

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		BPA NO.	1. CONTRACT ID CODE	PAGE 1	OF PAGE 1
2. AMENDMENT/MODIFICATION NO. M002		3. EFFECTIVE DATE See Block 15c.	4. REQUISITION/PURCHASE REQ. NO. NMS-06-021 FFS: 5010R056		5. PROJECT NO.(if applicable)
6. ISSUED BY U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Valerie Whipple Mail Stop TWB 01 B10M Washington, DC 20555		CODE 3100	7. ADMINISTERED BY (If other than Item 6) U.S. Nuclear Regulatory Commission Div. of Contracts Mail Stop TWB 01 B10M Washington, DC 20555		CODE 3100
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)  SOUTHWEST RESEARCH INSTITUTE INC  6220 CULEBRA RD  SAN ANTONIO TX 782385100			(X)	9A. AMENDMENT OF SOLICITATION NO.	
CODE 007936842				9B. DATED (SEE ITEM 11)	
FACILITY CODE				10A. MODIFICATION OF CONTRACT/ORDER NO. NRC-02-06-021 T008	
			X	10B. DATED (SEE ITEM 13) 03-23-2010	

**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. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required) N/A

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

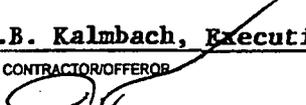
(X)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET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

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

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)  
See Page 2.

DUNS: 007936842

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) <b>R.B. Kalmbach, Executive Director, Contracts</b>		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Valerie M. Whipple Contracting Officer	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED 9/8/2010	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)	16C. DATE SIGNED 9/9/10

NSN 7540-01-152-8070  
PREVIOUS EDITION NOT USABLE

STANDARD FORM 30 (REV. 10-83)  
Prescribed by GSA - FAR (48 CFR) 53.243

**TEMPLATE - ADM001**

**SUNSI REVIEW COMPLETE**

SEP 14 2010

**ADM001**

The purpose of this modification is (1) to revise the Statement of Work to increase the level of effort in support of the digital instrumentation and control work required for the review of the International Isotopes license application, and (2) to increase the contract ceiling by \$68,097, from \$288,758 to \$356,855.

Accordingly, the following changes are hereby made:

1. Section B, CONSIDERATION AND OBLIGATION--COST PLUS FIXED FEE (JUN 1988) ALTERNATE I (JUN 1991), paragraph (a) 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 **\$356,855** of which the sum of **\$** represents the estimated reimbursable costs, and of which **\$** represents the fixed fee.
2. The Statement of Work is revised increase the level of effort and to add a subtask in support of the digital instrumentation and control work required for the review of the International Isotopes license application. Revised Statement of Work attached.

A summary of obligations under this order, from date of award through this modification, is given below:

Total FY'09 obligations to date: \$60,000  
Total FY'10 obligations to date: \$61,000  
Total obligations to date: \$121,000

This modification does not obligate funds.

**All other terms and conditions of this task order remain unchanged.**

## STATEMENT OF WORK

PROJECT TITLE: SUPPORT FOR REVIEW OF INTERNATIONAL ISOTOPES LICENSE APPLICATION

JOB CODE: J5590

NRC PROJECT MANAGER: Brenda J. DuBose (301) 492-3247

NRC TECHNICAL MONITOR: Tyrone D. Naquin (301) 492-3187

DOCKET NUMBER: 40-9086

TAC NUMBER: L32723

### 1.0 BACKGROUND

In April 2009, International Isotopes, Inc., (INIS) submitted a letter of intent (see Agencywide Documents Access and Management System accession number ML091260796) to the U.S. Nuclear Regulatory Commission (NRC) to build a depleted uranium de-conversion facility. Depleted Uranium Hexafluoride ( $\text{DUF}_6$ ) is a by-product of the uranium enrichment process. Approximately 90% of the  $\text{UF}_6$  that goes into the enrichment process emerges as  $\text{DUF}_6$ . There are currently four enrichment facilities in the U.S. that are being built or are planned for construction. The initial stated capacity of those facilities will produce in excess of 60 million pounds of  $\text{DUF}_6$  each year. INIS has notified the NRC that they intend to submit the license application to the NRC in December 2009. Once licensed, the facility will be constructed in Lea County, New Mexico, approximately 15 miles west of Hobbs, New Mexico.

The Department of Energy (DOE) stores approximately 1.54 billion pounds of depleted  $\text{UF}_6$  at existing enrichment facilities. DOE is building two deconversion plants, one at each of the gaseous diffusion enrichment sites near Paducah, Kentucky and Portsmouth, Ohio. These facilities will process DOE's inventory of material. In addition, Aerojet Ordinance Inc., located in Tennessee, produces uranium metal for military penetrators, shielding, and counter weights from depleted Uranium Tetrafluoride ( $\text{UF}_4$ ). This facility is licensed by an agreement state in accordance with 10 Code of Federal Regulations (CFR) Part 40, but unlike INIS, its process does not involve large quantities of  $\text{UF}_6$ .

INIS will be the nation's first commercial facility for the deconversion of  $\text{DUF}_6$  and fluorine extraction. The INIS de-conversion facility will produce high-value, specialty fluoride gas products, which are in commercial demand for use in microelectronics manufacturing and in other applications. The off product will be depleted uranium dioxide ( $\text{DUO}_2$ ) which will be disposed of as low level radioactive waste.

NRC staff will use 10 CFR Parts 40, 51, and 70 regulations as the basis for licensing the deconversion facility which requires the preparation of an Environmental Impact Statement (EIS). There may be formal contested hearings conducted under 10 CFR Part 2, Subpart L. NRC must issue its license before any construction can begin. NRC staff will use portions of NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," as guidance for its review.

## 2.0 OBJECTIVE

The objective of this task order is to provide technical support to the NRC staff in reviewing and assessing the adequacy of the seismic, structural design, and tornado and high wind hazard evaluations performed by INIS in support of its license application and environmental report. The focus of the reviews shall be on license conditions and the commitments made by INIS in its Safety Analysis Report (SAR) and Integrated Safety Analysis (ISA) Summary.

## 3.0 LEVEL OF EFFORT

The estimated total level of effort for the task order is 0.43 Full Time Equivalentents (FTE) in FY10 and 0.62 FTE in FY11. (Note: This change represents an increase in the level of effort of 0.03 FTE in FY10 and 0.17 FTE in FY11.)

## 4.0 PERIOD OF PERFORMANCE

The period of performance for the work specified in this Statement of Work (SOW) will begin on or about late December 2009 and will expire two years thereafter.

## 5.0 SCOPE OF WORK

The contractor shall review the seismic, structural design, and tornado and high wind analyses presented in the INIS license application and environmental report to ensure consistency with NRC regulations, with state-of-the-art analysis methods, and with the conclusions drawn from the data.

Specifically, the contractor shall:

Subtask 1: The Commission directed in SECY-07-0146 that new 10 CFR Part 40 licensees with significant quantities of uranium hexafluoride would be subject to the requirements in 10 CFR Part 70, Subpart H. (Note: Consistent with SECY-07-0146, upon completion of the rulemaking to incorporate ISA requirements into Part 40, the Part 70, Subpart H requirements will take precedence.) Therefore, in accordance with the requirements in 10 CFR Part 40, 10 CFR Part 70, Subpart H, and applicable portions of NUREG-1520, the contractor shall review the seismic, structural design, and tornado and high wind hazard analyses presented in the INIS license application and environmental report. In addition, the contractor shall verify the final design bases to be consistent with the commitments made in the SAR and the analyses performed in the ISA Summary. The contractor shall prepare input for Requests for Additional Information (RAIs), as needed, to document areas where additional information from the applicant is required to complete the licensing review. The contractor shall also review the applicant's response to the RAIs.

Prepare a review plan to describe the seismic, structural design, and tornado and high wind hazard reviews to be performed. Discuss the criteria to be used in assessing the adequacy of the applicant's analysis in the review plan.

Activity 2      General Issues for Review Under the SAR and ISA

1.      Have all significant issues related to defining the seismic, structural design, and tornado and high wind hazard areas been addressed in the application and environmental report?
2.      Have Items Relied on for Safety (IROFS) boundary packages related to seismic, structural design, and tornado and high wind hazards been prepared consistently with the regulations and with INIS' commitments in the SAR and supporting calculations in the ISA?
3.      For the seismic area, are the results consistent with the overall approaches defined in NRC regulations and with INIS' commitments in the SAR and supporting calculations in the ISA?

For the structural design area, are the results consistent with overall NRC approaches for evaluating:

- (a)      loads and load combinations (i.e., are all applicable loads (e.g., seismic, tornado, wind, flood, explosion, thermal, gravity (dead and live) included and are the load combinations appropriate?);
- (b)      codes and standards;
- (c)      structural design approaches (e.g., elastic vs. inelastic, soil-structure interactions, etc.);
- (d)      approaches to transform natural phenomena into loads;
- (e)      aircraft hazards;

For the tornado and high wind hazard area, are the results consistent with the overall approach defined in NRC regulations, the INIS SAR and supporting calculations in the ISA Summary for: (a) mean and median hazard definitions (i.e., likelihood vs. magnitude); and (b) uncertainties.

4.      Assist NRC staff in determining whether the performance requirements of the ISA in 10 CFR 70.61 and the baseline design criteria of 10 CFR 70.64 are met.
5.      Are there any limitations in using the results of the applicant's and contractor's evaluations for the proposed site?

Activity 3      Meetings and Conference Calls

The contractor shall participate in meetings (Refer to Section 6.0 – Travel Requirements) and conference calls with NRC staff and the applicant to discuss the technical evaluations.

Subtask 2: Review the design criteria commitments, quality assurance requirements, and management measures of the electrical utility and digital instrumentation and control (I & C) as described in the license application as they apply to Items Relied On For Safety (IROFS). Ensure the design portion, as described, if established and maintained pursuant to 10 CFR 70.62 will be adequate to provide reasonable assurance that these IROFS will be available and reliable to perform their intended safety function(s) when needed and in the context of the performance requirements of 10 CFR 70.61. The contractor shall prepare input for Requests for Additional Information (RAIs), as needed, to document areas where additional information from the applicant is required to complete the licensing review. The contractor shall also review the applicant's response to the RAIs.

Activity 1 General Issues for Review Under the SAR and ISA

1. Do the safety related aspects of the application, pursuant to 10 CFR Part 70, which apply to instrumentation and controls and applied management measures maintain IROFS?

2. Determine whether the proposed conceptual design and intended operations of the electrical power and I&C systems and components for the INIS that are relied on for safety pursuant to 10 CFR Part 70 and encompassed by the hazard and accident analyses of the integrated safety analysis (ISA), will be adequate to ensure that items designated as IROFS will be available and reliable to perform their intended safety function during normal operations, upset conditions, and postulated accidents and natural phenomena events.

Subtask 2: Review responses to RAIs to ensure any modifications requested are designed to meet INIS commitments in the SAR. As needed, participate in followup conference calls with NRC staff and the applicant to discuss and/or clarify responses to RAIs. If necessary, prepare draft and final RAIs as followup to responses to RAIs. Prepare draft and final input to the NRC's Safety Evaluation Report (SER) to document the review and analyses performed in the seismic, structural design, and tornado and high wind hazard areas.

Subtask 3: Assist NRC reviewers during any on-site reviews at Hobbs, New Mexico; Idaho Falls, Idaho; or the contractor's facility in Paducah, Kentucky. This subtask is during FY10 and FY11. Refer to Paragraph 6.0 – Travel Requirements.

Subtask 4: Assist NRC inspectors as needed during on-site inspections to INIS facilities in Hobbs, New Mexico; Idaho Falls, Idaho; or their contractor's facility in Paducah, Kentucky. In addition, travel to NRC Headquarters or NRC's Region II Office may

be required. This subtask is during FY10 and FY11. Refer to Paragraph 6.0 – Travel Requirements.

## REQUIREMENT

Subtask 5: Provide hearing support, as needed. Review the contentions admitted by the ASLB that are related to seismic, structural design, and tornado and high wind hazard issues at the proposed site of the INIS facility and other contentions as identified by NRC staff. Review other hearing documentation related to the admitted issues. As requested, research and prepare documents needed by NRC Office of the General Counsel staff for hearing briefs and other ASLB submittals. Provide oral testimony as needed to support NRC documentation related to the admitted contentions as identified by NRC staff. Provide testimony, as needed, for the mandatory hearing.

## 6.0 TRAVEL REQUIREMENTS

During FY10, the NRC anticipates two (2) trips to NRC Headquarters in Rockville, Maryland, and/or NRC Region II in Atlanta, Georgia and one (1) trip to either the INIS office in Hobbs, New Mexico; Idaho Falls, Idaho; or their contractor's facility in Paducah, Kentucky, as being necessary to perform reviews and discuss technical issues applicable to the seismic, structural design, and tornado and high wind hazard areas. These meetings and inspections are expected to last three (3) days each and will consist of three (3) contractor staff.

During FY11, the NRC anticipates two (2) trips to NRC Headquarters in Rockville, Maryland, and/or NRC Region II located in Atlanta, Georgia, and three (3) trips to the INIS facilities in Hobbs, New Mexico; Idaho Falls, Idaho, or their contractor's facility in Paducah, Kentucky, as being necessary to assist in inspections, perform reviews, and discuss technical issues applicable to the seismic, structural design, and tornado and high wind hazard areas. These meetings and inspections are expected to last three (3) days each and will consist of three (3) contractor staff.

## 7.0 NRC FURNISHED MATERIAL

The NRC Technical Project Manager (TPM) will provide copies of the following documents to the contractor:

- INIS application and environmental report
- responses to NRC Requests for Additional Information
- applicable NRC regulations
- applicable guidance materials

## 8.0 CONTRACTOR ACQUIRED MATERIAL

No materials are expected to be acquired under this task order.

## 9.0 DELIVERABLES AND SCHEDULE

Deliverable	Completion Date
Deliverable 1: If needed, prepare input for Requests for Additional Information. (Ref: Subtask 2)	2 weeks after the task order is awarded.
Deliverable 2: Prepare draft input to the SER. (Note: <u>The site visits are conducted as part of the SER development.</u> ) (Ref: Subtask 2)	4 weeks after receipt of responses to RAI
NRC to provide comments to the contractor on the Draft SER (Ref: Subtask 2)	4 weeks after receipt of the Draft SER.
Deliverable 4: Prepare final input to the SER. (Ref: Subtask 2)	To Be Determined.
Provide hearing support. (Ref: Subtask 5)	As needed.
Deliverable 6: Prepare and provide draft input to NRC Inspection Reports (Ref. Subtask 4)	14 days after conducting the inspections/design reviews or as directed by the NRC inspection staff
NRC to provide comments to the contractor on the NRC Inspection Reports	2 weeks after receipt of Draft Inspection Reports
Deliverable 7: Prepare and provide final input to NRC Inspection Reports (Ref. Subtask 4)	5 days after receipt of NRC inspection staff comments on draft input

Any change(s) to the delivery schedule delineated under Section 9.0 – Deliverables and Schedule, must be approved and authorized, in writing, by the NRC Contracting Officer.

The NRC staff will review and provide comments to the contractor on the submitted draft reports and documents. Upon receipt of the comments, the contractor shall address each comment and revise the report, as needed, to address NRC input.

## 10. TECHNICAL DIRECTION

Matthew Bartlett is designated as the NMSS TPM for this task order. Brenda J. DuBose is designated as the NRC Project Officer. The NMSS TPM is responsible for providing technical guidance to the performing organization regarding staff interpretations of technical aspects of regulatory requirements along with relevant documents when requested by the performing organization. All work products must be reviewed and approved by the NMSS TPM before they are submitted as final documents. All technical direction given to the contractor by the NRC TPM must be consistent with the work scope and schedule. The NMSS TPM is not authorized to unilaterally make changes to the approved work scope or schedule or give the contractor any direction that would increase costs over approved levels. Directions, if any, for changes in scope of work, cost, or period of performance will be issued by the NRC Contracting Officer.