

# ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1

15

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

1. DATE OF ORDER 04/23/2015		2. CONTRACT NO. (If any) NRC-HQ-25-14-E-0005		6. SHIP TO. a. NAME OF CONSIGNEE US NUCLEAR REGULATORY COMMISSION-	
3. ORDER NO. NRC-HQ-20-15-T-0004		4. REQUISITION/REFERENCE NO. NRR-15-0117			
5. ISSUING OFFICE (Address correspondence to) US NRC - HQ ACQUISITION MANAGEMENT DIVISION MAIL STOP 3WFN-05-C64MP WASHINGTON DC 20555-0001				b. STREET ADDRESS MAIL PROCESSING CENTER 4930 BOILING BROOK PARKWAY	
				c. CITY ROCKVILLE	d. STATE MD
				e. ZIP CODE 20852	
7. TO: a. NAME OF CONTRACTOR ENERGY RESEARCH INC b. COMPANY NAME c. STREET ADDRESS 6189 EXECUTIVE BLVD				f. SHIP VIA	
				8. TYPE OF ORDER <input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY 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 ROCKVILLE		e. STATE MD	f. ZIP CODE 208523901		
9. ACCOUNTING AND APPROPRIATION DATA See Schedule				10. REQUISITIONING OFFICE OFF OF NUCLEAR REACTOR REGULATION	
11. BUSINESS CLASSIFICATION (Check appropriate box(es)) <input checked="" 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					
13. PLACE OF a. INSPECTION Destination		b. ACCEPTANCE Destination		12. F.O.B. POINT	
				15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	
				16. DISCOUNT TERMS	

## 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)
	ERI EWC UN T006. 1 titled Armed Forces Radiobiology Research Reactor: Performance and Documentation of Confirmatory Calculations of the Thermal Hydraulics Analyses for the License Renewal.  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						
b. STREET ADDRESS (or P O Box)		ONE WHITE FLINT NORTH 11555 ROCKVILLE PIKE MAILSTOP 03-E17A		\$0.00		17(i) GRAND TOTAL
c. CITY ROCKVILLE	d. STATE MD	e. ZIP CODE 20852-2738		\$35,795.33		
22. UNITED STATES OF AMERICA BY (Signature)				04/23/2015		23. NAME (Typed) MARK THOMPSON 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

JUN 15 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


CONTRACT NO

ORDER NO.

04/23/2015

NRC-HQ-25-14-E-0005

NRC-HQ-20-15-T-0004

ITEM NO (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	<p>Contracting Officers Representative: Cindy Montgomery, email: Cindy.Montgomery@nrc.gov, phone: 301-415-3398</p> <p>Contractor POCs:</p> <p>Business: Tracey Mullinix, Contract Administrator. Email: tlm@eri-world.com. Phone: (301) 881-0866.</p> <p>Technical: Dr. Mohsen Khatib-Rahbar, President. Email: mkrl@eri-world.com. Phone: (301) 881-0866.</p> <p> 4/23/15</p> <p>ERI Authorized Official                      Date</p> <p>Accounting Info:</p> <p>2015-X0200-FEEBASED-20-20D006-11-4-178-1082-252A</p> <p>Period of Performance: 04/23/2015 to 01/29/2016</p>					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$0.00

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Prescribed by GSA FAR (48 CFR) 53.213(f)

**TASK ORDER 06 – Unrestricted EWC IDIQ for ERI**

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

**B.1 PRICE/COST SCHEDULE**

CLIN	DESCRIPTION OF SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL COST PLUS FIXED FEE
0001	Contractor to provide Technical Assistance in accordance with section C: DESCRIPTION/ SPECIFICATIONS/ STATEMENT OF WORK			
	<b>Total</b>			<b>\$35,795.33</b>

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

(a) The estimated total quantity of this contract for the products/services under this contract is **\$35,795.33**, 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 **\$35,795.33**, 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.

(End of Clause)

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

NRC Requisition Office: NRR

Fee Recoverable: No

TAC Numbers: ME1587

### **1.0 PROJECT TITLE AND DESCRIPTION**

This project is titled: “Armed Forces Radiobiology Research Reactor: Performance and Documentation of Confirmatory Calculations of the Thermal Hydraulics Analyses for the License Renewal.”

The purpose of this task order is to perform independent confirmatory calculations and provide safety evaluation (SE) input for the thermal hydraulics analysis that Armed Forces Radiobiology Research Reactor (AFRRI) submitted for their License Renewal Application (LRA). The task order should be accomplished in accordance with the guidance provided in U.S. NRC NUREG-1537, “Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors.” The NRC staff will use this SE input to complete the Safety Evaluation Report (SER) for the AFRRI LRA.

The Statement of Work (SOW) for this Task Order falls within the unrestricted part of NRC IDIQ Enterprise-Wide Contract entitled Technical Assistance in Support of Agency Environmental and Reactor Programs, paragraph 3.2, Licensing Support.

### **2.0 BACKGROUND**

The Nuclear Regulatory Commission (NRC) has the authority and responsibility to review and evaluate requests for licensing actions made by its licensees. AFRRI (the Licensee/Applicant) submitted an application for renewal of its Facility Operating License No. R-84 for the AFRRI facility. As part of the LRA request, the licensee provided an updated safety analysis report (SAR), including technical specifications (TS). Issuance of a renewed license would authorize operation of AFRRI for a period of 20 years. The NRC staff has reviewed the LRA, issued requests for additional information (RAIs), reviewed the RAI responses, and is close to the completion of the license renewal (LR) SER. However, confirmatory calculations for AFRRI's thermal hydraulics analyses have not been performed and documented. The NRC staff created this SOW in order to obtain additional technical support necessary in order to complete the AFRRI LRA review in a timely fashion. Specifically, the contractor shall perform independent confirmatory calculations and provide SE input documenting confirmatory calculations of the thermal hydraulics analyses. This input will be used by the NRC staff to complete the AFRRI LR SER. The scope of the technical support needed is detailed below.

### **3.0 SCOPE OF WORK**

The objective of this task order is to obtain the SE input document to be used by the NRC staff to complete the LR SER for the AFRRI facility operating license. The contractor must provide all resources necessary to accomplish the tasks and deliverables described in this SOW. Specifically, the contractor shall review pertinent information in the documents listed below (these documents will be provided by the NRC staff):

- AFRRRI LRA, including SAR;
- NRC staff RAIs;
- AFRRRI responses to NRC staff RAIs;
- Other related information, as necessary.

The NRC Contracting Officer's Representative (COR) will conduct a kickoff meeting via a telephone conference call to discuss the status of the LR review and discuss any questions from the contractor. Routine telephone conversations between the NRC COR and the contractor will occur as necessary throughout the contract period.

Following this kickoff meeting, the contractor shall develop a calculational approach and SE input outline. After NRC approval, the contractor shall perform independent confirmatory calculations using codes and methodologies approved by the NRC COR (e.g., RELAP or TRACE) and develop SE input documenting the confirmatory calculations using the guidance provided in NRC NUREG-1537 (Task 1). The NRC staff has developed a draft SER that this SE input will be placed into.

The NRC staff does not anticipate that additional RAIs will be required, but if during the course of the work, the contractor determines that they may be necessary, the contractor shall communicate that information to the NRC COR who will obtain the necessary information from the licensee. Additionally, all communication to the licensee by the contractor must be done through the NRC COR.

The contractor's review will be done in-office from documents and material provided by the NRC staff. A site visit may be necessary for the contractor to complete this work. If the contractor believes a site visit, conference calls or other communications are necessary, the contractor shall discuss and make arrangements through the NRC COR. The contractor shall not contact the licensee directly.

Following review by the NRC COR of the calculational approach and the SE input outline (Task 1), the contractor shall provide the draft SE input documenting the confirmatory calculations (Task 2). The NRC staff will provide the contractor with comments on the draft; the contractor shall address the staff's comments and generate the final SE input (Task 3).

Also, the contractor shall provide to the NRC COR the input decks and all associated data with performing the confirmatory calculations and code runs.

#### **4.0 SPECIFIC TASKS**

The contractor shall perform the tasks below in accordance with the estimated completion schedule. The specific dates for these deliverables will be agreed upon between the NRC COR and the contractor prior to start of work.

##### **Task 1: Calculational Approach and SE Input Outline**

### **Task 1a: Provide a Draft Calculational Approach and SE Input Outline**

**Requirement:** The contractor shall provide a draft confirmatory calculational approach and an SE input outline. The code(s) chosen for the calculations should be described in the calculational approach. These codes shall be RELAP5 or TRACE using the Bernath correlation. The NRC staff will review the calculational approach and SE input outline and provide comments to the contractor.

**Standard:** The draft calculational approach and SE input outline to demonstrate how the calculational results will be presented shall be consistent with the guidance in NUREG 1537 and be approved by NRC COR.

**Deliverable:** Within three weeks of the kick off meeting, provide draft calculational approach and an outline of the SE input to demonstrate how the calculational results will be presented.

### **Task 1b: Provide a Final Calculational Approach and SE Input Outline**

**Requirement:** The contractor shall provide a final confirmatory calculational approach and an SE input outline incorporating NRC comments.

**Standard:** The final calculational approach and SE input outline shall demonstrate how the calculational results will be presented and shall be consistent with the guidance in NUREG 1537.

**Deliverable:** Within two weeks of receiving comments from NRC COR, provide the final calculation approach and an outline of the SE input to demonstrate how the calculational results will be presented.

### **Task 2: Perform Independent Confirmatory Calculations and Develop Draft SE Input Documenting Confirmatory Calculations of AFRRI's Thermal Hydraulics Analyses**

**Requirement:** Based on the requirements of 10 CFR Parts 20, 30, 40, 50 and 70 as appropriate, and the guidance contained in NUREG-1537, the contractor shall review the information provided by the NRC COR related to the AFRRI LRA and perform confirmatory calculations using the approach approved by the NRC in Task 1 above. The contractor shall:

- Calculate the numeric value of the facility's departure from nucleate boiling ratio (DNBR) at limiting conditions, i.e., licensed power level of 1.1 MW, TS coolant inlet temperature, and limiting core conditions – highest peak power.
- Determine the power level where DNBR is 1.0. Compare that power level to the AFRRI calculated value of 1.99 MW where DNBR is 1.0.
- Determine the rate of change in DNBR as a function of power level over the interval from 1MW to the power level where DNBR is 1.0 using power level increments that reveal inflection points.

As preliminary results of the calculations become known by the contractor, the contractor shall provide these results to the NRC COR in a timely fashion.

The contractor shall develop a Draft SE input using the outline in Task 1 to document the confirmatory calculations of the thermal hydraulics analyses, in conformance with the applicable regulations and consistent with the guidance in NUREG-1537. The Draft SE

input shall state the applicable regulations or standards, discuss the licensee's method for satisfying the regulations or standards, and provide an evaluation of whether the licensee's method does indeed satisfy the regulations or standards. The Draft SE input shall describe the methodology used to perform the confirmatory calculations, including which computer codes were used, and the applicable correlations. The Draft SE input shall also describe the rationale for the use of the chosen methodology, calculations, codes, and equations.

If the contractor finds other technical issues with the licensee's submission for license renewal, the contractor shall bring this to the attention of the NRC COR for the NRC COR's approval prior to beginning performance of these other calculations.

**Standard:** The Draft SE input shall be consistent with the review guidance specified in the NUREG-1537. The contractor shall provide the Draft SE input to the NRC COR as a Word file, and shall follow the guidance in NUREG-1379, "NRC Editorial Style Guide," Rev. 2. The contractor shall submit the draft SE input to the NRC COR on time and the deliverable shall be technically acceptable, with no spelling or grammatical errors and in a format that is compatible with the draft SER.

The Draft SE input shall describe the contractor's evaluation of the licensee's conformance to regulatory requirements and consistency with the guidance, show the confirmatory calculations and shall clearly identify the basis of acceptability. For the confirmatory calculations, the contractor shall use the calculational approach Task 1. If the contractor determines that there are areas where additional information is warranted, the contractor shall communicate this information to the NRC COR as soon as possible.

**Deliverables:** The contractor shall provide the Draft SE input documenting the confirmatory calculations, and specify the codes and methodologies used. Deliver to NRC COR either ten weeks after approval of calculational approach and SE input outline, or if RAIs are required, eight weeks after receipt of licensee RAI responses, whichever comes later.

### **Task 3: Provide Final SE Input Documenting the Confirmatory Calculations and Input Decks**

**Requirement:** The NRC staff will review the Draft SE input and provide comments to the contractor. The contractor shall review and evaluate the NRC COR's comments to the Draft SE input document and provide a Final SE input incorporating NRC COR's comments. The contractor shall deliver to the NRC COR the input decks and all associated data used in performing the confirmatory calculations and code runs.

**Standard:** The contractor shall provide the Final SE input document to the NRC COR as a Word file, and shall follow the guidance in NUREG-1379, "NRC Editorial Style Guide," Rev. 2. The contractor shall ensure that the Final SE input document is delivered on time and, is technically acceptable, and contains no spelling or grammatical error and in the specified format.

**Deliverable:** Final SE input document – Delivered to NRC COR, two weeks following receipt of the NRC staff comments on the Draft SE input document. The contractor shall deliver to the NRC COR the input decks and all associated data used in performing the confirmatory calculations and code runs

### **Task 4: Related Support**

**Requirement:** If requested by the NRC COR, the contractor shall provide up to 20 hours of related technical support to the NRC staff at the conclusion of the tasks in this statement of work. This related support may, for example, consist of tasks such as: responding to questions on the final deliverable, attending meetings with NRC Management to discuss the results of the LRA review, and assisting NRC staff in resolution of outstanding issues from these meetings.

The scope of the related support activity and amount of hours to be used shall be agreed upon between the contractor and the NRC COR before starting the activity. The NRC COR will confirm the request, the due date, and the estimate of effort for the specific activity by e-mail to the contractor with a complimentary copy to the NRC Contracting Officer (CO).

**Standard:** The contractor shall participate in related meeting support, if requested by the NRC COR. The contractor shall ensure that all information/support it provides for these meetings pursuant to this SOW shall be technically correct.

**Deliverable:** The contractor shall provide support for the preparation of these meetings, including support services for any presentation preparation. All deliverable due dates will be specified by the NRC COR.

## **5.0 APPLICABLE DOCUMENTS AND STANDARDS**

The NRC COR will provide the specific documents listed in Section 3, Scope of Work, related to the LRA for AFRRRI, at the commencement of the task order. Other documents needed are publicly available on the NRC Website. ANSI/ANS standards include the ANSI/ANS-15 series applicable to research and test reactors, which the contractor will have to procure on their own. The NRC COR cannot provide those, due to copyright restrictions.

The NRC will provide appropriate information in an electronic format, or if the contractor requests, in paper format.

## **6.0 DELIVERABLES AND DELIVERY SCHEDULE/REPORTING REQUIREMENTS**

All deliverables shall be submitted to the NRC COR electronically with a copy provided to the NRC CO. These deliverables shall be prepared in Microsoft Office Word format, and in Adobe Acrobat file (.pdf). The transmittal letter, at a minimum, shall contain the job code number (JCN), contract number, the LRA being reviewed, as well as the task order project title. Below is an example of an estimated delivery schedule. The specific dates for these deliverables will be agreed upon between the NRC COR and the contractor after task order award.

<b>Tasks</b>	<b>Deliverables</b>	<b>Schedule</b>
1a. Presentation of draft calculational approach and SE outline	Draft Calculational approach and SE outline	Three weeks after the kick off meeting
1b. Presentation of final calculational	Final Calculational approach and SE	Two weeks after receiving comments from the NRC COR



approach and SE outline	outline	
2. Draft SE input document	Draft SE input document	Deliver to NRC COR either ten weeks after approval of calculational approach and SE input outline, or if RAls are required, eight weeks after receipt of licensee RAl responses, whichever comes later.
3. Final SE input document	Final SE input document	Two weeks after receipt of NRC comments
4. Related Support	As requested	As requested

### **Monthly Letter Status Report**

The contractor shall provide an electronic version of the Monthly Letter Status Report (MLSR) to the NRC CO, NRC COR, NRR Funds Certifying Official and Office of the Chief Financial Officer (OCFO) by the 15th of each month, in a format similar to the sample contained in Attachment 2. The report shall provide the technical and financial status of the effort.

The technical status section of the MLSR shall contain a summary of the work performed 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, including trip start and end dates, destination, and traveler(s) for each trip.

The financial status section of the MLSR shall include the following information: the total task order ceiling amount; funds obligated to-date; total costs incurred in the reporting period, broken down by direct and other direct costs; and total cumulative costs incurred-to date. The MLSR shall also contain the balance of obligated funding remaining at the end of the reporting period, and the balance of funds required to complete the contract.

Additionally, if applicable, the MLSR 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 MLSR 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.

In the event that the data in the MLSR indicates a need for additional funding beyond that already obligated to the task order for that reporting period, 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.

### **Performance Requirements**

The deliverables required under this effort must conform to the standards contained or referenced in this SOW. The table on performance requirements summarizes the performance requirements, deliverables, standards and method of review for this effort.

<b>Performance Requirement and Deliverables</b>	<b>Standard</b>	<b>Method of Review</b>	<b>Corrections (if needed)</b>
Provide draft calculational approach and SE outline	Draft calculational approach and SE outline	NRC COR will review the draft calculational approach and SE outline.	Draft calculational approach and SE outline will be corrected by contractor.
Provide final calculational approach and SE outline	Final calculational approach and SE outline	NRC COR will review the final calculational approach and SE outline.	Final calculational approach and SE outline will be corrected by contractor.
Provide Draft SE input document to NRC COR.	Draft SE input document is in accordance with the review guidance specified in NUREG-1537, includes all information requested in the SOW, and incorporates all comments from the NRC COR. Technical conclusions are properly supported. No spelling or grammatical errors.	NRC COR will review the Draft SE input document.	Items determined by the NRC COR to be missing or incorrect will be corrected by contractor. If not incorporated after initial identification by NRC COR, contractor will add/correct at its own expense.
Provide Final SE input document to NRC COR.	Final SE input document is in accordance with the review guidance specified in NUREG-1537, includes all information requested in the SOW and incorporates all comments by the NRC COR. Technical conclusions are properly supported. No spelling or grammatical errors.	NRC COR will review the Final SE input document.	Items determined to be missing or incorrect will be corrected by contractor. If not incorporated after initial identification by NRC COR, contractor will add/correct at its own expense.

## 7.0 GOVERNMENT-FURNISHED PROPERTY

No government-furnished property is expected to perform this task order.

## **8.0 PERIOD OF PERFORMANCE**

See NRCF030A PERIOD OF PERFORMANCE ALTERNATE I, below.

## **9.0 PLACE OF PERFORMANCE**

The work will be performed at the contractor's site.

## **11.0 SPECIAL CONSIDERATIONS**

### **TRAVEL/MEETINGS**

The contractor may need to make one trip to the NRC HQ to support any related questions or meetings that may result from the review. During this visit, the contractor may visit the AFRR facility near NRC HQ.

**Trip purpose and associated task:** The purpose of this travel would be to understand fully the thermal hydraulics of the licensee's facility, answer questions posed by NRC management, or attend a meeting.

**Frequency:** One trip.

**Destination:** NRC HQ, Rockville, MD, or the licensee's facility, Bethesda, Maryland.

**Number of Staff:** Up to three (3) contractor's staff.

**Number of Days:** Up to three (3) days.

Contractor will be authorized travel expenses consistent with the substantive provisions of the Federal Travel Regulation (FTR) and the limitation of funds specified in this contract/order. All travel requires written Government approval from the CO, unless otherwise delegated to the COR.

Travel will be reimbursed in accordance with FAR 31.205-46, "Travel costs" and the General Services Administration's Federal Travel Regulations at:  
<http://www.gsa.gov/portal/content/104790>.

All travel requires prior written approval from the NRC COR.

### **SECURITY**

No classified information is needed in the performance of this contract. Some materials provided may be sensitive and the contractor shall have the necessary provisions to secure the information consistent with the NRC guidance for storage and use of Official Use Only, Proprietary, or Pre-decisional information.

Documents containing proprietary information and must be safeguarded against unauthorized disclosure. After completion of work, the documents shall either be destroyed or returned to NRC. If they are destroyed, please confirm this in an e-mail to the NRC COR with a copy to the NRC CO and include the date and manner in which the documents were destroyed.

## **12.0 NRC FURNISHED MATERIAL**

The following NRC furnished materials will be provided to the contractor under Section J, below:

Electronic copy of the MLSR

## **13.0 OTHER APPLICABLE INFORMATION**

### **a. License Fee Recovery**

The 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 April 23, 2015 and will expire on January 29, 2016. (See FAR 52.216-18 - Ordering)..

(End of Clause)

## **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:

N/A	N/A
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\*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.

(End of Clause)

**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: Cindy Montgomery  
Address: US NRC  
NRR/DPR/PRLB  
MS-O-10E01  
Washington DC 20555  
Telephone Number: (301) 415-3398  
Email: [Cindy.Montgomery@nrc.gov](mailto:Cindy.Montgomery@nrc.gov)

The alternate contracting officer's representative is:

Name: Patrick Boyle  
Address: US NRC  
NRR/DPR/PRLB  
MS-O-10E01  
Washington DC 20555  
Telephone Number: 301-415-3936  
Email: [Patrick.Boyle@nrc.gov](mailto:Patrick.Boyle@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:

(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.

(End of Clause)

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

Attachments:

1. Monthly Letter Status Report Template