

2. AMENDMENT/MODIFICATION NO. P00001	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO. NRR-21-0001	5. PROJECT NO. (If applicable) EWC
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6. ISSUED BY US NRC - HQ ACQUISITION MANAGEMENT DIVISION MAIL STOP TWFN-07B20M WASHINGTON DC 20555-0001	7. ADMINISTERED BY (If other than Item 6) CODE
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8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) NUMARK ASSOCIATES INC ATTN NEIL NUMARK 1220 19TH ST NW SUITE 500 WASHINGTON DC 200362444	9A. AMENDMENT OF SOLICITATION NO.  9B. DATED (SEE ITEM 11)  9C. MODIFICATION OF CONTRACT/ORDER NO. 31310020D0017 31310020F0162 9D. DATED (SEE ITEM 13) 09/30/2020
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**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 electronic communication 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 letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNT NG AND APPROPRIATION DATA (If required) 2021-X0200-ADVRX-20-20D006-1061-1A-6-220-251B-1A-6-220-1061	Net Increase:	\$150,239.79
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**13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) Bilateral: Definitize Task Order No. 31310020F0162

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

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)  
This action definitizes this task order issued on 09/30/2020 as a placeholder to hold the minimum guarantee under IDIQ No. 31310020D0017, thereby awarding the first task order to NUMARK Associates, Inc.

At this time the NRC definitizes this action with the project titled "Advanced Reactor Inspection and Oversight Guidance," for which a Statement of Work and applicable clauses are incorporated. The period of performance is updated to Date of Award through July 15, 2022.

Task Order Ceiling (Base and All Options): \$467,146.91  
Task Order Exercised Ceiling: ██████████  
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) JENNIFER A. DUDEK
15B. CONTRACTOR/OFFEROR  <i>(Signature of person authorized to sign)</i>	15C. DATE SIGNED
16B. UNITED STATES OF AMERICA <span style="background-color: black; color: black;">██</span> <i>(Signature of Contracting Officer)</i>	16C. DATE SIGNED 04/19/2021

**CONTINUATION SHEET**

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
31310020D0017/31310020F0162/P00001

PAGE OF  
2 20

NAME OF OFFEROR OR CONTRACTOR  
NUMARK ASSOCIATES INC

ITEM NO. (A)	SUPPL ES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Task Order Obligated Amount: \$160,239.79 Period of Performance: 04/19/2021 to 07/15/2022				

Section B - Supplies or Services/Prices was added and reads as follows.

**B - Supplies or Services/Prices**

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

(a) The title of this project is: **Advanced Reactor Inspection and Oversight Guidance**

(b) Summary work description:  
The purpose of this task order is to develop recommendations for development of NRC inspection and oversight guidance to support construction and operation of advanced reactors that is technology-inclusive, risk-informed, and performance based.

**B.2 CONSIDERATION AND OBLIGATION—COST-PLUS-FIXED-FEE ALTERNATE I**

(a) The total estimated cost to the Government for full performance of this contract is [redacted] Phase 1) (Note: This amount will increase with the exercise of any options.) of which the sum of [redacted] represents the estimated reimbursable costs, and of which [redacted] represents the fixed-fee.

(b) There shall be no adjustment in the amount of the Contractor's fixed fee.

(c) The amount currently obligated by the Government with respect to this contract is \$160,239.79, of which the sum of [redacted] represents the estimated reimbursable costs, and of which [redacted] represents the fixed-fee.

(d) It is estimated that the amount currently obligated will cover performance through 02/15/2022.

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

(f) In accordance with FAR 52.216-8 - Fixed Fee, it is the policy of the NRC to withhold payment of fee after payment of 85 percent of the fee has been paid in order to protect the Government's interest. The amount of fixed-fee withheld from the contractor will not exceed 15 percent of the total fee or \$100,000, whichever is less. Accordingly, the maximum amount of fixed-fee that may be held in reserve is [redacted]

**B.3 PRICE/COST SCHEDULE**

**CLIN 00001 - Phase 1: Overall Outline for Advanced Reactor Inspection and Oversight Framework**

Description	Estimated Amount
Labor	[redacted]
Other Direct Costs	[redacted]
Indirect Cost Pool (includes G&A, Fringe, Overhead and Subcontractor Handling)	[redacted]
Total Estimated Costs	[redacted]
Fixed-Fee	[redacted]

Total Estimated Costs and Fixed-Fee		
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**CLIN 10001 - Phase 2: Microreactors (OPTIONAL TASK 1)**

Description	Estimated Amount
Labor	
Other Direct Costs	
Indirect Cost Pool (includes G&A, Fringe, Overhead and Subcontractor Handling)	
Total Estimated Costs	
Fixed-Fee	
Total Estimated Costs and Fixed-Fee	

**CLIN 20001 - Phase 3: Non-Microreactor Technologies (OPTIONAL TASK 2)**

Description	Estimated Amount
Labor	
Other Direct Costs	
Indirect Cost Pool (includes G&A, Fringe, Overhead and Subcontractor Handling)	
Total Estimated Costs	
Fixed-Fee	
Total Estimated Costs and Fixed-Fee	

**CLIN 30001 - Phase 4: Additional Non-Microreactor Technologies (If applicable) (OPTIONAL TASK 3)**

Description	Estimated Amount
Labor	
Other Direct Costs	
Indirect Cost Pool (includes G&A, Fringe, Overhead and Subcontractor Handling)	
Total Estimated Costs	
Fixed-Fee	
Total Estimated Costs and Fixed-Fee	

**CLIN 40001 - Phase 5: Light-water (LWR) Small Modular Reactor (SMR) Technologies (OPTIONAL TASK 4)**

Description	Estimated Amount
Labor	██████████
Other Direct Costs	██████████
Indirect Cost Pool (includes G&A, Fringe, Overhead and Subcontractor Handling)	██████████
Total Estimated Costs	██████████
Fixed-Fee	██████████
Total Estimated Costs and Fixed-Fee	██████████

**CLIN 50001 - Phase 6: Fusion Reactor Technologies (OPTIONAL TASK 5)**

Description	Estimated Amount
Labor	██████████
Other Direct Costs	██████████
Indirect Cost Pool (includes G&A, Fringe, Overhead and Subcontractor Handling)	██████████
Total Estimated Costs	██████████
Fixed-Fee	██████████
Total Estimated Costs and Fixed-Fee	██████████

<b>TOTAL TASK ORDER CEILING (base and all options)</b>	<b>\$467,146.92</b>
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Section C - Description/Specifications was added and reads as follows.

**C - Description/Specifications**

**C.1 STATEMENT OF WORK**

See Attachment No. 1

Section D - Packaging and Marking was added and reads as follows.

**D - Packaging and Marking**

**D.1 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: N/A.

## **D.2 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 Nuclear Reactor Regulation, under Contract/order number 31310020D0017 / 31310020F0162.

Section E - Inspection and Acceptance was added and reads as follows.

### **E - Inspection and Acceptance**

#### **E.1 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.

Section F - Deliveries or Performance was added and reads as follows.

### **F - Deliveries or Performance**

#### **F.1 PLACE OF DELIVERY-REPORTS**

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

a. Contracting Officer Representative:

Refer to Section H.3 CONTRACTING OFFICER'S REPRESENTATIVE AUTHORITY

b. Contracting Officer (CO) (1 electronic copy)

#### **F.2 TASK/DELIVERY ORDER PERIOD OF PERFORMANCE (SEP 2013)**

This order shall commence on Date of Award and will expire on July 15, 2022.

Section G - Contract Administration Data was added and reads as follows.

### **G - Contract Administration Data**

## **G.1 ELECTRONIC PAYMENTS (DEC 2017) – ALTERNATE 1**

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 Transfer-System for Award Management.”

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: NRC@fiscal.treasury.gov .

Section H - Special Contract Requirements was added and reads as follows.

### **H - Special Contract Requirements**

#### **H.1 SECURITY REQUIREMENTS FOR INFORMATION TECHNOLOGY LEVEL I OR LEVEL II ACCESS APPROVAL (JUL 2016)**

The contractor must identify all individuals selected to work under this contract. The NRC Contracting Officer’s Representative (COR) shall make the final determination of the level, if any, of IT access approval required for all individuals working under this contract/order using the following guidance. The Government shall have full and complete control and discretion over granting, denying, withholding, or terminating IT access approvals for contractor personnel performing work under this contract/order.

The contractor shall conduct a preliminary security interview or review for each employee requiring IT level I or II access and submit to the Government only the names of candidates that have a reasonable probability of obtaining the level of IT access approval for which the employee has been proposed. The contractor shall pre-screen its applicants for the following:

(a) felony arrest in the last seven (7) years; (b) alcohol related arrest within the last five (5) years; (c) record of any military courts-martial convictions in the past ten (10) years; (d) illegal use of narcotics or other controlled substances possession in the past year, or illegal purchase, production, transfer, or distribution of narcotics or other controlled substances in the last seven (7) years; and (e) delinquency on any federal debts or bankruptcy in the last seven (7) years.

The contractor shall make a written record of its pre-screening interview or review (including any information to mitigate the responses to items listed in (a) - (e)), and have the employee verify the pre-screening record or review, sign and date it. The contractor shall supply two (2) copies of the signed contractor’s pre-screening record or review to the NRC Contracting Officer’s Representative (COR), who will then provide them to the NRC Office of Administration, Division of Facilities and Security, Personnel Security Branch with the employee’s completed IT access application package.

The contractor shall further ensure that its personnel complete all IT access approval security applications required by this clause within fourteen (14) calendar days of notification by the NRC Contracting Officer’s Representative (COR) of initiation of the application process. Timely receipt of properly completed records of the pre-screening record and IT access approval applications (submitted for candidates that have a reasonable probability of obtaining the level

of security assurance necessary for access to NRC's IT systems/data) is a requirement of this contract/order. Failure of the contractor to comply with this requirement may be a basis to terminate the contract/order for cause, or to offset from the contract's invoiced cost or price the NRC's incurred costs or delays as a result of inadequate pre-screening by the contractor.

#### SECURITY REQUIREMENTS FOR IT LEVEL I

Performance under this contract/order will involve contractor personnel who perform services requiring direct access to or operation of agency sensitive information technology systems or data (IT Level I). The IT Level I involves responsibility for: (a) the planning, direction, and implementation of a computer security program; (b) major responsibility for the direction, planning, and design of a computer system, including hardware and software; (c) the capability to access a computer system during its operation or maintenance in such a way that could cause or that has a relatively high risk of causing grave damage; or (d) the capability to realize a significant personal gain from computer access.

Contractor personnel shall not have access to sensitive information technology systems or data until they are approved by DFS/PSB and they have been so informed in writing by the NRC Contracting Officer's Representative (COR). Temporary IT access may be approved by DFS/PSB based on a favorable review or adjudication of their security forms and checks. Final IT access may be approved by DFS/PSB based on a favorably review or adjudication of a completed background investigation. However, temporary access authorization approval will be revoked and the employee may subsequently be denied IT access in the event the employee's investigation cannot be favorably adjudicated. Such an employee will not be authorized to work under any NRC contract/order requiring IT access without the approval of DFS/PSB, as communicated in writing to the contractor by the NRC Contracting Officer's Representative (COR). Where temporary access authorization has been revoked or denied by DFS/PSB, the contractor shall assign another contractor employee to perform the necessary work under this contract/order without delay to the contract/order performance schedule, or without adverse impact to any other terms or conditions of the contract/order. When an individual receives final IT access approval from DFS/PSB, the individual will be subject to a reinvestigation every ten (10) years thereafter (assuming continuous performance under contracts/orders at NRC) or more frequently in the event of noncontinuous performance under contracts/orders at NRC.

CORs are responsible for submitting the completed access/clearance request package as well as other documentation that is necessary to DFS/PSB. The contractor shall submit a completed security forms packet, including the OPM Standard Form (SF) 86 (online Questionnaire for National Security Positions), two (2) copies of the Contractor's signed pre-screening record, and two (2) FD 258 fingerprint charts, to DFS/PSB for review and adjudication, prior to the individual being authorized to perform work under this contract/order requiring access to sensitive information technology systems or data. Non-U.S. citizens must provide official documentation to the DFS/PSB, as proof of their legal residency. This documentation can be a Permanent Resident Card, Temporary Work Visa, Employment Authorization Card, or other official documentation issued by the U.S. Citizenship and Immigration Services. Any applicant with less than seven (7) years residency in the U.S. will not be approved for IT Level I access. The Contractor shall submit the documents to the NRC Contracting Officer's Representative (COR) who will give them to DFS/PSB. The contractor shall ensure that all forms are accurate, complete, and legible. Based on DFS/PSB review of the contractor employee's security forms and/or the receipt of adverse information by NRC, the contractor individual may be denied access to NRC facilities and sensitive information technology systems or data until a final

determination is made by DFS/PSB. The contractor individual's clearance status will thereafter be communicated to the contractor by the NRC Contracting Officer's Representative (COR) regarding the contractor person's eligibility.

In accordance with NRCAR 2052.204-70 "Security," IT Level I contractors shall be subject to the attached NRC Form 187 and SF-86. Together, these furnish the basis for providing security requirements to contractors that have or may have an NRC contractual relationship which requires access to or operation of agency sensitive information technology systems, remote development and/or analysis of sensitive information technology systems or data, or other access to such systems and data; access on a continuing basis (in excess more than 30 calendar days) to NRC buildings; or otherwise requires issuance of an unescorted NRC badge.

## SECURITY REQUIREMENTS FOR IT LEVEL II

Performance under this contract/order will involve contractor personnel that develop and/or analyze sensitive information technology systems or data or otherwise have access to such systems or data (IT Level II).

The IT Level II involves responsibility for the planning, design, operation, or maintenance of a computer system and all other computer or IT positions.

Contractor personnel shall not have access to sensitive information technology systems or data until they are approved by DFS/PSB and they have been so informed in writing by the NRC Contracting Officer's Representative (COR). Temporary access may be approved by DFS/PSB based on a favorable review of their security forms and checks. Final IT access may be approved by DFS/PSB based on a favorably adjudication. However, temporary access authorization approval will be revoked and the contractor employee may subsequently be denied IT access in the event the employee's investigation cannot be favorably adjudicated. Such an employee will not be authorized to work under any NRC contract/order requiring IT access without the approval of DFS/PSB, as communicated in writing to the contractor by the NRC Contracting Officer's Representative (COR). Where temporary access authorization has been revoked or denied by DFS/PSB, the contractor is responsible for assigning another contractor employee to perform the necessary work under this contract/order without delay to the contract/order performance schedule, or without adverse impact to any other terms or conditions of the contract/order. When a contractor employee receives final IT access approval from DFS/PSB, the individual will be subject to a review or reinvestigation every ten (10) years (assuming continuous performance under contract/order at NRC) or more frequently in the event of noncontinuous performance under contract/order at NRC.

CORs are responsible for submitting the completed access/clearance request package as well as other documentation that is necessary to DFS/PSB. The contractor shall submit a completed security forms packet, including the OPM Standard Form (SF) 86 (online Questionnaire for National Security Positions), two (2) copies of the Contractor's signed pre-screening record and two (2) FD 258 fingerprint charts, to DFS/PSB for review and adjudication, prior to the contractor employee being authorized to perform work under this contract/order. Non-U.S. citizens must provide official documentation to the DFS/PSB, as proof of their legal residency. This documentation can be a Permanent Resident Card, Temporary Work Visa, Employment Authorization Card, or other official documentation issued by the U.S. Citizenship and Immigration Services. Any applicant with less than seven (7) years residency in the U.S. will not be approved for IT Level II access. The Contractor shall submit the documents to the NRC

Contracting Officer's Representative (COR) who will give them to DFS/PSB. The contractor shall ensure that all forms are accurate, complete, and legible. Based on DFS/PSB review of the contractor employee's security forms and/or the receipt of adverse information by NRC, the contractor employee may be denied access to NRC facilities, sensitive information technology systems or data until a final determination is made by DFS/PSB regarding the contractor person's eligibility.

In accordance with NRCAR 2052.204-70 "Security," IT Level II contractors shall be subject to the attached NRC Form 187, SF-86, and contractor's record of the pre-screening. Together, these furnish the basis for providing security requirements to contractors that have or may have an NRC contractual relationship which requires access to or operation of agency sensitive information technology systems, remote development and/or analysis of sensitive information technology systems or data, or other access to such systems or data; access on a continuing basis (in excess of more than 30 calendar days) to NRC buildings; or otherwise requires issuance of an unescorted NRC badge.

#### CANCELLATION OR TERMINATION OF IT ACCESS/REQUEST

When a request for IT access is to be withdrawn or canceled, the contractor shall immediately notify the NRC Contracting Officer's Representative (COR) by telephone so that the access review may be promptly discontinued. The notification shall contain the full name of the contractor employee and the date of the request. Telephone notifications must be promptly confirmed by the contractor in writing to the NRC Contracting Officer's Representative (COR), who will forward the confirmation to DFS/PSB. Additionally, the contractor shall immediately notify the NRC Contracting Officer's Representative (COR) in writing, who will in turn notify DFS/PSB, when a contractor employee no longer requires access to NRC sensitive automated information technology systems or data, including the voluntary or involuntary separation of employment of a contractor employee who has been approved for or is being processed for IT access.

The contractor shall flow the requirements of this clause down into all subcontracts and agreements with consultants for work that requires them to access NRC IT resources.

#### **H.2 ANNUAL AND FINAL CONTRACTOR PERFORMANCE EVALUATIONS**

Annual and final evaluations of contractor performance under this contract will be prepared in accordance with FAR Subpart 42.15, "Contractor Performance Information," normally at or near the time the contractor is notified of the NRC's intent to exercise the contract option. If the multi-year contract does not have option years, then an annual evaluation will be prepared. Final evaluations of contractor performance will be prepared at the expiration of the contract during the contract closeout process.

The Contracting Officer will transmit the NRC Contracting Officer's Representative's (COR) annual and final contractor performance evaluations to the contractor's Project Manager, unless otherwise instructed by the contractor. The contractor will be permitted thirty days to review the document and submit comments, rebutting statements, or additional information.

Where a contractor concurs with, or takes no exception to an annual performance evaluation, the Contracting Officer will consider such evaluation final and releasable for source selection

purposes. Disagreements between the parties regarding a performance evaluation will be referred to an individual one level above the Contracting Officer, whose decision will be final.

The Contracting Officer will send a copy of the completed evaluation report, marked "Source Selection Information", to the contractor's Project Manager for their records as soon as practicable after it has been finalized. The completed evaluation report also will be used as a tool to improve communications between the NRC and the contractor and to improve contract performance.

The completed annual performance evaluation will be used to support future award decisions in accordance with FAR 42.1502 and 42.1503. During the period the information is being used to provide source selection information, the completed annual performance evaluation will be released to only two parties - the Federal government personnel performing the source selection evaluation and the contractor under evaluation if the contractor does not have a copy of the report already.

### **H.3 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.

### **H.4 DRUG FREE WORKPLACE TESTING: UNESCORTED ACCESS TO NUCLEAR FACILITIES, ACCESS TO CLASSIFIED INFORMATION OR SAFEGUARDS INFORMATION, OR PERFORMING IN SPECIALLY SENSITIVE POSITIONS (MARCH 2019)**

The following Contractor employees, subcontractor personnel, and consultants proposed for performance or performing under this contract shall be subject to pre-assignment, random, reasonable suspicion, and post-incident drug testing: (1) individuals who have access to classified information (National Security Information and/or Restricted Data); (2) individuals who have access to Safeguards information (section 147 of the Atomic Energy Act of 1954, as amended); (3) individuals who are authorized to carry firearms while performing work under this

contract; (4) individuals who are required to operate government vehicles or transport passengers for the NRC; (5) individuals who are required to operate hazardous equipment at NRC facilities; (6) individuals who administer the agency's drug program or who have Employee Assistance Program duties; (7) individuals who have unescorted access to vital or protected areas of Nuclear Power Plants, Category 1 Fuel Cycle Facilities, or Uranium Enrichment Facilities; or (8) incident/emergency response personnel (including on-call).

#### **H.5 KEY PERSONNEL. (JAN 1993)**

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

See Attachment No. 2

\*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.

#### **H.6 2052.204-70 SECURITY. (OCT 1999)**

(a) Security/Classification Requirements Form. The attached NRC Form 187 (See List of Attachments) furnishes the basis for providing security and classification requirements to prime contractors, subcontractors, or others (e.g., bidders) who have or may have an NRC contractual relationship that requires access to classified information or matter, access on a continuing basis (in excess of 90 or more days) to NRC Headquarters controlled buildings, or otherwise requires NRC photo identification or card-key badges.

(b) It is the contractor's duty to safeguard National Security Information, Restricted Data, and Formerly Restricted Data. The contractor shall, in accordance with the

Commission's security regulations and requirements, be responsible for safeguarding National Security Information, Restricted Data, and Formerly Restricted Data, and for protecting against sabotage, espionage, loss, and theft, the classified documents and material in the contractor's possession in connection with the performance of work under this contract. Except as otherwise expressly provided in this contract, the contractor shall transmit to the Commission any classified matter in the possession of the contractor or any person under the contractor's control in connection with performance of this contract upon completion or termination of this contract.

(1) The contractor shall complete a certificate of possession to be furnished to the Commission specifying the classified matter to be retained if the retention is:

- (i) Required after the completion or termination of the contract; and
- (ii) Approved by the contracting officer.

(2) The certification must identify the items and types or categories of matter retained, the conditions governing the retention of the matter and their period of retention, if known. If the retention is approved by the contracting officer, the security provisions of the contract continue to be applicable to the matter retained.

(c) In connection with the performance of the work under this contract, the contractor may be furnished, or may develop or acquire, proprietary data (trade secrets) or confidential or privileged technical, business, or financial information, including Commission plans, policies, reports, financial plans, internal data protected by the Privacy Act of 1974 (Pub. L. 93-579), or other information which has not been released to the public or has been determined by the Commission to be otherwise exempt from disclosure to the public. The contractor agrees to hold the information in confidence and not to directly or indirectly duplicate, disseminate, or disclose the information, in whole or in part, to any other person or organization except as necessary to perform the work under this contract. The contractor agrees to return the information to the Commission or otherwise dispose of it at the direction of the contracting officer. Failure to comply with this clause is grounds for termination of this contract.

(d) Regulations. The contractor agrees to conform to all security regulations and requirements of the Commission which are subject to change as directed by the NRC Division of Facilities and Security and the Contracting Officer. These changes will be under the authority of the FAR Changes clause referenced in Section I of this document.

(e) Definition of National Security Information. As used in this clause, the term National Security Information means information that has been determined pursuant to Executive Order 12958 or any predecessor order to require protection against unauthorized disclosure and that is so designated.

(f) Definition of Restricted Data. As used in this clause, the term Restricted Data means all data concerning design, manufacture, or utilization of atomic weapons; the production of special nuclear material; or the use of special nuclear material in the production of energy, but does not include data declassified or removed from the Restricted Data category under to Section 142 of the Atomic Energy Act of 1954, as amended.

(g) Definition of Formerly Restricted Data. As used in this clause the term Formerly Restricted Data means all data removed from the Restricted Data category under Section 142-d of the Atomic Energy Act of 1954, as amended.

(h) Security clearance personnel. The contractor may not permit any individual to have access to Restricted Data, Formerly Restricted Data, or other classified information, except in accordance with the Atomic Energy Act of 1954, as amended, and the Commission's regulations or requirements applicable to the particular type or category of classified information to which access is required. The contractor shall also execute a Standard Form 312, Classified Information Nondisclosure Agreement, when access to classified information is required.

(i) Criminal liabilities. Disclosure of National Security Information, Restricted Data, and Formerly Restricted Data relating to the work or services ordered hereunder to any person not entitled to receive it, or failure to safeguard any Restricted Data, Formerly Restricted Data, or any other classified matter that may come to the contractor or any person under the contractor's control in connection with work under this contract, may subject the contractor, its agents, employees, or subcontractors to criminal liability under the laws of the United States. (See the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.; 18 U.S.C. 793 and 794; and Executive Order 12958.)

(j) Subcontracts and purchase orders. Except as otherwise authorized, in writing, by the contracting officer, the contractor shall insert provisions similar to the foregoing in all subcontracts and purchase orders under this contract.

(k) In performing contract work, the contractor shall classify all documents, material, and equipment originated or generated by the contractor in accordance with guidance issued by the Commission. Every subcontract and purchase order issued under the contract that involves originating or generating classified documents, material, and equipment must provide that the subcontractor or supplier assign the proper classification to all documents, material, and equipment in accordance with guidance furnished by the contractor.

(End of Clause)

#### **H.7 2052.215-71 CONTRACTING OFFICER REPRESENTATIVE AUTHORITY. (OCT 1999)**

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

Name:	Maryam Khan
Address:	U.S. Nuclear Regulatory Commission Office of Nuclear Reactor Regulation Mail Stop:OWFN-04F10 Washington, DC 20555
Phone:	301-415-6215
E-mail:	Maryam.Khan@nrc.gov

Alternate COR:

Name: Joe Sebrosky  
Address: U.S. Nuclear Regulatory Commission  
Office of Nuclear Reactor Regulation  
Mail Stop: OWFN-12D20  
Washington, DC 20555  
Phone: 301-415-1132  
E-mail: Joseph.Sebrosky@nrc.gov

(b) Performance of the work under this contract is subject to the technical direction of the NRC COR. 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 (SOW) or changes to specific travel identified in the SOW), fills in details, or otherwise serves to accomplish the contractual SOW.

(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, approval of 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 COR 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 COR or must be confirmed by the COR 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 COR in the manner prescribed by this clause and within the COR's authority under the provisions of this clause.

(f) If, in the opinion of the contractor, any instruction or direction issued by the COR is within one of the categories as 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 the 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 COR 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 thereto is subject to 52.233-1 - Disputes.

(i) In addition to providing technical direction as defined in paragraph (b) of the section, the COR 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.

(4) Assist the contractor in obtaining the badges for the contractor personnel.

(5) Immediately notify the Security Branch, Division of Facilities and Security (SB/DFS) (via e-mail) when a contractor employee no longer requires access authorization and return of any NRC issued badge to SB/DFS within three days after their termination.

(6) Ensure that all contractor employees that require access to classified Restricted Data or National Security Information or matter, access to sensitive unclassified information (Safeguards, Official Use Only, and Proprietary information) access to sensitive IT systems or data, unescorted access to NRC controlled buildings/space, or unescorted access to protected and vital areas of nuclear power plants receive approval of SB/DFS prior to access in accordance with Management Directive and Handbook 12.3.

(7) For contracts for the design, development, maintenance or operation of Privacy Act Systems of Records, obtain from the contractor as part of closeout procedures, written certification that the contractor has returned to NRC, transferred to the successor contractor, or destroyed at the end of the contract in accordance with instructions provided by the NRC Systems Manager for Privacy Act Systems of Records, all records (electronic or paper) which were created, compiled, obtained or maintained under the contract.

(End of Clause)

Section I - Contract Clauses was added and reads as follows.

## **I - Contract Clauses**

### **I.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 209.570-9.

(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)

**I.2 52.217-7 OPTION FOR INCREASED QUANTITY - SEPARATELY PRICED LINE ITEM. (MAR 1989)**

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within the period of performance of the task order. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

(End of clause)

Section J - List of Documents, Exhibits and Other Attachments was added and reads as follows.

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

Attachment Number	Title	Date
1	Statement of Work – Advanced Reactor Inspection and Oversight Guidance	04/05/2021
2	Table of Key Personnel	04/05/2021
3	NRC Form 187 – Contract Security and/or Classification Requirements	10/16/2020

## TASK ORDER STATEMENT OF WORK

### 1. PROJECT TITLE

Advanced Reactor Inspection and Oversight Guidance

### 2. BACKGROUND

Over the past several years there has been significant stakeholder interest in the development and licensing of advanced reactors. An “advanced nuclear reactor” is defined in legislation enacted in 2018 as “a nuclear fission reactor with significant improvements over the most recent generation of nuclear fission reactors” or a reactor using nuclear fusion (P.L. 115-248). In accordance with the U.S. Nuclear Regulatory Commission’s (NRC) advanced reactor policy statement (<https://www.nrc.gov/reading-rm/doc-collections/commission/policy/73fr60612.pdf>) the Commission expects that advanced reactors will provide enhanced margins of safety and/or use simplified, inherent, passive, or other innovative means to accomplish their safety and security functions. The policy statement also identifies attributes of advanced reactors to potentially include reliable and less complex shutdown heat removal systems; longer time constants before reaching safety system challenges; simplified safety systems that, where possible, reduce required operator actions; reduced potential for severe accidents; and considerations for safety and security requirements together in the design process.

Advanced reactors include light water reactor (LWR) designs that are far smaller than existing reactors, as well as concepts that would use different moderators, coolants, and types of fuel. Many of these advanced designs are small modular reactors (SMRs), which the NRC defines as reactors with electric generating capacity of 300 megawatts and below, in contrast to an average of about 1,000 megawatts for existing commercial reactors.

The current NRC inspection and oversight guidance is based on its experience with large light-water reactors. Advanced reactor designs may be grouped into the following categories:

- Non-light- water-cooled reactors (non-LWRs), which are fission reactors that use materials such as liquid metals (e.g., sodium and lead), gases (e.g., helium and carbon dioxide), or molten salts as coolants instead of light water, may use liquid or solid fuel, and can range in electric generating capacities from a few megawatts or less (e.g. microreactors) to 1,000 megawatts or more;
- Small modular light water reactors that the NRC defines as reactors with electric generating capacities of no more than 300 MW, that employ modular construction techniques, ship major components from factory fabrication locations to the plant site by rail or truck, and include designs that simplify plant site activities required for plant assembly; and
- Fusion reactors, which seek to generate energy by joining small atomic nuclei, as opposed to fission reactors, which generate energy by splitting large atomic nuclei. Like non-LWRs fusion reactors can also range dramatically in power levels.

### 3. OBJECTIVE(S)

The purpose of this task order is to develop recommendations for development of NRC inspection and oversight guidance to support construction and operation of advanced reactors that is technology-inclusive, risk-informed, and performance based. Advanced reactor inspection and oversight guidance recommendations developed under this task order should consider such issues as:

- Most of the construction may take place in a factory environment and then shipped to the site for assembly of the facility. Recommendations associated with advanced construction technologies that could be employed for such facilities should also be considered. In early April 2020 the Department of Energy (DOE) issued an Expression of Interest (EOI) seeking industry stakeholders interested in forming a partnership to develop and/or demonstrate advanced construction technologies and processes that would be transformative in nuclear energy system project economics and schedule success. More information regarding this EOI can be found at: [Partnership for Advanced Construction Technologies](#).
- Advanced reactor designs may include the use of new high temperature materials, new codes and standards, and advanced manufacturing technologies. Recommendations associated with the use of such new materials and associated codes and standards as well as advanced manufacturing techniques (e.g., additive manufacturing technology) should be considered. Previous industrial and national laboratory experience should be considered in developing recommendations associated with inspection and oversight.
- Inspection and oversight processes that are scalable and consider risk insights from the various designs. For example, the NRC's research and test reactor (RTR) inspection and oversight program proposes a different level of base inspections based on the risk insights associated with the particular RTR. There is a subset of RTRs with lower power levels that are highly resilient to the loss of electrical power, active decay heat removal systems, and heat sink. The robust nature of these reactors is the result of their minimal decay heat generation – air cooling is sufficient to remove decay heat to prevent fuel failure. The RTR inspection and oversight program is scaled such that, based on risk insights, the lower power RTRs inspection resources are less than those associated with higher power RTRs. In addition, the RTR inspection and oversight program does not rely on a resident inspector, rather on inspections being performed out of NRC headquarters.
- For microreactor design inspection and oversight guidance (i.e., reactor with power less than 10 MW thermal (MWt)), the contractor should utilize microreactor design information available from national laboratory experience (e.g., Kilopower reactor) as well as available commercial design information (e.g., eVinci, Oklo) to explore the inspection issues associated with this class of reactors.
  - The recommendations developed under this task order should prioritize inspection and oversight guidance recommendations associated with the 10 CFR Part 52 combined license microreactor designs above inspection and oversight guidance for other advanced reactor designs. This is because the NRC has recently received an application for such a design (see Oklo application dated

March 11, 2020 (ADAMS Accession No. [ML20075A000](#))).

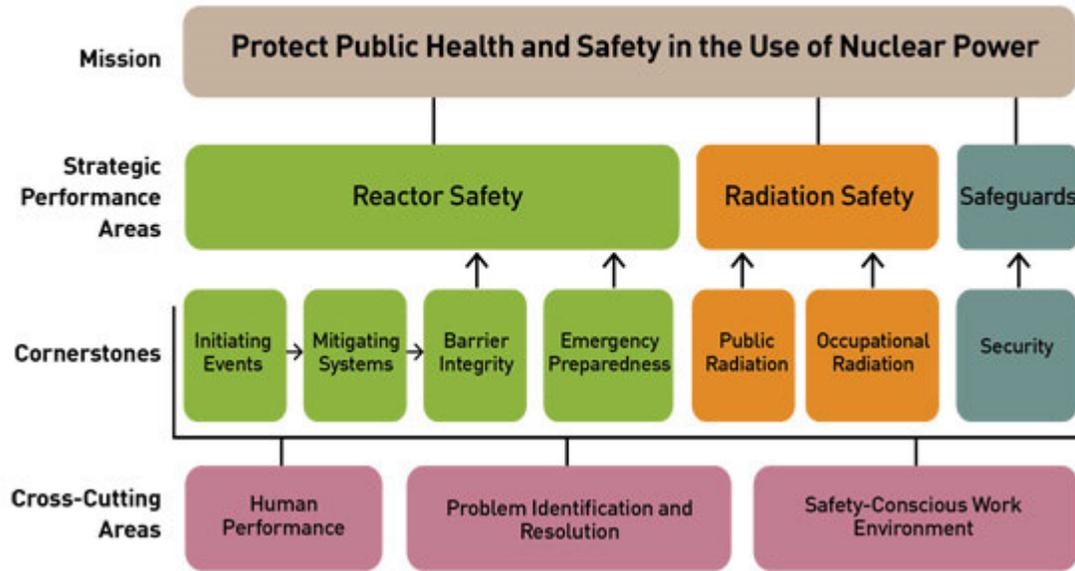
- The document should include a proposed path forward for development of guidance for advanced reactor inspection and oversight that includes markers to signify appropriate timing for development of portions of the program (e.g., microreactor inspection guidance) and an overall program for advanced reactors.
- Inspection and oversight guidance that considers insights from the licensing modernization program (LMP). A discussion of the LMP can be found in SECY-19-0117, "Technology-Inclusive, Risk-Informed, and Performance-Based Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light-Water Reactors," issued on December 2, 2019 (ADAMS Accession No. [ML18311A264](#)).

The LMP identifies the licensing basis events, classification of structure systems and components, and defense-in-depth needed to provide a regulatory approach to achieve a finding of reasonable assurance of public health and safety. The construction inspection and operating reactor inspection program should consider key insights from this approach in developing guidance recommendations.

- Develop flexible inspection and oversight guidance that could be used under the two-step process found in 10 CFR Part 50 (i.e., a construction permit, followed by an operating license) or the combined license process found in 10 CFR Part 52.
- Consider that based on risk insights, non-LWR designs could pose unique inspection and oversight challenges. The figure below provides an overview of the current reactor oversight process (ROP) framework for large LWRs. The emphasis and overall approach for the ROP may need to be adjusted for non-LWRs. For example, molten salt-fueled reactors could have more fission products stored in waste tanks than in the reactor itself. The NRC inspection and oversight program may need to recognize that operational inspections of the radiation protection program and inspections associated with waste system operation will be an important aspect of an inspection program for this type of reactor. The barrier integrity aspects for a large LWR has a tie to reactor safety. In the case of a molten-salt fueled reactor this may need to be adjusted.

In addition, the "Barrier Integrity," portion of the Reactor Oversight Framework shown below should consider direction received from the Commission in a staff requirements memorandum (SRM) dated December 4, 2018, titled "Staff Requirements - SECY-18-0096- Functional Containment Performance Criteria for Non-Lightwater Reactors," (ADAMS Accession No. [ML18338A502](#)). In the SRM the Commission approved a methodology that could be used by designers to define design-specific functional containment performance criteria that relies heavily on the identification and analyses of licensing-basis events.

## Reactor Oversight Framework



- Based on risk insights, develop recommendations for the use of performance indicators in the advanced reactor inspection and oversight program. The current ROP framework for large LWRs provides a means to collect information about licensee performance, assess the information for its safety significance, and provide for appropriate licensee and NRC response. Under the current ROP each plant operator reports performance indicators to the NRC quarterly. Following compilation and review by NRC staff, the NRC posts performance indicators on the NRC Web site. NRC staff evaluates performance indicator data and integrates the data with inspection findings to develop an assessment of licensee performance. Therefore, performance indicators for the current operating fleet are an important part of the NRC's inspection and oversight program. The current performance indicators are based on risk insights for large LWRs that may not be appropriate for advanced reactor designs associated with this task order.
- Based on risk insights, develop recommendations as to whether a portion of the inspection and oversight of a facility can be performed remotely. Current technology allows for the real-time sharing of data. For example, for the current fleet of operating reactors the Emergency Response Data System (ERDS) provides for the ability for direct real-time transfer of data from licensee plant computers to the NRC Operations Center during a plant emergency. In addition, microreactor developers are likely to include instrumentation and telemetry to support diagnostic evaluations and centralized support for multiple microreactor facilities. As part of this task order consider development of recommendations as to whether an expanded use of such a system (continuous sharing of data with the NRC) would allow for a portion of the inspection and oversight of a facility to be performed remotely.

- Consider the development of an advanced reactor methodology for assessment and enforcement. Include whether the different categories of advanced reactors could have a different methodology (e.g. traditional enforcement maybe appropriate for microreactors).
- Consider the use of benchmarking of inspection and oversight activities for advanced reactors against fuel cycle facilities and other industrial facilities (e.g., chemical plants).
- Consider inspection and oversight protocols from other regulated industries that have similar risk profiles as the nuclear power industry where credit for self-regulation is provided. This include, for example, programmatic activities that are performed in response to industry-wide accrediting organizations that promote excellence and safety.
- Consider that based on insights from the advanced reactor content of application project (ARCAP) there could be a shift from licensing-based reviews to a performance-based inspection review. For example, less material maybe appropriate in an advanced reactor application for areas involving waste management and radiation protection and the focus of NRC's review in these areas shifted to more of a performance-based inspection of these areas.
  - In addition to looking at a performance-based approach, provide recommendations for a holistic approach for how rulemaking, licensing, inspection and enforcement can be done for advanced reactors. Consider whether updates to how the NRC regulates found at: <https://www.nrc.gov/about-nrc/regulatory.html> are appropriate for advanced reactor technologies.
- Consider recommendations for a scalable approach for security and emergency preparedness inspections based on the outcome of the emergency preparedness and security rulemakings that are in process. The security rulemaking would establish voluntary alternative physical security requirements commensurate with the potential consequences to public health and safety and the common defense and security. The emergency preparedness rulemaking would amend the NRC's regulations to add new emergency preparedness requirements for small modular reactors and other new technologies such as non-light-water reactors and non-power production or utilization facilities. The emergency preparedness rule would adopt a scalable plume exposure pathway emergency planning zone approach that is performance-based, consequence-oriented, and technology-inclusive.

#### 4. SCOPE OF WORK / TASKS

The contractor shall provide all resources necessary to accomplish the tasks and deliverables described in this task order. The contractor should leverage existing reports such as those developed for the Next Generation Nuclear Plant (NGNP) Program, DOE Advanced Reactor Technology Programs, DOE Gateway for Accelerated Innovation in Nuclear (GAIN) activities, and DOE guidance for reactor and non-reactor facilities.

The contractor shall provide subject matter experts to support the development of advanced reactor inspection guidance recommendations. Contractor personnel will participate in

routine meetings with NEI and other stakeholders and contribute insights during those meetings and internal meetings with the NRC staff. Contractor personnel will provide recommendations considering NRC input, direction and comments. The contractor shall develop recommendations and the contractor is responsible for technical editing of the report.

The technology sequences described by each sequential phase below following Phase 1 (microreactors) could be changed based on direction from the NRC staff in order to be responsive to the technology choices that result from DOE awards via the Advanced Reactor Demonstration Project (ARDP) as well as the potential for other fact of life changes that may occur during the task order period. As a phase is completed the expectation is that the framework document will be updated to incorporate the recommendations for the specific technology associated with that phase as well as resolutions to NRC comments such that at the end of each phase there is a complete framework document that provides recommendations and addresses all issues for the just completed phase as well as the previous phases.

The contractor shall perform the following tasks which are broken into several phases.

#### **4.1. Phase 1: Overall Outline for Advanced Reactor Inspection and Oversight Framework**

The contractor will produce comments and suggestions related to the draft outline for the advanced reactor inspection and oversight framework document developed by the NRC staff. As the scope of the draft outline includes non-LWR advanced reactors, LWR SMRs, and fusion reactors, the contractor will make recommendations related to the outline for the framework document that address overarching goals applicable to all technologies and provide a summary presentation on the draft outline in a public meeting, seeking input and feedback from interested stakeholders. The contractor will address NRC staff comments, also considering input received at the public meeting, and deliver a final outline for the advanced reactor framework document to the staff. The contractor will develop an accompanying presentation related to the final outline for the framework document and deliver the presentation to NRC staff and interested stakeholders.

##### Task 1: Kick-off Meeting

Prior to the initiation of work, the NRC will conduct a “kick-off meeting” via teleconference call with the contractor to discuss the project. Routine telephone conversations between the NRC and the contractor will occur as necessary throughout the task duration.

##### Task 2: Task Plan

The contractor will prepare a draft task plan that provides an outline of each area to be addressed in the advanced reactor inspection and oversight framework document. The NRC will provide a draft framework document outline to the contractor at the beginning of the contract and request the contractor update the outline providing feedback to the staff on areas that may have been missed or areas that need to be addressed in more detail as part of task 2. The NRC will provide comments on the draft task plan. The contractor will incorporate NRC comments and submit a final task plan. The contractor will develop an outline for advanced

reactor inspection guidance and provide it to the NRC for comment. The NRC will provide comments on the outline. Based on NRC and stakeholder feedback on the outline the contractor will develop inspection and oversight guidance recommendations.

### Task 3: Support Stakeholder Interactions

The contractor will provide recommendations on an NRC-supplied outline of issues to be considered in developing its recommendations that will be provided to stakeholders. The contractor will consider feedback from stakeholders and adjust the recommendations accordingly.

### Task 4: Outline Development

The contractor shall develop a document to provide recommendations to the NRC for the outline for the advanced reactor inspection and oversight framework document. Additional detail on this deliverable will be developed following stakeholder interactions.

The contractor shall develop an accompanying presentation related to the final outline for the framework document and deliver the presentation to NRC staff and interested stakeholders.

The contractor will correspond with the NRC to ensure appropriate topics are covered (as technologies and areas of interest may change).

### Coordination

This task involves coordination of activities with the NRC staff and external stakeholders on a regular basis. This task is expected to involve interactions with a utility-led working group, which is participating in a cost-share program with DOE.

## **4.2. Phase 2: Microreactors (OPTIONAL TASK 1)**

The NRC will issue a modification authorizing the contractor to begin work on this task.

The contractor will produce comments and suggestions related to the NRC framework document based on the draft outline completed under Phase 1 above. The contractor will make specific recommendations associated with unique considerations for microreactor technologies (e.g., Oklo and others that may be selected by DOE as part of the ARDP) and not included in Phase 1 of the NRC framework document and provide a summary presentation on the framework document for use by the NRC in a public meeting, seeking input and feedback from interested stakeholders. The contractor will address NRC staff comments, also considering input received at the public meeting, and deliver a final advanced reactor framework document to the staff. The contractor will develop an accompanying presentation related to the updated framework document for use by the NRC to deliver the presentation to NRC staff and a follow-on public meeting with interested stakeholders.

### Task 1: Kick-off Meeting

Prior to the initiation of Phase 2, if awarded, the NRC will conduct a “kick-off

meeting” via teleconference call with the contractor to discuss the project. Routine telephone conversations between the NRC and the contractor will occur as necessary throughout the task duration.

#### Task 2: Task Plan

The contractor will update the task plan that was developed in Phase 1. The NRC will provide comments on the updated task plan. The contractor will incorporate NRC comments and submit a final task plan. The contractor will update the outline that was developed in Phase 1 for advanced reactor inspection guidance and provide it to the NRC for comment. The NRC will provide comments on the outline. Based on NRC and stakeholder feedback on the outline the contractor will develop inspection and oversight guidance recommendations.

#### Task 3: Support Stakeholder Interactions

The contractor will provide unique recommendations specific to microreactors (e.g., Oklo and others that may be selected by DOE as part of the ARDP) and not included in Phase 1 of the development of the NRC framework document, based on the outline developed under Phase 1. The contractor will consider feedback from stakeholders and adjust the recommendations accordingly.

#### Task 4: Outline Development

The contractor shall develop an updated document to provide unique recommendations to the NRC for micro-reactors to include in the advanced reactor inspection and oversight framework document. Additional details on this deliverable will be developed following stakeholder interactions.

The contractor shall develop a presentation for use by the NRC in communicating internally to the NRC staff the proposed updates to the inspection and oversight framework and then to the public and interested stakeholders during a public meeting.

The contractor will correspond with the NRC to ensure appropriate topics are covered (as technologies and areas of interest may change).

#### Coordination

This task involves coordination of activities with the NRC staff and external stakeholders on a regular basis. This task is expected to involve interactions with a utility-led working group, which is participating in a cost-share program with DOE.

### **4.3. Phase 3: Non-Microreactor Technologies (OPTIONAL TASK 2)**

The NRC will issue a modification authorizing the contractor to begin work on this task.

The contractor will produce comments and suggestions related to the NRC framework document based on the draft outline completed under Phase 2 above. The contractor will make specific recommendations associated with unique considerations for any non-microreactor technology (e.g., molten salt or high temperature gas cooled reactor), that is selected by DOE as part of Tier 1 for the ARDP, and not included in Phase 1 of the NRC

framework document and provide a summary presentation on the framework document for use by the NRC in a public meeting, seeking input and feedback from interested stakeholders. The contractor will address NRC staff comments, also considering input received at the public meeting, and deliver a final advanced reactor framework document to the staff. The contractor will develop an accompanying presentation related to the updated framework document for use by the NRC to deliver the presentation to NRC staff and a follow-on public meeting with interested stakeholders.

#### Task 1: Kick-off Meeting

Prior to the initiation of Phase 3, the NRC will conduct a “kick-off meeting” via teleconference call with the contractor to discuss the project. Routine telephone conversations between the NRC and the contractor will occur as necessary throughout the task duration.

#### Task 2: Task Plan

The contractor will update the task plan that was developed in the earlier Phases. The NRC will provide comments on the updated task plan. The contractor will incorporate NRC comments and submit a final task plan. The contractor will update the outline that was developed in earlier Phases for advanced reactor inspection guidance and provide it to the NRC for comment. The NRC will provide comments on the outline. Based on NRC and stakeholder feedback on the outline the contractor will develop inspection and oversight guidance recommendations.

#### Task 3: Support Stakeholder Interactions

The contractor will provide unique recommendations specific to the non-microreactor technology (e.g., molten salt or high temperature gas cooled reactor) that is selected by DOE as part of Tier 1 for the ARDP, and not included in Phase 1 of the development of the NRC framework document, based on the updated outline developed under Phase 2. The contractor will consider feedback from stakeholders and adjust the recommendations accordingly.

#### Task 4: Outline Development

The contractor shall develop an updated document to provide unique recommendations to the NRC for the non-microreactor technology (e.g., molten salt or high temperature gas cooled reactor) that is selected by DOE as part of Tier 1 for the ARDP, in the advanced reactor inspection and oversight framework document. Additional details on this deliverable will be developed following stakeholder interactions.

The contractor shall develop a presentation for use by the NRC in communicating internally to the NRC staff the proposed updates to the inspection and oversight framework and then to the public and interested stakeholders during a public meeting.

The contractor will correspond with the NRC to ensure appropriate topics are covered (as technologies and areas of interest may change).

#### Coordination

This task involves coordination of activities with the NRC staff and external stakeholders on a regular basis. This task is expected to involve interactions with a utility-led working group, which is participating in a cost-share program with DOE.

#### **4.4. Phase 4: Additional Non-Microreactor Technologies (If applicable) (OPTIONAL TASK 3)**

The NRC will issue a modification authorizing the contractor to begin work on this task.

The contractor will produce comments and suggestions related to the NRC framework document based on the draft outline completed under Phase 3 above. The contractor will make specific recommendations associated with unique considerations for any non-microreactor technology (e.g., molten salt or high temperature gas cooled reactor), that is selected by DOE as part of Tier 2 for the ARDP, and not included in Phase 1 of the NRC framework document and provide a summary presentation on the framework document for use by the NRC in a public meeting, seeking input and feedback from interested stakeholders. The contractor will address NRC staff comments, also considering input received at the public meeting, and deliver a final advanced reactor framework document to the staff. The contractor will develop an accompanying presentation related to the updated framework document for use by the NRC to deliver the presentation to NRC staff and a follow-on public meeting with interested stakeholders.

##### Task 1: Kick-off Meeting

Prior to the initiation of Phase 4, if awarded, the NRC will conduct a “kick-off meeting” via teleconference call with the contractor to discuss the project. Routine telephone conversations between the NRC and the contractor will occur as necessary throughout the task duration.

##### Task 2: Task Plan

The contractor will update the task plan that was developed in the earlier Phases. The NRC will provide comments on the updated task plan. The contractor will incorporate NRC comments and submit a final task plan. The contractor will update the outline that was developed in earlier Phases for advanced reactor inspection guidance and provide it to the NRC for comment. The NRC will provide comments on the outline. Based on NRC and stakeholder feedback on the outline the contractor will develop inspection and oversight guidance recommendations.

##### Task 3: Support Stakeholder Interactions

The contractor will provide unique recommendations specific to the non-microreactor technology (e.g., molten salt or high temperature gas cooled reactor) that is selected by DOE as part of Tier 2 for the ARDP, and not included in Phase 1 of the development of the NRC framework document, based on the updated outline developed under Phase 3. The contractor will consider feedback from stakeholders and adjust the recommendations accordingly.

#### Task 4: Outline Development

The contractor shall develop an updated document to provide unique recommendations to the NRC for the non-microreactor technology (e.g., molten salt or high temperature gas cooled reactor) that is selected by DOE as part of Tier 2 for the ARDP, in the advanced reactor inspection and oversight framework document. Additional details on this deliverable will be developed following stakeholder interactions.

The contractor shall develop a presentation for use by the NRC in communicating internally to the NRC staff the proposed updates to the inspection and oversight framework and then to the public and interested stakeholders during a public meeting.

The contractor will correspond with the NRC to ensure appropriate topics are covered (as technologies and areas of interest may change).

#### Coordination

This task involves coordination of activities with the NRC staff and external stakeholders on a regular basis. This task is expected to involve interactions with a utility-led working group, which is participating in a cost-share program with DOE.

### **4.5. Phase 5: Light-water (LWR) Small Modular Reactor (SMR) Technologies (OPTIONAL TASK 4)**

The NRC will issue a modification authorizing the contractor to begin work on this task.

The contractor will produce comments and suggestions related to the NRC framework document based on the draft outline completed under Phase 4 above. The contractor will make specific recommendations associated with unique considerations for any LWR SMR technology not included in Phase 1 of the NRC framework document and provide a summary presentation on the framework document for use by the NRC in a public meeting, seeking input and feedback from interested stakeholders. The contractor will address NRC staff comments, also considering input received at the public meeting, and deliver a final advanced reactor framework document to the staff. The contractor will develop an accompanying presentation related to the updated framework document for use by the NRC to deliver the presentation to NRC staff and a follow-on public meeting with interested stakeholders.

#### Task 1: Kick-off Meeting

Prior to the initiation of Phase 5, if awarded, the NRC will conduct a “kick-off meeting” via teleconference call with the contractor to discuss the project. Routine telephone conversations between the NRC and the contractor will occur as necessary throughout the task duration.

#### Task 2: Task Plan

The contractor will update the task plan that was developed in the earlier Phases. The NRC will provide comments on the updated task plan. The contractor will incorporate NRC comments and submit a final task plan. The contractor will update the outline that was developed in earlier Phases for advanced reactor inspection

guidance and provide it to the NRC for comment. The NRC will provide comments on the outline. Based on NRC and stakeholder feedback on the outline the contractor will develop inspection and oversight guidance recommendations.

#### Task 3: Support Stakeholder Interactions

The contractor will provide unique recommendations specific to any LWR SMR technology not included in Phase 1 of the development of the NRC framework document, based on the updated outline developed under Phase 4. The contractor will consider feedback from stakeholders and adjust the recommendations accordingly.

#### Task 4: Outline Development

The contractor shall develop an updated document to provide unique recommendations to the NRC for any LWR SMR technology included in the advanced reactor inspection and oversight framework document. Additional details on this deliverable will be developed following stakeholder interactions.

The contractor shall develop a presentation for use by the NRC in communicating internally to the NRC staff the proposed updates to the inspection and oversight framework and then to the public and interested stakeholders during a public meeting.

The contractor will correspond with the NRC to ensure appropriate topics are covered (as technologies and areas of interest may change).

#### Coordination

This task involves coordination of activities with the NRC staff and external stakeholders on a regular basis. This task is expected to involve interactions with a utility-led working group, which is participating in a cost-share program with DOE.

### **4.6. Phase 6: Fusion Reactor Technologies (OPTIONAL TASK 5)**

The NRC will issue a modification authorizing the contractor to begin work on this task.

The contractor will produce comments and suggestions related to the NRC framework document based on the draft outline completed under Phase 5 above. The contractor will make specific recommendations associated with unique considerations for any fusion reactor technology not included in Phase 1 of the NRC framework document and provide a summary presentation on the framework document for use by the NRC in a public meeting, seeking input and feedback from interested stakeholders. The contractor will address NRC staff comments, also considering input received at the public meeting, and deliver a final advanced reactor framework document to the staff. The contractor will develop an accompanying presentation related to the updated framework document for use by the NRC to deliver the presentation to NRC staff and a follow-on public meeting with interested stakeholders.

#### Task 1: Kick-off Meeting

Prior to the initiation of Phase 6, if awarded, the NRC will conduct a “kick-off meeting” via teleconference call with the contractor to discuss the project. Routine

telephone conversations between the NRC and the contractor will occur as necessary throughout the task duration.

#### Task 2: Task Plan

The contractor will update the task plan that was developed in the earlier Phases. The NRC will provide comments on the updated task plan. The contractor will incorporate NRC comments and submit a final task plan. The contractor will update the outline that was developed in earlier Phases for advanced reactor inspection guidance and provide it to the NRC for comment. The NRC will provide comments on the outline. Based on NRC and stakeholder feedback on the outline the contractor will develop inspection and oversight guidance recommendations.

#### Task 3: Support Stakeholder Interactions

The contractor will provide unique recommendations specific to any fusion reactor technology not included in Phase 1 of the development of the NRC framework document, based on the updated outline developed under Phase 5. The contractor will consider feedback from stakeholders and adjust the recommendations accordingly.

#### Task 4: Outline Development

The contractor shall develop an updated document to provide unique recommendations to the NRC for any fusion reactor technology included in the advanced reactor inspection and oversight framework document. Additional details on this deliverable will be developed following stakeholder interactions.

The contractor shall develop a presentation for use by the NRC in communicating internally to the NRC staff the proposed updates to the inspection and oversight framework and then to the public and interested stakeholders during a public meeting.

The contractor will correspond with the NRC to ensure appropriate topics are covered (as technologies and areas of interest may change).

#### Coordination

This task involves coordination of activities with the NRC staff and external stakeholders on a regular basis. This task is expected to involve interactions with a utility-led working group, which is participating in a cost-share program with DOE.

### **5. APPLICABLE DOCUMENTS AND STANDARDS**

The contractor shall comply with the following applicable regulations, publications, manuals, and local policies and procedures:

1. NUREG-1379, "NRC Editorial style Guide", Rev.2 (May 2009)
2. NUREG-0650, "Preparing NUREG-Series Publications," Rev. 2 (January 1999)

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

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

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

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

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

The kick-off meeting will be scheduled by the NRC and held via teleconference. The NRC will develop the kick-off meeting agenda, and the contractor will develop and deliver the kick-off meeting summary. The contractor will prepare a draft task plan that provides an outline of each area to be addressed in the advanced reactor inspection and oversight framework document. The NRC will provide a draft framework document outline to the contractor at the beginning of the contract and request the contractor update the outline providing feedback to the staff on areas that may have been missed or areas that need to be addressed in more detail as part of task 2 below. The NRC will provide comments on the draft task plan. The contractor will incorporate NRC comments and submit a final task plan. The contractor will develop an outline for advanced reactor inspection guidance and provide it to the NRC for comment. The NRC will provide comments on the outline. Based on NRC and stakeholder feedback on the outline the contractor will develop inspection and oversight guidance recommendations.

<b>Task</b>	<b>Deliverables</b>	<b>Deliverable Format</b>	<b>Scheduled Completion</b>
Phase 1 – develop outline for advanced reactor inspection and oversight framework document			
1. Kick-off Meeting	Meeting summary	Microsoft Word	Within two weeks after the kickoff meeting.
2. Task plan	Draft task plan	Microsoft Word	Within 30 days after the kickoff meeting
	Final task plan	Microsoft Word	Within 14 days after receiving NRC comments on the draft task plan.

Task	Deliverables	Deliverable Format	Scheduled Completion
3. Stakeholder Interactions	Updated Outline for issues to be addressed in recommendation document	Microsoft Word	As directed by the NRC.
4. Outline	Draft outline of advanced reactor inspection guidance	Microsoft Word	Within 90 days after completing the final task plan.
	Final outline	Microsoft Word	Within 30 days after receiving NRC comments on the draft report.
5. Presentation	Presentation to internal and external stakeholders on final outline for framework document	Microsoft PowerPoint	Within 30 days after final outline provided to staff
<p>Phase 2 through Phase 6 Notes:(OPTIONAL TASKS)</p> <ul style="list-style-type: none"> <li>• Develop advanced reactor inspection and oversight framework document for appropriate technologies (Note that steps 6 through 10 are completed for each of the phase 2 through 6 found in Section 4 of the SOW)</li> <li>• Consistent with discussion in Section 4 the technology sequences described by each sequential phase after microreactors could be changed based on direction from the NRC staff</li> <li>• As a phase is completed the expectation is that the framework document will be updated to provide the resolution of issues specific to that technology such that at the end of each phase there is a complete document that addresses issues for the just completed phase as well as the previous phases.</li> </ul>			
6. Kick-off Meeting	Meeting summary	Microsoft Word	Within two weeks after the kickoff meeting.
7. Task plan	Draft task plan	Microsoft Word	Within 30 days after the kickoff meeting

Task	Deliverables	Deliverable Format	Scheduled Completion
	Final task plan	Microsoft Word	Within 14 days after receiving NRC comments on the draft task plan.
8. Stakeholder Interactions	Updated draft framework document	Microsoft Word	As directed by the NRC.
9. Outline	Draft outline of advanced reactor inspection guidance	Microsoft Word	Within 90 days after completing the final task plan.
	Final document	Microsoft Word	Within 30 days after receiving NRC comments on the draft report.
10. Presentation	Presentation to internal and external stakeholders on final outline for framework document	Microsoft PowerPoint	Within 30 days after final outline provided to staff

The contractor shall provide a Monthly Letter Status Report which consists of a technical progress report and financial status report. This report 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 identification and resolution, travel plans, and staff hour summary. Copies must be sent to the COR and AMD at [ContractsPOT.Resource@nrc.gov](mailto:ContractsPOT.Resource@nrc.gov).

The above deliverables shall be submitted to the task order CO and task order COR. Unless otherwise directed by the COR or the CO, the contractor must provide all deliverables except the Monthly Letter Status Reports (MLSR) as draft products. The COR will review all draft deliverables (and coordinate any internal NRC staff review, if needed) and provide comments back to the contractor. The contractor shall revise the draft deliverable based on the comments provided by the COR and then deliver a revised version of the deliverable, which will then be considered the Final Version. When mutually-agreed upon between the contractor and the COR, the contractor may submit preliminary or partial drafts to help gauge the contractor's understanding of the particular work requirement. More than one round of drafts may be needed if the contractor does not successfully incorporate the COR's comments on the previous draft.

**7. REQUIRED LABOR CATEGORIES**

The work requires personnel with expertise in the area of advanced reactor technology and inspection guidance for large LWRs and inspection guidance for research and test reactors. All personnel performing work under this task order agreement shall have pertinent technical experience by discipline and technical area.

Experience in risk-informed, performance-based regulation and inspection is required to identify and resolve current inspection framework gaps for advanced reactors. The ability to determine the applicability of previously identified policy issues to non-LWRs is required. The ability to identify additional risk-informed and technology-neutral policy issues for advanced reactor inspection guidance is required.

Knowledge and ability to create "plain language" guidance to NRC staff inspectors and NRC applicants that reflects risks posed by advanced reactor technology is required.

Oral and technical writing skills are required. Technical training skills are required. Knowledge and ability to assess and leverage the experience available from international counterparts and industry to determine state-of-the-art advanced reactor inspection tools is required.

Labor Categories

Labor Category	Minimum Qualification Requirement
Project Manager (PM)	B.S. Degree in Engineering or equivalent. Experience with project management of large complex projects.
Subject Matter Expert (SME)	<p>B.S. Degree in Engineering or equivalent. The work requires personnel with expertise in the area of advanced reactor technology and inspection guidance for large LWRs and inspection guidance for research and test reactors. All personnel performing work under this task order agreement shall have pertinent technical experience by discipline and technical area.</p> <p>Experience in risk-informed, performance-based regulation and inspection is required to identify and resolve current inspection and oversight framework gaps for advanced reactors. Knowledge and ability to create "plain language" guidance to NRC staff inspectors and NRC applicants that reflects risks posed by advanced reactor technology is required.</p>
Administrative Support (ADMIN)	Must be versed in NUREG-1379, "NRC Editorial style Guide", Rev.2 (May 2009) such that documents created under this contract meet this guidance.

**8. GOVERNMENT-FURNISHED PROPERTY**

N/A

## **9. PLACE OF PERFORMANCE**

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

## **10. SPECIAL CONSIDERATIONS**

### **10.1 TRAVEL/MEETINGS**

The current expectation is that interactions and presentations will be remote/virtual due to the public health emergency.

Contractor will be authorized travel expenses consistent with the substantive provisions of the Federal Travel Regulation (FTR) and the limitation of funds specified in this contract/order. All travel requires prior written approval from the COR. Travel will be reimbursed in accordance with FAR 31.205-46, "Travel costs" and the General Services Administration's Federal Travel Regulations at: <http://www.gsa.gov/portal/content/104790>.

### **10.2 SECURITY**

The material associated with this work is expected to be unclassified.

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

### **10.3 LICENSE FEE RECOVERY**

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

### **10.4 DATA RIGHTS**

The NRC shall have unlimited rights to and ownership of all deliverables provided under this contract/order, including reports, recommendations, briefings, work plans and all other deliverables. All documents and materials, to include the source codes of any software, produced under this contract/order are the property of the Government with all rights and privileges of ownership/copyright belonging exclusively to the Government. These documents and materials may not be used or sold by the contractor without written authorization from the CO. All materials supplied to the Government shall be the sole property of the Government and may not be used for any other purpose. This right does not abrogate any other Government rights. The definition of "unlimited rights" is contained in Federal Acquisition Regulation (FAR) 27.401, "Definitions." FAR clause at FAR 52.227-14, "Rights in Data-General," is hereby incorporated by reference and made a part of this contract/order.

