

**ORDER FOR SUPPLIES OR SERVICES**

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

BPA NO.

1. DATE OF ORDER <b>MAR 25 2010</b>		2. CONTRACT NO. (if any) NRC-04-07-113		6. SHIP TO:	
3. ORDER NO. NRC-T027		MODIFICATION NO.		a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission	
5. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Sharon M. Lim Mail Stop: TWE-01-B10M Washington, DC 20555		4. REQUISITION/REFERENCE NO. RES-C10-477 RES-C10-497		b. STREET ADDRESS	
7. TO:		c. CITY Washington		d. STATE DC	e. ZIP CODE 20555
a. NAME OF CONTRACTOR INFORMATION SYSTEMS LABORATORIES		f. SHIP VIA		8. TYPE OF ORDER	
b. COMPANY NAME		<input type="checkbox"/> a. PURCHASE		<input checked="" type="checkbox"/> b. DELIVERY	
c. STREET ADDRESS 11140 ROCKVILLE PIKE STE 500		e. STATE MD		f. ZIP CODE 208523106	
d. CITY ROCKVILLE		9. ACCOUNTING AND APPROPRIATION DATA (SEE BLOCK 17(b) BELOW FOR ACCOUNTING AND APPROPRIATION DATA) DUNS: 150135445		10. REQUISITIONING OFFICE RES	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))		12. F.O.B. POINT Destination			
<input type="checkbox"/> a. SMALL		<input checked="" type="checkbox"/> b. OTHER THAN SMALL		<input type="checkbox"/> c. DISADVANTAGED	
<input type="checkbox"/> d. WOMEN-OWNED		<input type="checkbox"/> e. HUBZone		<input type="checkbox"/> f. EMERGING SMALL BUSINESS	
<input type="checkbox"/> g. SERVICE-DISABLED VETERAN-OWNED		13. PLACE OF		14. GOVERNMENT B/L NO. N/A	
a. INSPECTION Destination		b. ACCEPTANCE Destination		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) 10/24/2011	
				16. DISCOUNT TERMS Net 30	

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Task Order #27 for "Developing the Technical Basis for Revising Regulatory Guide 5.26, Selection of Material Balance Areas and Item Control Areas" in accordance with the attached Statement of Work.  Period of Performance: 3/25/10 - 10/24/11 Estimated Reimbursable Cost: \$45,029.61 Fixed Fee: \$2,444.78 Total Estimated Cost plus Fixed Fee: \$47,474.39  ACCOUNTING AND APPROPRIATION DATA: B&R: 060-15-171-277, Job Code: N6538, BOC: 252A, Appropriation No: 31X0200.060, Obligate: \$4,220.00 FFS: RES-10-477  B&R: 060-15-171-277, Job Code: N6538, BOC: 252A, Appropriation No: 31X0200.060, Obligate: \$43,254.39 FFS: RES-C10-497					

18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.	
21. MAIL INVOICE TO:					
a. NAME Department of Interior / NBC NRCPayments@nbc.gov					
b. STREET ADDRESS (or P.O. Box) Attn: Fiscal Services Branch - D2770 7301 W. Mansfield Avenue					
c. CITY Denver		d. STATE CO	e. ZIP CODE 80235-2230		\$47,474.39

17(h)  
TOTAL  
(Cont. pages)

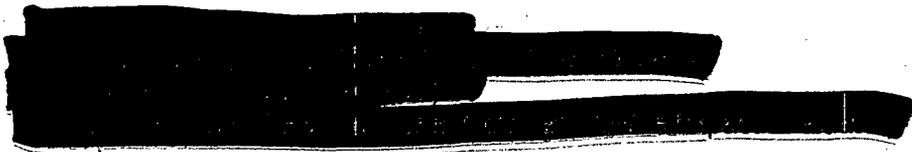
17(i)  
GRAND TOTAL

22. UNITED STATES OF AMERICA  
BY (Signature)

*Sharon M. Lim*

23. NAME (Typed)  
Sharon M. Lim  
Contracting Officer  
TITLE: CONTRACTING/ORDERING OFFICER

1. In accordance with contract **Clause G.4 2052.216-72 TASK ORDER PROCEDURES (OCT 1999)** Task Order NRC-T027 is hereby definitized. This effort shall be performed in accordance with the attached Statement of Work (Attachment One).
2. Task Order NRC-T027 shall be in effect from March 25, 2010 through October 24, 2011.
3. The cost ceiling for this order shall be \$47,474.39 of which \$45,029.61 represents estimated reimbursable costs and the amount of \$2,444.78 represents the fixed fee.
4. The following individuals are considered key personnel and as such are essential to the successful performance of the work under Task Order NRC-T027:



Key personnel shall not be removed from the effort under this task order without compliance with contract **Clause H.2 KEY PERSONNEL (JAN 1993)**.

5. Contacts for this task order:

Technical Monitor: Glenn Tuttle  
(301) 492-3129

Project Officer: Robert Carpenter  
(301) 251-7483

Alternate Project Officer: John Ridgely  
(301) 251-7458

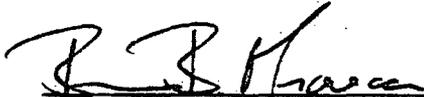
Contracting Officer: Sharon M. Lim  
(301) 492-3624

6. The contractor shall provide a current Contractor Spending Plan to be submitted with the Technical Progress Report and the Financial Status Report each month, initially based on the Contractor Spending Plan submitted on March 25, 2010 in the amount of \$47,474.39.

Contract No.: NRC-04-07-113  
Task Order No.: NRC-T027  
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7. The issuance of Task Order NRC-T027 does not amend any of the terms and conditions of Contract No.: NRC-04-07-113.

ACCEPTANCE:

  
\_\_\_\_\_  
Signature

3/25/2010  
Date

V.P.  
Title

## **STATEMENT OF WORK**

### **NRC Regulatory Guide Revision Contracts**

#### **Task Order No. 27**

#### **Developing the Technical Basis for Revising Regulatory Guide 5.26, "Selection of Material Balance Areas and Item Control Areas"**

### **BACKGROUND**

Regulatory Guide 5.26, "Selection of Material Balance Areas and Item Control Areas," was issued in April 1975. This Regulatory Guide supported the requirements in Title 10 of the Code of Federal Regulations (CFR) Parts 70, "Domestic Licensing of Special Nuclear Material." Part 70 required certain licensees authorized to possess more than one effective kilogram of special nuclear material (SNM) to establish material balance areas or item control areas for the physical and administrative control of SNM. The basic objective for establishing these areas is to detect the occurrence of missing or stolen material and to provide assurance with a stated degree of confidence that, if any material is unaccounted for, it is less than a specified threshold quantity.

A Material Balance Area (MBA) is a physical area such that the quantity of nuclear material moved into or out of the MBA is represented by a measured value. An Item Control Area (ICA) is different from an MBA in that control into and out of this area would be by item identification and number of items from previously determined special nuclear material quantities, the validity of which must be ensured by tamper-safe devices unless items are sealed sources.

The establishment of an effective MBA and/or ICA to enhance control of SNM at a nuclear or fuel cycle facility depends on several factors. These include: (1) the organization and management of the MBAs and ICAs, i.e., the assignment of responsibility to a single designated individual for the control of the material in each of these areas, (2) the establishment of clear physical boundaries for the MBA and/or ICA to ensure that the material flowing into or out of these areas is properly accounted for, (3) the number of MBAs and ICAs needed at a facility which depends on the unique situation at that facility, and (4) detection capability consistent with the physical boundaries and layout of the facility.

Since the 1970s, the significant material control and accounting (MC&A) advances have occurred with respect to technology, equipment, and control procedures. Title 10 CFR Part 74, "Material Control and Accounting of Special Nuclear Material," was created in 1985 specifically for SNM MC&A requirements to decouple them from other safety requirements in the regulations. However, while most of the MC&A requirements have been moved to Part 74 there may still be MC&A requirements in other portions of the regulations.

The purpose of this task order is to develop the technical basis for revising Regulatory Guide 5.26, to reflect the new requirements in the regulations, enhance or enlarge the scope (as appropriate), and to identify and propose updates to references within the Regulatory Guide.

## **WORK SCOPE**

Under this task order the contractor shall develop the technical basis for revising Regulatory Guide 5.26 as well as review and assess the regulatory positions in the Regulatory Guide, including documents referenced within this guide (e.g., relevant technical standards, papers, and NRC regulations). Throughout the revision process the contractor shall support presentations [e.g., prepare presentations and attend public meetings and the Advisory Committee on Reactor Safeguards (ACRS) meetings], respond to comments (from the public, staff, and ACRS), and provide additional support suitable for the Regulatory Guide development, as needed. The contractor shall propose suitable text for the preparation of the Regulatory Guide. References to guidance and other relevant documents shall be updated to reflect the most current and applicable versions.

### **Task 1 – Kickoff for Revising Regulatory Guide 5.26**

Upon award of this task order, the NRC Project Officer (PO) and the contractor shall agree on the earliest mutually agreeable date and time for the kickoff meeting. The contractor's project manager and technical lead shall attend the kickoff meeting at NRC Headquarters in Rockville, Maryland. The contractor shall review and evaluate relevant information and be prepared to discuss it at the kickoff meeting with the NRC. Seven business days prior to the kickoff meeting, the contractor shall provide to the NRC PO a pre-kick-off meeting summary of its reviews in the context of development of a Regulatory Guide. The summary shall be a list, in tabular format, of all regulatory positions, performance objectives, provisions, methodologies (statistical or otherwise), organizational structure, definitions, and references and an assessment as to their continued validity, proposed revisions, and basis for those proposed revisions. At the kickoff, the NRC technical lead will describe the important issues related to developing the NUREG/CR report to support development of the Regulatory Guide.

Within five working days of the kickoff meeting the contractor shall provide a kick-off meeting summary to the Project Officer that summarizes the outcomes of the kickoff meeting, including clarification of the contractor's understanding of the work to be performed. The NRC staff will provide timely review, comment, and approval of this summary.

### **Task 2 – Technical Bases for Revising Regulatory Guide 5.26**

The contractor shall develop the technical basis for revising Regulatory Guide 5.26 to reflect advances in statistical methods, equipment, measurement control procedures, and technology that have occurred since issuance of the Regulatory Guide. The technical basis shall include provisions for: (1) physical and administrative control of SNM at

nuclear and fuel cycle facilities, (i.e., establishing and maintaining a system of procedures for reviewing, detecting, evaluating, and controlling the movement of SNM), (2) establishing a clear organizational structure and approved documented written procedures for the management of the MBAs and ICAs, (i.e., the assignment of responsibility is clearly delineated to a single designated individual for the control of the material in these areas), and (3) developing written procedures to maintain adequate records and documentation of SNM added or removed from MBAs and ICAs.

Statistical controls are an integral part of SNM MC&A to assure that all licensees effectively account for the SNM they possess and to identify losses when they occur. Several important statistical indicators affecting the movement, detection, and control of SNM shall be validated with respect to their applicability and measurement error control. These indicators include, although are not limited to: (1) Material unaccounted for (MUF), (2) Limits of Error of the Material Unaccounted For (LEMUF) and (3) the observed shipper-receiver difference, which results from two independent determinations of material in transfer.

The contractor shall provide in the technical basis a regulatory infrastructure that addresses the current threat environment that can readily be applied to activities under NRC's regulatory authority. The guidance shall also apply to Category I, II, and III facilities. To achieve these goals, the contractor shall perform a comprehensive review of existing Regulatory Guide 5.26 performance objectives and regulatory positions, and determine if the requirements, provisions, methodologies (statistical or otherwise), organizational structure, definitions, and terminology are technically sound and consistent with current NRC MC&A regulations. The contractor shall also determine if American National Standards Institute (ANSI) and American Standards for Testing Material (ASTM) standards exist that may be applicable to support the objectives of this revised guide.

At the conclusion of this review, the contractor shall identify the need for: (a) new guidance in the Regulatory Guide, (b) deletion of existing guidance, (c) revision of existing guidance, (d) proposed new references for application of acceptable methods, (e) modifications and enhancements to the guidance, and (f) best practices that should be incorporated in the new Regulatory Guide (with supporting documentation).

The contractor shall review the current reporting requirements to determine if they are adequate to maintain accurate and reliable information to periodically confirm the quantities and locations of SNM in the licensee's possession.

Specifically, the Regulatory Guide update needs to be consistent with the state of the art (as appropriate), and to consider the following areas and propose changes.

1. Are the current references applicable? Do the Regulatory Guides accurately and appropriately reflect the current requirements in the regulations? Are there other codes or standards, e.g., ANSI and ASTM, which should be referenced? Have any of

- the references been revised, replaced, withdrawn, or otherwise superseded? If a reference has been superseded, is there a reference that reflects current best practices?
2. Do the methods and techniques discussed in the Regulatory Guides reflect the current best practices?
  3. Are additional reporting requirements necessary?
  4. Have there been any additional regulatory experiences and/or changes in the regulatory position that should be included in the new Regulatory Guide?
  5. Is any information contained in similar Regulatory Guides appropriate for inclusion in this Regulatory Guide?

For each document (reference, guidance document (except other Regulatory Guides), code, and standard) that is proposed to be replaced with an updated version, the contractor shall prepare a table comparing all of the items (tables, charts, features, requirements, criteria, guidance, etc.) in the original document and the proposed updated document. The contractor shall provide a discussion for each item as to its applicability and acceptability. The discussion on acceptability shall include, but is not limited to, an assessment of the effect of adding or reducing conservatism, or increasing or decreasing safety or safety margin.

After NRC concurrence, the contractor shall draft the technical basis for the revision of the Regulatory Guide in a technical basis report as a NUREG/CR (in the NUREG report format) for the development of the revised Regulatory Guide. This report shall include a discussion of the work performed, proposed regulatory positions, a regulatory analysis, the rationale for all positions, modifications, and additions proposed, and all supporting tables, lists, figures and appendices. The report shall be sufficiently complete that someone not familiar with the work can follow the discussion, understand the basis and rationale, and reach the same conclusions. The regulatory analysis shall conform to the guidance specified in NUREG/BR-0058, Revision 4, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission."

The contractor shall prepare the technical basis report (in the NUREG report format) in accordance with the Presidential memorandum on plain language (63 FR 31883, June 10, 1998). Preparation of the technical basis shall include a "Level 2" technical edit to correct the following problems:

- Misspelled words
- Subject/verb disagreement
- Incomplete sentences
- Punctuation errors
- Typographical errors
- Poor word choices or usage

- Poor syntax
- Overuse of the passive voice
- Faulty parallelisms
- Misplaced modifiers
- Incomplete comparisons
- Inconsistent/incorrect use of symbols, terms, acronyms, and/or abbreviations
- Wordiness
- Overly complex sentences
- Errors in figures and tables, including inconsistencies with the text
- Use of references not available in the public domain

The contractor shall submit the draft report for review by the NRC staff. The staff review is expected to typically take three weeks. Upon receipt of NRC comments, the contractor shall revise the draft report and resubmit the draft report within 30 days.

### Task 3 –Support for Revising Regulatory Guide 5.26

The contractor shall prepare slides or other briefing material and attend advisory committee or public meetings, as requested. The contractor shall respond to comments from advisory committees and public meetings, as requested. The contractor shall revise the technical basis as a result of advisory committee or public comments, as requested.

Using comments from the public, staff, and ACRS obtained for the draft NUREG/CR, the contractor shall finalize the document, as directed by the staff, and provide the final NUREG/CR to the NRC.

The activities in Task 3 will typically be performed after Task 2 is completed.

### **DELIVERABLES**

The contractor shall be required to comply with the delivery schedule stated below. All deliverables shall be formatted and prepared using Microsoft Word for documentation and reports, Microsoft PowerPoint for briefings, and Microsoft Project for schedules. Contractors are encouraged to submit deliverables as soon as they are completed, which may be prior to the due dates listed below.

The contractor shall provide the following deliverables:

Deliverable	Due Date
Technical Progress Report	Monthly by the 15 <sup>th</sup> day of the following month
Financial Status Report	Monthly by the 15 <sup>th</sup> day of the following month
Pre-Kick-Off Meeting Summary	7 working days prior to kick-off meeting
Kick-Off Meeting Summary and Action Items	Within 5 working days of the kick-off meeting
Initial Technical Basis Report (Task 2)	Within 6 months of the kick-off meeting
Revised Technical Basis Report (Task 2)	Within 30 days of receipt of comments
Final Technical Basis Report (Task 3)	· Within 30 days of notification from the Project Officer – if only editorial comments · Within 3 months of notification from the Project Officer – if technical comments

Technical Progress Report – shall meet the requirements of Clause F.3 - 2052.211-71 Technical Progress Reports (JAN 1993) of the base contract.

Financial Status Report – shall meet the requirements of Clause F.4 – 2052.211-72 Financial Status Report (OCT 1999) of the base contract.

Kick-Off Meeting Summary and Action Items – shall also reflect the contractor’s understanding of the issues and the contractor’s approach for development of a new Regulatory Guide.

Initial Technical Basis Report – shall be submitted by the above due date after the completion of Task 2.

Revised Technical Basis Report – shall be submitted 30 days after receipt of comments on the Initial Technical Basis Report.

Final Technical Basis Report – shall be submitted by the above due date after the completion of Task 2, after receipt of comments and instructions from the Project Officer (about 18 months after the kick-off meeting).

All of the above deliverables shall be submitted in accordance with Clause F.6 Place of Delivery – Reports (JUN 1988) of the base contract.

Any deliverables rejected by the Project Officer shall be revised and resubmitted within 10 working days of notification from the Project Officer that the deliverable was rejected.

### **REQUIRED EXPERTISE**

Technical staff proposed for this project shall have recognized knowledge of and experience with the current requirements in 10 CFR 74, “Material Control and Accounting of Special Nuclear Material.” The contractor shall also have working knowledge of the requirements of 10

CFR Parts 30, 33, 40, 70, 72, 73, and 76. The proposed staff shall have experience in the practice and procedures used in MC&A activities, including a working knowledge of statistics applied to these activities. One method to demonstrate experience or familiarity with MC&A is through publications of topics in these fields and /or advanced formal education directly related to the subject matter above.

### **MATERIALS PROVIDED**

The Regulatory Guides are available on the NRC's public web site at:  
<http://www.nrc.gov/reading-rm/doc-collections/reg-guides/environmental-siting/active/>.

Other references mentioned above are publically available in NRC's Code of Federal Regulations, Title 10, in ADAMS on NRC's public web site, or available from the specific standards organizations.

### **TRAVEL REQUIREMENTS**

Travel is required to NRC headquarters to attend kickoff meeting, ACRS meetings, public meetings, and to discuss the contractor's work with the staff. It is anticipated that two people will attend the kickoff meeting and one person will attend each of the other three one-day meetings for a total of five person-meetings.

### **TASK MANAGER**

The Task Manager for this Task Order is Glenn Tuttle (301) 492-3129.