

ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1 34

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

1. DATE OF ORDER 09/12/2014		2. CONTRACT NO. (If any) NRC-HQ-50-14-E-0001		6. SHIP TO:	
3. ORDER NO NRC-HQ-25-14-T-0023		4. REQUISITION/REFERENCE NO NRO-14-0127		a. NAME OF CONSIGNEE US NUCLEAR REGULATORY COMMISSION-	
5. ISSUING OFFICE (Address correspondence to) US NRC - HQ ACQUISITION MANAGEMENT DIVISION MAIL STOP 3WFN-05-C64MP ATTN HUGO O ALCANTARA 301-287-0844 WASHINGTON DC 20555-0001				b. STREET ADDRESS MAIL PROCESSING CENTER 4930 BOILING BROOK PARKWAY	
				c. CITY ROCKVILLE	e. ZIP CODE 20852
7. TO				f. SHIP VIA	
a. NAME OF CONTRACTOR S W R I				8. TYPE OF ORDER	
b. COMPANY NAME				<input type="checkbox"/> a. PURCHASE	
c. STREET ADDRESS 6220 CULEBRA RD				REFERENCE YOUR:	
d. CITY SAN ANTONIO				e. STATE TX	
				f. ZIP CODE 782385166	
9. ACCOUNTING AND APPROPRIATION DATA See Schedule				10. REQUISITIONING OFFICE OFFICE OF NEW REACTORS	

11. BUSINESS CLASSIFICATION (Check appropriate box(es))				12. F.O.B. POINT	
<input type="checkbox"/> a. SMALL <input checked="" 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		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	
a. INSPECTION Destination		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)
	The Contractor shall provide services in accordance with the Statement of Work entitled "Dam Failure Review Support" NRC Contracting Officer's Representative: Barbara Hayes 301-415-7442 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				\$912,222.00		17(i) GRAND TOTAL
b. STREET ADDRESS (or P.O. Box) ONE WHITE FLINT NORTH 11555 ROCKVILLE PIKE MAILSTOP 03-E17A				\$992,010.00		
c. CITY ROCKVILLE		d. STATE MD	e. ZIP CODE 20852-2738			

22. UNITED STATES OF AMERICA BY (Signature)		09/17/2014		23. NAME (Typed) STEPHEN M. POOL TITLE: CONTRACTING/ORDERING OFFICER	
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TEMPLATE - ADM001

SUNSI REVIEW COMPLETE

NOV 25 2014

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

NRC-HQ-50-14-E-0001

ORDER NO


NRC-HQ-25-14-T-0023

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Period of Performance: 09/19/2014 to 09/30/2016 Accounting Info: 2014-X0200-FEEBASED-25-25D005-11-4-212-1062- 252A					
00001	Labor/Fee Line Item Ceiling\$912,222.00 Incrementally Funded Amount: \$99,826.08				912,222.00	
00002	Optional Subtasks 4.3.2/4.3.3 (Option Line Item) Anticipated Exercise Date Line Item Ceiling\$79,788.00 The obligated amount of award: \$99,826.08. The total for this award is shown in box 17(i).				0.00	
TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))					\$912,222.00	

CONTRACTOR ACCEPTANCE OF TASK ORDER NRC-HQ-25-14-T-0023

Acceptance of Task Order No: NRC-HQ-25-14-T-0023 should be made by having an official, authorized to bind your organization, execute two copies of this document in the space provided and return one copy to the Contracting Officer. You should retain the other copy for your records.

Accepted Task Order No. NRC-HQ-25-14-T-0023:



Name R. B. Kalmbach

Executive Director, Contracts
Title

09/15/2014
Date

SECTION B - Supplies or Services/Prices

NRCB010 BRIEF PROJECT TITLE AND WORK DESCRIPTION (AUG 2011)

(a) The title of this project is: "Review of Portions of Near Term Task Force (NTTF) Recommendation 2.1 Flood Hazard Re-evaluations Related to Dam Failures"

(b) Summary work description: *The objective of this task order is to obtain technical expertise to assist staff of the Hydrology and Metrology Branch (RHMB) in the Office of New Reactors in reviewing the portions of the FHRs that pertain to failure of offsite or onsite dams.*

PRICE/COST SCHEDULE

PERIOD OF PERFORMANCE – September 19, 2014 through September 30, 2016					
ITEM NO.	DESCRIPTION OF SUPPLIES/SERVICES	ESTIMATED COST	TRAVEL	FIXED FEE	TOTAL CPFF
00001	Review of Portions of Near Term Task Force (NTTF) Recommendation 2.1 Flood Hazard Re-evaluations Related to Dam Failures	\$819,719.00	\$25,450.00	\$67,053.00	\$912,222.00
00002	Optional Subtasks 4.3.2 "Hydrologically Induced Dam Failure & 4.3.3 Sunny Day Dam Failure"	\$73,937.00	\$0.00	\$5,851.00	\$79,788.00
Total					\$992,010.00

NRCB040A CONSIDERATION AND OBLIGATION—COST-PLUS-FIXED-FEE ALTERNATE I (AUG 2011)

(a) The total estimated cost to the Government for full performance of this contract is **\$912,222.00** of which the sum of [REDACTED] represents the estimated reimbursable costs, and of which [REDACTED] represents the fixed-fee. In the event that the Government exercises its option, the total estimated cost to the Government will be increased as follows:

Optional Subtasks 4.3.2/4.3.3: **\$79,788.00**

Total Task Order Ceiling inclusive of Optional Subtasks: **\$992,010.00**

(b) The amount currently obligated by the Government with respect to this contract is **\$98,826.08**, of which the sum of [REDACTED] represents the estimated reimbursable costs, and of which [REDACTED] represents the fixed-fee.

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

(d) In accordance with FAR 52.216-8 - Fixed Fee, it is the policy of the NRC to withhold payment of fee after payment of [REDACTED] percent of the fee has been paid in order to protect the Government's interest. The amount of fixed-fee withheld from the contractor will not exceed 15 percent of the total fee or \$ [REDACTED] whichever is less. Accordingly, the maximum amount of fixed-fee that may be held in reserve is \$ [REDACTED]

SECTION C - Description/Specifications

Statement of Work for Dam Failure Review Support

1. PROJECT TITLE

Review of Portions of Near Term Task Force (NTTF) Recommendation 2.1 Flood Hazard Re-evaluations Related to Dam Failures

2. BACKGROUND

In response to the accident at the Fukushima Dai-ichi nuclear power plant caused by the March 11, 2011, Tōhoku earthquake and subsequent tsunami, the Commission established the Near-Term Task Force (NTTF) to systematically review United States Nuclear Regulatory Commission (NRC) processes and regulations, and to make recommendations to the Commission for its policy direction. The NTTF developed a set of recommendations¹ that are intended to clarify and strengthen the regulatory framework for protection against natural phenomena. NTTF recommendations 2.1 and 2.3 pertained to flooding:

- NTTF recommendation 2.1 stated: "Order licensees to reevaluate the seismic and flooding hazards at their sites against current NRC requirements and guidance, and if necessary, update the design basis and SSCs important to safety to protect against the updated hazards."
- NTTF recommendation 2.3 stated: "Order licensees to perform seismic and flood protection walkdowns to identify and address plant-specific vulnerabilities and verify the adequacy of monitoring and maintenance for protection features such as watertight barriers and seals in the interim period until longer term actions are completed to update the design basis for external events."

In addition, the Consolidated Appropriations Act, for 2012 (Pub Law 112-74), Section 402, directs the U.S. Nuclear Regulatory Commission (NRC) to "require reactor licensees to reevaluate the seismic, tsunami, flooding, and other external hazards at their sites against current applicable Commission requirements and guidance for such licensees as expeditiously as possible, and thereafter, when appropriate, as determined by the Commission, and require each licensee to respond to the Commission that the design basis for each reactor meets the requirements of its license, current applicable Commission requirements and guidance for such license."

The NTTF recommendations provided the basis for further actions by the Commission. Staff Requirements Memoranda (SRMs)² associated with SECY-11-0124³ and

¹ These recommendations are contained in the report, *Recommendations for Enhancing Reactor Safety in the 21st Century: The Near-Term Task Force Review of Insights from the Fukushima-Dai-Ichi Accident*, July 12, 2011. This report is available under ADAMS Accession No. ML111861807.

² SRMs are memoranda from the Commission to the NRC staff conveying Commission decisions and requests for additional staff actions.

³ "SECY papers" are documents submitted by the NRC staff to the Commission for its decision or information. SECY-11-0124 is available under ADAMS Accession No. ML11245A158.

SECY-11-0137⁴ instructed the NRC staff to issue requests for information to licensees pursuant to Title 10 of the Code of Federal Regulations, Section 50.54(f). By letter dated March 12, 2012,⁵ the NRC issued a request for information to all power reactor licensees and holders of construction permits in active or deferred status, pursuant to 10 CFR 50.54(f) (hence referred to as the 50.54(f) letter). NTTF recommendation 2.1 was implemented through Enclosure 2 to the 50.54(f) letter. NTTF recommendation 2.3 was implemented as Enclosure 4 to the 50.54(f) letter.

This effort is in direct response to NRC's actions related to implementing NTTF recommendation 2.1 and to the requests for information contained in Enclosure 2 of the 50.54(f) letter. Enclosure 2 requests that licensees reevaluate all external flooding hazards using present-day guidance and methodologies. Licensee submissions documenting this reevaluation are referred to as flood hazard reevaluation reports (FHRRs).⁶ For those sites where the reevaluated flood exceeds the plant's design basis, Enclosure 2 also requests licensees to (1) submit interim actions, planned or taken, to address the reevaluated hazard, and (2) subsequently perform an integrated assessment.

NRC staff will produce a staff assessment (SA) of the licensee's FHRR based on the results of reviews performed by the staff and its contractors. The SA will document the NRC staff's review to ensure licensees have provided sufficient information in their FHRRs to be responsive to the 50.54(f) letter. The SA will also document whether each reevaluated hazard bounds or does not bound the current design basis flood elevation. Moreover, if the reevaluated hazard for all flood-causing mechanisms is not bounded by the current plant-specific design basis flood, the SA will document whether the licensee's FHRR provides appropriate input to the licensee's subsequent integrated assessment.

3. SCOPE

The objective of this task order is to obtain technical expertise from the Southwest Research Institute, Center for Nuclear Waste Regulatory Analysis (CNWRA) to assist staff of the Hydrology and Metrology Branch (RHMB) in the Office of New Reactors in reviewing the portions of the FHRRs that pertain to failure of offsite or onsite dams.⁷ Review of other flooding mechanisms as well as interim actions proposed by licensees and discussed in some FHRRs is not within the scope of this task.

The reviews performed under this task order will provide the basis for determining whether or not licensees have provided sufficient information to be responsive to Enclosure 2 of the 50.54(f) letter. In particular, CNWRA shall ensure the responses meet present-day regulatory guidance and methodologies applicable to evaluation of flood hazards from dam failure. JLD-ISG-13-01 provides guidance acceptable to NRC staff for re-evaluating flooding

⁴ SECY-11-0137 is available under ADAMS Accession No. ML11272A111.

⁵ The 50.54(f) letter is available in the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML12053A340.

⁶ The flood hazard reevaluation report (FHRR) from each licensee will typically contain (among other items): (a) site information related to the flood hazard, (b) evaluation of the flood hazard for each flood causing mechanism (including local intense precipitation, flooding in streams and rivers, dam breaches and failures, storm surge, seiche, tsunami, ice induced flooding, and channel migration or diversion) based on present-day methodologies and regulatory guidance, and (c) a comparison of the current design basis for flooding against the reevaluated flood hazards at the site.

⁷ Consistent with JLD-ISG-2013-01, dams include any artificial barriers that have the ability to impound water, wastewater, or any liquid-borne materials for the purpose of storing or controlling the material.

hazards due to dam failure in response to Enclosure 2 of the 50.54(f) letter. However, it is noted that this guidance is not applicable to all sites for which a FHRR is submitted because the submittal of the FHRRs for a subset of the sites predates issuance of JLD-ISG-2013-01.⁸

The primary deliverable, or output of this regulatory review, shall be a Technical Evaluation Report (TER) that will serve as input to the NRC Staff Assessment (SA) of the licensee's FHRR. The TER shall include CNWRA's assessment of key factors reported in the SA including sufficiency of information in the licensee's FHRRs relative to the 50.54(f) letter; documentation whether each reevaluated hazard reviewed bounds or does not bound the current design basis flood elevation; and whether the licensee's FHRR provides appropriate input to the licensee's subsequent Integrated Assessment in cases where the reevaluated hazard is not bounded by the current plant-specific design basis flood.

In some cases, a licensee may submit a License Amendment Request (LAR) to update its Updated Final Safety Analysis Report (UFSAR) in response to the 50.54(f) letter. In this situation, the primary deliverable, or output of this regulatory review, shall be a TER which will serve as input to the NRC staff's Safety Evaluation Report (SER). The SER is intended to document the NRC staff's review to ensure that: (a) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (b) such activities will be conducted in compliance with the Commission's regulations, and (c) the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

NRC will issue letters of technical direction (LTDs) to the contractor that will identify:

- the sites for which CNWRA will review the FHRR
- the flooding hazards (i.e., dam failure mechanisms) to be reviewed for each assigned site
- site visits and/or meetings to be attended under Task 0
- the format for the TER

4. APPLICABLE DOCUMENTS

Applicable NRC regulatory documents include:

- March 12, 2012 50.54(f) letter⁹
- Interim staff guidance associated with implementation of NTTF recommendation 2.1:

⁸ Enclosure 2 to the 50.54(f) letter specified that NRC staff would provide a prioritization plan indicating FHRR deadlines for individual plants. The NRC staff issued a letter providing the prioritization plan on May 11, 2012. The memo specified three categories for submittal of FHRRs. Those plants in Category 1 submitted their FHRR by March 11, 2013 (unless an extension was granted). JLD-ISG-2013-01 was issued July 29, 2013. Therefore, the ISG is not strictly applicable to Category 1 sites that had submitted their completed FHRR before issuance of the ISG. The dam failure flood hazard reevaluations for these sites should be reviewed using present-day methodologies and regulatory guidance, as described in the 50.54(f) letter. JLD-ISG-2013-01 is applicable to Category 2 and Category 3 sites (i.e., sites with submittal dates of March 12, 2014 and 2015, respectively), as well as most Category 1 sites that have been granted an extension. Instances where Category 1 sites have been granted a very short extension (e.g. a few weeks) will be considered on a case-by-case basis.

⁹ The 50.54(f) letter is available using ADAMS Accession No. ML12053A340.

- JLD-ISG-13-01, "Interim Staff Guidance for Estimating Flooding Hazards due to Dam Failure"¹⁰
- JLD-ISG-12-05, "Interim Staff Guidance on Performance of an Integrated Assessment for Flooding"¹¹
- USNRC (1977), Design Basis Floods for Nuclear Power Plants, Regulatory Guide 1.59, Rev. 2, U.S. Nuclear Regulatory Commission, Washington, DC.
- ANSI/ANS (1992), Determining Design Basis Flooding at Nuclear Power Plant Sites, ANSI/ANS Standard 2.8, American National Standards Institute/American Nuclear Society, La Grange Park, IL.
- USNRC (2007), Review of Safety Analysis Reports for Nuclear Power Plants, NUREG-0800, U.S. Nuclear Regulatory Commission, Washington, DC.
- USNRC (2007), A Performance-Based Approach to Define the Site Specific Earthquake Ground Motion, Regulatory Guide 1.208, U.S. Nuclear Regulatory Commission, Washington, DC.
- USNRC (2011), Design-Basis Flood Estimation for Site Characterization at Nuclear Power Plants in the United States of America, NUREG/CR-7046, Prepared by Pacific Northwest National Laboratory, U.S. Nuclear Regulatory Commission, Washington, DC.
- USNRC (2012), Central and Eastern United States Seismic Source Characterization for Nuclear Facilities, NUREG-2115, U.S. Nuclear Regulatory Commission, Washington, DC.
- USNRC (2012), Information Notice 2012-2: Potentially Nonconservative Screening Value for Dam Failure Frequency in Probabilistic Risk Assessments, (ML090510269)

Documents referenced by the above regulatory documents are also applicable to this contract. Additional relevant documents will be provided (as needed) to the contractor in electronic format.

5. PERFORMANCE REQUIREMENTS

The contractor shall provide all resources necessary to accomplish the tasks and deliverables described in this Statement of Work (SOW). Table 2 provides a description of tasks, a completion schedule, and deliverables. In addition, LTDs will be issued that will indicate:

- The sites for which CNWRA will review the FHRR
- The flooding hazards (i.e., dam failure mechanisms) to be reviewed for each assigned site
- site visits and/or meetings to be attended under Task 0
- The format for the TER. The LTDs will also indicate the schedule for submittal of the deliverables described in Tasks 6.

¹⁰ JLD-ISG-13-01, "Interim Staff Guidance for Estimating Flooding Hazards due to Dam Failure," was issued in July 2013 to provide guidance acceptable to NRC staff for re-evaluating flooding hazards due to dam failure to support licensee response to Enclosure 2 of the 50.54(f) letter. JLD-ISG-13-01 is available using ADAMS Accession No. ML13151A153.

¹¹ JLD-ISG-12-05 is available using ADAMS Accession No. ML12311A214.

Table 3 provides a preliminary estimate of the number of sites and failure mechanisms that will be assigned for review during each fiscal year. Review complexity may vary substantially depending on: (a) the number of upstream or onsite dams to be considered, (b) the failure mechanisms considered, and (c) the complexity of evaluations that must be reviewed. Table 4 provides a preliminary estimate of the complexity of the reviews to be performed each fiscal year.

6. TECHNICAL QUALIFICATIONS

All personnel performing work under this effort (including principal investigators and team members) shall have pertinent technical experience by discipline and technical area. Specialized experience shall include senior-level expertise in such areas as structural engineering, geotechnical engineering, seismic hazard assessment, hydrology, and related technical fields relevant to the assessment of dam performance, including the review areas described in Table 5. It is the responsibility of CNWRA to propose technical staff, employees, subcontractors or specialists who have the required educational background, experience, or combination thereof, to meet both the technical and regulatory objectives of the work specified.

7. REPORTING REQUIREMENTS

The Contractor shall submit periodic technical and financial reports in the Program Manager's Periodic Reports (PMPRs) in accordance with the order. The estimated staff effort should be recorded at the subtask level. The work accomplished and the degree of completeness should also be tracked by subtask. The reports are due within 15 calendar days after the end of the report period (i.e., each four week period). The Contracting Officer's Representative (COR) shall receive one copy of the PMPR, and the Contracting Officer (CO) shall receive one copy. The PMPR shall be submitted electronically.

The PMPR will be used by the Government to assess the adequacy of the resources proposed by the contractor to accomplish the work contained in this SOW and provide status of contractor progress in achieving tasks and producing deliverables. The report shall include contract/order summary information, work completed during the specified period, milestone schedule information, problem resolution, travel plans, and staff hour summary.

Along with the PMPR, the contractor shall submit an updated version of the electronic spending plan. If changes and updates are needed at the interim period, the contractor shall note that in the log sheet and then make the changes in the electronic spending plan sheet. The file shall remain in electronic form and shall be sent as a separate file.

The CO, COR, and other Government personnel, as appropriate, may meet periodically with the contractor to review the contractor's performance. At these meetings the CO will apprise the contractor of how the government views the contractor's performance and the contractor will apprise the Government of problems, if any, being experienced. Appropriate action shall be taken to resolve outstanding issues. These meetings shall be at no additional cost to the Government.

8. DELIVERABLES AND DELIVERY SCHEDULE

Deliverables and the delivery scheduled associated with each subtask are described in Table 2 (Description of tasks, completion schedule and deliverables).

Deliverables produced shall be of high-quality, accurate, and of sufficient detail to allow NRC staff and external stakeholders to understand and reproduce any evaluations performed by the contractor. Deliverables described in Table 2 and LTDs should be delivered in a timely manner on dates described within the table.

The TER shall be written in a manner whereby a person with either non-nuclear technical background or non-technical background could understand the basis for the NRC staff's conclusions. In addition, the TER shall be "stand-alone" (e.g., all figures/tables necessary to support the TER's conclusions shall be enclosed in the document). Templates describing the format and detailed content of the TER will be provided in a LTD.

Unless otherwise specified in the LTDs, the contractor shall provide all deliverables as draft products. The NRC COR (technical) 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 (technical), and then deliver the final version of the deliverable. When mutually agreed upon between the contractor and the COR (technical), the contractor may submit preliminary or partial drafts to improve the contractors' understanding of the particular work requirement.

The contractor shall provide deliverables in hard copy (upon request) and electronic formats. The electronic format shall be provided in Microsoft Word or other word processing software approved by the COR (Technical). The schedule for deliverables shall be contained in the approved project plan for this effort.

In all correspondence, identifying information should be included: Contract No.: #; JCN No.: #; Technical Assignment Control No. (TAC): TBD; the licensee: TBD; and, the site: TBD.

The contractor shall report the following (as described in Section 5):

- At the completion of Task 3, the contractor shall submit a review plan describing the contractor's proposed technical approach for reviewing the portions of the licensee's submittal related to dam failure. The review plan should address mechanisms described in the LTDs.
- At the completion of Task 4, submit a preliminary Technical Evaluation Report (pTER) for each site reviewed that:
 - describes the information submitted by the licensee, including the assumptions for the analysis, design, and references to consensus standards
 - describes review findings (including the basis for the findings) as a result of comparison with the review guidelines
 - identifies any issues and needs for additional or clarifying information which should result in requests for additional information (RAIs)

A LTD will be provided by the NRC that outlines the format and content of the pTER.

- At the completion of Task 6 provide a copy of calculation packages, including input and output files from computer models, used to support key TER conclusions.
- At the completion of Task 6, submit a final TER for each site reviewed that:
 - describes the information submitted by the licensee applicant, including the assumptions for the analysis, design, and references to consensus standards
 - describes review findings (including the basis for the findings) as a result of comparison with the review guidelines

A LTD will be provided by NRC that outlines the format and content of the TER.

Communications with the NRC and among CNWRA staff may be subject to hearing file requirements under 10 CFR Part 2. In this circumstance, the NRC COR will identify the type of records that must be provided to the NRC for inclusion in the hearing file.

9. GOVERNMENT-FURNISHED PROPERTY

The following NRC furnished materials will be provided to the contractor, either via CD-ROM, electronic transmittal (e.g., email), or uploaded to a SharePoint web site:

- Guidance and other regulatory documents
- LTDs, including TER template and direction for dam failure mechanisms to be reviewed for each site
- FHRR for each site assigned for review
- Additional supporting documents as identified by the NRC staff or the contractor

10. PLACE OF PERFORMANCE

Performance will predominately occur at the contractor's facilities. Meetings at NRC Headquarters may occur under during the period of performance of this effort. Visits to licensee facilities may also occur, but must receive prior approval from the COR. Contractor personnel will be escorted by NRC staff during these visits. The contractor will be reimbursed only for travel costs incurred that are directly related to this contract and are allowable subject to the limitations prescribed in FAR 31.205-46.

11. PERIOD OF PERFORMANCE

The projected period of performance is from date of task order issuance through September 30, 2016.

12. SECURITY

Work performed under this task order, including licensee FHRRs and contractor deliverables, may be categorized as sensitive, unclassified information (SUNSI) in accordance with agency guidance.

Contractor personnel performing work under this contract or task order shall satisfy all requirements for appropriate security eligibility as specified in the contract/order dealing with access to sensitive electronic information and information systems belonging to or being used on behalf of the NRC.

All costs associated with obtaining clearances for contractor-provided personnel will be the responsibility of the contractor. Further, the contractor will be responsible for the actions of all individuals provided to work under this contract/order. If damages arise from work performed by contractor-provided personnel under the auspices of this contract/order, the contractor will be responsible for all resources necessary to remedy the incident.

Table 1: Sites and docket numbers

Unit	Docket	Unit	Docket
Arkansas Nuclear 1	5000313	Millstone 3	5000423
Arkansas Nuclear 2	5000368	Monticello	5000263
Beaver Valley 1	5000334	Nine Mile Point 1	5000220
Beaver Valley 2	5000412	Nine Mile Point 2	5000410
Braidwood 1	5000456	North Anna 1	5000338
Braidwood 2	5000457	North Anna 2	5000339
Browns Ferry 1	5000259	Oconee 1	5000269
Browns Ferry 2	5000260	Oconee 2	5000270
Browns Ferry 3	5000296	Oconee 3	5000287
Brunswick 1	5000325	Oyster Creek	5000219
Brunswick 2	5000324	Palisades	5000255
Byron 1	5000454	Palo Verde 1	5000528
Byron 2	5000455	Palo Verde 2	5000529
Callaway	5000483	Palo Verde 3	5000530
Calvert Cliffs 1	5000317	Peach Bottom 2	5000277
Calvert Cliffs 2	5000318	Peach Bottom 3	5000278
Catawba 1	5000413	Perry 1	5000440
Catawba 2	5000414	Pilgrim 1	5000293
Clinton	5000461	Point Beach 1	5000266
Columbia Generating Station	5000397	Point Beach 2	5000301
Comanche Peak 1	5000445	Prairie Island 1	5000282
Comanche Peak 2	5000446	Prairie Island 2	5000306
Cooper	5000298	Quad Cities 1	5000254
Crystal River 3	5000302	Quad Cities 2	5000265
D.C. Cook 1	5000315	River Bend 1	5000458
D.C. Cook 2	5000316	Robinson 2	5000261
Davis-Besse	5000346	Saint Lucie 1	5000335
Diablo Canyon 1	5000275	Saint Lucie 2	5000389
Diablo Canyon 2	5000323	Salem 1	5000272
Dresden 2	5000237	Salem 2	5000311
Dresden 3	5000249	San Onofre 2	5000361
Duane Arnold	5000331	San Onofre 3	5000362
Farley 1	5000348	Seabrook 1	5000443
Farley 2	5000364	Sequoyah 1	5000327
Fermi 2	5000341	Sequoyah 2	5000328

<u>FitzPatrick</u>	5000333	<u>Shearon Harris 1</u>	5000400
<u>Fort Calhoun</u>	5000285	<u>South Texas 1</u>	5000498
<u>Ginna</u>	5000244	<u>South Texas 2</u>	5000499
<u>Grand Gulf 1</u>	5000416	<u>Summer</u>	5000395
<u>Hatch 1</u>	5000321	<u>Surry 1</u>	5000280
<u>Hatch 2</u>	5000366	<u>Surry 2</u>	5000281
<u>Hope Creek 1</u>	5000354	<u>Susquehanna 1</u>	5000387
<u>Indian Point 2</u>	5000247	<u>Susquehanna 2</u>	5000388
<u>Indian Point 3</u>	5000286	<u>Three Mile Island 1</u>	5000289
<u>Kewaunee</u>	5000305	<u>Turkey Point 3</u>	5000250
<u>La Salle 1</u>	5000373	<u>Turkey Point 4</u>	5000251
<u>La Salle 2</u>	5000374	<u>Vermont Yankee</u>	5000271
<u>Limerick 1</u>	5000352	<u>Vogtle 1</u>	5000424
<u>Limerick 2</u>	5000353	<u>Vogtle 2</u>	5000425
<u>McGuire 1</u>	5000369	<u>Waterford 3</u>	5000382
<u>McGuire 2</u>	5000370	<u>Watts Bar 1</u>	5000390
<u>Millstone 2</u>	5000336	<u>Wolf Creek 1</u>	5000482

Table 2: Description of tasks, completion schedule and deliverables

Tasks/Standards	Scheduled Completion	Deliverables
<p>1. Orientation/kick-off meeting Prepare for and participate in an orientation/kick-off meeting with the NRC staff to discuss JLD-ISG-2013-01 the scope of the work, expectations and contract management.</p>	Within 10 working days of work authorization	Attendance by key individuals
<p>2. Review Regulatory Guidance Review appropriate regulatory guidance and background documents (see Section 0)</p>	Within 10 working days of work authorization	n/a
<p>3. Develop a review plan Develop a written plan related to review of the portions of the FHRs related to dam failure for mechanisms described in the LTDs. Review areas should include considerations described in Table 5 (as applicable).</p>	As described for Tasks 0 and 0.	
<p>3.1 Draft review plan The review plan should describe in detail the technical areas to be reviewed, guidance and resources (e.g., computer software) to be used to support the review, and anticipated review challenges. NRC staff will review the draft plan and provide comments</p>	Within 25 working days of work authorization.	Draft review plan
<p>3.2 Revised review plan Revise review plan to address NRC comments on draft review plan. [If necessary] Revise/update during as the course of the review efforts are performed of the FHRs in coordination with NRC staff.</p>	Within 5 working days of receiving NRC comments on draft plan and	Revised review plan

	as necessary thereafter.	
4. Review portions of licensee FHRRs dam failure described in the LTDs	As described in Tasks 0 to 5	As described in Tasks 0 to 5
4.1 Determine need for electronic reading room For each assigned site, review the licensee's submittal to determine if there is a need for an electronic reading room. If an electronic reading room is necessary, generate a list of materials that should be placed in the reading room.	Within 10 working days after receipt of the assignment to review a licensee's FHRR	List of documents for the electronic reading room
4.2 Determine need for site visits or meetings Determine if a site visit and/or meeting(s) would be helpful in expediting the review. If approved, participate in a site visit and/or meeting(s) at NRC headquarters. Prior to the site visit, assist the NRC staff in developing a list of items/areas that need to be visited and reviewed. Prior to a meeting, assist NRC staff in preparing for the meeting.	Date and time of site visit or meeting TBD	As requested, participate in a site visit(s) and/or meeting(s), and provide summaries of the results of visits or meetings.
4.3 Review of FHRRs For each assigned site, review portions of licensees' FHRRs related to dam failure mechanisms described in the LTDs and perform independent analysis as needed, consistent with the review plan (see Task 3) for: 4.3.1 FHRR review: Seismically-induced dam failure 4.3.2 [optional] FHRR review: Hydrologically-induced dam failure 4.3.3 [optional] FHRR review: Sunny day dam failure In addition, review the entire FHRR to ensure that information that is relevant to the assigned review areas are considered as part of the review. As necessary, interact with NRC staff regarding hazard mechanisms (including hazard mechanisms other than dam failure) not described in the LTDs to ensure CNWRA's technical input is compatible for integration into the SA being prepared by the staff. As necessary, interact with NRC staff to obtain relevant information resulting from reviews associated with hazard mechanisms not described in the LTDs (including hazard mechanisms other than dam failure).	n/a	n/a
5. Prepare preliminary technical evaluation report (pTER): <ul style="list-style-type: none"> ▪ Prepare a pTER as documented in the LTDs ▪ Identify issues and needs for additional or clarifying information by assisting with development of draft requests for additional information (RAIs). ▪ Participate in conference calls or meetings as required. 	For each assigned site, develop pTER and RAIs to be provided as documented in the LTDs	Preliminary TER and RAIs Note: several rounds of RAIs may be necessary
6. Final technical evaluation report (fTER) <ul style="list-style-type: none"> ▪ Review licensee responses to the RAIs to determine if they adequately resolve the outstanding issues. ▪ Issue and review additional RAIs if necessary. ▪ Update independent analyses discussed in the pTER based on the licensee's responses to RAIs. ▪ Incorporate the review results to produce final TER 	Draft of final TER to be provided as documented in the LTDs	Final TER

Table 3: Preliminary estimate of number of reviews to be assigned by fiscal year

estimated assignments	FY14	FY15	FY16
Total # of Sites - Seismic	4	3	2
Potential options at sites	0	6	2

Table 4: Preliminary estimate of review complexity associated with each fiscal year

Level of complexity	FY14	FY15	FY16
Base/simple	2	0	0
Base/intermediate	1	2	0
Base/complex	1	1	2
Options/simple	2	0	0
Options/intermediate	1	2	0
Options/complex	0	1	2

Table 5: Description of review considerations for dam failure mechanisms

Dam failure mechanism	Review considerations
Seismically-induced dam failure	<ul style="list-style-type: none"> ▪ Identification of dams for which seismically-induced failure could potentially affect the nuclear power plant site, including the potential for multiple dam failures under a single seismic event ▪ Identification of applicable seismic hazards (e.g., site-specific ground motion, liquefaction, and fault rupture) ▪ Identification of relevant dam failure modes for relevant dams and appurtenances ▪ Evaluation of seismic performance (including deterministic and probabilistic assessments, as applicable) of dams that could potentially affect the nuclear power plant site considering relevant failure modes and seismic hazards ▪ Evaluation of breach parameters and inputs into hydraulic and hydrologic models ▪ Estimation of stage, velocity, and discharge time-series discharge hydrographs near the nuclear power plant under relevant dam failure scenarios ▪ Other relevant evaluations
Hydrologically induced dam failure	<ul style="list-style-type: none"> ▪ Identification of dams for which hydrologically-induced failure could potentially affect the nuclear power plant site, including the potential for multiple dam failures under a single flood event ▪ Identification of applicable hydrologic hazards ▪ Identification of relevant dam failure modes for relevant dams and appurtenances ▪ Evaluation of hydrologic performance (including deterministic and probabilistic assessments, as applicable) of dams that could potentially affect the nuclear power plant site considering relevant failure modes and flood inflows ▪ Evaluation of breach parameters and inputs into hydraulic and hydrologic models ▪ Estimation of stage, velocity, and discharge time-series discharge hydrographs near the nuclear power plant under relevant dam failure scenarios ▪ Other relevant evaluations
Sunny-day dam failure	<ul style="list-style-type: none"> ▪ Identification of relevant dam failure modes ▪ Evaluation of breach parameters and inputs into hydraulic and hydrologic models ▪ Estimation of stage, velocity, and discharge time-series discharge hydrographs near the nuclear power plant under relevant dam failure scenarios ▪ Other relevant evaluations

SECTION D - Packaging and Marking

NRCD010 PACKAGING AND MARKING

(a) The Contractor shall package material for shipment to the NRC in such a manner that will ensure acceptance by common carrier and safe delivery at destination. Containers and closures shall comply with the Surface Transportation Board, Uniform Freight Classification Rules, or regulations of other carriers as applicable to the mode of transportation.

(b) On the front of the package, the Contractor shall clearly identify the contract number under which the product is being provided.

(c) Additional packaging and/or marking requirements are as follows: None.

NRCD020 BRANDING

The Contractor is required to use the statement below in any publications, presentations, articles, products, or materials funded under this contract/order, to the extent practical, in order to provide NRC with recognition for its involvement in and contribution to the project. If the work performed is funded entirely with NRC funds, then the contractor must acknowledge that information in its documentation/presentation.

Work Supported by the U.S. Nuclear Regulatory Commission (NRC), Office of New Reactors, under Contract/order number NRC-HQ-50-14-E-0001/NRC-HQ-25-14-T-0023.

SECTION E - Inspection and Acceptance

CONTRACTING OFFICER'S REPRESENTATIVE

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

Name: Barbara Hayes
Address: Mail Stop: TWFN-7F27
Washington, DC 20555
Telephone Number: 301-415-7442

(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.

SECTION F - Deliveries or Performance

NRCF010 PLACE OF DELIVERY-REPORTS

The items to be furnished hereunder shall be delivered, with all charges paid by the Contractor, to:

- a. Name: Barbara Hayes (1 Electronic Copy)
- b. Contracting Officer's Representative (COR)
- c. Address: Barbara.Hayes@nrc.gov (1 Electronic Copy)

- d. Name: Hugo Alcantara (1 Electronic Copy)
- e. Contract Specialist (CS)
- f. Address: Hugo.Alcantara@nrc.gov (1 Electronic Copy)

NRCF032 TASK/DELIVERY ORDER PERIOD OF PERFORMANCE (SEP 2013)

This order shall commence on September 19, 2014 and will expire on September 30, 2016.

SECTION G - Contract Administration Data

NRCG030 ELECTRONIC PAYMENT (SEP 2014)

The Debt Collection Improvement Act of 1996 requires that all payments except IRS tax refunds be made by Electronic Funds Transfer. Payment shall be made in accordance with FAR 52.232-33, entitled "Payment by Electronic Funds-Central Contractor Registration".

To receive payment, the contractor shall prepare invoices in accordance with NRC's Billing Instructions. Claims shall be submitted on the payee's letterhead, invoice, or on the Government's Standard Form 1034, "Public Voucher for Purchases and Services Other than Personal," and Standard Form 1035, "Public Voucher for Purchases Other than Personal – Continuation Sheet." The preferred method of submitting invoices is electronically to: NRCPayments@nrc.gov.

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:

<u>Name</u>	<u>Title</u>
Lane Howard	Program Manager
Dr. Biswajit Dasgupta	Principal Investigator

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.

2052.215-78 TRAVEL APPROVALS AND REIMBURSEMENT (OCT 1999) - ALTERNATE I (OCT 1999)

(a) Total expenditure for travel may not exceed **\$25,450.00** without the prior approval of the contracting officer.

(b) All foreign travel must be approved in advance by the NRC on NRC Form 445, Request for Approval of Official Foreign Travel, and must be in compliance with FAR 52.247-63 Preference for U.S. Flag Air Carriers. The contractor shall submit NRC Form 445 to the NRC no later than 30 days prior to the commencement of travel.

(c) The contractor will be reimbursed only for travel costs incurred that are directly related to this contract and are allowable subject to the limitations prescribed in FAR 31.205-46.

(d) It is the responsibility of the contractor to notify the contracting officer in accordance with the FAR Limitations of Cost clause of this contract when, at any time, the contractor learns that travel expenses will cause the contractor to exceed the travel ceiling amount identified in paragraph (a) of this clause.

(e) Reasonable travel costs for research and related activities performed at State and nonprofit institutions, in accordance with Section 12 of Pub. L. 100-679, must be charged in accordance with the contractor's institutional policy to the degree that the limitations of Office of Management and Budget (OMB) guidance are not exceeded. Applicable guidance documents include OMB Circular A-87, Cost Principles for State and Local Governments; OMB Circular A-122, Cost Principles for Nonprofit Organizations; and OMB Circular A-21, Cost Principles for Educational Institutions.

NRCH400 SECURITY REQUIREMENTS RELATING TO THE PRODUCTION OF REPORT(S) OR THE PUBLICATION OF RESULTS UNDER CONTRACTS, AGREEMENTS, AND GRANTS

Review and Approval of Reports

(a) Reporting Requirements. The contractor/grantee shall comply with the terms and conditions of the contract/grant regarding the contents of the draft and final report, summaries, data, and related documents, to include correcting, deleting, editing, revising, modifying, formatting, and supplementing any of the information contained therein, at no additional cost to the NRC. Performance under the contract/grant will not be deemed accepted or completed until it complies with the NRC's directions. The reports, summaries, data, and related documents will be considered draft until approved by the NRC. The contractor/grantee agrees that the direction, determinations, and decisions on approval or disapproval of reports, summaries, data, and related documents created under this contract/grant remain solely within the discretion of the NRC.

(b) Publication of Results. Prior to any dissemination, display, publication, or release of articles, reports, summaries, data, or related documents developed under the contract/grant, the contractor/grantee shall submit them to the NRC for review and approval. The contractor/grantee shall not release, disseminate, display or publish articles, reports, summaries, data, and related documents, or the contents therein, that have not been reviewed and approved by the NRC for release, display, dissemination or publication. The contractor/grantee agrees to conspicuously place any disclaimers, markings or notices, directed by the NRC, on any articles, reports, summaries, data, and related documents that the contractor/grantee intends to release, display, disseminate or publish to other persons, the public, or any other entities. The contractor/grantee agrees, and grants, a royalty-free, nonexclusive, irrevocable worldwide license to the government, to use, reproduce, modify, distribute, prepare derivative works, release, display or disclose the articles, reports, summaries, data, and related documents developed under the contract/grant, for any governmental purpose and to have or authorize others to do so.

(c) Identification/Marking of Sensitive Unclassified Non-Safeguards Information (SUNSI) and Safeguards Information (SGI). The decision, determination, or direction by the NRC that information possessed, formulated or produced by the contractor/grantee constitutes SUNSI or SGI is solely within the authority and discretion of the NRC. In performing the contract/grant, the contractor/grantee shall clearly mark SUNSI and SGI, to include for example, OUO-Allegation

Information or OUO-Security Related Information on any reports, documents, designs, data, materials, and written information, as directed by the NRC. In addition to marking the information as directed by the NRC, the contractor shall use the applicable NRC cover sheet (e.g., NRC Form 461 Safeguards Information) in maintaining these records and documents. The contractor/grantee shall ensure that SUNSI and SGI is handled, maintained and protected from unauthorized disclosure, consistent with NRC policies and directions. The contractor/grantee shall comply with the requirements to mark, maintain, and protect all information, including documents, summaries, reports, data, designs, and materials in accordance with the provisions of Section 147 of the Atomic Energy Act of 1954 as amended, its implementing regulations (10 CFR 73.21), Sensitive Unclassified Non-Safeguards and Safeguards Information policies, and NRC Management Directives and Handbooks 12.5, 12.6 and 12.7.

(d) Remedies. In addition to any civil, criminal, and contractual remedies available under the applicable laws and regulations, failure to comply with the above provisions, and/or NRC directions, may result in suspension, withholding, or offsetting of any payments invoiced or claimed by the contractor/grantee.

(e) Flowdown. If the contractor/grantee intends to enter into any subcontracts or other agreements to perform this contract/grant, the contractor/grantee shall include all of the above provisions in any subcontracts or agreements.

NRCH410 WHISTLEBLOWER PROTECTION FOR NRC CONTRACTOR AND SUBCONTRACTOR EMPLOYEES

(a) The U.S. Nuclear Regulatory Commission (NRC) contractor and its subcontractor are subject to the Whistleblower Employee Protection public law provisions as codified at 42 U.S.C. 5851. NRC contractor(s) and subcontractor(s) shall comply with the requirements of this Whistleblower Employee Protection law, and the implementing regulations of the NRC and the Department of Labor (DOL). See, for example, DOL Procedures on Handling Complaints at 29 C.F.R. Part 24 concerning the employer obligations, prohibited acts, DOL procedures and the requirement for prominent posting of notice of Employee Rights at Appendix A to Part 24 entitled: "Your Rights Under the Energy Reorganization Act".

(b) Under this Whistleblower Employee Protection law, as implemented by regulations, NRC contractor and subcontractor employees are protected from discharge, reprisal, threats, intimidation, coercion, blacklisting or other employment discrimination practices with respect to compensation, terms, conditions or privileges of their employment because the contractor or subcontractor employee(s) has provided notice to the employer, refused to engage in unlawful practices, assisted in proceedings or testified on activities concerning alleged violations of the Atomic Energy Act of 1954 (as amended) and the Energy Reorganization Act of 1974 (as amended).

(c) The contractor shall insert this or the substance of this clause in any subcontracts involving work performed under this contract.

NRCH470 GREEN PURCHASING (SEP 2013)

(a) In furtherance of the sustainable acquisition goals included in Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance," products and services acquired under this contract/order shall be energy-efficient (Energy Star or Federal Energy Management Program (FEMP) designated), water-efficient, biobased, environmentally

preferable (e.g., Electronic Product Environmental Assessment Tool (EPEAT) certified), non-ozone depleting, recycled content, and non-toxic or less toxic alternatives, to the maximum extent practicable in meeting NRC contractual requirements.

(b) See NRC's Green Purchasing Plan (GPP) at:
<http://pbadupws.nrc.gov/docs/ML1219//ML12191A130.pdf> and the General Service

Administration's (GSA) Green Procurement Compilation at:
<http://www.gsa.gov/portal/content/198257>.

(c) The contractor shall flow down this clause into all subcontracts and other agreements that relate to performance of this contract/order.

**NRCH480 USE OF AUTOMATED CLEARING HOUSE (ACH) ELECTRONIC
PAYMENT/REMITTANCE ADDRESS**

The Debt Collection Improvement Act of 1996 requires that all Federal payments except IRS tax refunds be made by Electronic Funds Transfer. It is the policy of the Nuclear Regulatory Commission to pay government vendors by the Automated Clearing House (ACH) electronic funds transfer payment system. Item 15C of the Standard Form 33 may be disregarded.

SECTION I - Contract Clauses

All clauses are on the master contract and flow down to each task order.

SECTION J - List of Documents, Exhibits and Other Attachments

BILLING INSTRUCTIONS FOR COST-REIMBURSEMENT TYPE CONTRACTS (MAY 2013)

General: During performance and through final payment of this contract, the contractor is responsible for the accuracy and completeness of data within the System for Award Management (SAM) database and for any liability resulting from the Government's reliance on inaccurate or incomplete SAM data.

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

Standard Forms: Reimbursement requests shall be submitted on the payee's letterhead, invoice/voucher, or on the Government's Standard Form 1034, "Public Voucher for Purchases and Services Other than Personal," and Standard Form 1035, "Public Voucher for Purchases Other than Personal--Continuation Sheet."

Electronic Invoice/Voucher Submissions: The preferred method of submitting invoices/vouchers is electronically to the U.S. Nuclear Regulatory Commission, via email to: NRCPayments@nrc.gov.

Hard-Copy Invoice/Voucher Submissions: If you submit a hard-copy of the invoice/voucher, a signed original and supporting documentation shall be submitted to the following address:

NRC Payments
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Mailstop O3-E17A
Rockville, MD 20852-2738

Purchase of Capital Property: (*\$50,000 or more with life of one year or longer*)

Contractors must report to the Contracting Officer, electronically, any capital property acquired with contract funds having an initial cost of \$50,000 or more, in accordance with procedures set forth in NRC Management Directive (MD) 13.1, IV, C – "Reporting Requirements" (revised 2/16/2011).

Agency Payment Office: Payment will continue to be made by the office designated in the contract in Block 12 of the Standard Form 26, or Block 25 of the Standard Form 33, whichever is applicable.

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

Format: Invoices/Vouchers shall be submitted in the format depicted on the attached sample form entitled "Invoice/Voucher for Purchases and Services Other Than Personal". Alternate formats are permissible only if they address all requirements of the Billing Instructions. The

instructions for preparation and itemization of the invoice/voucher are included with the sample form.

Task Order Contracts: The contractor must submit a separate invoice/voucher for each individual task order with detailed cost information. This includes all applicable cost elements and other items discussed in paragraphs (a) through (s) of the attached instructions. In addition, the invoice/voucher must specify the contract number, and the NRC-assigned task/delivery order number.

Billing of Costs after Expiration of Contract: If costs are incurred during the contract period and invoiced after the contract has expired, you must cite the period during which these costs were incurred. To be considered a proper expiration invoice/voucher, the contractor shall clearly mark it "EXPIRATION INVOICE" or "EXPIRATION VOUCHER".

Final invoices/vouchers shall be marked "FINAL INVOICE" or "FINAL VOUCHER".

Currency: Invoices/Vouchers must be expressed in U.S. Dollars.

Supersession: These instructions supersede previous Billing Instructions for Cost-Reimbursement Type Contracts (July 2011).

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

1. Official Agency Billing Office

NRC Payments
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Mailstop O3-E17A
Rockville, MD 20852-2738

2. Invoice/Voucher Information

a. Payee's DUNS Number or DUNS+4. The Payee shall include the Payee's Data Universal Number (DUNS) or DUNS+4 number that identifies the Payee's name and address. The DUNS+4 number is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the Payee to identify alternative Electronic Funds Transfer (EFT) accounts for the same parent concern.

b. Taxpayer Identification Number. The Payee shall include the Payee's taxpayer identification number (TIN) used by the Internal Revenue Service (IRS) in the administration of tax laws.

(See IRS Web site:

[http://www.irs.gov/Businesses/Small-Businesses-&Self-Employed/Employer-ID-Numbers-\(EINs\)\)](http://www.irs.gov/Businesses/Small-Businesses-&Self-Employed/Employer-ID-Numbers-(EINs)))).

c. Payee's Name and Address. Show the name of the Payee as it appears in the contract and its correct address. If the Payee assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Payee shall require as a condition of any such assignment, that the assignee shall register separately in the System for Award Management (SAM) database at <http://sam.gov> and shall be paid by EFT in accordance with the terms of this contract. See Federal Acquisition Regulation (FAR) 52.232-33(g) Payment by Electronic Funds Transfer - Central Contractor Registration (October 2003).

d. Contract Number. Insert the NRC contract number (including Enterprise-wide Contract (EWC)), GSA Federal Supply Schedule (FSS), Governmentwide Agency Contract (GWAC) number, or Multiple Agency Contract (MAC) number, as applicable.

e. Task Order Number. Insert the task/delivery order number (If Applicable). **Do not include more than one task order per invoice or the invoice may be rejected as improper.**

f. Invoice/Voucher. The appropriate sequential number of the invoice/voucher, beginning with 001 should be designated. Contractors may also include an individual internal accounting number, if desired, in addition to the 3-digit sequential number.

g. Date of Invoice/Voucher. Insert the date the invoice/voucher is prepared.

h. Billing Period. Insert the beginning and ending dates (day, month, year) of the period during which costs were incurred and for which reimbursement is requested.

- i. Description of Deliverables. Provide a brief description of supplies or services, quantity, unit cost, and total cost.
- j. Work Completed. Provide a general summary description of the services performed or products submitted for the invoice period and specify the section or Contract Line Item Number (CLIN) or SubCLIN in the contract pertaining to the required deliverable(s).
- k. Shipping. Insert weight and zone of shipment, if shipped by parcel post.
- l. Charges for freight or express shipments. Attach prepaid bill if shipped by freight or express.
- m. Instructions. Include instructions to consignee to notify the Contracting Officer of receipt of shipment.
- n. For Indefinite Delivery contracts, the final invoice/voucher shall be marked "FINAL INVOICE" or "FINAL VOUCHER".
- o. Direct Costs. Insert the amount billed for the following cost elements, adjustments, suspensions, and total amounts, for both the current billing period and for the cumulative period (from contract inception to end date of this billing period).

(1) Direct Labor. This consists of salaries and wages paid (or accrued) for direct performance of the contract itemized as follows:

<u>Labor Category</u>	<u>Hours Billed</u>	<u>Rate</u>	<u>Cumulative Total</u>	<u>Hours Billed</u>
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(2) Fringe Benefits. This represents fringe benefits applicable to direct labor and billed as a direct cost. Where a rate is used indicate the rate. Fringe benefits included in direct labor or in other indirect cost pools should not be identified here.

(3) Contractor-acquired property (\$50,000 or more). List each item costing \$50,000 or more and having a life expectancy of more than one year. List only those items of equipment for which reimbursement is requested. For each such item, list the following (as applicable): (a) an item description, (b) manufacturer, (c) model number, (d) serial number, (e) acquisition cost, (f) date of purchase, and (g) a copy of the purchasing document.

(4) Contractor-acquired property (under \$50,000), Materials, and Supplies. These are equipment other than that described in (3) above, plus consumable materials and supplies. List by category. List items valued at \$1,000 or more separately. Provide the item number for each piece of equipment valued at \$1,000 or more.

(5) Premium Pay. This enumeration in excess of the basic hourly rate. (Requires written approval of the Contracting Officer.)

(6) Consultant Fee. The supporting information must include the name, hourly or daily rate of the consultant, and reference the NRC approval (if not specifically approved in the original contract).

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

<u>Start Date</u>		<u>Destination</u>		<u>Costs</u>
From	To	From	To	\$

(Must include separate detailed costs for airfare, per diem, and other transportation expenses. All costs must be adequately supported by copies of receipts or other documentation.)

(8) Subcontracts. Include separate detailed breakdown of all costs paid to approved subcontractors during the billing period.

(9) Other Costs. List all other direct costs by cost element and dollar amount separately.

p. Indirect Costs (Overhead and General and Administrative Expense). Cite the formula (rate and base) in effect in accordance with the terms of the contract, during the time the costs were incurred and for which reimbursement is requested.

q. Fixed-Fee. If the contract provides for a fixed-fee, it must be reimbursed as indicated in the contract. Cite the formula or method of computation. Include this information as it applies to individual task orders as well.

(1) The NRC will withhold payment of 15% of the negotiated contract fixed-fee amount, not to exceed \$100,000.

(2) If the fee withholding amount has reached \$100,000, the contractor may resume billing the NRC for the balance of its fee under subsequent invoices for work completed.

(3) Any fee amounts withheld by the NRC will be paid to the contractor during contract closeout in increments, following the submission/settlement of indirect rate proposals in accordance with FAR 52.216-8, "Fixed Fee" (JUN 2011).

r. Total Amount Billed. Insert columns for total amounts for the current and cumulative periods.

s. Adjustments. Insert columns for any adjustments, including outstanding suspensions for deficient or defective products or nonconforming services, for the current and cumulative periods.

t. Grand Totals.

3. Sample Invoice/Voucher Information

Sample Invoice/Voucher Information (Supporting Documentation must be attached)

This invoice/voucher represents reimbursable costs for the billing period from _____ through _____

		<u>Amount Billed</u>	
		<u>Current Period</u>	<u>Cumulative</u>
(a)	<u>Direct Costs</u>		
(1)	Direct labor	\$ _____	\$ _____
(2)	Fringe benefits (% of direct labor)	\$ _____	\$ _____
(3)	Government property (\$50,000 or more)	\$ _____	\$ _____
(4)	Government property, Materials, and Supplies (under \$50,000 per item)	\$ _____	\$ _____
(5)	Premium pay (NRC approved overtime)	\$ _____	\$ _____
(6)	Consultants Fee	\$ _____	\$ _____
(7)	Travel	\$ _____	\$ _____
(8)	Subcontracts	\$ _____	\$ _____
(9)	Other costs	\$ _____	\$ _____
Total Direct Costs:		\$ _____	\$ _____

(b)	<u>Indirect Costs</u> <i>(provide the rate information applicable to your firm)</i>		
(10)	Overhead _____ % of _____ (Indicate Base)	\$ _____	\$ _____
(11)	General and Administrative (G&A) _____ % of _____ (Indicate Base)	\$ _____	\$ _____
Total Indirect Costs:		\$ _____	\$ _____

(c)	<u>Fixed-Fee:</u>		
(12)	Fixed-Fee Calculations:		
i.	Total negotiated contract fixed-fee percent _____ and amount \$ _____		
ii.	85% allowable fee amount \$ _____		
iii.	Cumulative fee billed on prior invoices \$ _____		
iv.	Fee due this invoice <i>(not to exceed 85% of fee earned based upon negotiated contract fee percentage)</i> \$ _____		

Note: The fee balance withheld by NRC may not exceed \$100,000.

Total Fixed-Fee:		\$ _____	\$ _____
(d)	Total Amount Billed	\$ _____	\$ _____

(e)	Adjustments (+/-)	\$ _____	\$ _____
(f)	Grand Total	\$ _____	\$ _____

(The invoice/voucher format provided above must include information similar to that included below in the following to ensure accuracy and completeness.)

SAMPLE SUPPORTING INFORMATION

The budget information provided below is for format purposes only and is illustrative.

Cost Elements:

1) Direct Labor - \$2,400

<u>Labor Category</u>	<u>Hours Billed</u>	<u>Rate</u>	<u>Total</u>	<u>Cumulative Hours Billed</u>
Senior Engineer I	100	\$14.00	\$1,400	975
Engineer	50	\$10.00	\$ 500	465
Computer Analyst	100	\$ 5.00	\$ 500	320
			<u>\$2,400</u>	1,760 hrs.

2) Fringe Benefits - \$480

Fringe @ 20% of Direct Salaries

<u>Labor Category</u>	<u>Salaries</u>	<u>Fringe Amount</u>
Senior Engineer I	\$1,400	\$280
Engineer	\$ 500	\$100
Computer Analyst	<u>\$ 500</u>	<u>\$100</u>
	\$2,400	\$480

3) Government-furnished and contractor-acquired property (\$50,000 or more) - \$60,000

Prototype Spectrometer - item number 1000-01 = \$60,000

4) Government-furnished and contractor-acquired property (under \$50,000), Materials, and Supplies - \$2,000

10 Radon tubes @ \$110.00	=	\$1,100
6 Pairs Electrostatic gloves @ \$150.00	=	<u>\$ 900</u>
		\$2,000

5) Premium Pay - \$150

Walter Murphy - 10 hours @ \$10.00 Per Hour (Reg. Pay) = \$100 x 1.5 OT rate = \$150
(EX: Premium pay for this individual was approved and authorized under this contract by the NRC Contracting Officer by letter dated 6/1/2011.)

6) Consultants' Fee - \$100

Dr. Carney - 1 hour fully-burdened @ \$100 = \$100

7) Travel - \$2,640

(i) Airfare: (2 Roundtrip trips for 1 person @ \$300 per r/t ticket)

<u>Start Date</u>	<u>End Date</u>	<u>Days</u>	<u>From</u>	<u>To</u>	<u>Cost</u>
4/1/2011	4/7/2011	7	Philadelphia, PA	Wash, D.C.	\$300
7/1/2011	7/8/2011	8	Philadelphia, PA	Wash, D.C.	\$300

(ii) Per Diem: \$136/day x 15 days = \$2,040

8) Subcontracting - \$30,000

Company A = \$10,000
Company B = \$20,000
\$30,000

(EX: Subcontracts for Companies A & B were consented to by the Contracting Officer by letter dated 6/15/2011.)

9) Other Costs - \$5,100

Honorarium for speaker at American Nuclear Society conference = \$5,000
Nuclear Planet Journal subscription fee = \$100

10) Overhead Expense - \$41,148

Overhead @ 40% of Total Direct Costs

11) General and Administrative (G&A) Expense - \$22,784

G&A @ 20% of Total Costs, excluding subcontracts and consultants

12) Fixed-Fee - \$8,218

Fixed-Fee applied to Total Costs @ 5%

Fixed-Fee Calculations:

- i. Total contract fixed-fee \$100,000
- ii. 85% allowable fee \$85,000
- iii. Cumulative fee billed on prior invoices \$85,000
- iv. Fee due this invoice (*not to exceed 85% of fee earned based upon negotiated contract fee percentage*) \$8,218

Total Amount Billed \$175,020
Adjustments (+/-) - \$8,218
Grand Total \$166,802