

2. AMENDMENT/MODIFICATION NO. M0009	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO. RES-17-0357	5. PROJECT NO. (If applicable)
6. ISSUED BY      CODE US NRC - HQ ACQUISITION MANAGEMENT DIVISION MAIL STOP TWFN-8E06M WASHINGTON DC 20555-0001		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.
		9B. DATED (SEE ITEM 11)
	x	10A. MODIFICATION OF CONTRACT/ORDER NO. NRC-HQ-50-14-E-0001 NRC-HQ-60-15-T-0001
CODE    007936842      FACILITY CODE		10B. DATED (SEE ITEM 13) 04/30/2015

**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) 2017-X0200-FEEBASED-60-60D001-60B106-1014-11-6-213-252A-11-6-213-1014	Net Increase:	\$28,240.00
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**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).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) FAR 43.103 (a) Bilateral - Mutual Agreement of the Parties

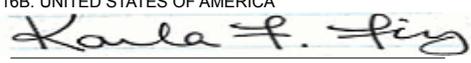
**E. IMPORTANT** Contractor  is not.  is required to sign this document and return 1 copies to the issuing office.

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) raise the ceiling by \$28,240.00, from \$391,074.00 to \$419,314.00; (2) revise deliverable due dates; (3) extend the period of performance by one (1) year, from September 30, 2017 to September 30, 2018; and (4) provide incremental funding in the amount of \$28,240.00, thereby increasing the total obligated amount from \$391,074.00 to \$419,314.00.

Refer to continuation pages for task order modification details.

Total Task Order Ceiling: \$419,314.00 (Changed)  
Total Obligated Amount: \$419,314.00 (Changed)  
Period of Performance: 05/01/2015 to 09/30/2018

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)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) KARLA F. GARCIA
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED
	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)
	16C. DATE SIGNED 08/24/2017

Accordingly the following changes are hereby made:

- 1) Section B, Supplies or Services/Prices, sub-section PRICE/COST SCHEDULE is deleted in its entirety and replaced with the following:

**PRICE/COST SCHEDULE**

CLIN NO.	DESCRIPTION OF SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL CPFF
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

- 2) Section B, Supplies or Services/Prices, sub-section NRCB040A CONSIDERATION AND OBLIGATION—COST-PLUS-FIXED-FEE ALTERNATE I is deleted in its entirety and replaced with the following:

**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 **\$419,314.00** 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 **\$419,314.00**, 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 85 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 15 percent of the total fee or \$100,000, whichever is less. Accordingly, the maximum amount of fixed-fee that may be held in reserve is [REDACTED]

- 3) Section C - Description/Specifications Statement of Work is deleted in its entirety and replaced with the attached Statement of Work (Revision 2) titled, "Technical Assistance for Revision to NUREG-2117, *Practical Implementation Guidelines for SSHAC Level 3 and 4 Hazard Studies.*"
  
- 4) Section F - Deliveries or Performance, sub-section NRCF032 TASK/DELIVERY ORDER PERIOD OF PERFORMANCE (SEP 2013) is deleted in its entirety and replaced with the following:  
  
"This order shall commence on May 1, 2015, and will expire on September 30, 2018."
  
- 5) The contractor shall not submit the Technical Progress and Financial Status Reports in Sections F.3 and F.4 of the base contract, if no work is performed during the prior month.

All other terms and conditions remain unchanged.

## **STATEMENT OF WORK (Revision 2)**

Project Title: Technical Assistance for Revision to NUREG-2117, *“Practical Implementation Guidelines for SSHAC Level 3 and 4 Hazard Studies”*

### **1.0 BACKGROUND**

In 1997, the U.S. Nuclear Regulatory Commission (NRC) issued NUREG/CR-6372 entitled, Recommendations for Probabilistic Seismic Hazard Analysis: Guidance on Uncertainty and the Use of Experts. The document was the culmination of 4 years of deliberations by the Senior Seismic Hazard Analysis Committee (SSHAC) regarding the manner in which the uncertainties in probabilistic seismic hazard analysis (PSHA) should be addressed using expert judgment. The document describes a formal process for structuring and conducting expert assessments that has come to be known as a “SSHAC process,” and the recommendations made in the report are referred to as the SSHAC guidelines.

NUREG-2117 was written to complement the SSHAC guidelines report. NUREG-2117 serves two primary purposes: (1) it provides additional levels of detail on topics related to the implementation of SSHAC processes beyond those provided in the original SSHAC report, particularly for Level 3 studies, and (2) it provides additional guidance on the implementation of Level 3 and 4 studies in light of experience gained from past SSHAC projects. Over the past 15 years, several SSHAC Level 3 and 4 studies have been conducted, thus leading to an expanded “database” of experience in the intricacies of carrying out the SSHAC process in actual projects.

The recommendations given in the original SSHAC report regarding methodology were made largely in the abstract without the benefit of significant experience in many areas that would allow for specific guidance. As a result, they provide a very useful framework but are generally at a very high level. NUREG-2117 fills in that framework with details (necessarily) missing in the original SSHAC guidelines. In addition, the SSHAC guidelines devoted most effort to discussing SSHAC Level 4 studies and provided very little guidance regarding the specific approaches that would be appropriate for Level 3 studies. For this reason, NUREG-2117 focused a significant amount of effort on developing and describing the appropriate methods and approaches for a Level 3 study.

Since the time of its issuance, the guidance in NUREG-2117 has been used for seismic hazard studies at all of the nuclear power plant sites in the United States, and has provided a framework for seismic hazard studies for U.S. Department of Energy nuclear facilities, nuclear facilities in other countries (e.g., South Africa, Switzerland), and major dams in Canada. Further, the SSHAC guidelines are now being contemplated by the NRC and Federal Energy Regulatory Commission (FERC) for application to flooding hazards (e.g., riverine flooding, tsunami) and dam failures. These implementations include extensive Level 3 SSHAC studies. NUREG-2117 greatly improved the SSHAC methodology and provided a more consistent regulatory framework. From subsequent applications of the guidance has come a wealth of experience that demonstrates the fundamental value and importance of the SSHAC process. At the same time, the real-world experience has provided lessons learned that necessitate both updating and revision of the guidance provided in the NUREG, and additions to and amplification of guidance in areas that were not afforded detailed attention in NUREG-2117. Based on these lessons learned, updates are needed to NUREG-2117 in order to enhance the efficiency and effectiveness of this guidance.

## **2.0 OBJECTIVE**

The overall objective of this contract is to obtain expert technical assistance for the revision of NUREG-2117. Specifically, updates to the NUREG should include improved SSHAC Level 2 process definition, updates to the guidance for Level 3 and Level 4 processes, and recommendations for use of SSHAC for non-seismic hazards and risk assessments. The results of the guidance update are to be published as a new revision to NUREG-2117.

## **3.0 SCOPE OF WORK**

The tasks included in this statement of work (SOW) will require considerable interactions and teamwork between the NRC Contracting Officer's Representative (COR) and the contractor. The contractor shall provide technical assistance with the production of NUREG-2117, "Practical Implementation Guidelines for SSHAC Level 3 and 4 Hazard Studies." The final versions of this guidance documents are to be published as a new revision to NUREG-2117.

For each task of this contract, the contractor shall organize a workshop and several writing sessions. The workshops may include inputs from many of the project managers for recent PSHA studies, technical integrators or technical facilitators, and participatory peer-review panelists (PPRP). The outcome of each of the workshops will be a set of recommended changes to the NUREG. Prior to each of the workshops to support Tasks 1-4 below, the contractor shall develop a questionnaire to elicit feedback from the participants. This product will be provided to the NRC COR for review prior to the workshops.

The existing document (NUREG-2117) is expected to change significantly, including parts dealing with the regulatory history of the development of expert elicitation approaches and the SSHAC guidelines, the fundamental theoretical underpinnings of the SSHAC approach, and the essential steps involved in SSHAC Level 3 and 4 processes, the SSHAC Level 2 approach, updates to implementation approaches that either require modification or amplification in light of experience (e.g., timing of workshops), and guidance for subjects not considered in previous guidance (e.g., SSHAC application to hazards other than seismic). In addition, a review of the entire document will be done to ensure that there is consistency between the modified sections of the document and those portions that are not revised.

The contractor shall provide document production services to produce the camera-ready NUREG in NRC-approved format, including technical editing and final formatting.

**The scope of work is described in the following tasks:**

### **Task 1: Specification of the SSHAC Level 2/1 processes**

In addition to the Level 2 "refinements" that are currently being conducted, it is likely that current Level 3 studies (including the Central and Eastern U.S. Seismic Source Characterization Model and the Next Generation Attenuation-East Model) will be updated in the future using a Level 2 process. Therefore, further guidance and specification of the essential steps in a SSHAC Level 2 process need to be provided. Issues that shall be addressed in the revision include:

- Ways that the technical integration team demonstrates and documents that they have identified and evaluated all data, models, and methods during the evaluation stage
- Use of workshops (required or encouraged) designed to demonstrate comprehensive evaluation and integration processes

- Role of the PPRP, including when they interact with the project, and what written products are expected from them
- Description of the tangible differences in the products and regulatory assurance of a Level 2 and 3 study, from the standpoint of the sponsors and the regulators
- Consideration of whether site response analyses should be done using a Level 2 process
- Description of the minimum acceptable attributes for a Level 1 study

## **Task 2: Updating Criteria**

This task entails the review and revision of the criteria for updating a SSHAC study, as discussed in Chapter 6 of NUREG-2117. The current criteria for evaluating an existing hazard study lead to a decision to accept, refine, or replace the existing study. Given the completion of Level 3 studies at all of the currently operating nuclear power plant (NPP) sites, the “updating” issue will then become the most important decision to be made and will affect the scope of the hazard studies that occur in the near future. Key issues that shall be addressed in this task include the following:

- Whether the alternatives for evaluating an existing PSHA (accept, refine, replace) should include the option of “revise”
- How existing studies should be evaluated relative to new data, models, and methods
- The strategy for assessing whether changes are significant, and whether quantitative definitions of “significant” should be provided
- Review and consideration of the 25% hazard precision estimate discussed in Chapter 9 of NUREG-2115 as a measure of when something is significant or not
- Address the issue of whether or not a local “refinement” of a regional study is considered an update to the regional study; in the sense that a comparison is made between the hazard from the regional study and the hazard from the refined study

## **Task 3: Detailed Guidance Updates to Level 3 and 4 Processes**

This task includes revision and improvement of the guidance for Level 3 and 4 studies based on experience from recent practice and problems. Issues that shall be addressed include the following:

- Discussion on the participation of the PPRP at Workshop 3 (as defined in NUREG-2117 for SSHAC Level 3 and 4 processes). This has proven to be very useful and the written feedback given after that workshop can greatly assist in finalizing the models
- Discussion of how the time from the end of SSHAC Workshop 3 to the receipt of the Draft Report is too long for the PPRP, because they don’t know how the preliminary models have been revised and finalized until they get the report, so they need a briefing at the time that the Hazard Input Document is finalized
- Additional guidance to better specify the crucial role of the PPRP, their role, at what point can they conclude that a project is inadequate, and details of the products that they are expected to develop at key times during the project
- The role of the Project Manager shall be more specifically defined

- Recommendations shall be provided regarding how mature the Technical Integration teams' models need to be in order to have an effective Workshop 3, particularly with regard to model changes that may be made and the applicability of hazard feedback

#### **Task 4: Use of SSHAC for Non-seismic Hazard and Risk Assessments**

Although the current document mentions other hazards, the concepts are not developed and examples are not given. The SSHAC process holds great promise for assessing all kinds of hazards that require expert judgment, including probabilistic flood, volcanic and tsunami hazard analysis as well as other inputs to a risk analysis. This discussion shall include the following:

- Examples of applications that have been conducted for non-seismic applications (e.g., volcanic hazard, percolation flux, tsunami).
- Description of the elements of the SSHAC process that would be unchanged and those that would require tailoring for the hazard being assessed
- Provide description of an example for flood hazard analysis: aleatory model, epistemic uncertainties, topics to be addressed in workshops, etc.
- Discuss consistency with risk-informed approach and need for full documentation and peer review

#### **Task 5: Incorporation of Task 1-4/6 Results into NUREG Revision**

This task involves compiling the information developed in Tasks 1-4 and task 6, performing a review of the existing NUREG document to correct or clarify passages that are unclear or ambiguous, modify the document based on the results of these tasks, and developing a final draft NUREG. Based on the extensive revisions recommended through completion of Tasks 1-4 and 6, three writing sessions will be required to facilitate: 1) determining which sections of the document will be updated, as well as which new sections need to be added; and 2) incorporation of new sections and final integration of newly authored sections. Furthermore, additional support is needed to fully capture international experience using SSHAC and to incorporate the insights and suggestions from Task 6.

A review of the entire draft NUREG-document will be done as part of this Task to ensure that there is consistency between the modified sections of the document and those portions that are not revised.

#### **Optional Task 6: Potential Application of SSHAC Framework to Site Response (Exercised)**

The current version of NUREG-2117 does not explore the application of the SSHAC Guidelines to the assessment of site response analysis for facility specific studies. Current PSHA studies conducted following the SSHAC guidelines included seismic source and ground motion attenuation characterization but not site response analysis.

- Based on discussions with participants and users of the current PSHA studies, provide an assessment of the feasibility of applying the SSHAC process to facility-specific site

response analyses. This assessment should include any relevant insights gained during the course of the Workshops conducted for Tasks 1-4.

Should this optional task be exercised, it will be implemented similarly to the prior tasks and will include an organized workshop and several writing sessions. The outcome of the workshops will be a set of recommended changes to the NUREG. This optional task is included should the CNWRA and NRC team decide that an additional workshop or workshops is needed to fully address these emergent topics. The option will be exercised at the discretion and approval of the NRC COR. Specifically, this task will produce a suggested framework for conducting a facility-specific site-response analysis consistent with the SSHAC guidelines. This framework should include a suggested outline and agenda for conducting the Site Response Analyses. This discussion will be informed by the results of Task 1 (Specification of guidance for SSHAC Level 1 and 2 studies).

#### 4.0 DELIVERABLES AND REPORTING REQUIREMENTS

The contractor shall provide deliverables in Microsoft® Word format, unless other software is approved in writing by the NRC COR. Deliverables shall be provided in both electronic format and hard copy. The electronic versions of the deliverables shall be delivered to the NRC COR. Unless the contract is otherwise bilaterally modified by the parties, the contractor shall submit deliverables by the draft due dates in the deliverable table below. The NRC COR will provide a revised schedule of activities, deliverables, and milestones for the project as the project progresses.

Unless otherwise specified below, for all tasks, the contractor shall provide all deliverables as draft products. The NRC 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 NRC COR, and, within 30 business days, deliver the final version of the deliverable, unless otherwise specified in the deliverable table. When mutually agreed upon between the contractor and the NRC COR, the contractor may submit preliminary or partial drafts to ensure the contractor understands of the particular work requirement.

TASK	SCHEDULE
<p>Task 1: Specification of SSHAC Level 2/1 Process</p> <p>1.1 Prior to the workshop the contractor shall develop a questionnaire to elicit feedback from the participants on this topic (described above) and develop list of potential participants. These items will be provided to the NRC COR for review prior to the workshop. NRC review (comments to contractor within 15 days)</p> <p>1.2 Conduct workshop</p> <p>1.3 Summarize workshop findings and provide draft summary to NRC COR for review.</p> <p>NRC review (comments to contractor within 15 days)</p>	<p>45 days after award COMPLETED</p> <p>60 days after award COMPLETED 30 days after workshop COMPLETED</p>

<p><b>Task 2: Updating Criteria</b></p> <p>2.1 Prior to the workshop the contractor shall develop a questionnaire to elicit feedback from the participants on this topic (described above) and develop list of potential participants. These items will be provided to the NRC COR for review prior to the workshop. NRC review (comments to contractor within 15 days)</p> <p>2.2 Conduct workshop</p> <p>2.3 Summarize workshop findings and provide draft summary to NRC COR for review NRC review (comments to contractor within 15 days)</p>	<p>July 1, 2015 COMPLETED</p> <p>August 30, 2015 COMPLETED 30 days after workshop COMPLETED</p>
<p><b>Task 3: Detailed Guidance Updates to Level 3 and 4 Processes</b></p> <p>3.1 Prior to the workshop the contractor shall develop a questionnaire to elicit feedback from the participants on this topic (as described above) and develop list of potential participants. These items will be provided to the NRC COR for review prior to the workshop. NRC review (comments to contractor within 15 days)</p> <p>3.2 Conduct workshop</p> <p>3.3 Summarize workshop findings and provide draft summary to NRC COR for review NRC review (comments to contractor within 15 days)</p>	<p>November 1, 2015 COMPLETED</p> <p>January 30, 2016 COMPLETED 30 days after workshop COMPLETED</p>
<p><b>Task 4: Use of SSHAC for Non-seismic Hazard and Risk Assessments</b></p> <p>4.1: Prior to the workshop the contractor shall develop a questionnaire to elicit feedback from the participants on this topic (as described above) and develop list of potential participants. These items will be provided to the NRC COR for review prior to the workshop. NRC review (comments to contractor within 15 days)</p> <p>4.2: Conduct workshop</p> <p>4.3: Summarize workshop findings and provide draft summary to NRC COR for review NRC review (comments to contractor within 15 days)</p>	<p>April 1, 2016 COMPLETED</p> <p>May 1, 2016 COMPLETED June 1, 2016 COMPLETED</p>

<p><b>Task 5: Incorporation of Task 1-4/6 Results into NUREG Revision</b>                      5.1: Compile summary of Tasks 1-4 and list of proposed changes to NUREG-2117. Provide to NRC COR for review (NRC comments within 30 days)</p> <p>5.2: Prepare draft revised version of NUREG-2117                      NRC review of draft NUREG (comments to contractor within 60 days)</p> <p>5.3 Prepare final draft of revised NUREG</p>	<p>August 31, 2016                      COMPLETED</p> <p>December 31 2016                      COMPLETED</p> <p><b>November 30, 2017</b></p>
<p><b>Optional Task 6: Potential Application of SSHAC Framework to Site Response</b>                      6.1: Develop questionnaire to elicit feedback from subject matter experts on the application of NUREG-2117 to facility-specific site response analyses. Provide draft questionnaire to NRC COR for review (NRC comments within 30 days)</p> <p>6.2: Conduct workshop</p> <p>6.3: Summarize workshop findings and provide draft summary to NRC COR for review                      NRC review (comments to contractor within 15 days)</p> <p><b>6.4 Prepare final workshop summary on facility-specific site response analyses</b></p>	<p>August 1, 2016                      COMPLETED</p> <p>September 30, 2016                      COMPLETED</p> <p>October 31, 2016                      COMPLETED</p> <p><b>August 31, 2017</b></p>

The contractor shall provide all data produced under this contract to the NRC COR at the conclusion of the contract. All data first produced in performance of this contract are subject to FAR clause 52.227-14, Rights in Data—General (Dec 2007), which is hereby incorporated by reference.

**5.0 APPLICABLE DOCUMENTS AND STANDARDS**

Mandatory Documents and Standards:

- 1) NUREG-0650, Preparing NUREG-Series Publications, Revision 2  
<http://pbadupws.nrc.gov/docs/ML0410/ML041050294.pdf>
- 2) NUREG-1379, NRC Editorial Style Guide  
<http://pbadupws.nrc.gov/docs/ML0932/ML093280744.pdf>

## 6.0 MEETINGS AND TRAVEL

Fiscal Year	No. of Trips	No. of Travelers	Meeting Duration, Days	Maximum Trip Duration, Days*	Purpose	Status
2015	1	2	2	4	Task 1 meeting in San Antonio, Texas	Completed
2015	3	2	2	4	Workshops for Tasks 1-4 in Walnut Creek, California	Completed
2016	1	2	2	4	Workshop for Tasks 1-4 in Walnut Creek, California	Completed
2016	1	2	2	2	Task 5 Preliminary writing session in Walnut Creek, California	Completed
2016	1	2	2	4	Workshop for Optional Task 6 in Walnut Creek, California or Rockville, Maryland	Pending
2016	1	2	5	7	Task 5 Writing session in Rockville, Maryland	Pending
2016	1	2	2	4	Task 5 Writing session in Rockville, Maryland	Pending

The contractor shall request and obtain approval from the COR before incurring any travel costs.

## 7.0 NRC FURNISHED MATERIALS

The NRC COR will furnish the following materials to the contractor. Upon request, other background information and reference materials will be provided to the contractor, if available.

The NRC shall furnish a final MS Word version of the existing NUREG-2117 document.

## 8.0 LICENSE FEE

N/A

## 9.0 KEY PERSONNEL AND REQUIRED QUALIFICATIONS

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

- Project Manager
- Subject Matter Expert(s)
  - The subject matter experts at a minimum must have 20 years of experience in the evaluation and assessment of seismic and other natural hazards for critical facilities. The subject matter experts should have a complete understanding of the SSHAC Guidelines and their implementation.
- Administrative Support