

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1 15
2. AMENDMENT/MODIFICATION NO. M0001	3. EFFECTIVE DATE 02/18/2015	4. REQUISITION/PURCHASE REQ. NO. NRR-15-0110	5. PROJECT NO. (If applicable)
6. ISSUED BY US NRC - HQ ACQUISITION MANAGEMENT DIVISION MAIL STOP TWFN-5E03 WASHINGTON DC 20555-0001	CODE NRCHQ	7. ADMINISTERED BY (If other than Item 6)	CODE
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) S W R I 6220 CULEBRA RD SAN ANTONIO TX 782385166		(x) 9A. AMENDMENT OF SOLICITATION NO.	
CODE 007936842 FACILITY CODE		9B. DATED (SEE ITEM 11)	
		x 10A. MODIFICATION OF CONTRACT/ORDER NO. NRC-HQ-50-14-E-0001 NRC-HQ-20-14-T-0008	
		10B. DATED (SEE ITEM 13) 08/12/2014	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required) Net Increase: \$25,000.00
See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: FAR 52.243-2 CHANGES--COST REIMBURSEMENT (AUG 1987)
	D. OTHER (Specify type of modification and authority)

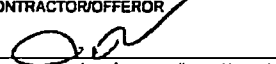
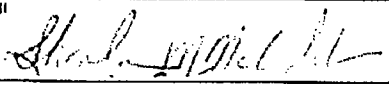
E. IMPORTANT: Contractor is not, is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)
The purpose of this task order modification is to: (1) increase the level of effort (LOE) by 378 staff hours to accommodate additional contractor support; (2) increase the ceiling by \$89,336.00 as a result of the increase in LOE; (3) incorporate the revised Statement of Work (SOW); and (4) provide incremental funding in the amount of \$25,000.00. The increase in LOE is required to complete Task 6 of the SOW entitled "Review of Safe Shutdown Analysis and Circuit Analysis Aspects of NFPA 805 LARs."

Refer to page 3 for modification details.

Task Order Ceiling Amount: \$272,306.00 (Changed)
Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) R. B. Kalmbach Executive Director, Contracts		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) SHARLENE M. MCCUBBIN	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED 02/23/2015	11 	16C. DATE SIGNED 02/18/2015

NSN 7540-01-152-8070
Previous edition unusable

STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

SUNSI REVIEW COMPLETE

TEMPLATE - ADM001

APR 14 2015

ADM002

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
 NRC-HQ-50-14-E-0001/NRC-HQ-20-14-T-0008/M0001

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NAME OF OFFEROR OR CONTRACTOR
 S W R I

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Task Order Obligation Amount: \$105,000.00 (Changed) Period of Performance: 09/01/2014 to 05/31/2016 (Unchanged) Account code: 2015-X0200-FEEBASED-20-20D007-11-4-149-1034-252A				

Accordingly the following changes are hereby made:

- 1) **SECTION B - Supplies or Services/Prices**, paragraph entitled **PRICE/COST SCHEDULE** is deleted in its entirety and the following is substituted in-lieu thereof:

PRICE/COST SCHEDULE

PERIOD OF PERFORMANCE – July 16, 2014 through May 15, 2016				
CLIN NO	DESCRIPTION OF SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL CPFF
00001	Review of License Amendment Request for the Beaver Valley Power Station, Units 1 and 2	[REDACTED]	[REDACTED]	
Total				\$272,306.00

- 2) **SECTION B - Supplies or Services/Prices**, clause **NRCB040A CONSIDERATION AND OBLIGATION—COST-PLUS-FIXED-FEE ALTERNATE I** is deleted in its entirety and the following is substituted in-lieu thereof:

NRCB040A CONSIDERATION AND OBLIGATION—COST-PLUS-FIXED-FEE ALTERNATE I

(a) The total estimated cost to the Government for full performance of this contract is **\$272,306.00** of which the sum of [REDACTED] represents the estimated reimbursable costs, and of which \$ [REDACTED] represents the fixed-fee.

(b) There shall be no adjustment in the amount of the Contractor's fixed fee.

(c) The amount currently obligated by the Government with respect to this contract is [REDACTED] of which the sum of [REDACTED] represents the estimated reimbursable costs, and of which [REDACTED] represents the fixed-fee.

(d) This is an incrementally-funded contract and FAR 52.232-22 - "Limitation of Funds" applies.

(e) In accordance with FAR 52.216-8 - Fixed Fee, it is the policy of the NRC to withhold payment of fee after payment of [REDACTED] percent of the fee has been paid in order to protect the Government's interest. The amount of fixed-fee withheld from the contractor will not exceed [REDACTED] percent of the total fee or [REDACTED] whichever is less. Accordingly, the maximum amount of fixed-fee that may be held in reserve is [REDACTED]

(End of Clause)

- 3) **SECTION C - Description/Specifications** is deleted in its entirety and the following is substituted in-lieu thereof:

**Statement of Work for
Beaver Valley Power Station Units 1 and 2**

Title: Review of License Amendment Request for the Beaver Valley Power Station, Units 1 and 2, Transition to National Fire Protection Association Standard 805 (NFPA 805), "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition in the Areas Related to Nuclear Power Plant Fire Protection Programmatic and Fire Modeling

Contract No.: NRC-HQ-50-14-E-0001

Task Order: NRC-HQ-20-14-T-0008

Cost Center: 1034

Docket Nos.: Docket No.: Unit 1 = 05000334; Unit 2 = 05000412

TAC Numbers: Unit 1 = MF3301; Unit 2 = MF3302; Fee Billable

Contracting Officer's Representative (COR): Bernard L. Grenier, 301-415-2726;
Bernard.Grenier@nrc.gov

Alternate COR: Naeem Iqbal, 301-415-3346; Naeem.Iqbal@nrc.gov

BACKGROUND

The United States Nuclear Regulatory Commission (NRC), Office of Nuclear Reactor Regulation (NRR) is currently implementing a new risk-informed, performance-based rule under Section 50.48(c) of Title 10 of the *Code of Federal Regulations* (10 CFR). This rule endorses the National Fire Protection Association Standard 805 (NFPA 805), "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition.

The Beaver Valley Power Station, Units 1 and 2 (Beaver Valley) has submitted a license amendment request (LAR) to adopt 10 CFR 50.48(c) (NFPA 805) and the Fire Protection (AFPB) and PRA Licensing (APLA) Branches in the Division of Risk Assessment (DRA), NRR, must complete the review of the LAR to determine whether the technical information in the incoming LAR submittal is sufficient to enable the NRC staff make an independent assessment regarding the acceptability of the proposed amendment in terms of regulatory requirements and the protection of public health and safety and the environment.

This project will require coordination between PNNL, the Center for Nuclear Waste Regulatory Analysis (CNWRA), and the NRC staff. CNWRA (under a separate contract) will be providing technical expertise in fire modeling and programmatic areas, the NRC staff will be providing technical expertise in radiological release and PNNL will be providing technical expertise in nuclear power plant fire protection and fire protection engineering, nuclear power plant safe shutdown analysis and circuit analysis and fire probabilistic risk assessment.

OBJECTIVE

The objective of this task order is to obtain technical expertise from the CNWRA/SwRI to assist the staff in determining the safety adequacy of the Beaver Valley Power Station, Units 1 and 2, 10 CFR 50.48(c) (NFPA 805) LAR in the technical review area of nuclear power plant fire modeling and fire protection programmatic portion of LAR so the NRC staff can make a licensing decision regarding whether or not the LAR is in accordance with 10 CFR 50.48(c);

NFPA 805, 2001 Edition; and the guidance provided in the NUREG-0800, Standard Review Plan (SRP) Section 9.5.1.2, "Risk-Informed, Performance-Based Fire Protection Program."

TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

One senior-level Fire Protection or Mechanical Engineer on an intermittent, part-time basis to serve as the Principal Investigator (PI) who has background and experience in nuclear power plant design and operations to include procedures related to operations at full-power conditions and shutdown modes. The PI should also be knowledgeable in the application of NUREC/CR-6850 methods which pertains to nuclear power plant fire protection PRA models. The PI must be able to ensure that the LAR reviews performed by the domain experts (e.g., FPE, Fire PRA, SSD/CA) are integrated and address areas that cross-cut domains, i.e., that the review by one domain expert is integrated with the review by other domain experts). The PI must also ensure that the PRA model that is reviewed by the PRA expert makes assumptions about the fire protection program and that the review of the fire protection program assumptions in the PRA model must be a coordinated/integrated review by both the PRA and FPE experts.

One senior-level Fire Protection Engineer on an intermittent, part-time basis who is knowledgeable of nuclear power plant fire protection programs and has in-depth experience in fire modeling and fire hazard analysis; has in-depth knowledge and experience in the design and operation of nuclear power plant fire protection systems; and, experience in the application of Appendix R compliance.

One senior-level Mechanical or Nuclear Engineer on an intermittent, part-time basis who is knowledgeable of nuclear power plant design and operation to include procedures related to operations at full-power conditions and shutdown modes and who has in-depth knowledge and experience in the design and operation of fire protection systems and programs implemented at nuclear power plants, and experience in the application of Appendix R regulations and who also has in-depth knowledge and experience of safe shutdown analysis and circuit analysis related to the design and operation of nuclear power plants.

All three individuals should be knowledgeable in the preparation of the TER, i.e., input to NRC safety evaluation reports.

The engineers must be able to satisfy the escorted access requirements for the Owner Controlled Area and Protected Area of Beaver Valley site.

WORK REQUIREMENTS AND SCHEDULE

Tasks

Scheduled Completion

1. Based on 10 CFR 50.48(c); NFPA 805, 2001 Edition and the guidance provided in the SRP Section 9.5.1.2., review and evaluate the Prairie Nuclear Generating Plant 10 CFR 50.48(c), (NFPA 805) LAR in the areas of nuclear power plant fire modeling and fire protection programmatic and determine the safety adequacy in the areas listed below to enable the staff to make a licensing decision regarding whether or not the LAR is in accordance with the regulations.

Identify areas where any additional information is needed to determine if the LAR is in accordance with the applicable regulatory requirements and develop questions for the licensee i.e., request for additional information (RAIs). Prepare a TER utilizing the template and guidance to be provided by the NRC staff.

- a. Fire Protection Programmatic Review
 - (1) Prepare a technical report that contains the RAIs. Four weeks after award¹.
 - (2) Incorporate NRC staff comments and submit the final RAIs. One week after receipt of NRC staff comments.
- b. Fire Modeling
 - (1) Prepare a technical report that contains the RAIs. Four weeks after completion of Subtask 1.a. (1).
 - (2) Incorporate NRC staff comments and submit the final RAIs. One week after receipt of NRC staff comments.
2. Prepare for and travel to the Beaver Valley Power Station site to participate in the an on-site audit of the NFWA 805 LAR in accordance with LIC-111, "Regulatory Audits" to review the same areas of fire modeling and fire protection programmatic review described in Task 1. Provide "on-call, in-office" support as may be necessary. Identify the need for any additional RAIs.
 - a. Prepare additional on-site RAIs, if needed. One day prior to the exit meeting.
 - b. Prepare an on-site audit trip report. One week after the on-site audit.
 - c. Prepare a consolidated audit report which includes received from PNNL. One week from input receipt of input from PNNL.
3. Review and evaluate the RAI responses and determine if the response(s) adequately address the open issues.
 - a. Review and evaluate the licensee's 60-day RAI responses.
 - (1) If the response(s) is not acceptable, discuss the RAI response(s) with the NRC staff who may determine Two weeks after receipt of the RAI response(s).

¹ It is understood that if the CNWRA has not received all of the documents necessary to begin the review, that the CNWRA will contact the Contracting Officer to agree upon a new milestone date.

that a conference call is needed to discuss the RAI response(s) with the licensee in which case the PI will be notified and a mutually acceptable date to participate in the conference call will be set. If the response is deemed inadequate, prepare a technical letter report describing the RAI(s) and the bases.

- (2) If the response is deemed to be adequate, incorporate the results in the TER prepared under Task 1. Two weeks after receipt of the RAI responses.
- b. Review and evaluate the licensee's 90-day RAI responses.
 - (1) If the response(s) is not acceptable, discuss the RAI response(s) with the NRC staff who may determine that a conference call is needed to discuss the RAI response(s) with the licensee in which case the PI will be notified and a mutually acceptable date to participate in the conference call will be set. If the response is deemed inadequate, prepare a technical letter report describing the RAI(s) and the bases. Two weeks after receipt of the RAI response(s).
 - (2) If the response is deemed to be adequate, incorporate the results in the TER prepared under Task 1. Two weeks after receipt of the RAI responses.
- c. Review and evaluate the licensee's 120-day RAI responses.
 - (1) If the response(s) is not acceptable, discuss the RAI response(s) with the NRC staff who may determine that a conference call is needed to discuss the RAI response(s) with the licensee in which case the PI will be notified and a mutually acceptable date to participate in the conference call will be set. If the response is deemed inadequate, prepare a technical letter report describing the RAI(s) and the bases. Two weeks after receipt of the RAI response(s).
 - (2) If the response is deemed to be adequate, incorporate the results in the TER prepared under Task 1. Two weeks after receipt of the RAI responses.
- 4. Review "Round 2" RAI responses, if any, and any additional responses which may be subsequently submitted; update the (TER) utilizing the template and guidance supplied by the NRC.
 - a. Draft. Two weeks after all RAIs have been resolved or upon notification by the COR.

- b. Incorporate NRC Comments and prepare the final report. Two weeks after receipt of NRC staff comments.
5. Assemble the entire safety evaluation report from parts provided by NRC. Perform consistency review, reference checks and technical editing per guidance received from the NRC. Four weeks after receipt of all SE parts from the NRC.
6. Review of Safe Shutdown Analysis and Circuit Analysis Aspects of NFPA 805 LARs
- Compliance with NFPA 805 Nuclear Safety Capability Assessment Methods
 - Applicability of Feed and Bleed
 - Assessment of Multiple Spurious Operations
 - Establishing Recovery Actions
 - Plant Specific Treatments or Technologies (e.g. Very Early Warning Fire Detection Systems)
 - Fire Risk Evaluations
 - Nuclear Safety Capability Assessment Results
 - Nuclear Safety Capability Assessment Results by Fire Area
 - Fire Protection During Non-Power Operational Modes
 - Nuclear Safety Capability Assessment Method Review
 - Nuclear Safety Capability Assessment Results by Fire Area
 - Deterministic Compliance with NFPA 805 Section 4.2.3
 - Performance-Based Compliance with NFPA 805 Section 4.2.4

LEVEL OF EFFORT

The estimated level of effort is 1,121 hours; apportioned among the tasks by labor category is as follows:

<u>Tasks</u>	<u>Labor Category</u>	<u>Level of Effort</u>
1.	Sr. Engineer (Fire Modeling (FM))	240
	Sr. Engineer (Fire Protection Program)	<u>120</u>
	Subtotal	360
2.	Sr. Engineer (Fire Modeling (FM))	56
	Sr. Engineer (Fire Protection Program)	<u>48</u>
	Subtotal	104
3.	Sr. Engineer (Fire Modeling (FM))	96
	Sr. Engineer (Fire Protection Program)	<u>44</u>
	Subtotal	140
4.	Sr. Engineer (Fire Modeling (FM))	100
	Sr. Engineer (Fire Protection Program)	<u>84</u>
	Subtotal	184

5.	Sr. Engineer (Fire Protection Program)	200
	Total Technical Review	988
	Project Management	62
	Program Support	<u>71</u>
	Subtotal	133
	Total by Labor Category:	
	Sr. Engineer (Fire Modeling (FM))	492
	Sr. Engineer (Fire Protection Program)	<u>496</u>
	Total Technical Review	988

PERIOD OF PERFORMANCE

The projected period of performance is 21 months from authorization of the task order.

DELIVERABLES

Technical Reporting Requirements

NOTE: All reports are to be prepared in Microsoft Word 2007 or compatible format and submitted electronically to the COR. The transmittal letter and cover page shall contain the Job Code Number (JCN), the Task Order Number, and Title.

Technical Reporting Requirements

1. At the completion of Subtasks 1.a. and 1.b, submit a technical letter report, draft and final as appropriate, that the list of questions which clearly articulate the bases of the need for further information or discussion. See Attachment 1 for guidance in the preparation of RAIs.
2. At the completion of Subtask 2.a., submit a technical letter report that contains RAIs uncovered while performing the audit.
3. At the completion of Subtask 2.b., submit audit trip report that contain summary of the activities performed during the audit and a summary of significant highlights, observations, insights, and findings. Include the title and description of any documents, slides, or other materials reviewed on the trip. As appropriate, describe possible resolution of the findings/observations, noting disposition responsibility (if appropriate) of the items presented and reviewed.
4. At the completion of Subtask 2.c., submit consolidated audit report that contain summary of the activities performed during the audit and a summary of significant highlights, observations, insights, and findings. Include the title and description of any documents, slides, or other materials reviewed on the trip. As appropriate, describe possible resolution of the findings/observations, noting disposition responsibility (if appropriate) of the items presented and reviewed.

5. At the completion of review of each Subtask under Task 3, for those responses deemed to be not acceptable, provide a verbal response followed by submission of a technical letter report that contains the RAI(s) which clearly articulates the bases for the need for further information or discussion.
6. At the completion of Task 4, prepare a TER, draft and final as appropriate, that contains the results of the evaluation, findings and conclusions following the template and guidance provided by the NRC.
7. At the completion of Task 5, submit a technical letter report, draft and final, that contains the assembled safety evaluation report.

Monthly Letter Status Reporting (MLSR) Requirements

Add Alex.Klein@nrc.gov to the distribution list.

A budget is to be developed for each Task based on the agreed upon allocation of the level of effort among the Tasks. Separate expenditures for each Task will be reported in the MLSR against the budget using the following format:

Authorized Cost Ceiling: \$ _____ Expenditures
 Funds Obligated to date: \$ _____ Task Expenditures Percentage

Monthly Letter Status Reporting (MLSR) Requirements

<u>Tasks</u>	<u>Planned Budget</u>	<u>for the Period</u>	<u>Cumulative</u>	<u>vs. Budget</u>
1.	\$	\$	\$	%
2.	\$	\$	\$	%
3.	\$	\$	\$	%
4.	\$	\$	\$	%
5.	\$	\$	\$	%
6.	\$	\$	\$	%
7.	\$	\$	\$	%
Total	\$ _____	\$ _____	\$ _____	%

A monthly expense variance greater than 10 percent must be explained in the "Problem/Resolution," section.

NOTE: Once a variance reaches 15 percent, prior approval is required in writing from the NRC COR, or a Modification is to be processed.

MEETINGS AND TRAVEL

Two one-person, five day trips to the Beaver Valley Nuclear Generating Plant site located in Shippingport, Pennsylvania.

NRC-FURNISHED MATERIALS

The Beaver Valley Power Station, Units 1 and 2, NFPA 805 ADAMS LAR accession numbers are ML14002A088, ML14002A090, ML14002A091 and ML14002A092.

NOTE: Some of these documents contain proprietary information and must be safeguarded against unauthorized disclosure. After completion of work, the documents should either be destroyed or returned to NRC. If they are destroyed, please confirm this in an E-mail to the COR and include the date and manner in which the documents were destroyed.

The NRC COR will provide those NRC documents related to licensing activities (for example, any Non-Publicly available SERs, audit reports, and related documents) that are readily available. The NRC COR will provide access to training material pertinent to the NFPA 805 LARs reviews or other NRC documents and docketed correspondence on related issues. The CNWRA staff shall identify any additional NRC documentation that is needed and the COR will determine whether these will be provided by the NRC or obtained directly by the CNWRA from ADAMS, NRC public document room or the NRC website at www.nrc.gov.

OTHER APPLICABLE INFORMATION

License Fee Recovery

The work specified in this SOW is license fee recoverable under TAC Nos. Unit 1 = MF3301; Unit 2 = MF3302.

Assumptions and Understandings

It is understood that the level of effort for each Task contains sufficient effort to conduct telephone conference calls with the NRC staff. Such phone calls, for example, might be arranged by the NRC COR with the Licensing Project Manager and other NRC staff to discuss the RAIs and to reach an understanding with the licensee. Comments might be provided such that the RAIs may have to be resubmitted.

It is understood that preparation of the TER will occur at the completion of each Subtask under Task 1 and Task 3 though a deliverable of the TER is not required; a summary of the work performed will be provided in the MLSR.

It is understood that preparation for the audit includes minimal participation in a conference call ("go-to-meeting") and effort to make travel arrangements.

It is understood that the "on-site" RAIs means RAIs that were developed on site as a result of the audit; they are in addition to from those developed under Task 1.

The level of effort assumption for the audit under Task 2 is based on eight hours for preparation and travel to the site, 40 hours to participate in the audit for one person and return travel, eight hours for "in-office" on-call support and eight hours for documentation: trip report and consolidated audit report.

It is understood that draft RAI responses may be available for review prior to their formal submittal.

Unless otherwise approved by Letter of Technical Direction or by a Modification, the level of effort among the Tasks cannot be exceeded by more than 15 percent.

It is understood that this project will require coordination between CNWRA/SwRI, PNNL, and the NRC staff since all three will be providing technical expertise and input for the review of the LAR.

It is understood that the actual time it will take to complete Task 3 may span up to 3 months after receipt of the initial RAIs.

It is understood that CNWRA/SwRI has copies of the following documents needed to perform the review:

1. Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants."
2. NUREG-0800, Standard Review Plan, Section 9.5.1.2, "Risk-Informed, Performance-Based Fire Protection Program."
3. Office of Nuclear Reactor Regulation, Office Instruction, Revision 0 of LIC-111, "Regulatory Audits."
4. Office of Nuclear Reactor Regulation, Office Instruction, Revision 3 of LIC-101, "License Amendment Review Procedures."
5. NEI 04-02, Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48(c), Revision 2, Nuclear Energy Institute, Washington, DC, April 2008.
6. NFPA 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition, National Fire Protection Association, Quincy MA.
7. NUREG/CR-6850, "EPRI/NRC-RES, Fire PRA Methodology for Nuclear Power Facilities," Volumes 1 and 2, USNRC, September 2005.
8. Regulatory Guide 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," ML070240001 (Clarification to RG 1.200, Revision 1, ML071940235) (Draft Revision 1 was issued as DG-1161, 09/2006, ML062480134) (Revision 0, 02/2004, ML040630078, was issued with SRP Chapter 19.1, ML040630300) (Draft Revision 0 was issued as DG-1122, 11/02, ML023360076)
9. NUREG-1824, "Verification and Validation of Selected Fire Models for Nuclear Power Plant Applications," U.S. Nuclear Regulatory Commission, Washington, DC, May 2007.
10. Regulatory Guide 1.174, Revision 1, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis".
11. NRC NUREG-0800, Standard Review Plan, Chapter 19.2, "Review of Risk Information Used to Support Permanent Plant-Specific Changes to the Licensing Basis: General Guidance," Revision 0, June 2007.
12. NEI 00-01, "Guidance for Post Fire Safe Shutdown Analysis," Revisions 1 & 2, Nuclear Energy Institute, Washington, DC.

13. EI 00-01, "Guidance for Post Fire Safe Shutdown Analysis," Revisions 1 & 2, Nuclear Energy Institute, Washington, DC.
14. Templates for development of various technical review related documents including but not limited to Audit Reports, RAIs, Safety Evaluations, Technical Specifications, etc.
15. Other NRC guidance such as Frequently Asked Questions (FAQs), historical documents related to previous 10 CFR 50.48(c) reviews, etc.

Guidance for Preparing Requests for Additional Information (RAIs)

Additional information necessary to resolve open or unresolved items identified during the review of the information associated with the LAR needs to be requested in a manner that is unambiguous, has an adequate basis, and is necessary for the safety review. RAIs should be developed using the following guidance:

1. An RAI should include the appropriate basis for requesting the information. The basis should explain why the information is needed, including how it will be used to help make a reasonable assurance finding.
2. Judgmental language should be avoided.
 - a. Questions should not make adequacy determinations.
 - b. Words like "unacceptable" or "deficient" and "deviation" should be avoided. Likewise, avoid using phrases like "*the staff will require*" since it is premature to require anything when asking questions.
3. Questions should be focused, not open-ended.
 - a. The RAI should be in the form of a question or an imperative to provide what is needed to complete the review. When the reviewer needs specific information or the underlying issue may not be apparent, the RAI should clearly identify the information requested and/or the underlying issue.
 - b. "If ... then" questions (questions that could lead to follow-on questions) should provide both parts of the question.

After the RAIs have been forwarded to the applicable NRC PM, teleconferences and/or public meetings may be held before issuing the RAIs:

- a. These discussions prevent misunderstandings of the intent of the questions.
- b. If a draft RAI is clarified or resolved before issuance, the NRC staff will prepare a documented record of the resolution (i.e., minutes of a public meeting or a teleconference summary).

After the RAIs have been issued, the licensee may request a telephone conference and/or a public meeting:

- a. The teleconferences and/or meetings provide additional clarification of the intent of the RAIs and will help the licensee prepare satisfactory responses.
- b. To ensure that the response appropriately addresses the RAI, the licensee may submit a draft response (which the NRC docket in the ADAMS) and may request a follow-up teleconference and/or meeting.

After receiving RAI response(s) from the licensee, the NRC may hold a teleconference and/or a public meeting:

- a. The purpose of discussing a response with the licensee is to better understand the response and/or clarify areas of disagreement. If the resolution of a response relies on information not submitted to the NRC, the licensee should submit the information on the docket. The submission is not intended to be another RAI or a means to minimize the number of safety evaluation report open items, but frequently reduces the number of SER open items.
- b. If the areas of disagreement remain, the unresolved RAI becomes a safety evaluation report open item.

NOTE THE REQUIREMENT FOR ANY FOLLOW-UP RAIs:

For follow-up RAIs, reference the original RAI, the date of the letter in which the licensee responded to the RAI, and the ADAMS Accession Number of the letter.

“In a letter dated _____ (ADAMS Accession No. MLXXXXXXXX), the licensee responded to _____ RAI _____ and stated _____.”