

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE	PAGE OF PAGES
2. AMENDMENT/MODIFICATION NO. M0001		3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO. ZEROREQ-NRR-16-0143
5. PROJECT NO. (If applicable)		1 9	
6. ISSUED BY U.S. NRC - HQ Acquisition Management Division Mail Stop: TWFN-5E03 ATTN: Aracelis Perez-Ortiz Washington DC 20555-0001	CODE NRCHQ	7. ADMINISTERED BY (If other than Item 6) U.S. NRC - HQ Acquisition Management Division Mail Stop: TWFN-5E03 Washington DC 20555-0001	CODE NRCHQ
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) INFORMATION SYSTEMS LABORATORIES, INC Attn: William Arcieri 11140 ROCKVILLE PIKE ROCKVILLE MD 20852-3106		(x) 9A. AMENDMENT OF SOLICITATION NO.	
CODE 150135445 FACILITY CODE		9B. DATED (SEE ITEM 11)	
		X 10A. MODIFICATION OF CONTRACT/ORDER NO. NRC-HQ-13-A-03-0011 NRC-HQ-20-15-O-0002	
		10B. DATED (SEE ITEM 13) 09/11/2015	

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 ACKNOWLEDGEMENT 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)

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

CHECK ONE	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 date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: FAR 43.103 (a) Bilateral (Mutual Agreement of the Parties)
	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.)

GSA Contract #: GS23F0060L

The purpose of this order modification is to, at no additional cost to the Government, revise Attachment 1 to: (1) reflect changes to the responsible review organization, including ISL and the NRC staff; and (2) reflect the chapters for review as outlined in the NWMI application. Refer to continuation pages for details.

Base and All Options: \$443,632.20 (Unchanged)

Base and Exercised Options: \$391,130.66 (Unchanged)

Total Obligated Amount: \$100,000.00 (Unchanged)

Period of Performance: 09/11/2015 to 09/10/2017

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

15A. NAME AND TITLE OF SIGNER (Type or print) W. Arcieri, Div. Mgr., Energy & Space Div		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) ARACELIS PEREZ-ORTIZ	
15C. DATE SIGNED 4/8/2016		16C. DATE SIGNED 4/14/2016	
15B. UNITED STATES OF AMERICA <i>William Arcieri</i> (Signature of person authorized to sign)		16B. UNITED STATES OF AMERICA <i>Aracelis Perez Ortiz</i> (Signature of Contracting Officer)	

NSN 7540-01-152-8070  
Previous edition unusable

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

TEMPLATE - ADM001

SUNSI REVIEW COMPLETE

APR 29 2016

ADM002

Attachment 1 provides the chapters for review as outlined in the "Interim Staff Guidance Augmenting NUREG-1537, 'Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors,' for Licensing Radioisotope Production Facilities and Aqueous Homogeneous Reactors," and identifies the responsible review organizations including the Nuclear Regulatory Commission (NRC) staff and the contractor (Information Systems Laboratories (ISL)).

The purpose of this order modification is to, at no additional cost to the Government, revise Attachment 1 to:

- 1) reflect changes to the responsible review organization, including ISL and the NRC staff; and
- 2) reflect the chapters for review as outlined in the Northwest Medical Isotopes (NWMI) application.

**Specific Changes from Attachment 1 affecting ISL:**

1. Section 2.6 - Added ISL to provide input to NRC/NMSS/FCSE.
2. Section 3.5b – Deleted Section 3.5b where NRC/NMSS/FCSE has the lead and ISL to provide input.
3. Sections 3.5.1, 3.5.2, and 3.6 - Added Sections 3.5.1, 3.5.2 (split Section 3.5) and 3.6. ISL has the lead and NRC/NMSS/FCSE to provide input for both sections.
4. Sections 4.0 and 4.1 – Added ISL to provide input to NRC/NMSS/FCSE.
5. Section 4b.1.3.4 – Deleted Section 4b.1.3.4 where ISL has the lead.
6. Sections 4.2, 4.3, 4.4 and 4.5 – Added ISL to provide input to NRC/NMSS/FCSE.
7. Section 4.4.1 – Added Section 4.4.1. This section is part of Section 4.4 and ISL to provide input to NRC/NMSS/FCSE. Section 4.4.2 is not being reviewed (target fabrication).
8. Chapter 5 – expanded to include Sections 5.1, 5.2, and 5.3. ISL has the lead and NRC/NMSS/FCSE to provide input for all sections. The applicant split Chapter 5 into three sections.
9. Chapter 6 – change to ISL has the lead and for Sections 6.1, 6.2, and 6.4 and NRC/NMSS/FCSE to provide input for these sections. Added ISL to 6.3 to provide input to NRC/NMSS/FCSE.
10. Chapter 9 – change to ISL has the lead for Section 9.0 and NRC/NMSS/FCSE to provide input; added ISL as the lead for Sections 9.2 and 9.8 and NRC/NMSS/FCSE to provide input for both sections.
11. Chapter 11 – added ISL to provide input to NRC/NMSS/FCSE for Section 11.1; deleted ISL as the lead for Section 11.3.
12. Chapter 12 – Delete ISL as the lead for Section 12.11.
13. Chapter 13 –added ISL to provide input to NRC/NMSS/FCSE for Sections 13.1, 13.2, 13.3, and 13.4.

14. NWMI-2015 Safety-002 – added additional area of review and added ISL to provide input to NRC/NMSS/FCES for Safety 1.0, Safety 2.0, Safety 3.0, Safety 4.0, Safety 5.0, and Safety 6.0.

Accordingly, the following changes are hereby made:

- 1) Section J - List of Documents, Exhibits and Other Attachments is deleted in its entirety and substituted with the following in-lieu thereof:

<b>ATTACHMENT</b>	<b>NO. PAGES</b>
Attachment 1 (Revision 1)	4
Attachment 2: Sample Monthly Status Report and License Fee Recovery Cost Status format and content	4
Attachment 3: Billing Instructions for Time and Material Contracts (MAY 2013)	8

- 2) Attachment 1 is deleted in its entirety and substituted with the following in-lieu thereof:

**Attachment 1, Revision 1**

<b>Chapter/ Section</b>	<b>DESCRIPTION</b>	<b>Review Organization</b>
<b>Ch. 1</b>	<b>THE FACILITY</b>	
1.1	Introduction	NRC/NMSS/FCSE
1.2	Summary And Conclusions on Principal Safety Considerations	NRC/NMSS/FCSE
1.3	General Description of the Facility	NRC/NMSS/FCSE
1.4	Shared Facilities and Equipment	NRC/NMSS/FCSE
1.5	Comparison with Similar Facilities	NRC/NMSS/FCSE
1.6	Summary of Operations	NRC/NMSS/FCSE
1.7	Compliance with the Nuclear Waste Policy Act of 1982	NRC/NMSS/FCSE
1.8	Facility Modifications and History	NRC/NMSS/FCSE
1.9	References	NRC/NMSS/FCSE
<b>Ch. 2</b>	<b>SITE CHARACTERISTIC</b>	
2.1	Geography and Demography	NRC/NMSS/FCSE
2.2	Nearby Industrial, Transportation, and Military Facilities	NRC/NMSS/FCSE
2.3	Meteorology	NRC/NMSS/FCSE
2.4	Hydrology	NRC/NMSS/FCSE
2.5	Geology, Seismology, and Geotechnical Engineering	ISL
2.6	References	NRC/NMSS/FCSE – ISL
<b>Ch. 3</b>	<b>DESIGN OF STRUCTURES, SYSTEMS, AND COMPONENTS</b>	
3.0	Design of Structures, Systems, and Components	ISL – NRC/NMSS/FCSE
3.1	Design Criteria	ISL – NRC/NMSS/FCSE
3.2	Meteorological Damage	ISL
3.3	Water Damage	ISL
3.4	Seismic Damage	ISL
3.5	Systems and Components	ISL
3.5.1	General Design Basis Information	ISL – NRC/NMSS/FCSE
3.5.2	Radioisotope Production Facility	ISL – NRC/NMSS/FCSE
3.6	References	ISL – NRC/NMSS/FCSE

<b>Ch. 4</b>	<b>RADIOISOTOPE PRODUCTION FACILITY DESCRIPTION</b>	
4.0	Radioisotope Production Facility Description	NRC/NMSS/FCSE – ISL
4.1	Facility and Process Description	NRC/NMSS/FCSE – ISL
4.2	Radioisotope Production Facility Biological Shield	NRC/NMSS/FCSE – ISL
4.3	Radioisotope Extraction System	NRC/NMSS/FCSE – ISL
4.4	Special Nuclear Material Processing and Storage	NRC/NMSS/FCSE – ISL
4.4.1	Processing of Irradiated Special Nuclear Material	NRC/NMSS/FCSE – ISL
4.5	References	NRC/NMSS/FCSE – ISL

<b>Ch. 5</b>	<b>COOLING SYSTEMS</b>	
5.1	Summary Description	ISL – NRC/NMSS/FCSE
5.2	Coolant Systems Description	ISL – NRC/NMSS/FCSE
5.3	References	ISL – NRC/NMSS/FCSE

<b>Ch. 6</b>	<b>ENGINEERED SAFETY FEATURES</b>	
6.1	Summary Description	ISL – NRC/NMSS/FCSE
6.2	Detailed Description	ISL – NRC/NMSS/FCSE
6.3	Nuclear Criticality Safety in the Radioisotope Production Facility	NRC/NMSS/FCSE – ISL
6.4	References	ISL – NRC/NMSS/FCSE

<b>Ch. 7</b>	<b>INSTRUMENT AND CONTROL SYSTEMS</b>	
7.1	Summary Description	ISL
7.2	Design of Instrumentation and Control Systems	ISL
7.3	Process Control Systems	ISL
7.4	Engineered Safety Feature Actuation System	ISL
7.5	Control Console and Display Instruments	ISL
7.6	Radiation Monitoring Systems	ISL
7.7	References	ISL

<b>Ch. 8</b>	<b>POWER SYSTEMS</b>	
8.0	Electrical Power Systems	ISL
8.1	Normal Electrical Power Systems	ISL
8.2	Emergency Electrical Power Systems	ISL
8.3	References	ISL

<b>Ch. 9</b>	<b>AUXILIARY SYSTEMS</b>	
9.0	Radioisotope Production Facility Auxiliary Systems	ISL – NRC/NMSS/FCSE
9.1	Heating, Ventilation, and Air Conditioning Systems	ISL – NRC/NMSS/FCSE
9.2	Material Handling	ISL
9.3	Fire Protection Systems and Programs	NRC/NMSS/FCSE
9.4	Communication Systems	ISL – NRC/NMSS/FCSE
9.5	Possession and Use of Byproduct, Source and Special Nuclear Material	NRC/NMSS/FCSE
9.6	Cover Gas Control in Closed Primary Coolant Systems	ISL
9.7	Other Auxiliary Systems	ISL – NRC/NMSS/FCSE
9.8	References	ISL – NRC/NMSS/FCSE

<b>Ch. 10</b>	<b>EXPERIMENTAL FACILITIES</b>	
10.1	Summary Description	N/A

<b>Ch. 11</b>	<b>RADIATION PROTECTION PROGRAM AND WASTE MANAGEMENT</b>	
11.0	Radiation Protection and Waste Management	NRC/NMSS/FCSE
11.1	Radiation Protection	NRC/NMSS/FCSE – ISL
11.2	Radioactive Waste Management	ISL
11.3	Respiratory Protection Program	NRC/NMSS/FCSE
11.4	References	NRC/NMSS/FCSE – ISL

<b>Ch. 12</b>	<b>CONDUCT OF OPERATIONS</b>	
12.1	Organization	NRR/NMSS/FCSE
12.2	Review and Audit Activities	NRR/NMSS/FCSE
12.3	Procedures	NRR/NMSS/FCSE
12.4	Required Actions	NRR/NMSS/FCSE
12.5	Reports	NRR/NMSS/FCSE
12.6	Records	NRR/NMSS/FCSE
12.7	Emergency Planning	NRC/DPR/NSIR
12.8	Security Planning	NRC/DPR/NSIR
12.9	Quality Assurance	NRC/NMSS/FCSE
12.10	Radioisotope Production Facility Operator Training and Requalification	NRC/NMSS/FCSE
12.11	Startup Plan	N/A
12.12	Vacated	N/A
12.13	Material Control And Accounting Program	NRC/NMSS/FCSE
12.14	References	NRC/NMSS/FCSE – ISL

Appendix A	Emergency Plan	NRC/NSIR/DPR
Appendix B	Security Plan	NRC/NSIR/DSP
Appendix C	Quality Assurance Program Description	NRC/NMSS/FCSE

<b>Ch. 13</b>	<b>ACCIDENT ANALYSIS</b>	
13.0	Radioisotope Production Facility Accident Analyses	NRC/NMSS/FCSE – ISL
13.1	Accident Analysis Methodology and Preliminary Hazards	NRC/NMSS/FCSE – ISL
13.2	Analyses of Accidents with Radiological and Criticality Safety Consequences	NRC/NMSS/FCSE – ISL
13.3	Analysis of Accidents with Hazardous Chemicals	NRC/NMSS/FCSE – ISL
13.4	References	NRC/NMSS/FCSE – ISL

<b>Ch. 14</b>	<b>TECHNICAL SPECIFICATIONS</b>	
14.0	Technical Specifications	NRC/NMSS/FCSE
14.1.1	Introduction	NRC/NMSS/FCSE – ISL
14.1.2	Safety Limits and Limiting Safety System Settings	NRC/NMSS/FCSE – ISL
14.1.3	Limiting Conditions for Operation	NRC/NMSS/FCSE – ISL
14.1.4	Surveillance Requirements	NRC/NMSS/FCSE – ISL
14.1.5	Design Features	NRC/NMSS/FCSE – ISL
14.1.6	Administrative Controls	NRC/NMSS/FCSE – ISL
14.2	References	NRC/NMSS/FCSE – ISL

<b>Ch. 15</b>	<b>FINANCIAL QUALIFICATIONS</b>	
15.0	Financial Qualifications	NRC/NRR/DIRS
15.1	Financial Ability to Construct a Facility	NRC/NRR/DIRS
15.2	Financial Ability to Safely Operate a Facility	NRC/NRR/DIRS
15.3	Financial Ability to Safely Decommission a Facility	NRC/NRR/DIRS
15.4	Foreign Ownership, Control, or Domination	NRC/NRR/DIRS
15.5	Nuclear Insurance and Indemnity	NRC/NRR/DIRS
15.6	References	NRC/NRR/DIRS

<b>Ch. 16</b>	<b>OTHER LICENSE CONSIDERATIONS</b>	
16.1	Prior Use of Facility Components	NRC/NMSS/FCSE
16.2	Medical Use of the Radioisotope Production Facility	NRC/NMSS/FCSE

<b>Ch. 17</b>	<b>DECOMMISSIONING AND POSSESSION-ONLY LICENSE AMENDMENTS</b>	
17.1	Decommissioning	N/A
17.2	Possession-Only License Amendments	N/A

<b>Ch. 18</b>	<b>HIGHLY ENRICHED TO LOW ENRICHED URANIUM</b>	
18.1	Highly Enriched to Low Enriched Uranium Conversion	N/A

<b>Ch. 19</b>	<b>ENVIRONMENTAL REVIEW</b>	
19.1	Introduction	NRC/NRR/DLR
19.2	Proposed Action	NRC/NRR/DLR
19.3	Affected Environment	NRC/NRR/DLR
19.4	Impacts of Proposed Construction, Operations, and Decommissioning	NRC/NRR/DLR
19.5	Alternatives	NRC/NRR/DLR
19.6	Conclusions	NRC/NRR/DLR
19.7	References	NRC/NRR/DLR



<b>NWMI-2015-Safety-002</b>	<b>RADIOISOTOPE PRODUCTION FACILITY INTEGRATED SAFETY ANALYSIS SUMMARY</b>	
Safety 1.0	Introduction	NRC/NMSS/FCSE – ISL
Safety 2.0	Site and Facility Characteristics	NRC/NMSS/FCSE – ISL
Safety 3.0	Integrated Safety Analysis Methods	NRC/NMSS/FCSE – ISL
Safety 4.0	Hazards and Accident Analysis	NRC/NMSS/FCSE – ISL
Safety 5.0	Items Relied on for Safety	NRC/NMSS/FCSE – ISL
Safety 6.0	References	NRC/NMSS/FCSE – ISL