

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS
OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30

1. REQUISITION NUMBER: RES-15-0446
 PAGE OF: 1 21
 2. CONTRACT NO.: NRC-HQ-60-14-E-0003
 3. AWARD/EFFECTIVE DATE: 09/30/2015
 4. ORDER NUMBER: NRC-HQ-60-15-T-0002
 5. SOLICITATION NUMBER:
 6. SOLICITATION ISSUE DATE:

7. FOR SOLICITATION INFORMATION CALL: **▶**
 a. NAME: GEOFFREY COLEMAN
 b. TELEPHONE NUMBER (No collect calls): 301-415-5517
 8. OFFER DUE DATE/LOCAL TIME:

9. ISSUED BY: US NRC - HQ
 ACQUISITION MANAGEMENT DIVISION
 MAIL STOP 3WFN-05-C64MP
 WASHINGTON DC 20555-0001
 CODE: NRCHQ
 10. THIS ACQUISITION IS: UNRESTRICTED OR SET ASIDE: 100.00 % FOR:
 SMALL BUSINESS
 HUBZONE SMALL BUSINESS
 SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS
 WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM
 EDWOSB
 8(A)
 NAICS: 541712
 SIZE STANDARD: 500

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED: SEE SCHEDULE
 12. DISCOUNT TERMS:
 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)
 13b. RATING:
 14. METHOD OF SOLICITATION: RFQ IFB RFP

15. DELIVER TO: US NUCLEAR REGULATORY COMMISSION-
 MAIL PROCESSING CENTER
 4930 BOILING BROOK PARKWAY
 ROCKVILLE MD 20852
 CODE: NRCHQ
 16. ADMINISTERED BY: US NRC - HQ
 ACQUISITION MANAGEMENT DIVISION
 MAIL STOP 3WFN-05-C64MP
 WASHINGTON DC 20555-0001
 CODE: NRCHQ

17a. CONTRACTOR/OFFEROR: S C A INC
 1608 SPRING HILL RD STE 400
 VIENNA VA 221822241
 CODE: 071167910
 FACILITY CODE:
 18a. PAYMENT WILL BE MADE BY: US NUCLEAR REGULATORY COMMISSION
 ONE WHITE FLINT NORTH
 11555 ROCKVILLE PIKE
 MAILSTOP O3-E17A
 ROCKVILLE MD 20852-2738
 CODE: NRCPAYMENTS

17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER
 18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	The vendor shall deliver services for Task Order two (2) of the "Destinations of Released Patients Following Treatment with Iodine-131 and Estimation of Doses to Members of the Public at Locations other than Conventional Residences Receiving such Patients" contract in accordance with the attached Statement of Work. <i>(Use Reverse and/or Attach Additional Sheets as Necessary)</i>				

25. ACCOUNTING AND APPROPRIATION DATA: 2015-X0200-FEEBASED-60-60D003-34-6-155-1044-252A
 26. TOTAL AWARD AMOUNT (For Govt. Use Only): \$474,072.00

27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA ARE ARE NOT ATTACHED.
 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA ARE ARE NOT ATTACHED.

28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED.
 29. AWARD OF CONTRACT: REF. _____ OFFER DATED _____ YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:

30a. SIGNATURE OF OFFEROR/CONTRACTOR: 
 31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER): 

30b. NAME AND TITLE OF SIGNER (Type or print): Laurie Loomis, Contracts Manager & VP
 30c. DATE SIGNED: 9/23/15
 31b. NAME OF CONTRACTING OFFICER (Type or print): DOMONIQUE MALONE
 31c. DATE SIGNED: 9/24/2015

AUTHORIZED FOR LOCAL REPRODUCTION PREVIOUS EDITION IS NOT USABLE
 STANDARD FORM 1449 (REV. 2/2012) Prescribed by GSA - FAR (48 CFR) 53.212

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	Current Obligated Amount: \$100,000.40 Contracting Officer Representative: Mohammad Saba Period of Performance: 09/29/2015 to 09/29/2017				

32a. QUANTITY IN COLUMN 21 HAS BEEN
 RECEIVED INSPECTED ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: _____

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE 32c. DATE 32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE 32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE
 32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER 34. VOUCHER NUMBER 35. AMOUNT VERIFIED CORRECT FOR 36. PAYMENT 37. CHECK NUMBER
 PARTIAL FINAL COMPLETE PARTIAL FINAL

38. S/R ACCOUNT NUMBER 39. S/R VOUCHER NUMBER 40. PAID BY

41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT 42a. RECEIVED BY (*Print*)
 41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER 41c. DATE 42b. RECEIVED AT (*Location*)
 42c. DATE REC'D (*YY/MM/DD*) 42d. TOTAL CONTAINERS

**Contract No. NRC-HQ-60-14-E-003; Order No. NRC-HQ-60-14-T-0002:
Destinations of Released Patients Following Treatment with Iodine-131, and
Estimation of Doses to Members of the Public at Locations Other Than
Conventional Residences Receiving Such Patients**

SECTION B: SUPPLIES OR SERVICES/PRICES

B.1 CONSIDERATION AND OBLIGATION TASK ORDERS

(a) The ceiling of this order for services is \$474,072.00.

(b) This is a Firm Fixed Price Task Order.

(c) The amount presently obligated with respect to this order is \$100,000.40. The obligated amount shall, at no time, exceed the order ceiling as specified in paragraph (a) above. When and if the amount(s) paid and payable to the Contractor hereunder shall equal the obligated amount, the Contractor shall not be obligated to continue performance of the work unless and until the Contracting Officer shall increase the amount obligated with respect to this order, in accordance with FAR Part 43 - Modifications. Any work undertaken by the Contractor in excess of the obligated amount specified above is done so at the Contractor's sole risk and may not be reimbursed by the Government.

(d) The Contractor shall comply with the provisions of FAR 52.232-19 - Availability of Funds for Next Fiscal Year.

B.2 PRICE SCHEDULE BREAKDOWN

Total Labor	
Total ODCs & Travel	
Total Firm Fixed Price	\$474,072

SECTION C – Statement of Work

Introduction and Background

Although most patients return to their homes after receiving I-131 treatment for thyroid cancer or hyperthyroidism, some patients may reside at other locations for a variable period of time. The extent of the latter practice is unclear. The NRC Office of Nuclear Regulatory Research (RES) has asked SC&A to provide technical support to obtain estimates of the prevalence of this practice as well as to determine by measurements the external and internal doses received by members of the general public at hotels, nursing homes, or other institutional settings that receive treated patients immediately after their release.

Task Order 1 surveyed by questionnaire non-federal and federal (i.e., Veterans Administration and military) treatment facilities, to collect data and to identify those that knowingly discharge patients to locations other than their homes following I-131 treatment. Task Order 2 will determine whether radiological exposure and contamination data can be collected at hotel, nursing homes, or other institutional locations and to take actual measurements when feasible.

Scope of Work

The SOW divides Task Order 2 into two subtasks, 2a and 2b;

Subtask 2a: When radiological exposure and contamination data can be collected at the abovementioned facilities or destinations.

- Collect data for a sufficient number of facilities to ensure statistically reliable sample.
- Characterize the destination and the patient's activities and identify which members of the public are likely to come in direct contact with either the patient or contamination from the patient. Such individuals may include other patients/residents/inmates, food service personnel (kitchen, hotel, restaurant, cafeteria, room service, dish washers), maid service, nursing care staff, family members to include children, visitors, administrative staff, etc.
- Collect and summarize typical discharge instructions provided by the treatment facilities.]
- Collect external and internal exposure information at these sites to members of the public.
- Identify what areas are contaminated, to what extent, and for how long.
- Ascertain if the destination is aware that the patient received iodine-131. [Determine if the destination understands discharge instructions.]
- Ascertain if there are procedures/protocols in place to minimize the spread of contamination at the alternative residence.
- Ascertain the patient/family members/staff awareness of methods to minimize the spread of contamination.

- [Identify]/pay particular attention to who is the maximally exposed individual and who is the most radiologically sensitive individual.
- Collect data for a sufficient number of exposed individuals to ensure statistically reliable sample. [entry moved up one place in list]
- Describe the range of exposures to members of the public.

Subtask 2b: When radiological data cannot be collected at the abovementioned facilities or destinations.

- Interview patients that have been released to these types of destinations. [Determine understanding of and compliance with discharge instructions.]
- Characterize the destination and the patient's activities and identify which members of the public are likely to come in direct contact with either the patient or contamination from the patient. Such individuals may include other patients/residents/inmates, food service personnel (kitchen, hotel, restaurant, cafeteria, room service, dish washers), maid service, nursing care staff, family members to include children, visitors, administrative staff, etc.
- Time-motion studies should be used to document and replicate patient and member-of-the-public exposure scenarios and activities.
- [Identify]/pay particular attention to who is the maximally exposed individual and who is the most radiologically sensitive individual.
- The contractor shall prepare a detailed design of the study and provide that design to the NRC COR for approval before starting the work.
- Provide the information derived from the time-motion studies for external exposures to the NRC COR. NRC will request ORNL to use this information to calculate actual doses to for the exposure scenarios.
- The contractor shall ascertain if there a similar scenario for public exposure that can be used as a reasonable surrogate for any alternative residence.
- Identify any remaining information gaps for this group(s) of patients.

SC&A will perform the above tasks as outlined in its proposal of June 23, 2014 as applicable. It must be recognized that while SC&A will attempt to fulfill all elements to the best of its ability, within technical, cost, and schedule constraints, some eventualities are beyond its control. These include limited or non-cooperation of or unanticipated problems associated with candidate institutions treating patients and those receiving patients following treatment. In addition, the large-scale survey of Task Order 1 Subtask 1c might not identify a statistically significant number of such institutions. To reduce the risk resulting from this occurring and to ensure the collection of high-quality exposure data, SC&A proposes to add an element to Subtask 2b where data would be taken under controlled conditions using a surrogate institution such as Hershey and/or Columbia Medical Centers that would duplicate to a large extent the conditions of the time-motion studies at the locations where discharged patients might reside. This surrogate data collection would complement the field measurements taken at participating patient-receiving institutions and the dose calculations performed by ORNL,¹ forming a triad of

measured and calculated values, which would ultimately greatly increase confidence in the validity of the exposure results.

An overview of some of the individual SOW elements follows. Activity reference numbers are those appearing in Table 4, the Deliverables List and Fixed Price Milestone Billing Schedule.

Subtask 2 – Planning and Reporting

This subtask includes several activities that are common to both Subtasks 2a and 2b and, therefore, belong solely in neither subtask; SC&A added it for clarity. The first event will be a one-day kickoff meeting between the NRC and SC&A at the NRC offices in Rockville, Maryland. The project participants will review the findings of Task Order 1 and discuss the goals and activities of Subtasks 2a and 2b. The task will culminate with a final report at the end of Task Order 2 encompassing all the data and findings of the overall task. SC&A will present the overall results of Task Order 2 to the NRC in a one-day meeting at the NRC offices after producing the draft Overall Task Order 2 Report and before finalizing it.

Subtask 2a - Radiological Exposure and Contamination Data *Can* be Collected

The primary scope under Subtask 2a will involve monitoring of external and internal exposures to members of the public (staff, other patients, other residents, and visitors) at the facilities to which treated patients travel following I-131 treatment. The task will begin with the production of a detailed design that will be submitted to the NRC as a draft then finalized following receipt of comments by the NRC. The design document will be informed by the Subtask 2.1 Kickoff Meeting. After SC&A has amassed some experience in data collection through a preliminary "field" measurements at a participating institution (a highly recommended step before further measurements are done, which will reduce project risk), it will produce a preliminary report to allow the NRC to provide feedback on the direction in which the task is going and to help plan measurements at other institutions that will follow. The task will conclude with production of draft and final reports on internal and external exposures after all measurements are taken.

SC&A will continue to pursue obtaining cooperation from any hospital already identified in the Task Order 1 Pilot Study that historically sends a significant number of patients to a hotel, nursing home, or elsewhere following treatment, with the aim of working with both the hospital and receiving institution to measure exposures to staff and others from the patients, waste products, contaminated linen, etc. Following development of suitable protocols, which will be informed by the experience gained by the preliminary field measurement mentioned above, this task will measure external and internal dose data at cooperating locations receiving patients following treatment with I-131.

Each alternative type of residence examined may have different populations that may come into contact with the released patient or material contaminated by the patient.

Once the appropriate monitoring protocol is established and appropriate permissions secured from the participating patients, treatment institutions, and patient-receiving facilities (including IRB approvals), the SC&A health physics team, led by radiation safety personnel from the local medical institution, will implement the monitoring protocol.

This will include monitoring of sites in the patient room as appropriate, and taking internal and external exposure and contamination measurements of appropriate residential facility personnel, particularly employees. The team would also confirm that the receiving residential facilities are aware that their clientele occasionally includes I-131-treated patients, and determine whether the residential facilities have received and implemented written procedures and/or protocols from the local treating medical institution. In some cases, the receiving residential facility might have a consensual agreement with a treatment institution and work with the treatment institution to monitor and minimize exposures to members of the public.

In addition to technical aspects of this task, SC&A will also ensure that regulatory requirements are met. These activities might include establishing agreements with the hospitals or other treatment facilities, so that patient consents and IRB approval are obtained as appropriate, and confidentiality of patient data is treated in compliance with the Health Insurance Portability and Accountability Act (HIPAA) of 1996; and establishing agreements with the receiving residential facilities for monitoring consenting employees; the NRC might become involved as required in some of these activities.

Subtask 2b - Radiological Exposure and Contamination Data *Cannot* be Collected

The task will begin after the kickoff meeting with the production of draft and final design reports. That will be followed by time-motion studies of residential facilities receiving patients following their treatment with I-131 to enable the SC&A team to replicate, to the greatest extent possible (in "surrogate" measurements), patient and members-of-the-public exposure scenarios and activities. The time-motion studies will also provide data for the dose calculations that the NRC indicated that it wants ORNL to perform. SC&A recognizes the importance of the time-motion studies to the successful completion of the overall task by allowing cross-validation of the exposure results from three different approaches (field measurements, surrogate measurements, and calculation) to determine exposures.

Since the time-motion studies will be influenced by patient behavior, which is affected by guidance received from treating institutions, the patient and, if available, hotel/nursing home guidance documents of several treating institutions will be obtained and reviewed. SC&A will first determine for each category of release facility (e.g., hotels, nursing homes, assisted living facilities, and, if feasible, correctional facilities) the types of people (i.e., employees, patrons or guests, other patients, or inmates) who might either come in contact with the released patient or with material contaminated by the patient. Discharge guidance advice that might affect determination of exposed populations include patient instructions on where and how to have meals, whether or not day-time activities are restricted to the hotel room, instructions on bathroom usage, and guidance to hotel staff. Monitoring protocols will be designed for different categories of dwellings, such as hotels and nursing homes. Once the protocols have been developed and reviewed with the NRC, they will be discussed with the participating

personnel (e.g., RSOs) of the cooperating institutions to ensure appropriateness and applicability.

It is possible that despite the best efforts of SC&A and the NRC, only a small number of institutions that treat patients with I-131 will be identified in Task Order 1, Subtask 1c and, further, agree, along with the institutions that receive patients (e.g., hotels and nursing homes), to participate in the study. As both a back-up and supplement to the "field" measurements, SC&A proposes to *also* conduct "surrogate" data measurements guided by the time-and-motion studies; SC&A strongly urges the NRC to authorize the parallel execution of Subtasks 2a and 2c. This will both ensure the collection of high-quality data under very controlled conditions (it is expected that the local procedures, programs, and practices will likely differ somewhat from each other) and provide, along with the planned dose calculations, an important benchmark for the field measurements. Also, there could be difficulties obtaining direct dosimetry measurements from potentially exposed populations (e.g., hotel or laundry employees). This could be due to a variety of reasons, such as unwillingness of hotel or nursing home administration to participate, difficulty obtaining IRB permission, lack of patient consent, perceived or real HIPAA issues, or shortage of patients discharged to alternative residences during the work timeframe.

It is anticipated that the surrogate data measurements will be gathered from the medical personnel (nurses and physicians) and housekeeping, janitorial, and other staff at Columbia University and/or Hershey Medical Centers. Such high-quality measurements are already made routinely by the health physics staffs at these institutions and can be tailored to mimic conditions at hotels, etc. described in the time-motion studies. Both organizations can also provide available retrospective data of hospital personnel and expanded prospective data for hospital nursing, housekeeping, and janitorial staff to serve as surrogate data if hotel and nursing home data are limited. In addition to providing actual measured data, this limited study will also provide valuable insights and lessons for the larger-scale measurements of Subtask 2a, which will reduce both cost and schedule risk. Furthermore, this data can help determine which personnel at hotels and nursing homes, etc., are at greatest risk of radiation exposure. It can also help identify radiation exposure readings in the non-hospital residential setting that are out of alignment with expectations, help identify inconsistent or unexpected results, and serve as a quality control instrument.

SECTION D- Packaging & Markings

See the base contract for clauses that apply to this section

SECTION E - INSPECTION & ACCEPTENCE

See the base contract for clauses that apply to this section

SECTION F - Deliveries or Performance

F.1 NRCF032 TASK/DELIVERY ORDER PERIOD OF PERFORMANCE

This order shall commence on 09/30/2015 and will expire on 09/29/2017.

(End of Clause)

F.2 NRCF010 PLACE OF DELIVERY-REPORTS

The items to be furnished hereunder shall be delivered electronically to:

- a. Contracting Officer/Contracts Specialist (Geoffrey.Coleman@nrc.gov)
- b. Contracting Officer Representative (See Section H.2)

(End of Clause)

SECTION G – CONTRACT ADMINISTRATION DATA

G.1 NRCG030 ELECTRONIC PAYMENT (SEP 2013)

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 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: OCFO_ObligationsResource@nrc.gov.

(End of Clause)

SECTION H – SPECIAL CONTRACT REQUIREMENTS

H.1 2052.215-70 KEY PERSONNEL (JAN 1993)

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

Stephen L. Ostrow, PhD – Project Manager
Julie Timins, MD, FACR – Principal Investigator/ Co-PI
Steve King, CHP, CMHP – Principal Investigator/ Co-PI
Michael Stabin, PhD – Senior Health Physicist
John Mauro, PhD, CHP – Senior Health Physicist
Rose Gogliotti – Junior Health Physicist/ Surveyor
Tom Morgan, PhD, CHP – Senior Human Factor Specialist
Deborah Schneider, MPH – Survey Coordinator
Harry Chmelynski – Statistician

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

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

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

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

(End of Clause)

H.2 2052.215-71 CONTRACTING OFFICER REPRESENTATIVE AUTHORITY

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

Name: Mohammad Saba

Address: US Nuclear Regulatory Commission
Mail Stop: CSB/ C3 C36
Washington DC 20555
Email: Mohammad.Saba@nrc.gov
Telephone Number: 301-251-7558

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

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

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

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

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

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

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

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

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

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

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

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

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

this article and does not constitute a change under the "Changes" clause.

(g) Any unauthorized commitment or direction issued by the project officer may result in an unnecessary delay in the contractor's performance and may even result in the contractor expending funds for unallowable costs under the contract.

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

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

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

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

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

(End of Clause)

SECTION I – Contract Clause

I.1 52.217-8 OPTION TO EXTEND SERVICES

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 15 Days.

I.2 52.232-19 AVAILABILITY OF FUNDS FOR NEXT FISCAL YEAR (APR 1984)

Funds are not presently available for performance under this contract beyond \$100,000.40. The Government's obligation for performance of this contract beyond that amount is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise for performance under this contract beyond \$100,000.40, until funds are made available to the Contracting Officer for performance and until the Contractor receives notice of availability, to be confirmed in writing by the Contracting Officer.

(End of Clause)

SECTION J - LIST OF ATTACHMENTS

BILLING INSTRUCTIONS

**BILLING INSTRUCTIONS FOR
FIXED-PRICE TYPE CONTRACTS (MAY 2015)**

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

The contractor shall prepare invoices/vouchers for payment of deliverables identified in the contract, in the manner described herein. FAILURE TO SUBMIT INVOICES/VOUCHERS IN ACCORDANCE WITH THESE INSTRUCTIONS MAY RESULT IN REJECTION OF THE INVOICE/VOUCHER AS IMPROPER.

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

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

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

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

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

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

Agency Payment Office: Payment will continue to be made by the office designated in the contract in Block 12 of Standard Form 26, Block 25 of Standard Form 33, or Block 18a of Standard Form 1449, whichever is applicable.

Frequency: The contractor shall submit invoices/vouchers for payment once each month, unless otherwise authorized by the Contracting Officer.

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

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

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

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

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

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

1. Official Agency Billing Office

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

2. Invoice/Voucher Information

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

b. Taxpayer Identification Number. The Payee shall include the Payee's taxpayer identification number (TIN) used by the Internal Revenue Service (IRS) in the administration of tax laws. (See IRS Web site: [http://www.irs.gov/Businesses/Small-Businesses-&-Self-Employed/Employer-ID-Numbers-\(EINs\)](http://www.irs.gov/Businesses/Small-Businesses-&-Self-Employed/Employer-ID-Numbers-(EINs))).

c. Payee's Name and Address. Show the name of the Payee as it appears in the contract and its correct address. Where the Payee is authorized to assign the proceeds of this contract in accordance with the clause at FAR 52.232-23, the Payee shall require as a condition of any such assignment, that the assignee shall register separately in the Central Contractor Registration (CCR) database at <http://www.ccr.gov> and shall be paid by EFT in accordance with the terms of this contract. See Federal Acquisition Regulation (FAR) 52.232-33(g) Payment by Electronic Funds Transfer - Central Contractor Registration (October 2003).

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

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

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

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

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

- i. Description of Deliverables. Provide a brief description of supplies or services, quantity, unit price, and total price.
- j. Work Completed. Provide a general summary description of the services performed or products submitted for the invoice period and specify the section or Contract Line Item Number (CLIN) or SubCLIN in the contract pertaining to the specified contract deliverable(s).
- k. Shipping. Insert weight and zone of shipment, if shipped by parcel post.
- l. Charges for freight or express shipments. Attach prepaid bill if shipped by freight or express.
- m. Instructions. Include instructions to consignee to notify the Contracting Officer of receipt of shipment.
- n. For Indefinite Delivery contracts, the final invoice/voucher shall be marked "FINAL INVOICE" or "FINAL VOUCHER".
- o. Total Amount Billed. Insert columns for total amounts for the current and cumulative periods.
- p. Adjustments. Insert columns for any adjustments, including outstanding suspensions for deficient or defective products or nonconforming services, for the current and cumulative periods.
- q. Grand Totals.

Deliverables List and Fixed Price Milestone Billing Schedule

Subtask ^(a)	Task Title ^(a)	Deliverable/ Milestone	Due Date ^(b)	Payment, \$
Subtask 2	Task Order 2 Planning and Reporting			
2.1	Kickoff Meeting	Meeting	3 weeks after award	\$23,910
2.2	Project Final Report (draft)	Report	10 months after award	\$28,290
2.3	Presentation Meeting	Meeting	11 months after award	\$21,212
2.4	Project Final Report (final)	Report	1 year after award	\$17,275
			Total	\$90,687
Subtask 2a	Radiological Exposure and Contamination Data Can be Collected			
2a(1)	Subtasks 2a Design (draft)	Report	2 weeks after kickoff mtg.	\$32,165
2a(2)	" (final)	"	2 weeks after receipt of NRC comments on draft report	\$14,367
2a(3)	Preliminary Field Measurement Report (draft)	Report	5 months after award	\$45,898
2a(4)	" (final)	"	1 month after receipt of NRC comments on draft report	\$11,957
2a(5)	Subtask 2a Final Report on Internal and External Exposures (draft)	Report	8 months after award	\$25,930
2a(6)	" (final)	"	1 month after receipt of NRC comments on draft report	\$17,378
			Total	\$147,695
Subtask 2b	Radiological Exposure and Contamination Data Cannot be Collected			
2b(1)	Subtasks 2a Design (draft)	Report	2 weeks after kickoff mtg.	\$32,165
2b(2)	" (final)	"	2 weeks after receipt of NRC comments on draft report	\$14,367
2b(3)	Time-Motion Studies (draft)	Report	3 months after award	\$37,935
2b(4)	" (final)	"	1 month after receipt of NRC comments on draft report	\$15,295
2b(5)	Surrogate Dosimetry Study (draft)	Report	4 months after award	\$34,075
2b(6)	" (final)	"	1 month after receipt of NRC comments on draft report	\$13,440
2b(7)	Retrospective Data Compilation (draft)	Report	6 months after award	\$26,463
2b(8)	" (final)	"	1 month after receipt of NRC comments on	\$17,520

Subtask ^(a)	Task Title ^(a)	Deliverable/ Milestone	Due Date ^(b)	Payment, \$
			draft report	
2b(9)	Subtask 2b Final Report on Internal and External Exposures (draft)	Report	8 months after award	\$27,318
2b(10)	Subtask 2b Final Report on Internal and External Exposures (final)	"	1 month after receipt of NRC comments on draft report	\$17,112
			Total	\$235,690