

9/13/11

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

2 AMENDMENT/MODIFICATION NO M009 3 EFFECTIVE DATE See Block 16C 4 REQUISITION/PURCHASE REQ NO NMS-11-066 5 PROJECT NO (if applicable)

6 ISSUED BY U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Mandy Mauer, 301-492-3537 Mail Stop: TWB-01-B10M Washington, DC 20555 7 ADMINISTERED BY (if other than Item 6) U.S. Nuclear Regulatory Commission Div. of Contracts Mail Stop: TWB-01-B10M Washington, DC 20555

8 NAME AND ADDRESS OF CONTRACTOR INFORMATION SYSTEMS LABORATORIES Attn: Dr. James F. Meyer 11140 ROCKVILLE PIKE STE 500 ROCKVILLE MD 20852-3106 9A AMENDMENT OF SOLICITATION NO 9B DATED (SEE ITEM 11) 10A MODIFICATION OF CONTRACT/ORDER NO NRC-02-06-006 10B DATED (SEE ITEM 13) 09-29-2006

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT 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.

12 ACCOUNTING AND APPROPRIATION DATA (if required) B&R: 11-50-33-4-189 JC: J5566 BOC: 251A APPN: 31x0200 FAIMIS: 113440 NAICS: 541990 PSC: R421 OBLIGATE: \$55,000.00

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

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: MUTUAL AGREEMENT OF THE PARTIES LEVEL OF EFFORT INCREASE D OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, X 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) ** PLEASE SEE PAGE TWO (2) FOR A DESCRIPTION OF THE MODIFICATION TO REVISE THE STATEMENT OF WORK, INCREASE THE LEVEL OF EFFORT AND CONTRACT CEILING, ADD INCREMENTAL FUNDING, AND CHANGE THE NRC TECHNICAL PROJECT MANAGER.**

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

15A NAME AND TITLE OF SIGNER (Type or print) James F. Meyer, V.P. 15B CONTRACTOR/OFFEROR Signature of person authorized to sign 15C DATE SIGNED 9/12/11 15A NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Valerie M. Whipple Contracting Officer 15B UNITED STATES OF AMERICA BY Signature of Contracting Officer 15C DATE SIGNED 9/13/11

TEMPLATE - ADM001 SUNSI REVIEW COMPLETE SEP 13 2011 ADM002

The purpose of this contract modification is to: (1) revise the statement of work; (2) increase the estimated labor hours under Task A by 0.25 staff years or 330 hours, from 1.0 staff years to 1.25 staff years; (3) increase the total contract ceiling by \$56,335.34, from \$399,302.00 to \$455,637.34; (4) provide incremental funding in the amount of \$55,000.00, thereby, increasing the obligated amount from \$399,302.00 to \$454,302.00; and (5) change the NRC Technical Project Manager (TPM) from Ron Parkhill to Jason Piotter. Accordingly, the following changes are hereby made:

- 1) Attachment 1, entitled "Statement of Work" is hereby incorporated into the subject contract.
- 2) The COST SCHEDULE for the level of effort increase is as follows:

DESCRIPTION	EST. QUANTITY	UNIT	UNIT PRICE	AMOUNT
[REDACTED]	[REDACTED]	Hours	[REDACTED]	[REDACTED]0
Senior Engineer	[REDACTED]	Hours	[REDACTED]	[REDACTED]
Administrative Assistant	[REDACTED]	Hours	[REDACTED]	[REDACTED]
Labor Overhead				[REDACTED]
G&A				[REDACTED]
FEE				[REDACTED]
Remaining Unobligated Funds				[REDACTED]
Prior Contract Ceiling				[REDACTED]
TOTAL CONTRACT CEILING				\$455,637.34

- 3) Section B.3 CONSIDERATION AND OBLIGATION – COST PLUS FIXED FEE (JUN 1988) ALTERNATE I (JUN 1991), is deleted in its entirety and replaced with the following:

- (a) The total estimated cost to the Government for full performance of this contract is \$455,637.34, 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 by reason of differences between any estimate of cost for performance of the work under this contract and the actual cost for performance of that work.
- (c) The amount currently obligated by the Government with respect to this contract is \$454,302.00, 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 allotted will cover performance through December 31, 2011.

- 4) Section G.1 PROJECT OFFICER AUTHORITY (FEB 2004), paragraph (a) is deleted in its entirety and replaced with the following:

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

Name: Jason Piotter

Address: U.S. Nuclear Regulatory Commission
11555 Rockville Pike, Mail Stop: E3D2M
Rockville, MD 20852

Telephone Number: 301-492-3286

All other terms and conditions of this contract remain unchanged including the period of performance end date of December 31, 2011.

A summary of obligations from award date through the date of this action is given below:

Total FY06 Obligations	\$175,000.00
Total FY07 Obligations	\$224,302.00
Total FY11 Obligations	\$ 55,000.00
 Total NRC Obligations	 \$454,302.00

This modification obligates FY11 funds in the amount of \$55,000.00.

Statement of Work

Project Title: Technical Assistance in Risk-Informing Division of Spent Fuel Project Office Standard Review Plans for Storage and Incorporating Interim Staff Guidance Documents

Job Code Number: J5566
B&R Number: 11-50-33-4-189
NRC Technical
Project Manager (TPM): **Jason Piotter, (301) 492-3286**
Project Manager (TAPM): Tracy Clark, (301) 492-3216
Fee Recoverable: No

1.0 BACKGROUND

The Division of Spent Fuel Storage and Transportation (SFST) (formerly Spent Fuel Project Office) within the Office of Nuclear Materials Safety and Safeguards (NMSS) at the U.S. Nuclear Regulatory Commission (NRC) has two Standard Review Plans (SRPs) for storage of spent nuclear fuel:

- Dry Cask Storage System (NUREG-1536), was last updated in December 2008
- Spent Fuel Dry Storage Facilities (NUREG-1567), was last updated in February 2000

These SRPs need to be risk-informed to help focus staff reviews on more important aspects of design so that the reviews can be more effective in achieving the objectives of the regulations, including safety, environmental protection, and security. The areas requiring more staff focus are: analysis, material, fabrication, inspection and testing of licensing information in the areas of confinement, structural, shielding, criticality, and thermal safety. Therefore, the NRC requires technical assistance with updating these NUREGs and incorporating information from applicable Interim Staff Guidance (ISG) documents that were developed to address emerging issues which were not captured in the existing SRPs.

ISL has successfully completed the tasks required by this contract for NUREG-1536. However, during the course of the original period of performance, the parallel track for revising NUREG-1536 and NUREG-1567 was decoupled by NRC such that the NUREG-1536 revision was completed first. The NUREG-1567 revision was to follow. Because of this NRC's decision to decouple the revisions, certain efficiencies of process and staffing were lost. NRC's decision to decouple the tasks and the resulting inefficiencies resulted in the need for additional contract costs beyond the original award amount.

2.0 OBJECTIVE

The objective of this revised Statement of Work (SOW) is to raise the contract ceiling so that the task of risk informing and updating NUREG-1567 can be completed in addition to the already completed task on NUREG-1536. The revised SOW allows for incorporating staff comments into the draft NUREG-1567, applying the previously developed review prioritization scheme, and supplying a final draft version of NUREG-1567 for NRC review and dissemination. NUREG-1536 was already risk-informed and updated non-concurrently with NUREG-1567.

3.0 TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

ISL shall commit the appropriate number of qualified staff to the project encompassing all required discipline areas (i.e. structural, materials, criticality, shielding, thermal, and containment/confinement) to develop and review the SRPs and associated ISGs documents. ISL's project manager shall be experienced in managing the preparation of SRPs.

4.0 LEVEL OF EFFORT

Since the work will be performed under the tasks specified below, the estimated level of effort for each task is as follows

Task A: 1.25 staff years or 1 year and 330 hours

Task B: 0.75 staff years

5.0 PERIOD OF PERFORMANCE

The period of performance for the work specified in this revised SOW is September 29, 2006 through December 31, 2011.

6.0 SCOPE OF WORK

Task A: Update Spent Fuel Dry Storage Facilities SRP (NUREG-1567)

The contractor shall review the SRPs and ISGs to determine information and emerging issues that require updating in the documents. Suggestions regarding revisions to the documents shall be presented in draft and final reports in accordance with the requirements specified under the tasks below.

One aspect of this activity would be to identify those areas of the staffs review that are less important in terms of safety impact and hence the scope of the staff's review could be curtailed or eliminated. This is not to imply that additions to the SRPs cannot be added that would increase the staff's level of effort, if justified by risk. Examples of some risk-informed changes to the SRPs are provided below:

For spent fuel storage casks that are constructed in accordance with Interim Staff Guidance (ISG)-15, made of ductile stainless steel and welded closed, ISG -18 documents that leak testing of the confinement boundary is no longer required.

1. For spent fuel storage casks that are not required to be leak tested per ISG-18, an explicit confinement release evaluation does not have to be performed. As such, the annual release of radionuclides is considered to be negligible.
2. For spent fuel storage casks that are welded, a thermal accident fire evaluation is considered of minimal value because of the small amount of fuel available for combustion and the thermal inertia of the canister/cask causes negligible effect on the confinement boundary or spent fuel cladding temperatures.
3. Margins in the design are not currently reflected in the SRP. This generally leads the staff to use the same review approach for applications with large design margins and small design margins. Guidance needs to be added, in each discipline area, which minimizes the staff review resources for those aspects of the design that have relatively large margins of safety.

Additionally, the SFPO staff have addressed and resolved emergent, technical issues, not covered in the SRPs, through the issuance of ISG documents. Currently there are 21 issued ISGs, with others under development. The applicable ISGs will need to be incorporated into the revised SRPs.

- **Task A: Update Dry Cask Storage Systems SRP (NUREG-1536)**

The contractor must review and become familiar with the current Dry Cask Storage Systems SRP and applicable ISG documents. Subsequently, the contractor shall facilitate and document meetings with the NRC staff to gain specific NRC input from the various review disciplines (i.e. structural, materials, thermal, criticality, shielding and confinement/containment) to address all of the SRP chapters. These coordination meetings with the NRC staff shall be held separately with each of the review disciplines. As a outgrowth of these discipline meetings with the NRC staff, the contractor shall develop a draft SRP report identifying areas that have the potential to be risk-informed (e.g. highlight the SRP areas that are the most important, moderately important and least important for the staff to review from a safety perspective) and incorporates the applicable ISGs. In addition to documenting specific changes in the draft SRP, the contractor shall document a process and criteria by which technical discipline reviewers can make determinations of relative safety importance. A presentation of the draft report shall be made to management in the Spent Fuel Project Office (SFPO). After this presentation and comments received from the NRC, the contractor shall develop and submit a draft final SRP that risk-informs the SRP and incorporates the applicable ISGs. The NRC will review and forward any additional comments to the contractor, who shall then incorporate these comments and provide the NRC with a final camera-ready, risk-informed SRP.

- **ISL will continue the revision of the draft NUREG-1567 delivered to the NRC in May 2011. This continuation of work will entail incorporation of NRC comments, conducting prioritization meetings, documentation of the prioritization process, incorporation of the prioritization results into the NUREG, and final editing, including formatting, of the final camera ready version of NUREG-1567.**

- **Task B: Update Spent Fuel Dry Storage Facilities SRP (NUREG-1567)**

The contractor must review and become familiar with the current Spent Fuel Dry Storage Facilities SRP and applicable ISG documents. Subsequently, the contractor shall facilitate and document meetings with the NRC staff to gain specific NRC input from the

various review disciplines (i.e. structural, materials, thermal, criticality, shielding and confinement/containment) to address all of the SRP chapters. These coordination meetings with the NRC staff shall be held separately with each of the review disciplines. As an outgrowth of these discipline meetings with the NRC staff, the contractor shall develop a draft SRP report identifying areas that have the potential to be risk-informed (e.g. highlight the SRP areas that are the most important, moderately important and least important for the staff to review from a safety perspective) and incorporates the applicable ISGs. In addition to documenting specific changes in the draft SRP, the contractor shall document a process and criteria by which technical discipline reviewers can make determinations of relative safety importance. A presentation of the draft report shall be made to management in the Spent Fuel Project Office (SFPO). After this presentation and comments received from the NRC, the contractor shall develop and submit a draft final SRP that risk-informs the SRP and incorporates the applicable ISGs. The NRC will review and forward any additional comments to the contractor, who shall then incorporate these comments and provide the NRC with a final camera-ready, risk-informed SRP.

7.0 SCHEDULE OF MILESTONES/DELIVERABLES

The deliverables required by this contract with estimated due dates for submission to the TPM, TAPM, and the contracting officer are provided below.

		ESTIMATED DUE DATES
Task A -	Dry Cask Storage Systems SRP (NUREG-1536)	
	Draft Report & Presentation to SFPO Mgmt	6 months after award of contract
	Final Draft Report	4 months after receipt of NRC comments
	Final Camera Ready SRP	3 months after receipt of NRC comments
Task B -	Spent Fuel Dry Storage Facilities (NUREG-1567)	
	Final Camera Ready SRP	12/15/11
	Prioritization documentation	12/15/11

Note that NRC comments on the draft and final draft reports will each take approximately 2 months. All reports shall be submitted electronically and in NUREG and WordPerfect 10 format. All drafts and the final report shall be reviewed by a technical editor prior to submittal to the NRC.

8.0 TRAVEL

It is expected that there will be several coordination meetings between ISL and the NRC staff throughout the duration of the task. Meetings will be held either at ISL's facility in

Rockville, MD or at NRC headquarters in Rockville, MD, at the NRC's discretion. Based on the geographic separation of less than 2 miles, there will be no associated travel costs, only staff time, which has been accounted for in the estimate.

9.0 NRC FURNISHED MATERIALS

The NRC TPM has already provided relevant copies of the SRPs and ISGs to ISL.

10.0 FINANCIAL AND TECHNICAL STATUS REPORTS

ISL shall submit monthly technical and financial status reports in accordance with NRCAR 2052.212-71 and 2052.212-72.

11.0 TECHNICAL DIRECTION

Tracy Clark is the NMSS TAPM and is the point of contact for all contract related activities. All work assignments and program funding actions are initiated by the NMSS TAPM who submits all requests to the Division of Contracts (DC) for processing. All proposed work scope or schedule changes must be submitted through the NMSS TAPM.

Jason Piotter is the NMSS TPM and is responsible for providing technical guidance to the contractor regarding staff interpretations of the technical aspects of regulatory requirements, along with copies of relevant documents. Technical Instructions may be issued from time to time during the duration of this task. Technical Instructions will not constitute new assignment work assignments or changes of such nature as to justify an adjustment in cost or period of performance. The Contracting Officer is the only individual authorized to make changes to this task.