statement that the audit found the AMP consistent with the GALL Report and that any applicant-identified exceptions to the GALL Report were found technically acceptable to manage the aging effect during the period of extended operation. The SER input should identify the exceptions and provide the basis for acceptance. The SER input will also address the UFSAR supplement, and document the basis for concluding that it is acceptable.

C. For plant-specific AMPs, the SER input should document the basis for accepting each of the seven elements reviewed by the project team. The SER input should also include a discussion concerning the adequacy of the UFSAR supplement.

D. For aging management evaluations that are consistent with the GALL Report,[10] the SER input should include the following:

[10] The audit results documented in this section address the AMRs consistent with the GALL Report for which no further evaluation is recommended.

(1) Identify the LRA section reviewed
(2) A summary of the type of information provided in the section of the LRA reviewed, including a listing of the AMPs reviewed.
(3) Identify the LRA Tables 3.X.2-Y reviewed.
(4) A summary review of the AMR Notes A through E used to classify the AMR line items used in these tables.
(5) A brief summary of what the staff (project team) reviewed to perform the audit, i.e., LRA and applicant basis documents and other implementation documents. Reference the appendix that lists the details of the documents reviewed.
(6) The bases for accepting any exceptions to GALL AMRs that were identified by the applicant or the project team member.
(7) A finding that verifies that:
  (a) the applicant identified the applicable aging effects
  (b) the applicant defined the appropriate combination of materials and environments
  (c) the applicant specified acceptable AMPs
(8) A conclusion stating, if applicable, that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, and that 10 CFR 54.21(a)(3) has been satisfied.

E. For aging management evaluations that are consistent with the GALL Report, for which further evaluation is recommended, the SER input should include the following:

(1) The LRA section containing the applicant's further evaluations of AMRs for which further evaluation is required.
(2) A list of the aging effects for which the further evaluation apply.
(3) For the applicant's further evaluations, provide a summary of the basis for concluding that it satisfied the criteria of Section 3.1.3.2 of the SRP-LR.
(4) A statement that the staff audited the applicant's further evaluations against the criteria contained in Section 3.1.3.2 of the SRP-LR.
(5) A statement that the audit and review report contains additional information. Also identify the issue date and the ADAMS accession number for the audit and review report.

F. Staff AMR Review Results.[11] This section of the SER input documents the reviews of AMRs assigned to the project team that are not consistent with the GALL Report. The audit report should document the following, based on a precedent identified by the applicant:

(1) The LRA section reviewed
(2) A summary of the type of information provided in the section of the LRA, reviewed, including a listing of the AMPs reviewed for this LRA section.
(3) Identify the LRA Tables 3.X.2-Y documented by this audit writeup.
(4) A brief summary of what the staff (project team) reviewed, i.e., LRA and applicant basis documents and other implementation documents.
(5) A finding that verifies, if true, that:

[11] This section documents reviews of AMRs assigned to the project team that are not consistent with the GALL Report.

(a) The applicant identified the applicable aging effects
(b) The applicant listed the appropriate combination of materials and environments
(c) The applicant specified acceptable AMPs

(6) Provide a conclusion stating, if applicable, that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, and that 10 CFR 54.21(a)(3) has been satisfied.

6.5 Documents Reviewed and Document Retention

Any documents reviewed that were used to formulate the basis for resolution of an issue, such as the basis for a technical resolution, the basis for the acceptance of an exception or an enhancement, etc., should be documented as a reference in the audit and review report.

Upon issuance of the audit and review report, all worksheets that were completed by contractor and NRC personnel shall be given to the NRC project team leader.

After the NRC has made its licensing decision, all copies of documents collected and all documents generated to complete the audit and review report, such as audit worksheets, question and answer tracking documentation, etc., are to be discarded.

Table 1. Aging Management Program Element Descriptions

Element		Description
1	Scope of the program	The scope of the program should include the specific structures and components subject to an aging management review.
2	Preventive actions	Preventive actions should mitigate or prevent the applicable aging effects.
3	Parameters monitored or inspected	Parameters monitored or inspected should be linked to the effects of aging on the intended functions of the particular structure and component.
4	Detection of aging effects	Detection of aging effects should occur before there is loss of any structure and component intended function. This includes aspects such as method or technique (i.e., visual, volumetric, surface inspection), frequency, sample size, data collection and timing of new/one-time inspections to ensure timely detection of aging effects.
5	Monitoring and trending	Monitoring and trending should provide prediction of the extent of the effects of aging and timely corrective or mitigative actions.
6	Acceptance criteria	Acceptance criteria, against which the need for corrective action will be evaluated, should ensure that the particular structure and component intended functions are maintained under all current licensing basis design conditions during the period of extended operation.
7	Corrective actions	Corrective actions, including root cause determination and prevention of recurrence, should be timely.
8	Confirmation process	The confirmation process should ensure that preventive actions are adequate and appropriate corrective actions have been completed and are effective.
9	Administrative controls	Administrative controls should provide a formal review and approval process.
10	Operating experience	Operating experience involving the aging management program, including past corrective actions resulting in program enhancements or additional programs, should provide objective evidence to support a determination tht the effects of aging will be adequately managed so that the structure and component intended functions will be maintained during the period of extended operation.

Table 2. Notes for License Renewal Application Tables 3.X.2-Y[12]

Note	Description
A	Consistent with NUREG-1801 [GALL Report] item for component, material, environment, and aging effect. AMP is consistent with NUREG-1801 AMP.
B	Consistent with NUREG-1801 item for component, material, environment, and aging effect. AMP takes some exceptions to NUREG-1801 AMP.
C	Component is different, but consistent with NUREG-1801 item for material, environment, and aging effect. AMP is consistent with NUREG-1801 AMP.
D	Component is different, but consistent with NUREG-1801 item for material, environment, and aging effect. AMP takes some exceptions to NUREG-1801 AMP.
E	Consistent with NUREG-1801 for material, environment, and aging effect, but a different aging management program is credited.
F	Material not in NUREG-1801 for this component.
G	Environment not in NUREG-1801 for this component and material.
H	Aging effect not in NUREG-1801 for this component, material and environment combination.
I	Aging effect in NUREG-1801 for this component, material and environment combination is not applicable.
J	Neither the component nor the material and environment combination is evaluated in NUREG-1801.

[12] Each AMR line item is coded with a letter which represents a standard note designation based on a letter from A. Nelson, NEI, to P.T. Kuo, NRC, "U.S. Nuclear Industry's Proposed Standard License Renewal Application Format Package, Request NRC Concurrence," dated January 24, 2003 (ML030290201). The staff concurred in the format of the standardized format for license renewal applications by letter dated April 7, 2003, from P.T. Kuo, NRC, to A. Nelson, NEI (ML030990052).

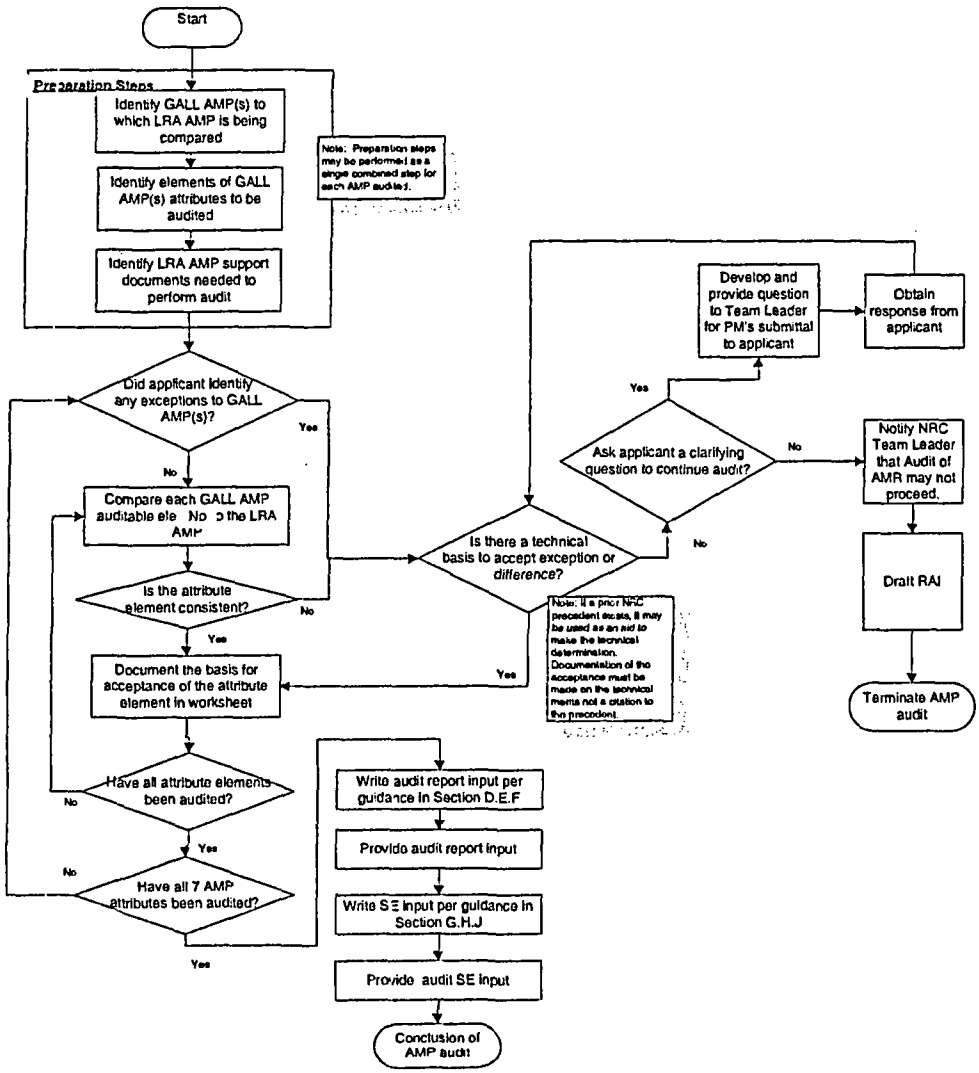

Figure 1. Audit of AMPs That Are Consistent With the GALL Report

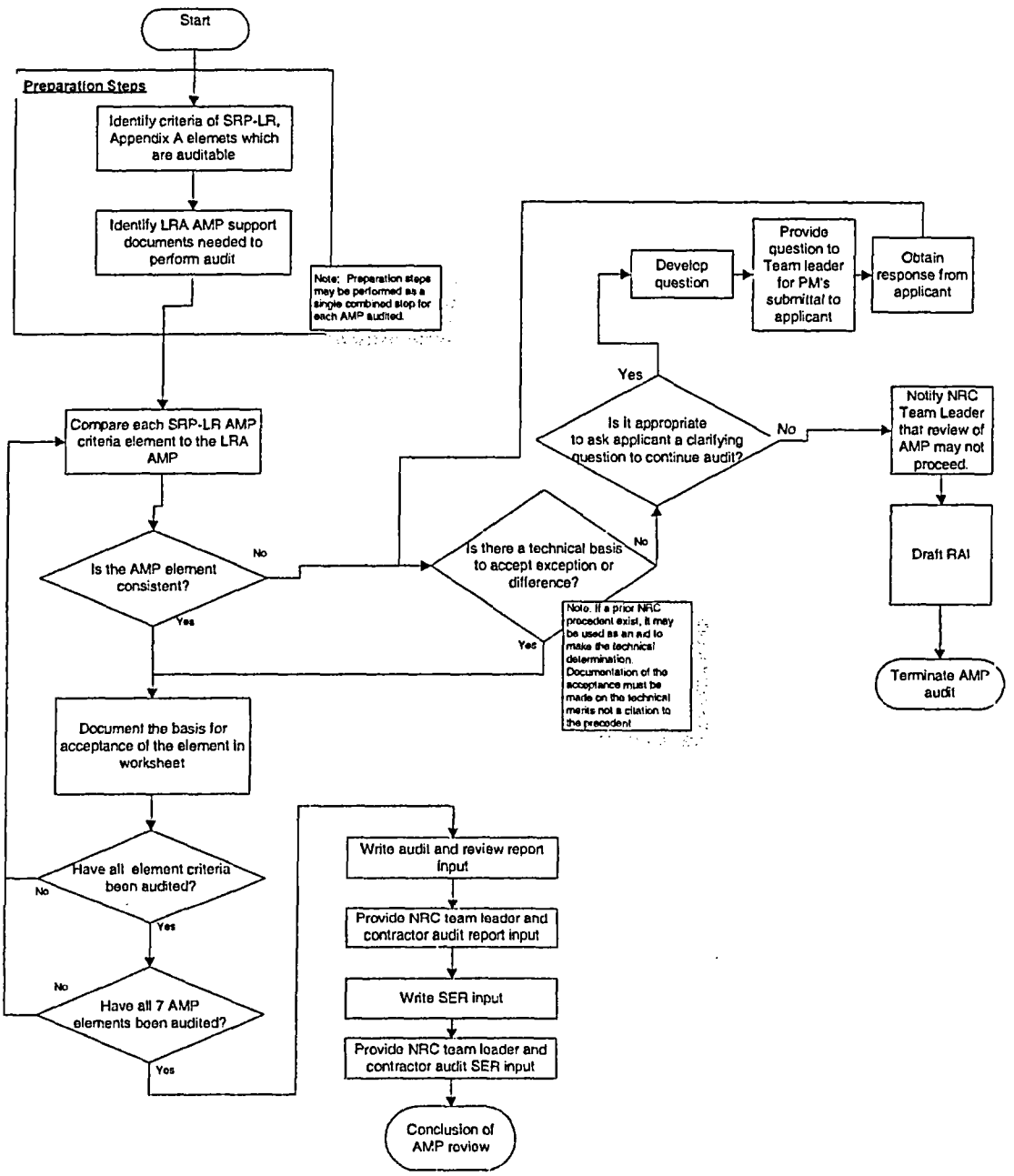

Figure 2. Audit of Plant-Specific AMPs

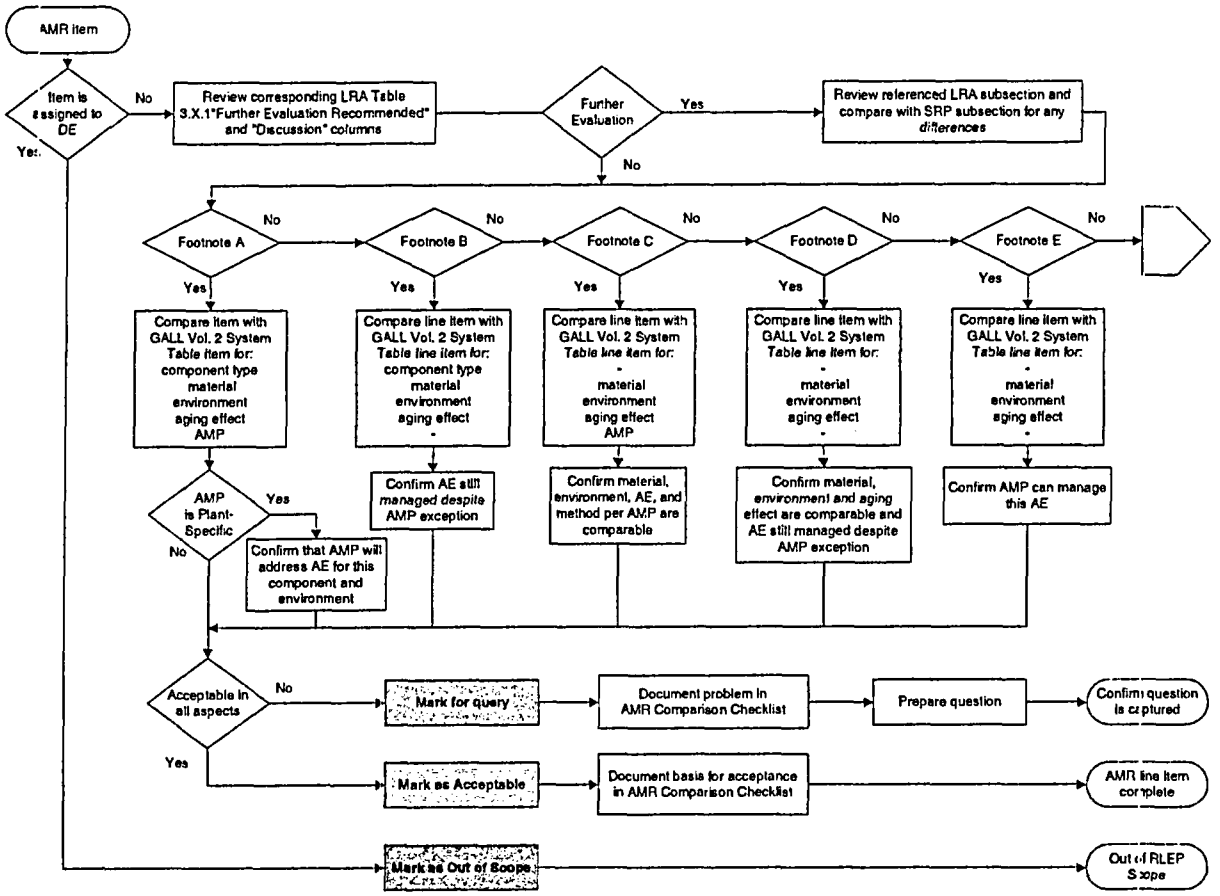

Figure 3. Review of AMRs That Are Consistent With the GALL Report

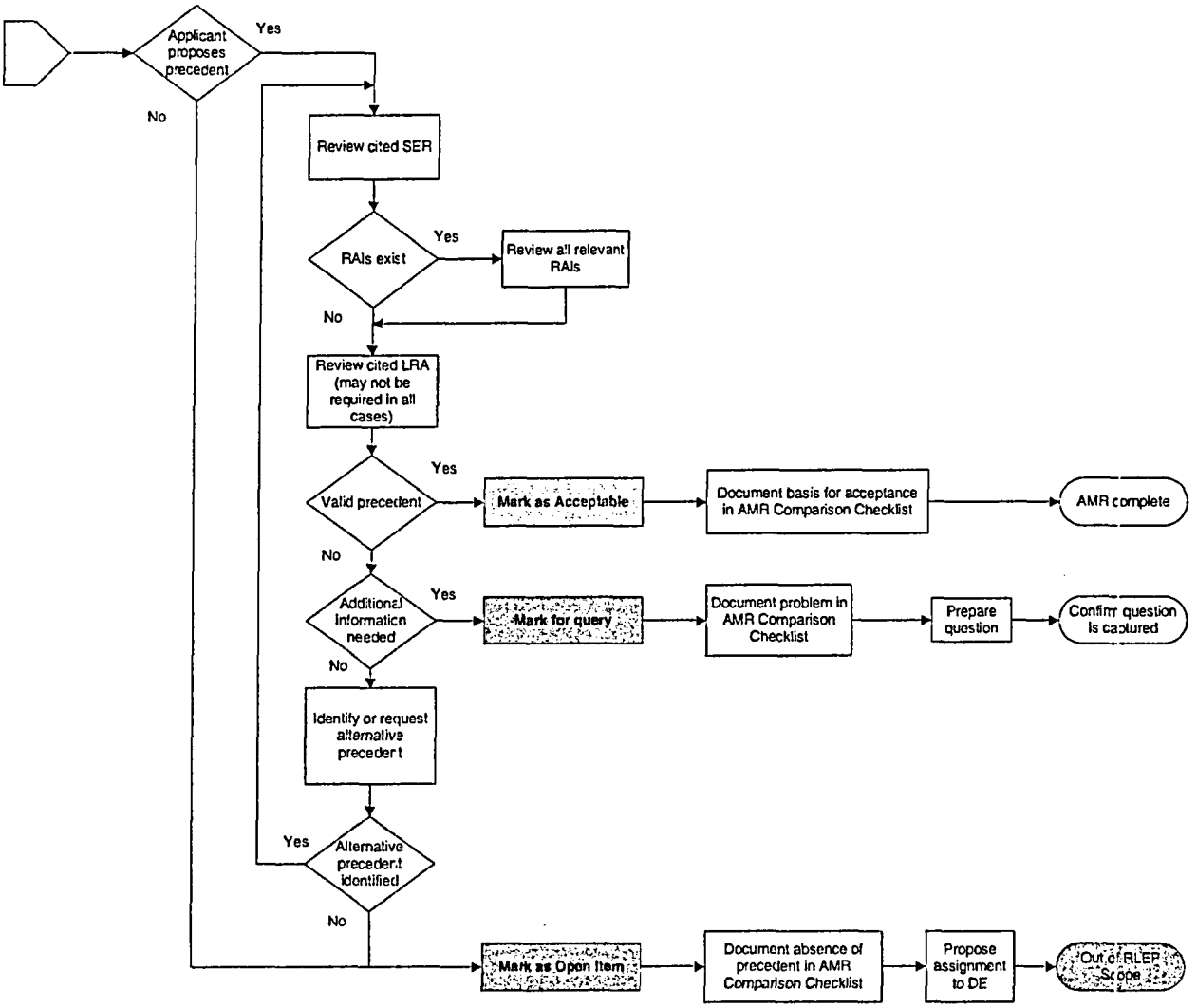

Figure 4. Review of AMRs Using NRC-Approved Precedents

Appendix A

Project Team Membership

Appendix A

Project Team Membership

Organization	Name	Function
NRC/NRR/DRIP/RLEP-B	[NAME]	Team leader
NRC/NRR/DRIP/RLEP-B	[NAME]	Backup team leader
NRC/NRR/DRIP/RLEP-B	[NAME]	Reviewer - [EXPERTISE]
[CONTRACTOR]	[NAME]	Contractor lead, reviewer - [EXPERTISE]
[CONTRACTOR]	[NAME]	Reviewer - Materials
[CONTRACTOR]	[NAME]	Reviewer - Mechanical
[CONTRACTOR]	[NAME]	Reviewer - Structural
[CONTRACTOR]	[NAME]	Reviewer - Systems

Appendix B

RLEP-B Schedule for LRA Safety Review

Appendix B

RLEP-B Schedule for LRA Safety Review

Plant: [NAME] **TAC Number:** [NUMBER]
Team Leader: [NAME]
Backup Team Leader: [NAME]
Project Manager: [NAME]
Contractor: [NAME]

	Activity/Milestone	Scheduled Completion
1	Receive license renewal application	[DATE]
2	Make review assignments (project manager)	[DATE]
3	Train project team	[DATE]
4	Hold team planning (kick-off) meeting	[DATE]
5	Issue audit plan to project manager	[DATE]
6	Conduct first site visit (AMP reviews)	[DATE] - [DATE]
7	Draft AMP audit report input (team members)	[DATE]
8	Draft SER input for AMP reviews (team members)	[DATE]
9	Conduct in-office AMR reviews	[DATE] - [DATE]
10	Conduct second site visit (resolve AMP and AMR questions)	[DATE] - [DATE]
11	Draft AMR audit report input (team members)	[DATE]
12	Draft SER input for AMR reviews (team members)	[DATE]
13	Conduct third site visit (resolve outstanding issues and questions)	[DATE] - [DATE]
14	Conduct public exit meeting	[DATE]
15	Conduct writing session for audit and review report and SER input	[DATE] - [DATE]
16	Cutoff for providing RAIs to project manger	[DATE]
17	Final audit and review report (AMP and AMR sections)	[DATE]
18	Final input for draft SER with open items	[DATE]

Appendix C

Aging Management Program Assignments

NOTE: This appendix of the plan template includes an example table that shows project team AMP work assignments by team member. For a plant-specific plan, the table should be revised as appropriate to reflect the AMP assignments for the plant for which the plan is being prepared.

Appendix C

Aging Management Program Assignments

The following AMPs have been assigned to the project team for review.

LRA AMP Number	GALL Report AMP Number	AMP Title	Consistent with GALL Report		Assigned Reviewer
			Yes	No	
B2.1.1	XI.M1 XI.M3	ASME, Section XI, IWB, IWC, & IWD	X		[LAST NAME]
B2.1.2	XI.S1 XI.S2 XI.S4	ASME, Section XI, IWE and IWL	X		[LAST NAME]
B2.1.3	XI.S3	ASME, Section XI, IWF	X		[LAST NAME]
B2.1.4	XI.M18	Bolting Integrity Program	X		DE
B2.1.5	XI.M22	Boroflex Monitoring Program	X		[LAST NAME]
B2.1.6	XI.M10	Boric Acid Corrosion Program	Yes		DE
B2.1.7	XI.M34	Buried Services Monitoring Program	Yes		[LAST NAME]
B2.1.8	XI.E1 XI.E2 XI.E3	Cable Condition Monitoring Program	X		[LAST NAME]
B2.1.9	XI.M21	Closed-Cycle Cooling Water Surveillance Program	X		[LAST NAME]
B2.1.10	XI.M26 XI.M27	Fire Protection Program	X		[LAST NAME]
B2.1.11	XI.M17	Flow-Accelerated Program	X		[LAST NAME]
B2.1.12	XI.M30	Fuel Oil Chemistry Control Program	X		[LAST NAME]
B2.1.13	XI.M32 XI.M33	One-Time Inspection Program	X		[LAST NAME]
B2.1.14	XI.M20	Open-Cycle Cooling (Service) Water Surveillance Program	X		[LAST NAME]
B2.1.15		Periodic Surveillance and Preventative Maintenance Program	PS		[LAST NAME]
B2.1.16	XI.M11	Reactor Coolant System Alloy 600 Program	X		DE

LRA AMP Number	GALL Report AMP Number	AMP Title	Consistent with GALL Report		Assigned Reviewer
			Yes	No	
B2.1.17	XI.M13 XI.M16	Reactor Vessel Internals Program	X		[LAST NAME]
B2.1.18	XI.M31	Reactor Vessel Surveillance Program	X		DE
B2.1.19	XI.M19	Steam Generator Integrity Program	X		DE
B2.1.20	XI.M23 XI.S5 XI.S6 XI.S7	Structures Monitoring Program	X		[LAST NAME]
B2.1.21	XI.M29	Systems Monitoring Program	X		[LAST NAME]
B2.1.22		Tank Internal Inspection Program	PS		DE
B2.1.23		Thimble Tube Inspection Program	PS		DE
B2.1.24	XI.M2	Water Chemistry Control Program	X		[LAST NAME]
B3.1	X.S1	Environmental Qualification Program	X		[LAST NAME]
B3.2	X.M1	Fatigue Monitoring Program	X		[LAST NAME]
B3.3	X.E1	Pre-Stressed Concrete Containment Tendon Surveillance Program	X		[LAST NAME]

DE = Division of Engineering
PS = plant specific
X = with exceptions

Appendix D

Aging Management Review Assignments

***NOTE:** This appendix of the plan template includes an example table that shows project team AMR work assignments by team member. It also shows a sample page for an AMR work split table. For a plant-specific plan, both tables should be revised as appropriate to reflect the AMR assignments for the plant for which the plan is being prepared. The work split table shall be included with this appendix; not as an attachment to the plan or a reference to a separate ADAMS accession number.*

Appendix D

Aging Management Review Assignments

Aging Management Reviews	Reviewer
3.1 Aging Management of Reactor Vessel, Internals, and Reactor Coolant System	[LAST NAME]
3.2 Aging Management of Engineered Safety Features	[LAST NAME]
3.3 Aging Management of Auxiliary Systems	[LAST NAME]
3.4 Aging Management of Steam and Power Conversion Systems	[LAST NAME]
3.5 Aging Management of Containment, Structures, and Component Supports	[LAST NAME]
3.6 Aging Management of Electrical and Instrumentation and Controls	[LAST NAME]

NOTE: Following is an introduction to the work split tables. This text should be revised, as appropriate, to reflect the specific method used to show the project team work assignments in the work split table.

The specific AMRs to be reviewed by the project team are shown in the following table. The project team will review all the AMRs identified in the table except for those grayed out in the "Notes" column. The AMR line items that are grayed out will be evaluated by other NRC staff. The results of those evaluations will be reported in Section 3 of the [PLANT ACRONYM] SER.

Classification of AMRs (Reviewed (R) or Not Reviewed (NR))

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Volume 2 Line Item	Table 1 Item	Notes	
Bolting for Flanged Piping Joints, RCP and Valve Closure	Mechanical Closure Integrity	Low Alloy Steel	Borated Water Leaks (External)	Loss of Mechanical Closure Integrity due to Aggressive Chemical Attack	Boric Acid Corrosion Program	IV.C2.3-f, IV.C2.4-f	3.1.1-38	A	NR
			Containment (External)	Loss of Mechanical Closure Integrity due to Stress Relaxation	Bolting Integrity Program	IV.C2.3-g, IV.C2.4-g	3.1.1-26	B	NR
Orifices and Reducers	Pressure Boundary	Stainless Steel	Containment (External)	None	None Required			J	R
			Treated Water - Primary, 140HF<T<480HF (Internal)	Cracking due to SCC	Water Chemistry Control Program	(IV.C2.2-h)	(3.1.1-07)	D, 20	

In the example above, NR indicates the AMR was *not* reviewed and R indicates that the AMR was reviewed. The line items for the "Notes" cells that are shaded are assigned to the project team for review.

Appendix E

Consistent with GALL Report AMP Audit/Review Worksheet

Appendix E

Consistent with GALL Report AMP Audit/Review Worksheet

The worksheet provided in this appendix provides, as an aid for the reviewer, a process for documenting the basis for the assessment of the elements and sub-elements contained in the GALL Report AMPs (Chapter XI of NUREG-1801, Volume 2). The worksheet provides a systematic method for recording the basis for assessments or to identify when the applicant needs to provide clarification or additional information. Information recorded in the worksheets will also be used to prepare the audit and review report and the safety evaluation report input.

Consistent with GALL Report AMP Audit/Review Worksheet

LRA Appendix Subsection:	LRA AMP Title:
GALL Report Subsection:	GALL Report Title:

A. Element Review and Audit

Program Description:
□ Consistent with GALL Report □ Difference Identified
Discussion:

1. Scope of Program:
□ Consistent with GALL Report □ Exception □ Enhancement □ Difference Identified
Discussion:

2. Preventive Action:
□ Consistent with GALL Report □ Exception □ Enhancement □ Difference Identified
Discussion:

3. Parameters Monitored/Inspected:
□ Consistent with GALL Report □ Exception □ Enhancement □ Difference Identified
Discussion:

4. Detection of Aging Effects:
□ Consistent with GALL Report □ Exception □ Enhancement □ Difference Identified
Discussion:

5. Monitoring and Trending:
□ Consistent with GALL Report □ Exception □ Enhancement □ Difference Identified
Discussion:

6. Acceptance Criteria:
□ Consistent with GALL Report □ Exception □ Enhancement □ Difference Identified
Discussion:

7. Corrective Action: ***To be performed by DIPM***

8. Confirmation Process: ***To be performed by DIPM***

9. Administrative Controls: ***To be performed by DIPM***

10. Operating Experience:

B. FSAR supplement review: *(Include any commitments.)*

C. Remarks and questions:

D. References/documents used: *(Include number designation, full title, revision number, date, and page numbers, and ADAMS accession number.)*

E. Applicant contact:

Project team member: _____ **Date:** _____

Appendix F

Plant-Specific AMP Audit/Review Worksheet

Appendix F

Plant-Specific AMP Audit/Review Worksheet

The worksheet provided in this appendix provides, as an aid for the reviewer, a process for documenting the basis for the assessments concerning individual program elements and sub-elements contained in Branch Technical Position RLSB-1 "Aging Management Review - Generic," in Appendix A to the SRP-LR. The worksheet provides a systematic method to record the basis for assessments or identifying when the applicant needs to provide additional information. Information recorded in these worksheets will be used when preparing the audit and review report and the safety evaluation report input.

Plant-Specific AMP Audit/Review Worksheet

AMP Title: _____

Appendix Subsection: _____

A. Element Review and Audit

1. Scope of Program:
__ Consistent with SRP-LR __ Exception __ Difference Identified

Discussion:

SRP-LR Criteria	LRA AMP	Comment*

2. Preventive Action:
__ Consistent with SRP-LR __ Exception __ Difference Identified

Discussion:

SRP-LR Criteria	LRA AMP	Comment*

3. Parameters Monitored/Inspected:
__ Consistent with SRP-LR __ Exception __ Difference Identified

Discussion:

SRP-LR Criteria	LRA AMP	Comment*

4. Detection of Aging Effects:
__ Consistent with SRP-LR __ Exception __ Difference Identified

Discussion:

SRP-LR Criteria	LRA AMP	Comment*

5. Monitoring and Trending:
__ Consistent with SRP-LR __ Exception __ Difference Identified

Discussion:

SRP-LR Criteria	LRA AMP	Comment*

6. Acceptance Criteria:
__ Consistent with SRP-LR __ Exception __ Difference Identified

Discussion:

SRP-LR Criteria	LRA AMP	Comment*

7. **Corrective Action: To be performed by DIPM**

8. **Confirmation Process: To be performed by DIPM**

9. **Administrative Controls: To be performed by DIPM**

10. **Operating Experience:**
__ Consistent with SRP-LR __ Exception __ Difference Identified

Discussion:

SRP-LR Criteria	LRA AMP	Comment*

* Consistent or technical basis for accepting exception or difference

B. FSAR supplement review: (Include any commitments.)

C. Remarks and questions:

D. References/documents used: (Include number designation, full title, revision number, date, page numbers, and ADAMS accession number.)

E. Applicant contact:

Project team member: _____ **Date:** _____

Appendix G

AMR Comparison Worksheets

[PLANT ACRONYM] AMR Component (Table 1) Worksheet			Audit Date:
Unit:	Table No.:	Chapter:	
Auditor Name(s) :			

The audit team verified that items in Table 3.x.1 (Table 1) correspond to items in the GALL Volume 1, Table X. All items applicable to PWRs in Table 1 were reviewed and are addressed in the following table.

Item No.	Further Evaluation Recommended	Discussion

Audit Remarks (Document all questions for the applicant here):

No.	Question for applicant (draft per RAI guidance)	Response (with date)

References/Documents Used:

1.
2.
3.
4.

[PLANT ACRONYM] AMR MEAP Comparison (Table 2) Worksheet		Audit Date:
Unit:	Table No.:	Chapter:
Auditor Name(s) :		

Line items to which Notes A, B, C, D, and E are applied or for which a precedent was cited (except for those assigned to DE) were reviewed for: 1) consistency with NUREG-1801, Volume 2 tables, and 2) adequacy of the aging managing programs. All items in the Table 2 of the system named above are acceptable with the exception of items in **boldface** type. (Reviewers need not duplicate information in the 2nd-5th columns that are reflected in the discussion/draft audit report.)

LRA Page No.	Component Type	Material	Environment	Aging Effect	Note	Discussion (draft as Audit Report input)

Audit Remarks (Document all questions for the applicant here):

No.	Question for applicant (draft per RAI guidance)	Response (with date)

References/Documents Used:

5.
6.
7.

Appendix H

Acronyms, Abbreviations, and Initialisms

Revise list as appropriate for plant-specific audit plan

Appendix H

Acronyms, Abbreviations, and Initialisms

ADAMS	Agencywide Documents Access and Management System
AMP	aging management program
AMR	aging management review
ASME	American Society of Mechanical Engineers
CLB	current licensing basis
DE	Division of Engineering
DIPM	Division of Inspection Program Management
FSAR	final safety analysis report
GALL	Generic Aging Lessons Learned
ISG	interim staff guidance
LRA	license renewal application
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
RAI	*request for additional information*
RLEP-B	License Renewal and Environmental Impacts Program, Section B
RLSB	License Renewal and Standardization Branch
SC	structures and components
SER	safety evaluation report
SRP-LR	Standard Review Plan-License Renewal
SSC	structure, system, and component
UFSAR	updated final safety analysis report

DRAFT, REVISION 2, JUNE 15, 2004

Plain English Guidelines for Preparing Audit and Review Reports

The purpose of this document is to provide guidance for documenting the audits and reviews of license renewal applications (LRAs) that are performed by Section B of the License Renewal and Environmental Impacts Program (RLEP-B) and to enhance consistency, quality, and completeness of the audit and review reports.

All work performed by the project team must be documented in an audit and review report. The following guidelines address the preparation of the reports. Each project team member should become familiar with the guidelines *before* performing an audit and review. This will ensure that he/she collects sufficient information during the audit and review to prepare his/her input to the report. After the audit and review report is completed, it will be used to prepare a safety evaluation report (SER) input.

GENERAL

1. ***Report writing.*** Each project team member *must* prepare the report input for the audit and review activities that he or she performed. The contractor should collect the individual report inputs, and should assemble and compile the inputs into a coherent and internally consistent report.

2. ***Follow the prepared staff direction and guidance.*** The project team should follow these guidelines and the team leader's direction in preparing the audit and review report. Questions concerning report preparation should be directed to the NRC project team leader.

3. ***Report format and content.*** The general format and content for the audit and review report are shown in the attachment to these guidelines. The report should be a stand-alone document. It should identify all submittals and other documents (e.g., FSAR, staff guidance documents, etc.) that were reviewed or used as a basis for evaluating the licensee's program.

4. ***Report model.*** In general, previously published audit and review reports can be used as models for preparing audit and review reports. Such reports will provide insights on the appropriate level of detail for the reports, information on how specific issues were handled and documented, and information on regulatory language and style. Using previously published reports as models will also facilitate preparation of the SER input after the report is completed. Previously issued requests for additional information (RAIs) and SERs may also provide insights about how to address and document activities, programs, or issues that have not been documented in previous audit and review reports.

5. ***Use existing documents and material - minimize creativity.*** Typically, the work performed by the project team has been done many times before. When preparing report input, the team members should use existing (previously prepared and previously reviewed and approved) documentation and materials to the extent practicable. For example, they should cut and paste from the LRA, the guidance documents, previous audit and review reports, previous SERs, etc. The material should be edited as appropriate for internal consistency, flow, and context.

6. ***General.*** In preparing the report, the team members should bear in mind that the report is for the information and use of individuals that were not involved in the audit and review process. As such, it needs a certain context, flow, and logic to support the readers understanding of what the project team did and what they concluded.

7. ***Use plain English.*** Use plain English.

TECHNICAL AND PROCESS

8. ***Threshold for documenting interactions between the project team and the applicant.*** In general, the team should not document each discussion with the applicant (the so called "he said, she said" or "question and answer" material) in its report. However, the team should *document interactions that caused the applicant to change a program or activity.* For purposes of these guidelines, changes to programs and activities can be of two general types:

   A. those that require that the applicant submit a supplement to its LRA or formally respond to a RAI to resolve a question or issue– an example is a revision to an AMP described in the LRA–and

   B. those that do not involve a submittal but require that the applicant revise an on-site document to resolve a question or issue. Examples include revisions to bases documents and implementing procedures.

   For both types of programs and activities, the team should document the nature of the issue, the applicant's response to the issue (e.g., agreement or disagreement), and the action that the applicant took to address or resolve the issue. For example:

   > The project team identified a difference in the detection of aging effects element. The applicant claimed that its AMP will detect aging effects prior to loss of component intended function through Type A integrated leak rate tests (ILRT) and Type B ILRT, while the GALL AMP states that only the leak-tightness and structural integrity of the containment are demonstrated through ILRT. ILRT by itself does not provide information that would indicate that aging degradation has initiated or that the capacity of the containment may have been reduced for other types of loads. The applicant agreed with the project team and committed to revise the aging effects element of the AMP to make it consistent with the GALL AMP. In a letter dated September 24, 2003, the applicant committed to implement XI.S1 (IWE) and

XI.S2 (IWL). IWE and IWL are acceptable components of a containment inservce inspection program. On the basis of this change, the applicant's AMP is now consistent with the GALL AMP and is, therefore, acceptable.

9. ***Documents reviewed by the project team.*** Documents reviewed by the project team fall into two general categories: key documents and supporting documents. A key document is one that contains information that directly supports the teams review and is used by the team to verify the applicant's claims of consistency with the GALL Report. Such documents typically include the LRA and the applicant's basis documents. Supporting documents typically provide clarifying information. They could include, as examples, implementing procedures, condition reports, and drawings.

   The documents reviewed by the project team must be captured in two places in the report. First, the key documents must be explicitly mentioned in the body of the report, in the section of the report that documents the results of the team's review of the particular AMP or AMR. The report writeups should include full citations for the key documents as well as a brief discussion of the contents of the documents and their relevance to the team's review. Following is an example for an AMP writeup:

   > In Appendix B, Section B.1.12 of the LRA, the applicant stated that its 10 CFR 50 Appendix J leak rate testing program is consistent with GALL XI.S4, "10 CFR 50 Appendix J." The project team reviewed Section 7.2 of Technical Report TR00170-003, "Structures Aging Management Review for License Renewal," Revision 0, dated July 3, 2002. Section 7.2 of this report describes the applicant's aging management program contained in Appendix B.1.12 of the LRA.

   In addition, all key *and* supporting documents must be included in the attachment to the report that lists the documents reviewed by the project team (typically, Attachment 5). Again, this applies to both AMPs and AMRs. This document list should be arranged by report section and should include the full citation for each document as specified in Item 20, below.

10. ***Documenting GALL exceptions and enhancements.*** First, briefly state the GALL criteria and then state the exception or enhancement proposed by the applicant. The team *must* document its bases for accepting exceptions to GALL and plant specific programs.

11. ***Documenting evaluations.*** The evaluation should (1) clearly explain why the proposed program or activity satisfies the applicable regulatory guidance and regulatory requirements and (2) provide a clear link to the conclusions reached by the team, as documented in the conclusion section.

12. ***Operating experience.*** Industry and plant-specific operating experience is an area of emphasis for review. It is reviewed to identify aging effects requiring management that are not identified by the industry guidance documents and to confirm the effectiveness of aging management programs. The team members should consider the industry guidance when assessing operating experience, in formulating questions for the

applicant, and in documenting the review. The industry guidance (from NEI 95-10, Revision 3) is as follows.

A. Operating Experience - Aging Effects Requiring Management. A plant-specific operating experience review should assess the operating and maintenance history. A review of the prior five to 10 years of operating and maintenance history should be sufficient. The results of the review should confirm consistency with documented industry operating experience. Differences with previously documented industry experience such as new aging effects or lack of aging effects allow consideration of plant-specific aging management requirements.

B. Operating Experience With Aging Management Programs. Plant-specific operating experience with existing programs should be considered. The operating experience of aging management programs, including past corrective actions resulting in program enhancements or additional programs, should be considered. The review should provide objective evidence to support the conclusion that the effects of aging will be managed so that the intended function(s) will be maintained during the extended period of operation. Guidance for reviewing industry operating experience is presented in BTP RLSB-1 in Appendix A.1 of the Branch Technical Positions in NUREG-1800.

C. Industry Operating Experience. Industry operating experience and its applicability should be assessed to determine whether it changes plant-specific determinations. NUREG-1801 is based upon industry operating experience prior to its date of issue. Operating experience after the issue date of NUREG-1801 should be evaluated and documented as part of the aging management review. In particular, generic communications such as a bulleting or an information notice should be evaluated for impact upon the AMP. The evaluation should check for new aging effects or a new component or location experiencing an already identified aging effect.

13. ***Applicant commitments.*** Like documents, the project team must capture each commitment that it reviewed in two places in the report. First, each commitment must be discussed in the body of the report. This should include the nature of the commitment and where it was made by the applicant (e.g., LRA, UFSAR supplement, letter, etc.). Second, each commitment must be included in the report attachment (typically Attachment 6) that summarizes the commitments reviewed by the project team. This information will transfer directly into the SER input.

14. ***Reviews that involve NRC-approved precedents.*** To help facilitate the staff review of its LRA, an applicant may reference NRC-approved precedents to demonstrate that certain non-GALL programs correspond to programs that the staff had approved for other plants during its review of previous applications for license renewal. It is not acceptable to simply refer to an NRC-approved precedent as the basis for accepting the applicant's program that is based on a precedent. Thus, report statements like the following are *not* acceptable: "The applicant cited the [previously approved precedent] established in the SER for ANO-1. The project team finds this acceptable."

15. ***Documenting conclusions.*** Standardized conclusion statements should be used throughout the report for each of the review variations encountered (e.g., consistent with the GALL Report, consistent with the GALL Report with exceptions, plant specific, etc.) by the project team. *In no case should a precedent be explicitly discussed in a conclusion.* Examples of acceptable conclusion statements include:

A. ***For a GALL program*** "On the basis of its audit and review of the applicant's program, the project team finds that those portions of the program for which the applicant claims consistency with the GALL program are consistent with the GALL program. Since the GALL program is acceptable to the staff, the project team concludes that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB during the period of extended operation, as required by 10 CFR 54.21(a)(3). On the basis of its review of the UFSAR supplement for this AMP, the project team also finds that it provides and adequate summary description of the program, as required by 10 CFR 54.21(d)."

B. ***For a GALL program with an open or confirmatory item:*** "On the basis of its audit and review of the applicant's program, pending satisfactory resolution of Confirmatory Item ____ [and/or Open Item ____] the project team finds that those portions of the program for which the applicant claims consistency with the GALL program are consistent with the GALL program. Since the GALL program is acceptable to the staff, the project team concludes that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB during the period of extended operation, as required by 10 CFR 54.21(a)(3). On the basis of its review of the UFSAR supplement for this AMP, the project team also finds that it provides and adequate summary description of the program, as required by 10 CFR 54.21(d)."

C. ***For a GALL program with exceptions:*** "On the basis of its audit and review of the applicant's program, the project team finds that those portions of the program for which the applicant claims consistency with the GALL program are consistent with the GALL program. In addition, on the basis of its review of the exceptions to the GALL program, the project team finds that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB during the period of extended operation, as required by 10 CFR 54.21(a)(3). On the basis of its review of the UFSAR supplement for this AMP, the project team also finds that it provides an adequate summary description of the program, as required by 10 CFR 54.21(d)."

A conclusion like the above can be modified to include an open or confirmatory item, as documented in subsection 15.B, above.

D. ***For a GALL program with enhancements:*** "On the basis of its audit and review of the applicant's program, the project team finds that those portions of the program for which the applicant claims consistency with the GALL program are consistent with the GALL program. In addition, on the basis of its review of the enhancement

to the GALL program, the project team finds that the applicant's program provides for adequate management of the aging effects for which the program is credited so that the intended functions will be maintained consistent with the CLB during the period of extended operation, as required by 10 CFR 54.21(a)(3). On the basis of its review of the UFSAR supplement for this AMP, the project team also finds that it provides and adequate summary description of the program, as required by 10 CFR 54.21(d)."

A conclusion like the above can be modified to include an open or confirmatory item, as documented in subsection 15.B, above.

E. ***For a GALL program with exceptions and enhancements:*** "On the basis of its audit and review of the applicant's program, the project team finds that those portions of the program for which the applicant claims consistency with the GALL program are consistent with the GALL program. In addition, on the basis of its review of the clarifications, exceptions, and enhancements to the GALL program, the project team finds that the applicant's program provides for adequate management of the aging effects for which the program is credited so that the intended functions will be maintained consistent with the CLB during the period of extended operation, as required by 10 CFR 54.21(a)(3). On the basis of its review of the UFSAR supplement for this AMP, the project team also finds that it provides and adequate summary description of the program, as required by 10 CFR 54.21(d)."

A conclusion like the above can be modified to include an open or confirmatory item, as documented in subsection 15.B, above.

F. ***When GALL recommends further evaluation:*** "On the basis of its audit and review, the project team finds that the applicant appropriately evaluated AMR results involving [*the issue for which GALL recommends further evaluation*], as recommended in the GALL Report. Since the applicant's AMR results are otherwise consistent with the GALL Report, the project team finds that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB during the period of extended operation, as required by 10 CFR 54.21(a)(3)."

G. ***For a program that is not based on a GALL program*** "On the basis of its audit and review of the applicant's program, the project team finds that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB during the period of extended operation, as required by 10 CFR 54.21(a)(3). On the basis of its review of the UFSAR supplement for this AMP, the project team also finds that it provides and adequate summary description of the program, as required by 10 CFR 54.21(d)."

16. ***Applicant actions that exceed NRC requirements or guidance.*** In the draft reports for some of the pilot plants, the team noted that the applicant had committed to actions that

exceed those needed to satisfy NRC requirements or guidance. The reports also noted that the team had advised the applicant that it did not need to perform these voluntary actions. Project team member should not inform the applicant that it does not need to perform voluntary actions that exceed those needed to satisfy NRC requirements or guidance. Moreover, since such discussions should not take place, they should not be documented in the team's report.

FORMAT AND STYLE

17. ***NRC Editorial Style Guide.*** Follow the *NRC Editorial Style Guide* (NUREG-1379) and the following guidance to ensure consistency in such report features as abbreviations, capitalization, compound words, numbers, symbols, punctuation, references, etc. Refer to the *United States Government Printing Office Style Manual* for style information not covered in the *NRC Editorial Style Guide* or these guidelines. Questions concerning editorial style should be directed to the NRC project team leader.

18. ***The active voice should predominate.*** It should not be difficult for the reader to tell who did what. Therefore, although there are legitimate uses for the passive voice, it should be used sparingly and the active voice should predominate. For example, statements like the following may confuse the reader: "The plant-specific operating experience was reviewed ..." The reader is left to guess who reviewed the operating experience; the applicant or the project team. Any confusion is easily eliminated by simply restructuring the sentence such as "The project team reviewed the operating experience..." or "The applicant reviewed the operating experience..."

19. ***Who said what, and where?*** Statements like "the applicant stated [something]" add confusion because the reader can not tell in what context the applicant made the statement. It could have been made in the license renewal application, in a letter, in a basis document, or during a conversation with a team member. In its report, the team needs to be clear about who said what, in what context, using what vehicle.

20. ***References and documents reviewed by project team.*** When citing or listing references and documents used or reviewed by the team, include, as appropriate, the author, number, title, volume, page numbers, revision number, and date.

21. ***Word usage.*** Don't use "LRA AMP." Rather, use, for example, "[plant name] AMP" or "AMP for [plant name]," or ".... the applicant described its AMP." Apply the same style rule to the use of AMR.

22. ***Acronyms and abbreviations.*** Spell out the first use of all acronyms and abbreviations; even such common ones as NRC.

23. ***Capitalization.*** The use of capitalization should be kept to a minimum and should follow the rules in the *NRC Editorial Style Guide*. Such words and terms as team leader, license renewal application, safety evaluation report, etc., should not be capitalized. In addition, programs should be lower case unless the program name is used in the context of a title. As examples:

Okay The applicant's bolting integrity program is discussed in LRA Section B.1.1, "Bolting Integrity Program."

Okay The applicant's boric acid corrosion (BAC) prevention program is discussed in LRA Section B.2.1, "Boric Acid Corrosion Prevention Program." The applicant states that the program is consistent with GALL program XI.M.10, "Boric Acid Corrosion," with several enhancements which it will make prior to the period of extended operation.

Not okay The applicant provided its FSAR supplement for the Diesel Fuel Monitoring program in Section A.2.1.7 of the LRA.

24. ***Citations.*** When a reference or a document is first introduced in the report, use a complete citation (e.g., "Standard Review Plan for Review of License Renewal Application for Nuclear Power Plants" (SRP-LR), dated July 2001). Use the short form of the citation (e.g., SRP-LR) throughout the remainder of the report.

25. ***Provide ADAMS accession numbers*** for all documents that have them. For example:

    By letter dated October 14, 2003 (ADAMS Accession Number ML0328904920), Entergy Operations, Inc. (Entergy, the applicant) submitted to the U.S. Nuclear Regulatory Commission (NRC) its application for renewal of Operating License NPF-6 for Arkansas Nuclear One, Unit 2 (ML032890506, ML032930193, and ML032930198).

26. ***References to docketed correspondence.*** References to correspondence submitted by the applicant to address issues should be presented as follows: "By letter dated ____, (MLXXXXXXXXXX), the applicant stated that it had revised AMP B.1.12 to include..."

27. ***Consistent use of terminology and presentation of material.*** Terminology and presentation of material (e.g., references) should be both internally and externally consistent. i.e., there should be consistency in terminology between the NRC guidance documents, the audit plan, the audit report, and the SER input. Examples include:

    A. Use program <u>elements</u> not program <u>attributes</u>

    B. Use "NRC-approved precedent" not "previously approved precedent" or other characterization.

    C. Use the following convention (as examples) when citing references:

    - Title 10 of the *Code of Federal Regulations*, Part 54 (10 CFR Part 54), "Requirements for Renewal of Operating Licenses for Nuclear Power Plants"
    - NUREG-1800, "Standard Review Plan for Review of License Renewal Application for Nuclear Power Plants" (SRP-LR), dated July 2001

D. Don't use "matches the GALL AMP." Use "consistent with the GALL AMP."

E. Don't use "no significant differences with..." Use "consistent with..."

Attachment

Format and Content of Audit and Review Report

This attachment is taken from Section 6.3.1 of the RLEP-B template for preparing an audit and review plan.

6.3.1. Audit and review report

1. Format and content of the audit and review report. The report should include the following:

   A. Cover page
   B. Table of contents
   C. Section 1, Introduction
   D. Section 2, Background
   E. Section 3, Summary of Information in the License Renewal Application
   F. Section 4, Audit and Review Scope
   G. Section 5, Audit and Review Process
   H. Section 6, Exit Meeting
   I. Section 7, Audit and Review Results
      (1) Section 7.1, Aging Management Programs
      (2) Section 7.2, Aging Management Reviews
   J. Attachment 1, Acronyms and Initialisms
   K. Attachment 2, Project Team and Applicant Personnel
   L. Attachment 3, Elements of an Aging Management Program for License Renewal
   M. Attachment 4, Disposition of Requests for Additional Information, LRA Supplements, and Open Items
   N. Attachment 5, List of Documents Reviewed
   O. Attachment 6, List of Commitments

2. The following paragraphs describe, in general, the type of information and the level of detail necessary for each report section.

   A. A cover page that identifies the following:
      (1) name of the plant and units
      (2) docket number of the plants
      (3) organization preparing the report
      (4) contract number under which the work was performed
      (5) statement that the report was prepared for the License Renewal and Environmental Impacts Program, Division of Regulatory Improvement Programs, Office of Nuclear Reactor Regulation
      (6) issue date
   B. Table of Contents.
   C. Section 1, Introduction. This section of the report should provide an overview of the audit and review conducted by the project team. It should also list key audit and review activities, including site visits, and the organizations supporting the audit and review.
   D. Section 2, Background. This section of the report should include a summary of the license renewal requirements as stated in the *Code of Federal Regulations*

and a summary of the documents that the project team used to carry out the audit and review. This section of the report should be taken directly from the audit and review plan.

E. Section 3, Summary of Information in the License Renewal Application. This section of the report should include a description of the information contained in the license renewal application that is applicable to the audit and review. This section of the report should be taken directly from the audit and review plan.

F. Section 4, Audit and Review Scope. This section of the report should include statements that:
   (1) The audit and review was performed to fulfill the criteria of 10 CFR 54.21(a)(3).
   (2) The audit and review was performed in accordance with the guidance contained in the SRP-LR and the GALL Report.
   (3) This section also identifies the breadth of the audit performed, stating that the audits and reviews were limited to those AMPs and AMRs assigned to the project team.
      (a) Include in this section a description of the nominal rules used to make the work assignments.
      (b) This section shall note that only seven of the ten AMP elements were audited by the project team and that the other three elements were reviewed by other sections of the NRC staff.

G. Section 5, Audit and Review Process. This section of the report should state that the audit and review was performed in accordance with the processes defined in the audit and review plan and should summarize the audit and review process for AMPs, AMRs, and the UFSAR supplement.

H. Section 6, Exit Meeting.

I. Section 7, Audit and Review Results. This section of the report should include:
   (1) AMPs and AMRs reviewed. The table of contents lists those AMPs reviewed. The audit and review plan documents which AMRs were reviewed by the project team.
   (2) AMPs consistent with the GALL Report. The team's audit and review of each AMP that the applicant identified as consistent with the GALL Report should be documented in the report. Each AMP should have an individual section in the report that includes the following:
      (a) A subsection that identifies the plant AMP name, LRA section number and title, and a statement regarding the consistency of the plant AMP with the GALL Report AMP on which it is based.
      (b) A subsection describing the scope of the plant AMP.
      (c) A subsection describing the plant AMP consistency with respect to the GALL Report AMP, the documents reviewed, and the applicant staff interviewed.
      (d) A subsection listing the exceptions and/or enhancements and associated program elements to the GALL Report AMP, a restatement of the GALL Report AMP program element criteria that apply to the exception or enhancement, and an evaluation that clearly explains why any exceptions (identified by either the applicant or the project team) or enhancements to the plant AMPs are acceptable.

(e) A review of operating experience used to justify the acceptance of the AMP.
(f) A discussion concerning the adequacy of the applicant's commitment to revise the UFSAR.
(g) A subsection that provides the evaluation and basis for concluding that the plant AMP is consistent with the GALL Report AMP.
(h) If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.
(i) If an RAI was issued concerning the AMP, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.

(3) Plant-specific AMPs. Each plant specific AMP reviewed by the project team should be documented in the audit and review report. This documentation should include:
(a) a subsection identifying the name of the plant AMP, the LRA section number and title, and a description of the scope of the plant AMP.
(b) a subsection that describes the team's review of the seven AMP program elements against the program element criteria in the SRP-LR.
(c) the basis for concluding that each of the seven AMP program elements reviewed by the team is acceptable.
(d) the basis for accepting any exceptions or enhancements to the program element criteria.
(e) If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.
(f) If an RAI was issued concerning the AMP, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.
(g) a discussion of the plant-specific and industry operating experience (one of the seven program elements reviewed by the team), and the review of the operating experience that was used by the team to support its conclusion that the AMP is acceptable.
(h) a discussion concerning the adequacy of any commitments to revise the UFSAR.
(i) the basis for concluding that the plant AMP will adequately manage the effects of aging so that the intended functions will be maintained consistent with the CLB during the period of extended operation.

(4) Aging management reviews. This introductory section should include the following:
(a) A brief summary of what the project team reviewed to perform the audit and review, i.e., the LRA, the SRP-LR, and the applicant's basis documents

(b) A summary review of the AMR notes (A through J) used by the applicant to classify the AMR line items used in the LRA Tables 3.X.2-Y.
(c) The basis for accepting any exceptions to GALL AMRs that were identified by the applicant or the project team reviewer.
(d) If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.
(e) If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.
(f) An introductory section for each LRA Section 3.X should be included that contains the LRA section reviewed and a summary of the type of information provided in the section of the LRA reviewed, including a listing of the AMPs reviewed for this LRA section.

(5) AMRs consistent with the GALL Report for which no further evaluation is recommended. This section shall include the following:
(a) The project team will document information on AMRs consistent with the GALL Report for which no further evaluation is required only if it had an audit finding that resulted in an open item requiring a docketed response from the applicant or an RAI.
(b) If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.
(c) If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.
(d) Provide a evaluation and finding that verifies that:
(1) the applicant identified the applicable aging effects
(2) the applicant defined the appropriate combination of materials and environments
(3) The applicant specified acceptable AMPs
(e) Provide a conclusion stating, if appropriate, that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, and that 10 CFR 54.21(a)(3) has been satisfied.

(6) AMRs consistent with the GALL Report for which further evaluation is required. This section of the report should include:
(a) A subsection for each of the LRA sections (3.X.2.2.Y) containing the applicant's further evaluations of AMRs for which further evaluation is recommended.
(b) For each LRA Section 3.X.2.2.Y containing the applicant's further evaluations, include the following:

(1) A statement that the project team audited the applicant's further evaluations against the criteria contained in Section 3.X.2.2.Y of the SRP-LR.
(2) The SRP-LR Section 3.X.2.2.Y criteria.
(3) The basis for concluding that the applicant's evaluation of the aging effect satisfies the criteria contained in Section 3.X.2.2.Y of the SRP-LR.
(4) If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.
(5) If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.
5) A concluding paragraph summarizing the project team evaluation of the particular aging effect.

(7) AMR results that are not consistent with the GALL Report. This section of the report documents reviews of AMRs that are not consistent with the GALL Report. The audit and review report should include the following:
(a) A summary of the type of information provided in the section of the LRA reviewed. Identify the LRA Tables 3.X.2-Y listed in this section.
(b) For each LRA Table 3.X.2-Y in LRA Section 3.X, the results and findings of NRC-approved precedents that were reviewed.
(c) A evaluation and finding that verifies that:
(1) the applicant identified the applicable aging effects
(2) the applicant listed the appropriate combination of materials and environments
(3) the applicant identified acceptable AMPs
(d) If the applicant submitted an amendment or a supplement to its LRA to resolve a question or issue, document the submittal (include the date and the ADAMS accession number), explain the issue that the submittal resolved, and discuss the basis for the resolution.
(e) If an RAI was issued, identify the RAI number and briefly discuss the RAI. State if the RAI remains open or if the applicant has submitted a response. If the applicant's response to the RAI was acceptable, document the basis for its acceptance.
(f) Provide a conclusion stating, if appropriate, that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, and 10 CFR 54.21(a)(3) has been satisfied.

J. Attachment 1, Acronyms and Initialisms.
K. Attachment 2, Project Team and Applicant Personnel. This attachment should identify the project team members, the key applicant personnel who were consulted during the audit and review, and the individuals that attended the exit meeting.

L. Attachment 3, Elements of an Aging Management Program for License Renewal. This attachment is a standard table of the 10 program elements that are used to evaluate the adequacy of each AMP as presented in Branch Technical Position (BTP) RLSB-1, "Aging Management Review - Generic," in Appendix A of the SRP-LR.

M. Attachment 4, Disposition of Requests for Additional Information, LRA Supplements, and Open Items.
   (1) Include a list of the formal RAIs that were issued as a result of the audit/review and a summary of the disposition of the applicant's response to each RAI.
   (2) Include a list of issues that the applicant agreed to formally address through a supplement or an amendment to its LRA and a summary of the disposition of each issue.
   (3) For each RAI and LRA supplement, identify the applicable AMP or AMR.
   (4) Possible dispositions could include open, closed, or confirmatory item. The genesis of each RAI and LRA supplement, as well as their dispositions should be clearly documented in conjunction with the audit and review results in the applicable AMP or AMR section of the report.

N. Attachment 5, List of Documents Reviewed. This attachment should list all of the documents reviewed by the project team to support its AMP and AMR audits and reviews and to support its evaluations and conclusions.
   (1) indicate which documents were reviewed for each AMP or AMR section.
   (2) include both docketed documents (e.g., the license renewal application) and non-docketed documents (e.g., basis documents, condition reports, and implementing procedures).
   (3) include both licensee-controlled documents (e.g., basis documents, condition reports, and implementing procedures) and other documents (e.g., topical reports and industry codes and standards).

O. Attachment 6, List of Commitments. List and summarize all of the commitments made by the applicant that were reviewed by the project team, including any commitments that the applicant made in response to the team's audit and review. This information will transfer directly into the SER input.

Attachment 3

BILLING INSTRUCTIONS FOR LABOR HOUR TYPE CONTRACTS

General: The contractor shall prepare vouchers/invoices for reimbursement of costs in the manner and format described herein or a similar format. **FAILURE TO SUBMIT VOUCHERS/INVOICES IN ACCORDANCE WITH THESE INSTRUCTIONS WILL RESULT IN REJECTION OF THE VOUCHER/INVOICE AS IMPROPER.**

Number of Copies: An original and three copies, including supporting documentation shall be submitted. A copy of all supporting documents must be attached to each copy of your voucher/invoice. Failure to submit all the required copies will result in rejection of the voucher/invoice as improper.

Designated Agency Billing Office: Vouchers/invoices shall be submitted to the following address:

U.S. Nuclear Regulatory Commission
Division of Contracts
Mail Stop T-7-I-2
Washington, D.C. 20555

HAND DELIVERY OF VOUCHERS/INVOICES IS DISCOURAGED AND WILL NOT EXPEDITE PROCESSING BY NRC. However, should you choose to deliver vouchers/invoices by hand, including delivery by any express mail services or special delivery services which use a courier or other person to deliver the voucher/invoice in person to the NRC, such vouchers/invoices must be addressed to the above Designated Agency Billing Office and will only be accepted at the following location:

U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike - Mail Room
Rockville, MD 20852

HAND-CARRIED SUBMISSIONS WILL NOT BE ACCEPTED AT OTHER THAN THE ABOVE ADDRESS.

Note that the official receipt date for hand-delivered vouchers/invoices will be the date it is received by the official agency billing office in the Division of Contracts and Property Management.

Agency Payment Office: Payment will be made by the following office:

U.S. Nuclear Regulatory Commission
Division of Accounting and Finance GOV/COMM
Mail Stop T-9-H4
Washington, DC 20555

Frequency: The contractor shall submit claims for reimbursement once each month, unless otherwise authorized by the Contracting Officer.

Format: Claims should be submitted in the format depicted on the attached sample form entitled "Voucher/Invoice for Purchases and Services Other Than Personal" (see Attachment) or a similar format. **THE SAMPLE FORMAT IS PROVIDED FOR GUIDANCE ONLY AND IS NOT REQUIRED FOR SUBMISSION OF A VOUCHER/INVOICE. ALTERNATE FORMATS ARE PERMISSIBLE PROVIDED ALL REQUIREMENTS OF THE BILLING INSTRUCTIONS ARE ADDRESSED.**

Billing of Costs After Expiration of Contract/Purchase Order: If the costs are incurred during the purchase order period and claimed after the purchase order has expired, the period during which these costs were incurred must be cited. To be considered a proper voucher/invoice, the contractor shall clearly mark it 'EXPIRATION VOUCHER" OR "EXPIRATION INVOICE".

Currency: Billings may be expressed in the currency normally used by the contractor in maintaining his accounting records; payments will be made in that currency. However, the U.S. dollar equivalent for all vouchers/invoices paid under the purchase order may not exceed the total U.S. dollars authorized in the purchase order.

ATTACHMENT

INVOICE/VOUCHER FOR PURCHASES
AND
SERVICES OTHER THAN PERSONAL
(SAMPLE FORMAT - COVER SHEET)

Official Agency Billing Office
U.S. Nuclear Regulatory Commission
Division of Contracts and Property Management MS: T-7-I2
Washington, DC 20555-0001

(a) Purchase Order No:

(b) Voucher/Invoice No:

(c) Date of Voucher/Invoice:

Payee's Name and Address

(d) Individual to Contact Regarding Voucher/Invoice
Name:
Telephone No:

(e) This voucher/invoice represents reimbursable costs for the billing period

_____ to _____.

		Amount Billed	
		Current Period	Cumulative
(f)	Direct Costs:		
	(1) Direct Labor*	$_____	$_____
	(2) Travel*	$_____	$_____
	Total Direct Costs:	$_____	$_____

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* The contractor shall submit as an attachment to its invoice/voucher cover sheet a listing of labor categories, hours billed, fixed hourly rates, total dollars, and cumulative hours billed to date under each labor category, authorized under the purchase order for each of the three activities to be performed under the purchase order. In addition, the contractor shall include travel costs incurred with the required supporting documentation, as well as, the cumulative total of travel costs billed to date by activity.