

**ORDER FOR SUPPLIES OR SERVICES**

PAGE OF PAGES  
1 17

IMPORTANT: Mark all packages and papers with contract and/or order numbers.


1. DATE OF ORDER 08/31/2015		2. CONTRACT NO. (If any) NRC-HQ-25-14-E-0001		6. SHIP TO: a. NAME OF CONSIGNEE US NUCLEAR REGULATORY COMMISSION-	
3. ORDER NO. NRC-HQ-20-15-T-0003		4. REQUISITION/REFERENCE NO. NRR-15-0286		b. STREET ADDRESS MAIL PROCESSING CENTER 4930 BOILING BROOK PARKWAY	
5. ISSUING OFFICE (Address correspondence to) US NRC - HQ ACQUISITION MANAGEMENT DIVISION MAIL STOP TWFN-5E03 WASHINGTON DC 20555-0001		c. CITY ROCKVILLE		d. STATE MD	e. ZIP CODE 20852
7. TO: a. NAME OF CONTRACTOR NUMARK ASSOCIATES INC		f. SHIP VIA		8. TYPE OF ORDER <input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY	
b. COMPANY NAME		c. STREET ADDRESS 1220 19TH ST NW STE 500		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.	
d. CITY WASHINGTON		e. STATE DC	f. ZIP CODE 200362444	Except for billing instructions on the reverse, this delivery 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 Schedule		10. REQUISITIONING OFFICE OFF OF NUCLEAR REACTOR REGULATION			

11. BUSINESS CLASSIFICATION (Check appropriate box(es)) <input type="checkbox"/> a. SMALL <input type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB					12. F.O.B. POINT
13. PLACE OF a. INSPECTION Destination		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	
b. ACCEPTANCE Destination				16. DISCOUNT TERMS 30	

**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)
	NUMARK EWC SB TO. 6 entitled, Review of Topical Report WCAP-17788-P Comprehensive Analysis and Test Program for [Generic Safety Issue] GSI-191 Closure (PA-SEE-1090) under enterprise-wide Contract Number NRC-HQ-25-14-E-0001. Continued ...					

18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont. pages)
21. MAIL INVOICE TO:						
a. NAME US NUCLEAR REGULATORY COMMISSION				\$150,884.89		17(i) GRAND TOTAL
b. STREET ADDRESS (or P.O. Box) ONE WHITE FLINT NORTH 11555 ROCKVILLE PIKE MAILSTOP 03-E17A				\$150,884.89		
c. CITY ROCKVILLE		d. STATE MD	e. ZIP CODE 20852-2738			

22. UNITED STATES OF AMERICA BY (Signature) 		08/31/2015		23. NAME (Typed) SHARLENE M. MCCUBBIN TITLE: CONTRACTING/ORDERING OFFICER	
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OPTIONAL FORM 347 (Rev. 2/2012)  
Prescribed by GSA/FAR 48 CFR 53.213(f)

TEMPLATE - ADM001

SUNSI REVIEW COMPLETE

SEP 10 2015

ADM002

**ORDER FOR SUPPLIES OR SERVICES  
SCHEDULE - CONTINUATION**

PAGE NO

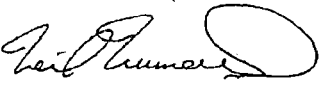
2

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER  
09/01/2015

CONTRACT NO  
NRC-HQ-25-14-E-0001

ORDER NO.  
NRC-HQ-20-15-T-0003

ITEM NO (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
00001	<p>This Task Order is incrementally funded.</p> <p>Period of Performance: September 1, 2015 through November 30, 2016 Task Order Ceiling: \$150,884.89 Total Obligated Amount: \$39,000.00</p> <p>Contracting Officer's Representative (COR) Name: William MacFee Telephone Number: 301-415-1326 Email: William.macfee@nrc.gov</p> <p>Contractor POC (Business) Name: Paul Edelstein Email: pedelstein@numarkassoc.com Phone: 202-466-2700</p> <p>Contractor POC (Technical) Name: Martin Bowling Email: mbowling@numarkassoc.com Phone: 202-466-2700</p> <p> August 31, 2015 Numark Authorized Official      Date</p> <p>Accounting Info: 2015-X0200-FEEBASED-20-20D006-11-4-151-1065-251A</p> <p>Labor/Fee Line Item Ceiling \$150,884.89 Incrementally Funded Amount: \$39,000.00</p> <p>The obligated amount of award: \$39,000.00. The total for this award is shown in box 17(i).</p>				150,884.89	
TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))					\$150,884.89	

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**TASK ORDER 06 – Small Business Set-Aside EWC IDIQ for Numark**

**SECTION B - SUPPLIES OR SERVICES AND PRICE/COSTS**

**B.1 PRICE/COST SCHEDULE**

CLIN	DESCRIPTION OF SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE - Prime, Subcontractor)	TOTAL COST PLUS FIXED FEE
0001	Contractor to provide Technical Assistance in accordance with section C: DESCRIPTION/ SPECIFICATIONS/ STATEMENT OF WORK	[REDACTED]	[REDACTED]	[REDACTED]
	<b>Total</b>	[REDACTED]	[REDACTED]	<b>\$150,884.89</b>

**NRCB044 CONSIDERATION AND OBLIGATION—INDEFINITE-QUANTITY CONTRACT**

- (a) The estimated total quantity of this contract for the products/services under this contract is **\$150,884.89** of which the sum of [REDACTED] represents the estimated reimbursable costs, and of which [REDACTED] represents fixed fee.
- (b) The Contracting Officer will obligate funds on each task order issued.
- (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) The Contractor shall comply with the provisions of FAR 52.232-20 - Limitation of Cost for fully-funded task orders and FAR 52.232-22 - Limitation of Funds for incrementally-funded task orders, issued hereunder.

## SECTION C – DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

NRC Requisition Office: NRR

Fee Recoverable: No

TAC Numbers: MC9003

### 1. PROJECT TITLE

Review of Topical Report WCAP-17788-P “Comprehensive Analysis and Test Program for [Generic Safety Issue] GSI-191 Closure (PA-SEE-1090)”.

### 2. BACKGROUND

As a consequence of the NRC’s evaluation of Generic Safety Issue 191 (GSI-191), “Assessment of Debris Accumulation on Pressurized Water Reactor (PWR) Sump Performance,” in September 2004 the NRC issued Generic Letter (GL) 2004-02, “Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors.” GL 2004-02 requests that holders of operating licenses for PWRs perform evaluations of the emergency core cooling system (ECCS) and the containment spray system (CSS) to assess the potential for debris entrained in the circulated containment pool, following a loss-of-coolant accident (LOCA), to block restrictions within the ECCS recirculation flow path, including blockage within the reactor fuel assemblies.

In December 2004, the Nuclear Energy Institute (NEI) published NEI 04-07, “Pressurized Water Reactor Sump Performance Evaluation Methodology” (Agencywide Documents Access and Management System (ADAMS) Accession No. ML050550138), providing a method for licensees to resolve some aspects of GL 2004-02. The NRC staff safety evaluation (SE) of NEI 04-07 (ADAMS Accession No. ML050550156) found that additional guidance was needed in the area of blockage in the reactor vessel in order to adequately address the downstream effects of debris that passes through the ECCS sump strainer(s).

In response to the SE conclusions on NEI 04-07, the Pressurized Water Reactor (PWR) Owners Group (PWROG) sponsored development of Topical Report (TR) WCAP-16793-NP, “Evaluation of Long-Term Cooling Considering Particulate, Fibrous and Chemical Debris in the Recirculating Fluid.” The TR evaluated the effects of debris and chemical precipitates on core cooling for PWRs when the ECCS is aligned to the containment sump. The objective was to demonstrate that following a LOCA, long-term core cooling (LTCC) can be maintained to satisfy the requirements of Title 10 of the *Code of Federal Regulations* Section 50.46 (10 CFR 50.46). The TR incorporates limits on the amount of debris that could be ingested by the reactor vessel to provide reasonable assurance that debris in the circulated containment pool will not prevent adequate cooling of the core. If the amount of debris that could be introduced into the reactor vessel at a specific licensed nuclear power plant is less than the staff-approved limit specified by TR WCAP-16793-NP, the licensee may close GL 2004-02 for their plant. Since some operating nuclear power plants contain debris greater than the staff-approved debris limit specified by TR WCAP-16793-NP, the PWROG has pursued further testing and analyses to increase the debris limit based on plant specific analyses. This information has been submitted for staff review and approval in TR WCAP-17788-P, “Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090).”

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**3. PROJECT DESCRIPTION AND OBJECTIVE(S)**

The objective of this contract is to obtain technical support in determining the acceptability of the thermal hydraulic methods and modeling techniques described in topical report WCAP-17788-P that justify increases in the debris limits while maintaining adequate long-term core cooling.

**4. STATEMENT OF WORK TASKS**

**Task 1: Evaluation of the Topical Report**

Based on the guidance found in Regulatory Guide (RG) 1.82, evaluate the completeness and applicability of WCAP-17788-P models, including their verification and validation for the phenomena in question. Determine conformance with the intent of RG 1.82. Identify the need for additional or clarifying information and formulate requests for additional information (RAIs). See Attachment 2 for guidance in preparing RAIs. Perform confirmatory calculations, if needed.

Subtask 1.A: Review Volume 1 of WCAP-17788-P and provide analysis in a technical letter report (TLR) that contains a list of the key issues and provide a brief summary of the issue and why the TR approach is acceptable. If the approach is unacceptable, then formulate RAIs and articulate the bases for each RAI.

Subtask 1.B Review Volume 3 of WCAP-17788-P and provide analysis in a technical letter report (TLR) that contains a list of the key issues and provide a brief summary of the issue and why the TR approach is acceptable. If the approach is unacceptable, then formulate RAIs and articulate the bases for each RAI.

Subtask 1.C: Review Volume 4 of WCAP-17788-P and provide analysis in a technical letter report (TLR) that contains a list of the key issues and provide a brief summary of the issue and why the TR approach is acceptable. If the approach is unacceptable, then formulate RAIs and articulate the bases for each RAI.

Subtask 1.D: Review Volume 6 of WCAP-17788-P and provide analysis in a technical letter report (TLR) that contains a list of the key issues and provide a brief summary of the issue and why the TR approach is acceptable. If the approach is unacceptable, then formulate RAIs and articulate the bases for each RAI.

Subtask 1.E: Obtain written agreement through electronic mail from the COR if computer calculations are needed, then perform the agreed upon calculations and document each calculation in a separate technical letter report with a description of key phenomena, input model used and key results.

**Task 2: Review and Evaluation of RAI Responses**

Evaluate RAI responses to see if they address the technical issue in sufficient detail to continue with the review. To clarify RAI responses, the COR will arrange for a conference call with the PWROG. The contractor will participate in the telephone conference call to discuss and clarify the nature of the RAIs in order to arrive at a mutual understanding of the issue and to reach resolution.

Subtask 2.A: Prepare a TLR that summarizes the conference call, including the proposed resolution approach for each RAI.

Subtask 2.B: Evaluate RAI responses in a separate TLR. This TLR includes a summary of the RAIs, a summary of the PWROG's response to the RAIs, and a summary of why it is acceptable. For RAI responses that are unacceptable, formulate follow-on RAI(s).

**Task 3: Preparation for Audit**

The contractor will perform one or two audits at a PWROG facility by reading relevant documents to identify open items and possible paths of resolution. When conducting the audit, the contractor shall advise NRC staff during discussions of open items with the PWROG. For each audit attended, the contractor will provide a trip report that contains the summary of the major issues discussed, any agreements reached and the basis/bases for agreement, any actions pending and who has the responsibility for doing what by when, as well as a list of attendees. Include any slides or other presentations made by the PWROG.

**Task 4: Prepare Final Technical Evaluation Report**

Subtask 4.A: Based on the work performed during the review, the contractor will prepare a draft technical evaluation report following the format in Attachment 2. The draft technical evaluation report that contains results of the work performed. The contractor will submit this to the COR. NRC staff will provide comments on the draft technical evaluation.

Subtask 4.B: The contractor will address the NRC staff's comments and prepare the final technical evaluation report.

**Task 5: Prepare Presentation for Advisory Committee on Reactor Safeguards (ACRS) Meeting(s)**

The contractor will prepare a presentation summarizing key issues of their technical evaluation pertaining to WCAP-17788-P.

Subtask 5.A: The contractor will send a draft PowerPoint presentation for the ACRS Sub-committee meeting to the COR. The COR will return the presentation with comments from the NRC staff.

Subtask 5.B: The contractor will address the NRC staff's comments into the final presentation for the ACRS Sub-committee meeting.

Subtask 5.C: The contractor will travel to the ACRS Sub-committee meeting and present their work. After the meeting, the contractor will prepare a trip report with the highlights of the meeting, key issues discussed, any follow-on actions required as a result of the meeting, and who has what actions and when they are due.

Subtask 5.D: After the ACRS Sub-committee meeting and gathering NRC staff comments, the contractor will update the presentation or the full ACRS committee meeting. The contractor will travel to the full ACRS committee meeting and deliver the updated presentation.

Subtask 5.E: After the ACRS Full-committee meeting, the contractor will prepare a trip report that contains the highlights of the meeting, key issues discussed, any follow-on actions required as a result of the meeting, and who has what actions and when they are due.

**5. APPLICABLE DOCUMENTS AND STANDARDS**

Regulatory Guide 1.82 "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant-Accident" Revision 4 (ADAMS ML111330278) describes the methods that the staff of the NRC considers acceptable for use in implementing requirements regarding the sumps and suppression pools that provide water sources for emergency core cooling, containment heat removal, or containment atmosphere cleanup systems.

**6. DELIVERABLES AND DELIVERY SCHEDULE/REPORTING REQUIREMENTS**

The contractor shall provide the deliverables stated in the table below, both in hard copy and electronic format unless directed by the COR. The electronic format shall be provided using a Microsoft-based product, (e.g., Outlook, Word, Excel, PowerPoint) unless the COR and the contractor specifically agree on another format. All deliverables shall be in the format of draft version, revision version with redline/strikeout with a change-control appendix, and a revised version which can be the final version. The contractor shall maintain appropriate revision control in an electronic format.

For each "final" deliverable (e.g., preliminary, draft, or final) that accomplishes a specific portion of a subtask activity, the contractor shall provide an electronic copy to the COR. The contractor shall explicitly state in its submittal that the product provided is the deliverable for Task/Subtask XX, as further described below.

The schedule for deliverables shall be contained in the approved Project Plan for the task order effort, which is included as a deliverable in the table below.

The contractor shall develop (as necessary), maintain, and control data, files, information, and deliverables pursuant to this task order

**Deliverable Schedule**

<b>Deliverable</b>	<b>Description</b>	<b>Quantity/Media</b>	<b>Completion Date</b>
1	Monthly Status Letter Report (MSLR)	Word Document	20 <sup>th</sup> of each month
2	Technical Letter Report as detailed in Subtask 1.A.	Word Document	Four weeks after receipt of the Topical Report
3	Technical Letter Report as detailed in Subtask 1.B.	Word Document	Two weeks after completion of Subtask 1.A.
4	Technical Letter Report as detailed in Subtask 1.C	Word Document	Two weeks after completion of Subtask 1.B
5	Technical Letter Report as detailed in Subtask 1.D	Word Document	Two weeks after completion of Subtask 1.C
6	Technical Letter Report as detailed in Subtask 1.E	Word Document	Agreed upon by the COR and PI
7	Technical Letter Report as detailed in Subtask 2.A	Word Document	Agreed upon between the COR and PI

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8	Technical Letter Report as detailed in Subtask 2.B	Word Document	Two weeks after receipt of RAI Responses
9	Trip Report as detailed in Task 3	Word Document and any other supporting media/documents	One week after the trip concludes
10	Draft Technical Evaluation Report as Detailed in Subtask 4.A	Word Document	Three weeks after resolution of open items
11	Final Technical Evaluation Report as detailed in Subtask 4.B	Word Document	One week after receipt of NRC comments
12	Draft ACRS Sub-committee presentation as detailed in Subtask 5.A.	PowerPoint	Two weeks prior to the ACRS Sub-committee meeting.
13	Final ACRS Sub-committee presentation as detailed in Subtask 5.B.	PowerPoint	Two days after receipt of NRC comments
14	Trip Report as detailed in Subtask 5.C.	Word Document	One week after trip concludes
15	Trip Report as detailed in Subtask 5.E	Word Document	One week after trip concludes

The above deliverables shall be submitted to the task order COR. Unless otherwise directed by the COR or the CO, the contractor must provide all deliverables except the Monthly Letter Status Reports (MLSR) as draft products. The COR 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 COR and then deliver a revised version of the deliverable, which will then be considered the Final Version. When mutually-agreed upon between the contractor and the COR, 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 COR's comments on the previous draft.

**7. REQUIRED LABOR CATEGORIES/ ESTIMATED LEVEL OF EFFORT(Except for Information Technology Services)**

Labor categories/Level of effort table

Labor Category	SKILLSETS	Minimum Qualification Requirement	Estimated Labor Hours
Sr. Tech Reviewer (STR)	-Expertise in transient thermal hydraulic analysis and core thermal analysis computer codes	1) M.S. in Mechanical or Nuclear Engineering, or 2) Minimum 10	550



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	-Expertise in nuclear engineering reactor design combined with the ability to perform calculations, analyses, and studies of thermal-hydraulics using state-of-the-art thermal-hydraulic computer codes such as RELAP5, TRACE, and COBRA/TRAC -Expertise in LOCA analysis including knowledge of all phases of the accident for both large and small breaks, key modeling techniques, and modeling codes.	years Technical Expertise in thermal hydraulic analysis; phenomena associated with boric acid precipitation in a nuclear reactor; experiments regarding boric acid precipitation (with and without debris); and previous GSI-191 testing and technical reviews	
Project Manager		1) Bachelor's Degree, or  2) Minimum 10 years Technical Expertise in thermal hydraulic analysis	40
Administrative Support			20
<b>TOTAL ESTIMATED LOE</b>			<b>610</b>

**8. GOVERNMENT-FURNISHED PROPERTY**

One copy of Topical Report WCAP-17788-P on CD, provided on 9/1/2015 shipped by United States Postal Service.

**9. PLACE OF PERFORMANCE**

The work to be performed under this contract will be primarily performed at the location of contractor's facility.

**10. SPECIAL CONSIDERATIONS**

**TRAVEL/MEETINGS**

All travel requires prior written approval from the COR.

The contractor shall be required to take the following trips:

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(2) one-person, three-day trips to a specified applicant facility such as Pittsburgh, PA or Lynchburg, VA to meet with the PWROG to perform an audit.

(2) one-person, one-day trips to NRC HQ to present to the ACRS Committees.

### **SECURITY**

Work on this task order may involve the handling of documents that contain proprietary information. The contractor shall safeguard documents containing proprietary information against unauthorized disclosure. After completion of work, the contractor must either destroy the documents or return them to the NRC. If they are destroyed, please confirm this in an e mail to the COR with a copy to the CO and include the date and manner in which the documents were destroyed.

### **LICENSE FEE RECOVERY**

All work under this task order is not license fee recoverable.

**SECTION F - Deliveries or Performance**

**NRCF030A PERIOD OF PERFORMANCE ALTERNATE I**

This order shall commence on September 1, 2015 and will expire on November 30, 2016. (See FAR 52.216-18 - Ordering).

**SECTION H - Special Contract Requirements**

**2052.215-70 KEY PERSONNEL. (JAN 1993)**

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

Title	Name
Senior Technical Reviewer	Dr. V. Palazov
Senior Technical Reviewer	Mr. David Caraher
Senior Technical Reviewer	Mr. Thomas King

\*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

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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.

**2052.215-71 PROJECT OFFICER AUTHORITY. (OCT 1999)**

(a) The contracting officer's authorized representative hereinafter referred to as the project officer for this contract is:

Name: William MacFee  
Address: US NRC NRR  
Washington DC 20555  
Telephone Number: 301-415-1326  
Email: [William.MacFee@nrc.gov](mailto:William.MacFee@nrc.gov)

The alternate contracting officer's representative is:

Name: Shaun Anderson  
Address: US NRC NRR  
Washington DC 20555  
Telephone Number: 301-415-2039  
Email: [Shaun.Anderson@nrc.gov](mailto:Shaun.Anderson@nrc.gov)

(b) Performance of the work under this contract is subject to the technical direction of the NRC project officer. 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 contract, approve technical reports, drawings, specifications, and technical information to be delivered by the contractor to the Government under the contract.

(c) Technical direction must be within the general statement of work stated in the contract. The project officer does not have the authority to and may not issue any technical direction which:

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- (1) Constitutes an assignment of work outside the general scope of the contract.
  - (2) Constitutes a change as defined in the "Changes" clause of this contract.
  - (3) In any way causes an increase or decrease in the total estimated contract cost, the fixed fee, if any, or the time required for contract performance.
  - (4) Changes any of the expressed terms, conditions, or specifications of the contract.
  - (5) Terminates the contract, settles any claim or dispute arising under the contract, or issues any unilateral directive whatever.
- (d) All technical directions must be issued in writing by the 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 contracting officer. 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 contracting officer.
- (e) 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.
- (f) If, in the opinion of the contractor, any instruction or direction issued by the project officer is within one of the categories defined in paragraph (c) of this section, the contractor may not proceed but shall notify the contracting officer in writing within five (5) working days after the receipt of any instruction or direction and shall request that contracting officer to modify the contract accordingly. Upon receiving the notification from the contractor, the contracting officer shall issue an appropriate contract modification or advise the contractor in writing that, in the contracting officer's opinion, the technical direction is within the scope of this article and does not constitute a change under the "Changes" clause.
- (g) 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 contract.
- (h) 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 to the instruction or direction is subject to 52.233-1 - Disputes.
- (i) 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 contracting officer 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 contracting officer recommendations for approval, disapproval, or suspension of payment for supplies and services required under this contract.

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**SECTION J - List of Documents, Exhibits and Other Attachments**

Attachments:

1. Monthly Letter Status Report Template
2. Guidance for Preparing Requests for Additional Information (RAIs)
3. Content, Outline, and Format for Technical Evaluation Report

Attachment 2

**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 Topical Report needs to be requested in a manner that is unambiguous, has an adequate basis, and is necessary for the safety review. The technical letter report described in Technical Reporting Requirements should provide a list of RAIs 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," "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.

After the RAIs have been forwarded to the applicable COR, 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 applicant 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 applicant prepare satisfactory responses.
- b. To ensure that the response appropriately addresses the RAI, the applicant may submit a draft response (which the NRC Project Manager docket in the Agency-Wide Documents Access and Management System (ADAMS)) and may request a follow-up teleconference and/or meeting.

After receiving the applicant's response to the RAI, the COR may hold a teleconference and/or a public meeting. The purpose of discussing a response with the applicant is to better understand the response and/or clarify areas of disagreement. If the resolution of a response relies on

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information not submitted to the NRC, the applicant should submit the information on the docket. Only docketed information will be taken into consideration when determining the staff's conclusion.



Attachment 3

**Content, Outline, and Format for Technical Evaluation Report**

1.0 Introduction

Summary of Work Performed: Describe the requested action. Outline the methodology used (by the PI) for evaluating the topical report.

2.0 Regulatory Evaluation and Criteria

Describe the regulatory guidance found in Regulatory Guide 1.82 for evaluation of the technical adequacy of the topical report methods.

3.0 Technical Evaluation

3.1. Document your evaluation of the methodology, modeling, and algorithms along with the supporting empirical and experimental database used for calibration and validation.

3.2. Document any independent calculations performed in support of assessing the methodology. Provide a direct comparison of your independent results to those presented in the topical report.

3.3. Include a summary of any RAIs and corresponding responses in the appropriate sections of the TER.

3.4. Document the basis(es) for acceptability of the methodology

4.0 Conclusion

Clearly define any limitation or conditions related to the future application of the methodology.