

**ORDER FOR SUPPLIES OR SERVICES**

PAGE OF PAGES  
1 21

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

1. DATE OF ORDER <i>1/23/2017</i>		2. CONTRACT NO. (If any) NRC-HQ-12-C-02-0089		6. SHIP TO:	
3. ORDER NO. NRC-HQ-50-17-T-0001		4. REQUISITION/REFERENCE NO. NMSS-17-0014		a. NAME OF CONSIGNEE NUCLEAR REGULATORY COMMISSION	
5. ISSUING OFFICE (Address correspondence to) US NRC - HQ ACQUISITION MANAGEMENT DIVISION MAIL STOP TWFN-5E03 WASHINGTON DC 20555-0001				b. STREET ADDRESS NUCLEAR REGULATORY COMMISSION	
7. TO: PAUL MALDONADO		c. CITY WASHINGTON		d. STATE DC	e. ZIP CODE 20555-0001
a. NAME OF CONTRACTOR S W R I		f. SHIP VIA		8. TYPE OF ORDER	
b. COMPANY NAME		<input type="checkbox"/> a. PURCHASE		<input checked="" type="checkbox"/> b. DELIVERY	
c. STREET ADDRESS 6220 CULEBRA RD		REFERENCE YOUR:		Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
d. CITY SAN ANTONIO		e. STATE TX	f. ZIP CODE 782385166		
9. ACCOUNTING AND APPROPRIATION DATA See Schedule				10. REQUISITIONING OFFICE OFFICE OF NUCLEAR MATERIAL	
11. BUSINESS CLASSIFICATION (Check appropriate box(es)) <input type="checkbox"/> a. SMALL <input type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB				12. F.O.B. POINT	
13. PLACE OF		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) 09/28/2017	
a. INSPECTION Destination	b. ACCEPTANCE Destination			18. 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, "Yucca Mountain High-Level Waste (HLW) Geological Repository Knowledge Management Reports - SER And Supplemental EIS " which is incorporated in pages 3-21 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				\$0.00		17(i) GRAND TOTAL
b. STREET ADDRESS (or P.O. Box) ONE WHITE FLINT NORTH 11555 ROCKVILLE PIKE MAILSTOP 03-E17A				\$517,433.00		
c. CITY ROCKVILLE		d. STATE MD	e. ZIP CODE 20852-2738			
22. UNITED STATES OF AMERICA BY (Signature) 				23. NAME (Typed) SHARLENE M. MCCUBBIN TITLE: CONTRACTING/ORDERING OFFICER		

AUTHORIZED FOR LOCAL REPRODUCTION  
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (Rev. 2/2012)  
Prescribed by GSA/FAR 41 CFR 53.213(f)

TEMPLATE - ADM001

SUNSI REVIEW COMPLETE

JAN 27 2017

ADM002

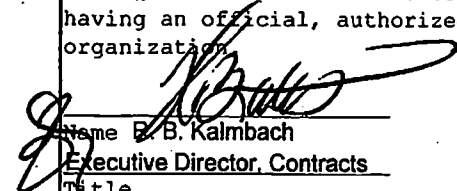
**ORDER FOR SUPPLIES OR SERVICES  
SCHEDULE - CONTINUATION**

PAGE NO

2

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

DATE OF ORDER	CONTRACT NO. NRC-HQ-12-C-02-0089	ORDER NO. NRC-HQ-50-17-T-0001
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ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	<p>of this task order.</p> <p>Task Order Ceiling Amount: \$517,433.00 Task Order Obligation Amount: \$510,000.00</p> <p>Contractor acceptance of this Task Order No. NRC-HQ-50-17-T-0001 under contract no. NRC-HQ-12-C-02-0089 should be made by having an official, authorized to bind your organization.</p> <p> Name <u>E. B. Kalmbach</u> Executive Director, Contracts Title January 20, 2017 Date</p> <p>Accounting Info: Accounting Info : 2017-CN200-NWF-50-50D007-1061-36-4-149-252A-36-4-149-1061 Period of Performance: 01/23/2017 to 09/29/2017</p>					

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

\$0.00

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE	PAGE OF PAGES
			1      2
2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
M0016	See Block 16C	NMSS-17-0026	
6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than Item 6)	CODE
	NRCHQ		

US NRC - HQ  
ACQUISITION MANAGEMENT DIVISION  
MAIL STOP TWFN-5E03  
WASHINGTON DC 20555-0001

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)		(x) 9A. AMENDMENT OF SOLICITATION NO.
S W R I ATTN PAUL MALDONADO 6220 CULEBRA RD SAN ANTONIO TX 782385166		
		9B. DATED (SEE ITEM 11)
		x 10A. MODIFICATION OF CONTRACT/ORDER NO. NRC-HQ-12-C-02-0089 NRCT004
		10B. DATED (SEE ITEM 13) 09/27/2012
CODE 007936842	FACILITY CODE	

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

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

12. ACCOUNTING AND APPROPRIATION DATA (If required)	Net Increase:	\$40,000.00
See Schedule		

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

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)
X	FAR 52.232-22 Limitation of Funds

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

**14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)**

NRC-HQ-12-C-02-0089 NRCT004 Modification No. 15

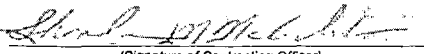
The purpose of this modification is to provide incremental funding in the amount of \$40,000.00 thereby increasing the funding from \$1,850,193.96 to \$1,890,193.96.

Section A.2 CONSIDERATION AND OBLIGATION-COST-PLUS-AWARD-FEE (AUG 2011) paragraph (c) is hereby revised as follows:

"(c) The amount obligated by the Government with respect to this task order is \$1,890,193.96."

Continued ...

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

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
		SHARLENE M. MCCUBBIN	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)			01/23/2017
		(Signature of Contracting Officer)	

**CONTINUATION SHEET**

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
 NRC-HQ-12-C-02-0089/NRCT004/M0016

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NAME OF OFFEROR OR CONTRACTOR  
 S W R I

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Period of Performance: 12/01/12 - 09/30/2017 (unchanged) Total Order Ceiling: \$2,343,432.00 (unchanged) Total Amount Obligated: \$1,890,193.96 (changed)  All other terms and conditions remain the same. Period of Performance: 12/01/2012 to 09/30/2017				

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**SECTION B - Supplies or Services/Prices**

**B.1 NRCB010 BRIEF PROJECT TITLE AND WORK DESCRIPTION**

(a) The title of this project is: Yucca Mountain High-Level Waste (HLW) Geological Repository Knowledge Management Reports – SER AND Supplemental EIS

(b) Summary work description: The objective of this task order is to capture additional information and new insights the staff has gained in specific technical areas related to the review of the Yucca Mountain HLW repository license application since the previous knowledge management reports were completed in 2011. These information and insights cover technical areas related to the staff's SER and supplemental EIS. They should differ from the SER lessons learned report, which focused on the review process.

(End of Clause)

**B.2 PRICE/COST SCHEDULE**

CLIN. NO.	DESCRIPTION OF SUPPLIES/SERVICES	ESTIMATED COST	BASE FEE	AWARD	TOTAL CPAF
00001	Yucca Mountain High-Level Waste (HLW) Geological Repository Knowledge Management Reports – SER AND Supplemental EIS	[REDACTED]	[REDACTED]	[REDACTED]	\$517,433.00

**B.3 NRCB070 CONSIDERATION AND OBLIGATION-COST-PLUS-AWARD-FEE**

(a) The total estimated cost to the Government for full performance of this contract is \$517,433.00, of which the sum of [REDACTED] represents the estimated reimbursable costs, and of which [REDACTED] represents the base fee.

(b) An award fee pool of [REDACTED] hereby established for this contract. Evaluation of award fee earned will be accomplished in accordance with the attached Award Fee Plan (AFP). The Government reserves the right to unilaterally change the content of the AFP at any time during the life of this contract. Any changes to the plan will be furnished to the Contractor prior to the date they become effective. The amount of award fee available for each period of evaluation and the amount of time for each period will be set forth in the AFP. The final evaluation and determination as to the amount of award fee earned during an evaluation period shall be made unilaterally by the Fee Determination Official (FDO). The Contractor shall be advised of the award fee decision by letter which shall include the rationale for reaching the decision.

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

(End of Clause)

## **SECTION C - Description/Specifications**

### **C.0 TASK ORDER STATEMENT OF WORK (SOW)**

**TASK TITLE:** YUCCA MOUNTAIN HIGH-LEVEL WASTE (HLW) GEOLOGICAL REPOSITORY KNOWLEDGE MANAGEMENT REPORTS – SER AND SUPPLEMENTAL EIS

#### **1.0 BACKGROUND**

As part of the NRC's orderly closure of its Yucca Mountain review activities in fiscal year 2011, the staff produced a set of knowledge management reports. These reports were primarily authored by staff from the Center for Nuclear Waste Regulatory Analyses (CNWRA), who provided extensive technical support to the NRC during the precicensing period and the review of the license application. NRC staff also contributed to the reports. The reports covered a number of topics related to the review of the license application, in areas such as preclosure and postclosure safety, performance assessment, the regional and local geologic framework, disruptive events, and barrier performance.

After the decision by the U.S. Court of Appeals for the District of Columbia Circuit on August 13, 2013, which directed the NRC to continue with the licensing process, NRC staff, with the assistance of CNWRA staff, completed the safety evaluation reports (SER) for the Yucca Mountain HLW repository license application and, subsequently, a supplement to the Department of Energy's Yucca Mountain Environmental Impact Statement (EIS). Since 2011, the staff have gained additional, new information and insights in completing the SER and the supplemental EIS. These information and insights include new approaches or understanding in the specific fields of preclosure and postclosure safety assessment and climate and hydrologic processes. Although these areas are similar to those included in the previous knowledge management effort, the specific insights and new information are distinct from those documented in the previous reports. Capturing this information now would position the agency well in the event that the Yucca Mountain repository adjudication is resumed or for potential NRC licensing of another geologic repository for high-level waste.

#### **2.0 OBJECTIVE**

The objective of this task order is to capture additional information and new insights the staff has gained in specific technical areas related to the review of the Yucca Mountain HLW repository license application since the previous knowledge management reports were completed in 2011. These information and insights cover technical areas related to the staff's SER and supplemental EIS. They should differ from the SER lessons learned report, which focused on the review process.

#### **3.0 STAFFING**

Professional staff proposed for the effort shall be thoroughly familiar with the technical aspects of the activities they are tasked with. Technical expertise in the following areas will be needed: geology; seismology and volcanology; hydrology; materials science and corrosion; engineered barrier systems; mechanical or mining engineering familiarity with a variety of disposal media and depths; nuclear engineering; waste form; source term; radionuclide release; radionuclide transport; performance assessment, and health physics. Preclosure safety analysis expertise

is needed to address specific aspects of operational safety issues associated with storage of fuel that could be handled in different potential waste disposal systems and with handling of fuel in surface facilities such as the geological repository operations area (GROA) of the proposed Yucca Mountain HLW geological repository.

#### **4.0 SCOPE OF WORK AND DELIVERABLES**

The overall objective of this task is for NRC and CNWRA staffs to collaborate in capturing additional information and new insights the staff has gained in specific technical areas related to the review of the Yucca Mountain HLW repository license application since the previous knowledge management reports were completed in 2011. The work conducted under this task order shall be subject to the project management requirements described in Section 5.0. The work required is described in detail below and in Appendix A.

##### **4.1 TASK 1: CAPTURE ADDITIONAL INFORMATION AND NEW INSIGHTS**

The contractor (CNWRA) shall capture knowledge in the following topical areas and produce deliverables, in collaboration with NRC staff, in the form of technical reports for each of the topical areas:

###### **SUBTASK 1 – Preclosure and Postclosure Safety Assessments**

The contractor shall capture knowledge, in collaboration with NRC staff, in the following three topical areas of preclosure and postclosure safety assessments.

- Evaluation of the geotechnical stability of repository surface facility structures
- Evaluation of methods used to calculate seismic fragility curves
- Application of seismic ground motion information to the analysis of repository surface and underground facilities

**Deliverables:** The contractor shall deliver a technical report for each of the topical areas listed above, which shall document the captured knowledge, new insights and additional information.

###### **SUBTASK 2 – Climate and Hydrology**

The contractor shall capture knowledge, in collaboration with NRC staff, in the following four areas of climate and hydrology.

- Approaches to climate modeling and the use of updated meteorological data for infiltration and groundwater flow
- Modeling and characterization of saturated zone flow
- Validation and documentation of an independent groundwater flow modeling tool (xFlo) for use in performance confirmation of a geologic repository



- Current capabilities of monitoring tools and sensors for unsaturated-zone fractured rocks and thermal environments, including use of remote sensors

**Deliverables:** The contractor shall deliver a technical report for each of the topical areas listed above, which shall document the captured knowledge, new insights and additional information.

#### 4.2 TASK 2: SUPPLEMENTAL EIS DOCUMENT PRESERVATION

The contractor shall preserve and provide all draft documents related to the NRC supplement to the Department of Energy's Yucca Mountain EIS. The format of the documents should comply with NRC ADAMS record management requirements.

**Deliverables:** The contractor shall deliver the collection of documents with formats that are in compliance with NRC ADAMS record management requirements.

### 5.0 PROJECT MANAGEMENT

The contractor (Center) shall maintain effective communication with NRC staff to help coordinate and integrate this effort with NRC's technical and decision-making activities. The contractor (Center) shall also coordinate all necessary NRC communication through the NRC COR. We expect strong NRC staff involvement in the development of, and participation in conducting, the work in the various topic areas identified in Section 4. The NRC may assign a technical lead (principal investigator) from the NRC staff for each of the topic areas who will serve as the Center's direct technical interface for the topic. This principal investigator will be responsible for: (1) correctly defining the focus for the Center's activities for their assigned topic, in coordination with the NRC COR (see Section 13 for restrictions on providing technical direction); (2) ensuring the proper focus is maintained during the technical activities; and (3) ensuring integration of efforts for the specific topic between the Center and the NRC. Any redirection not given by the NRC COR should be reported to the NRC COR immediately.

### 6.0 ACCEPTANCE CRITERIA

The contractor shall describe any applicable quality assurance program. Specifically, any work (i.e., data, interpretations, models, computations, methods, etc.) developed under the contract shall be performed under an adequate quality assurance program (discussed with and approved by the NRC COR) to ensure the technical accuracy and quality of the documents produced. Quality assurance comprises all those planned and systematic actions necessary to provide adequate confidence that the assessments have been satisfactorily performed. Quality assurance shall include verification for completeness, accuracy, consistency, and sufficient documentation to assure the reproducibility of the results of all calculations, laboratory experiments (if any), or modeling.

### 7.0 MEETINGS AND TRAVEL

Domestic, and any potential international travel, related to this effort shall require the prior approval by the NRC COR. To enhance integration and support the collaborative effort expected between the staffs of the NRC and the contractor (Center) on this task, the NRC staff may participate in staff exchanges with the Center, subject to prior approval by the NRC and the Center.

## **8.0 NRC FURNISHED MATERIAL**

The NRC COR and/or NRC task leads will provide the necessary information to conduct the activities for each topic to the pertinent, identified, Center staff.

## **9.0 CONTRACTOR ACQUIRED MATERIAL**

No materials are expected to be acquired.

## **10.0 REPORTS**

All reports are to be developed in the contractor (CNWRA) SharePoint system. Submittals for all Task deliverables shall be submitted via electronic mail with electronic attachments consistent with the word processor in use at the NRC or in portable document format (*i.e.*, \*.pdf), as appropriate. The contractor shall also include the NRC COR and the relevant NRC principle investigators in the electronic mail. Reports by the contractor shall be in technical report form. The deliverables should attribute work to both NRC and CNWRA when the outcome is a result of joint effort between NRC and CNWRA.

## **11.0 TECHNICAL/PROJECT DIRECTION**

Jack Gwo is the NRC COR and the focal point for all task order-related activities. Technical direction may be provided by the NRC COR to the contractor during the duration of this task order.

## **12.0 STANDARD WORK PRACTICES**

For all draft and final reports under this agreement, the contractor shall assure that an independent review of numerical computations, mathematical equations, and derivations is performed by qualified technical staff other than the original author(s) of the reports and other than the person who performed the original calculation. If the contractor proposes to check less than 100 percent of all computations, mathematical equations, and derivations in the report(s) (such as may be the case when there is a large number of routine, repetitive calculations), the contractor must first obtain approval from the NRC COR. In addition, all reports, including those which do not contain numerical analyses must be reviewed for consistency and readability in accordance with the procedures outline for the CNWRA's programmatic review. Informal submittals/deliverables must be reviewed and forwarded from at least the Project Manager level.

This section does not intend to create the development of a formal quality assurance program nor does it require formal quality assurance program documentation or review.

**13.0 SECURITY**

The work under this task order will be UNCLASSIFIED.

**14.0 KEY PERSONNEL**

The Contractor's designated key personnel for this task order shall include the Contractor's Project Manager and senior technical staff in the following discipline areas: transportation, public and occupational radiological health, socioeconomics, and environmental justice. See section H.2 for Key Personnel.

**15.0 LICENSE FEE RECOVERY**

The work is not fee-recoverable.

**APPENDIX A  
SCHEDULE AND DELIVERABLES**

The schedule of deliverables for Tasks 1 and 2 is outlined below. \*

TASK	DELIVERABLE	SCHEDULE (business days)
1-1	Intermediate Milestone: Report on Evaluation of the geotechnical stability of repository surface facility structures	June 23, 2017
1-1	Intermediate Milestone: Report on Evaluation of methods used to calculate seismic fragility curves	April 7, 2017
1-1	Intermediate Milestone: Report on Application of seismic ground motion information to the analysis of repository surface and underground facilities	May 12, 2017
1-2	Intermediate Milestone: Report on Approaches to climate modeling and the use of updated meteorological data for infiltration and groundwater flow	May 26, 2017
1-2	Intermediate Milestone: Report on Modeling and characterization of saturated zone flow	June 9, 2017
1-2	Intermediate Milestone: Report on Validation and documentation of an independent groundwater flow modeling tool for use in performance confirmation of a geologic repository	April 28, 2017
1-2	Intermediate Milestone: Report on Current capabilities of monitoring tools and sensors for unsaturated-zone fractured rocks and thermal environments, including use of remote sensors	June 30, 2017
2	Supplemental EIS documents Preservation	February 17, 2017

\* For each intermediate milestone, the contractor shall respond to NRC staff review comments no later than 15 calendar days after all NRC review comments are provided to the contractor staff. The final products shall be delivered to NRC no later than 60 calendar days after the intermediate milestones are delivered to NRC for technical and programmatic reviews. Unless it is notified by the COR, the contractor shall consider a final product accepted by NRC 90 calendar days after the intermediate milestone is delivered.

**SECTION D - Packaging and Marking**

**D.1 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: Not Applicable.

(End of Clause)

**SECTION E - Inspection and Acceptance**

**E. 1 NRCE010 INSPECTION AND ACCEPTANCE BY THE NRC (SEP 2013)**

Inspection and acceptance of the deliverable items to be furnished hereunder shall be made by the NRC Contracting Officer's Representative (COR) at the destination, accordance with FAR 52.247-34 - F.o.b. Destination.

(End of Clause)

**SECTION F - Deliveries or Performance**

**F.1 NRCF032 TASK/DELIVERY ORDER PERIOD OF PERFORMANCE (SEP 2013)**

This order shall commence on 01/23/2017-09/29/2017.

(End of Clause)

**F.2 NRCF010 PLACE OF DELIVERY-REPORTS**

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

a. Contracting Officer's Representative (COR) (1 electronic copy)

Name: Jin-Ping (Jack) Gwo

301-415-8736

[Jin-Ping.Gwo@nrc.gov](mailto:Jin-Ping.Gwo@nrc.gov)

Address:

U.S. Nuclear Regulatory Commission

Division of Spent Fuel Management

Office of Nuclear Material Safety and Safeguards

Alternate Contracting Officer's Representative (COR): N/A

b. Contract Specialist (1 electronic copy)

Name: Sharlene McCubbin

[Sharlene.McCubbin@nrc.gov](mailto:Sharlene.McCubbin@nrc.gov)

(End of Clause)

**SECTION G - Contract Administration Data**

**G.1 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](mailto:NRCPayments@nrc.gov).

(End of Clause)

**G.2 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.

(End of Clause)

**G.3 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.

(End of Clause)



**G.4 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.

(End of Clause)

**SECTION H - Special Contract Requirements**

**H.1 2052.209-72 CONTRACTOR ORGANIZATIONAL CONFLICTS OF INTEREST.  
(JAN 1993)**

(a) Purpose. The primary purpose of this clause is to aid in ensuring that the contractor:

(1) Is not placed in a conflicting role because of current or planned interests (financial, contractual, organizational, or otherwise) which relate to the work under this contract; and

(2) Does not obtain an unfair competitive advantage over other parties by virtue of its performance of this contract.

(b) Scope. The restrictions described apply to performance or participation by the contractor, as defined in 48 CFR 2009.570-2 in the activities covered by this clause.

(c) Work for others:

(1) Notwithstanding any other provision of this contract, during the term of this contract, the contractor agrees to forego entering into consulting or other contractual arrangements with any firm or organization the result of which may give rise to a conflict of interest with respect to the work being performed under this contract. The contractor shall ensure that all employees under this contract abide by the provision of this clause. If the contractor has reason to believe, with respect to itself or any employee, that any proposed consultant or other contractual arrangement with any firm or organization may involve a potential conflict of interest, the contractor shall obtain the written approval of the contracting officer before the execution of such contractual arrangement.

(2) The contractor may not represent, assist, or otherwise support an NRC licensee or applicant undergoing an NRC audit, inspection, or review where the activities that are the subject of the audit, inspection, or review are the same as or substantially similar to the services within the scope of this contract (or task order as appropriate) except where the NRC licensee or applicant requires the contractor's support to explain or defend the contractor's prior work for the utility or other entity which NRC questions.

(3) When the contractor performs work for the NRC under this contract at any NRC licensee or applicant site, the contractor shall neither solicit nor perform work in the same or similar technical area for that licensee or applicant organization for a period commencing with the award of the task order or beginning of work on the site (if not a task order contract) and ending one year after completion of all work under the associated task order, or last time at the site (if not a task order contract).

(4) When the contractor performs work for the NRC under this contract at any NRC licensee or applicant site,

(i) The contractor may not solicit work at that site for that licensee or applicant during the period of performance of the task order or the contract, as appropriate.

(ii) The contractor may not perform work at that site for that licensee or applicant during the period of performance of the task order or the contract, as appropriate, and for one year thereafter.

(iii) Notwithstanding the foregoing, the contracting officer may authorize the contractor to solicit or perform this type of work (except work in the same or similar technical area) if the contracting officer determines that the situation will not pose a potential for technical bias or unfair competitive advantage.

(d) Disclosure after award.

(1) The contractor warrants that to the best of its knowledge and belief, and except as otherwise set forth in this contract, that it does not have any organizational conflicts of interest as defined in 48 CFR 2009.570-2.

(2) The contractor agrees that if, after award, it discovers organizational conflicts of interest with respect to this contract, it shall make an immediate and full disclosure in writing to the contracting officer. This statement must include a description of the action which the contractor has taken or proposes to take to avoid or mitigate such conflicts. The NRC may, however, terminate the contract if termination is in the best interest of the Government.

(3) It is recognized that the scope of work of a task-order-type contract necessarily encompasses a broad spectrum of activities. Consequently, if this is a task-order-type contract, the contractor agrees that it will disclose all proposed new work involving NRC licensees or applicants which comes within the scope of work of the underlying contract. Further, if this contract involves work at a licensee or applicant site, the contractor agrees to exercise diligence to discover and disclose any new work at that licensee or applicant site. This disclosure must be made before the submission of a bid or proposal to the utility or other regulated entity and must be received by the NRC at least 15 days before the proposed award date in any event, unless a written justification demonstrating urgency and due diligence to discover and disclose is provided by the contractor and approved by the contracting officer. The disclosure must include the statement of work, the dollar value of the proposed contract, and any other documents that are needed to fully describe the proposed work for the regulated utility or other regulated entity. NRC may deny approval of the disclosed work only when the NRC has issued a task order which includes the technical area and, if site-specific, the site, or has plans to issue a task order which includes the technical area and, if site-specific, the site, or when the work violates paragraphs (c)(2), (c)(3) or (c)(4) of this section.

(e) Access to and use of information.

(1) If, in the performance of this contract, the contractor obtains access to information, such as NRC plans, policies, reports, studies, financial plans, internal data protected by the Privacy Act of 1974 (5 U.S.C. Section 552a (1988)), or the Freedom of Information Act (5 U.S.C. Section 552 (1986)), the contractor agrees not to:

(i) Use this information for any private purpose until the information has been released to the public;

(ii) Compete for work for the Commission based on the information for a period of six months after either the completion of this contract or the release of the information to the public, whichever is first;

(iii) Submit an unsolicited proposal to the Government based on the information until one year after the release of the information to the public; or

(iv) Release the information without prior written approval by the contracting officer unless the information has previously been released to the public by the NRC.

(2) In addition, the contractor agrees that, to the extent it receives or is given access to proprietary data, data protected by the Privacy Act of 1974 (5 U.S.C. Section 552a (1988)), or the Freedom of Information Act (5 U.S.C. Section 552 (1986)), or other confidential or privileged technical, business, or financial information under this contract, the contractor shall treat the information in accordance with restrictions placed on use of the information.

(3) Subject to patent and security provisions of this contract, the contractor shall have the right to use technical data it produces under this contract for private purposes provided that all requirements of this contract have been met.

(f) Subcontracts. Except as provided in 48 CFR 2009.570-2, the contractor shall include this clause, including this paragraph, in subcontracts of any tier. The terms contract, contractor, and contracting officer, must be appropriately modified to preserve the Government's rights.

(g) Remedies. For breach of any of the above restrictions, or for intentional nondisclosure or misrepresentation of any relevant interest required to be disclosed concerning this contract or for such erroneous representations that necessarily imply bad faith, the Government may terminate the contract for default, disqualify the contractor from subsequent contractual efforts, and pursue other remedies permitted by law or this contract.

(h) Waiver. A request for waiver under this clause must be directed in writing to the contracting officer in accordance with the procedures outlined in 48 CFR 2009.570-9.

(i) Follow-on effort. The contractor shall be ineligible to participate in NRC contracts, subcontracts, or proposals therefor (solicited or unsolicited) which stem directly from the contractor's performance of work under this contract. Furthermore, unless so directed in writing by the contracting officer, the contractor may not perform any technical consulting or management support services work or evaluation activities under this contract on any of its products or services or the products or services of another firm if the contractor has been substantially involved in the development or marketing of the products or services.

(1) If the contractor under this contract, prepares a complete or essentially complete statement of work or specifications, the contractor is not eligible to perform or participate in the initial contractual effort which is based on the statement of work or specifications. The contractor may not incorporate its products or services in the statement of work or specifications unless so directed in writing by the contracting officer, in which case the restrictions in this paragraph do not apply.

(2) Nothing in this paragraph precludes the contractor from offering or selling its standard commercial items to the Government.

(End of Clause)

## H.2 2052.215-70 KEY PERSONNEL (JAN 1993)

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

Dr. David Pickett, Sr. Program Manager	Dr. Biswajit Dasgupta, Staff Engineer
Dr. Cynthia Dinwiddie, Principal Engineer	Dr. John Stamatakos
Dr. Stuart Stothoff, Principal Scientist	Dr. Gordon Wittmeyer

\*The contractor agrees that personnel may not be removed from the contract work or replaced without compliance with paragraphs (b) and (c) of this section.

(b) If one or more of the key personnel, for whatever reason, becomes, or is expected to become, unavailable for work under this contract for a continuous period exceeding 30 work days, or is expected to devote substantially less effort to the work than indicated in the proposal or initially anticipated, the contractor shall immediately notify the contracting officer and shall, subject to the concurrence of the contracting officer, promptly replace the personnel with personnel of at least substantially equal ability and qualifications.

(c) Each request for approval of substitutions must be in writing and contain a detailed explanation of the circumstances necessitating the proposed substitutions. The request must also contain a complete resume for the proposed substitute and other information requested or needed by the contracting officer to evaluate the proposed substitution. The contracting officer and the project officer shall evaluate the contractor's request and the contracting officer shall promptly notify the contractor of his or her decision in writing.

(d) If the contracting officer determines that suitable and timely replacement of key personnel who have been reassigned, terminated, or have otherwise become unavailable for the contract work is not reasonably forthcoming, or that the resultant reduction of productive effort would be so substantial as to impair the successful completion of the contract or the service order, the contract may be terminated by the contracting officer for default or for the convenience of the Government, as appropriate. If the contracting officer finds the contractor at fault for the condition, the contract price or fixed fee may be equitably adjusted downward to compensate the Government for any resultant delay, loss, or damage.

(End of Clause)

### H.3 2052.215-71 PROJECT OFFICER AUTHORITY (OCT 1999)

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

Name: Jin-Ping (Jack) Gwo  
Jin-Ping.Gwo@nrc.gov  
U.S. Nuclear Regulatory Commission  
Renewals & Materials Branch  
Spent Fuel Management  
Office of Nuclear Material Safety and Safeguards

Telephone Number: 301-415-8736

The Contracting Officer's authorized alternate representative hereinafter referred to as the Alternate Contracting Officer Representative for this contract is:

Name: Wendy Reed  
301-415-7213  
Wendy.Reed@nrc.gov

(b) Performance of the work under this contract is subject to the technical direction of the NRC project officer. The term technical direction is defined to include the following:

(1) Technical direction to the contractor which shifts work emphasis between areas of work or tasks; authorizes travel which was unanticipated in the Schedule (i.e., travel not contemplated in the Statement of Work or changes to specific travel identified in the Statement of Work), fills in details, or otherwise serves to accomplish the contractual statement of work.

(2) Provide advice and guidance to the contractor in the preparation of drawings, specifications, or technical portions of the work description.

(3) Review and, where required by the contract, approve technical reports, drawings, specifications, and technical information to be delivered by the contractor to the Government under the contract.

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

(1) Constitutes an assignment of work outside the general scope of the contract.

(2) Constitutes a change as defined in the "Changes" clause of this contract.

(3) In any way causes an increase or decrease in the total estimated contract cost, the fixed fee, if any, or the time required for contract performance.

(4) Changes any of the expressed terms, conditions, or specifications of the contract.

(5) Terminates the contract, settles any claim or dispute arising under the contract, or issues any unilateral directive whatever.

(d) All technical directions must be issued in writing by the project officer or must be confirmed by the project officer in writing within ten (10) working days after verbal issuance. A copy of the written direction must be furnished to the contracting officer. A copy of NRC Form 445, Request for Approval of Official Foreign Travel, which has received final approval from the NRC must be furnished to the contracting officer.

(e) The contractor shall proceed promptly with the performance of technical directions duly issued by the project officer in the manner prescribed by this clause and within the project officer's authority under the provisions of this clause.

(f) If, in the opinion of the contractor, any instruction or direction issued by the project officer is within one of the categories defined in paragraph (c) of this section, the contractor may not proceed but shall notify the contracting officer in writing within five (5) working days after the receipt of any instruction or direction and shall request that contracting officer to modify the contract accordingly. Upon receiving the notification from the contractor, the contracting officer shall issue an appropriate contract modification or advise the contractor in writing that, in the contracting officer's opinion, the technical direction is within the scope of this article and does not constitute a change under the "Changes" clause.

(g) Any unauthorized commitment or direction issued by the project officer may result in an

unnecessary delay in the contractor's performance and may even result in the contractor expending funds for unallowable costs under the contract.

(h) A failure of the parties to agree upon the nature of the instruction or direction or upon the contract action to be taken with respect to the instruction or direction is subject to 52.233-1 - Disputes.

(i) In addition to providing technical direction as defined in paragraph (b) of the section, the project officer shall:

(1) Monitor the contractor's technical progress, including surveillance and assessment of performance, and recommend to the contracting officer changes in requirements.

(2) Assist the contractor in the resolution of technical problems encountered during performance.

(3) Review all costs requested for reimbursement by the contractor and submit to the contracting officer recommendations for approval, disapproval, or suspension of payment for supplies and services required under this contract.

(End of Clause)