

**ORDER FOR SUPPLIES OR SERVICES**

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

BPA NO.

1. DATE OF ORDER <b>FEB 26 2010</b>		2. CONTRACT NO. (If any) NRC-04-07-112		6. SHIP TO:	
3. ORDER NO. NRC-T022		MODIFICATION NO.		a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission	
4. REQUISITION/REFERENCE NO. RES-C10-473		b. STREET ADDRESS		c. CITY Washington	
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		d. STATE DC		e. ZIP CODE 20555	
7. TO:		f. SHIP VIA		8. TYPE OF ORDER	
a. NAME OF CONTRACTOR DADE MOELLER & ASSOCIATES, INC.		b. COMPANY NAME		<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY	
c. STREET ADDRESS 1835 TERMINAL DR STE 200		d. CITY RICHLAND		REFERENCE YOUR Please furnish the following on the terms and conditions specified on both sides of this order, and on the attached sheet, if any, including delivery as indicated.	
e. STATE WA		f. ZIP CODE 993544958		Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
9. ACCOUNTING AND APPROPRIATION DATA B&R: 060-15-171-277, Job Code: N6332, BOC: 252A Appropriation No: 31X0200.060, Obligate: \$32,184.00 DUNS: 928304120 FFS: RES-C10-473		10. REQUISITIONING OFFICE RES		12. F.O.B. POINT Destination	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))		13. PLACE OF		14. GOVERNMENT B/L NO.	
<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		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) 9/25/2011	
a. INSPECTION Destination		b. ACCEPTANCE Destination		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 #22 for "Developing the Technical Basis for Revising Regulatory Guide 2.3, Revision 1" in accordance with the attached Statement of Work  Period of Performance: 2/26/10 - 9/25/11 Estimated Reimbursable Cost: \$94,260.99 Fixed Fee: \$5,655.66 Total Estimated Cost plus Fee (Ceiling): \$99,916.65					

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	
SEE BILLING INSTRUCTIONS ON REVERSE					17(h) TOTAL (Cont. pages)  17(i) GRAND TOTAL \$99,916.65

22. UNITED STATES OF AMERICA BY (Signature) <i>Sharon M. Lim</i>		23. NAME (Typed) Sharon M. Lim Contracting Officer TITLE: CONTRACTING/ORDERING OFFICER	
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1. In accordance with contract **Clause G.4 2052.216-72 TASK ORDER PROCEDURES (OCT 1999)** Task Order NRC-T022 is hereby definitized. This effort shall be performed in accordance with the attached Statement of Work (Attachment One).
2. Task Order NRC-T022 shall be in effect from February 26, 2010 through September 25, 2011.
3. The cost ceiling for this order shall be \$99,916.65 of which \$94,260.99 represents estimated reimbursable costs and the amount of \$5,655.66 represents the fixed fee.
4. This task order is being incrementally funded. The current obligation for this order is \$32,184.00. This is a not to exceed amount. Any work undertaken by the Contractor in excess of this obligation is done at the Contractor's risk.
5. The following individuals are considered key personnel and as such are essential to the successful performance of the work under Task Order NRC-T022:



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

6. Contacts for this task order:

Technical Monitor: Geoffrey Wertz  
(301) 415-0893

Project Officer: Robert Carpenter  
(301) 251-7483

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

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

7. The contractor shall be required to comply with the Contractor Spending Plan submitted on February 25, 2010 in the amount of \$99,916.65. The Contractor shall immediately notify both the Contracting Officer and the Project Officer, in writing, if the estimated monthly amounts stated in the Contractor Spending Plan change at any time during the period of performance. The contractor shall be required to submit an updated Contractor Spending Plan upon request.

8. The issuance of Task Order NRC-T022 does not amend any of the terms and conditions of Contract No.: NRC-04-07-112.

ACCEPTANCE:

Kelly D. Cram  
Signature

Contract Specialist  
Title

2-25-10  
Date

## STATEMENT OF WORK

### NRC Regulatory Guide Revision Contract

#### Task Order No. 22

#### **Developing the Technical Basis for Revising Regulatory Guide 2.3, Revision 1 “Quality Verification for Plate-Type Uranium-Aluminum Fuel Elements for Use in Research Reactors”**

### **BACKGROUND**

Regulatory Guide 2.3, “Quality Verification for Plate-Type Uranium-Aluminum Fuel Elements for Use in Research Reactors,” Revision 1, was published in July 1976 to provide guidance acceptable to the NRC staff for establishing and executing a quality assurance program for verifying the quality of plate-type uranium-aluminum fuel elements used in research reactors licensed under 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities.”

Since the issuance of this Regulatory Guide, the regulations have undergone extensive revisions. The purpose of this task order is to develop the technical basis to permit the NRC staff to update Regulatory Guide 2.3 to reflect new requirements in the regulations. The contractor shall develop this technical basis which includes identifying and proposing updates to the references within the Regulatory Guide.

### **WORK SCOPE**

Under this task order the contractor shall develop the technical basis for revising Regulatory Guide 2.3. Throughout the revision process the contractor shall support presentations (e.g., prepare presentations and attend public meetings, 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 revision, as needed. The contractor shall propose suitable text for the preparation of the Regulatory Guide revision. 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 2.3**

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 should 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 2.3

Revising Regulatory Guide 2.3 will update the guidance for establishing and executing a quality assurance program for verifying the quality of plate-type uranium-aluminum fuel elements used in research reactors. Regulatory Guide 2.3 references the American Nuclear Standards Institute (ANSI) standard N398-1974, "Quality Verification for Plate-Type Uranium-Aluminum Fuel Elements." References to this document and other relevant documents shall be updated to reflect the most current and applicable versions. Other text shall be revised as appropriate based on the contractor's review of the current version, considering the following areas and recommended changes.

1. Review Regulatory Guide 2.3 for clarity, completeness, and technical soundness.
2. Is the reference to ANSI N398-1974 still applicable? If not, what guidance or standards are available?
3. Are the current references applicable? Does the Regulatory Guide accurately and appropriately reflect the current requirements in the regulations?
4. Do the methods and techniques discussed in the Regulatory Guide reflect the current best practices?
5. Are the regulatory positions stated in Regulatory Guide 2.3, section C., "Regulatory Position," accurate and appropriate?
6. Have there been any additional regulatory experiences and/or changes in the regulatory position that should be included in an updated 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, 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 of Regulatory Guide 2.3

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 the 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 8 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)	<ul style="list-style-type: none"> <li>• Within 30 days of notification from the Project Officer – if only editorial comments</li> <li>• Within 3 months of notification from the Project Officer – if technical comments</li> </ul>

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 the revision of Regulatory Guide 2.3.

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 be recognized technical experts in research reactor fuel material composition, manufacturing, and quality assurance (QA) plans and quality control (QC) procedures; relevant regulations (including 10 CFR 50.34(a)(7)); relevant guidance documents (including NUREG-1537, “Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors,” and NUREG-1520, “Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility”); and relevant generic communications. The proposed staff shall have extensive hands-on experience in the manufacture of research reactor fuel. One method to demonstrate experience with QA/QC activities for research reactor fuel manufacturing is through numerous publications of QA/QC reports.

### **MATERIALS PROVIDED**

Regulatory Guide 2.3 is available on the NRC’s public web site at:  
<http://www.nrc.gov/reading-rm/doc-collections/reg-guides/fuels-materials/active/>.

### **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 would attend the kickoff meeting and two people 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 Geoffrey Wertz (434-326-1086).