

2. AMENDMENT/MODIFICATION NO. M002	3. EFFECTIVE DATE See Block 15c.	4. REQUISITION/PURCHASE REQ. NO. 03-09-077 T2 M2 NRR-10-385	5. PROJECT NO. (if applicable)
ISSUED BY U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Jeffrey R. Mitchell, 301-492-3639 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) ENERGY RESEARCH, INC. ATTN: TRACEY MULLINIX 6167 EXECUTIVE BLVD. ROCKVILLE MD 208523901	(X)	9A. AMENDMENT OF SOLICITATION NO.
		9B. DATED (SEE ITEM 11)
		10A. MODIFICATION OF CONTRACT/ORDER NO. GS23F0110M NRC-T002
	X	10B. DATED (SEE ITEM 13) 11-10-2009
CODE	FACILITY CODE	

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) No Funds Obligated

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

(A)	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: 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.)

.....REFER TO ATTACHED PAGE TWO FOR A DESCRIPTION OF MODIFICATION NO. TWO.....

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) Mohnsen Khatib-Rahbar, President	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Jeffrey R. Mitchell Contracting Officer
15B. CONTRACTOR/OFFEROR <i>[Signature]</i> (Signature of person authorized to sign)	15C. DATE SIGNED 9/13/10
16B. UNITED STATES OF AMERICA BY <i>[Signature]</i> (Signature of Contracting Officer)	16C. DATE SIGNED 9/13/2010



The purpose of this modification is to revise the scope of work from a Full Review to a Streamlined Focused Review, thereby (a) reducing the contract ceiling from \$212,940.16 by (\$22,701.30) to \$190,238.86, (b) revise the Statement of Work, (c) revise the price costs schedule and (d) extend the period of performance from September 31, 2010 to September 30, 2011. Accordingly the contract is modified as follows:

- 1) Refer to the "Statement of Work" is here by deleted in its entirety and replaced with the following Statement of Work attached to this Modification No. 2 entitled "Statement of Work Rev 1".
- 2) Refer to "CONSIDERATION AND OBLIGATION--COST REIMBURSEMENT (JUN 1988)" paragraph (a) is deleted in its entirety and replaced with the following:

"(a) The total estimated cost to the Government for full performance under this contract is \$190,238.86."

- 3) Refer to "DURATION OF CONTRACT PERIOD (MAR 1987)" is hereby deleted in its entirety and replaced with the following:

"This contract shall commence on November 10, 2009 and will expire September 30, 2011."

- 4) Refer to "PRICE/COST SCHEDULE" is hereby deleted in its entirety and replaced with the following:

The following is a summary of the labor categories, number of hours and hourly labor rates.

Task Order No. 2 November 10, 2009 through September 30, 2011						
TASK 2 CLIN	LABOR CATEGORY	EST. HOURS	YEAR 1 RATES (FIXED) AWARD - 12/31/09	YEAR 2 RATES (FIXED) 01/01/10 - 12/31/2010	YEAR 3 RATES (FIXED) 01/01/11 - 09/30/11	ESTIMATE (BLENDED RATE X HOURS) LABOR
001	Executive	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
002	Executive Engineer Scientist	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
003	Senior Engineer/Scientist	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
004	Senior Consulting Engineer	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
005	Support Staff	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Sub Total (Labor)						\$169,438.86

Task 2 Travel Estimate (November 10, 2009 through September 30, 2011)		
Line Item	Category	Total Estimated Costs
006	Travel (Cost Reimbursable) The government will pay up to the rates specified in the Government Federal Travel Regulations (FTR) for travel destination. NO PAYMENT WILL BE MADE WITHOUT BACKUP DOCUMENTATION/RECEIPTS. *All travel must be approved in advance by the NRC Project Officer.*	[REDACTED]
Estimated Total Travel		\$20,000.00

Task 2 ODC Estimate (November 10, 2009 through September 30, 2011)				
BPA Line/Item	Description	Estimated Quantity	Unit Rate	Estimated Total
007A	Other Direct Cost (Copies)			
007B **	Other Direct Cost (Phone, FAX, Postage & Courier)		Actual Cost	
Estimated Total ODC Total				\$800.00

(B) ** These items are Open Market and do not apply to the Federal Supply Schedule Terms and Conditions. These items must comply with the following clauses incorporated by reference:

REFERENCE	NUMBER	TITLE	DATE
REFERENCE	FAR 52.212-4	CONTRACT TERMS AND CONDITIONS COMMERCIAL ITEMS	MARCH 2001
REFERENCE	FAR 52.212-5	CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUES OR EXECUTIVE ORDERS - COMMERCIAL ITEMS	MARCH 2001

TOTAL ESTIMATED AMOUNT (TASK ORDER 2)	\$190,238.86
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All other terms and conditions remain unchanged.

**Statement of Work (Rev 1)
For
Task Order 2
University of Utah Nuclear Reactor Facility
Technical Support for Research and Test Reactors
(RTR)
License Renewal Application Reviews with
Streamlined Review Process**

**Statement of Work (Rev 1)
For
Task Order 2**

**Technical Support for Research and Test Reactors
License Renewal Application Reviews with Streamlined Review Process
For University of Utah Nuclear Reactor Facility**

1.0 Background

Update:

Work began on this task order in November, 2009, with a task order that followed the full review in the streamlined review process in the "Scope of Work" section of the Statement of Work (SOW) for the base ordering contract. On May 27, 2010, the University of Utah notified the NRC on a telephone conference call to withdraw the power uprate from the license renewal application. As such, the University of Utah license renewal application review will now follow the "streamlined focus" review described in the Interim Staff Guidance on the "Streamlined Review Process for License Renewal for Research Reactors," (ML092240244). This task order is being modified to follow the focused review in the streamlined review process in the "Scope of Work" section of the Statement of Work (SOW) for the base-ordering contract.

Changes made to this SOW will be indicated by revision bars for new and strikeout for old revision information.

The Nuclear Regulatory Commission (NRC) has the authority and responsibility to review and evaluate requests for licensing actions made by its licensees. The University of Utah (licensee) submitted an application for license renewal for its University of Utah Nuclear Reactor Facility (UUNRF). As part of the license renewal application (LRA), the licensee submitted the safety analysis report (SAR) and technical specifications (TS). Issuance of a renewed license would authorize operation of the UUNRF for a period of 20 years at 100 kW licensed power level.

This task order falls under the focused review in the streamlined review process in the "Scope of Work" section of the Statement of Work (SOW) for the base-ordering contract. The NRC's review will center on the most safety-significant aspects of the LRA and relies on past NRC reviews for certain safety findings. Specifically, the review of the UUNRF LRA will focus on the sections of the SAR that are most significant to safety, including reactor design and operation, accident analysis, and technical specifications. The focused review will be performed in accordance with the guidance provided in "Interim Staff Guidance (ISG) on Streamlined Review Process for License Renewal for Research and Test Reactors," to ensure that those portions of the LRA satisfy the requirements of Title 10 of *The Code of Federal Regulations*. The license renewal process may include public, NRC management, Commission, and Congressional meetings. It may also include a public hearing with the Atomic Safety Licensing Board or the Commission.

2.0 Objective

The objective of this task order is to obtain necessary technical services to assist the NRC staff in the review and evaluation of the Utah's application for renewal of its UUNRF operating license. Specifically, the contractor shall support the staff in determining the technical adequacy in accordance with review guidance provided in the "Interim Staff Guidance (ISG) on Streamlined Review Process for License Renewal for Research and Test Reactors," perform independent calculations to verify the applicant's statement in the SAR and TS submitted as part of the licensee's application for license renewal, and to obtain safety evaluation (SE) input that formalizes the recommended safety and radiological conclusions made by the contractor.

3.0 Technical and Other Special Qualifications Required

The contractor shall provide personnel who have knowledge and practical experience with RTR technology and SAR analyses. These personnel shall have knowledge and experience in areas such as health physics, core physics, thermal hydraulics, system and nuclear engineering as appropriate for conducting the review of the SAR and TS.

The contractor shall also provide a Program Manager to oversee the efforts of its team and to ensure the timely submittal of quality deliverables such that all information is accurate and complete. The contractor shall also provide a technical editor to edit the final safety evaluation report input.

4.0 Scope of Work

The contractor shall perform the tasks below in accordance with the estimated completion schedule. The specific dates for these deliverables will be agreed upon between the NRC Technical Monitor (TM) and the contractor's program manager prior to start of work.

Task 1 LRA Review Plan

Requirement

The contractor shall conduct an initial review of the UUNRF LRA and previously issued safety evaluation report. The contractor shall accompany NRC staff on a one-day visit to UUNRF to observe the site configuration and to conduct general discussions regarding the LRA with the licensee. The site visit is expected to occur within three weeks after award of task order. The contractor shall prepare a draft review plan that includes, at a minimum the scope of the review, milestones to be completed and expected completion dates, any changes to the proposed staffing plan and resource loading data. The contractor shall incorporate comments provided by the NRC TM into the draft review plan and provide the final review plan.

Standard

The contractor participates in the site visit to UUNRF.

Review plan covers all required tasks and contains all milestones that must be completed for the Final SE Input to be accepted by the NRC.

The Review Plan shall be on time with no spelling or grammatical error.

Deliverable

Within two weeks after the site visit to UUNRF, contractor shall provide a Draft Review Plan.

Within one week after the receipt of NRC comments, contractor shall provide a Final Review Plan.

Meetings and Travel

One, 3-person, 3-day trip (1-day meeting and travel) to UUNRF for familiarization, and general discussion of application

Task 2 Revised Draft Safety Evaluation (SE) Input and Request for Additional Information (RAI)

Requirement

The contractor shall conduct a comprehensive review of the LRA. Based on the requirements of 10 CFR 20, 30, 40, 50 and 70 as appropriate, and the guidance contained in the "Interim Staff Guidance (ISG) on Streamlined Review Process for License Renewal for Research and Test Reactors, the contractor shall determine the applicant's conformance to the regulatory requirements and NRC guidance. The contractor shall prepare a draft SE input in accordance with the outline contained in Attachment 1, with any open items that the contractor may identify, that documents the evaluative analysis of how the applicant met the applicable regulation requirements. The Draft SE Input shall state the applicable regulations or standards, discuss the applicant's method for satisfying the regulations or standards, and provide an analysis of whether the applicant's method does indeed satisfy the regulations or standards.

The contractor shall identify the portions of the application needing further clarification to complete the Draft SE Input. The specific questions, in the form of an RAI, that are derived from the evaluation, shall be provided with the Draft SE Input. The contractor shall incorporate comments provided by the NRC TM into the Draft SE Input and RAI and provide the Revised Draft SE Input and RAI.

Standard

The contractor conducts a comprehensive review of the UUNRF LRA.

Draft SE Input is in accordance with the review guidance specified in the "Interim Staff Guidance (ISG) on Streamlined Review Process for License Renewal for Research and Test Reactors," includes all information requested in the SOW with place holders as necessary for open items.

Draft SE Input describes the contractor's evaluation of the applicant's conformance to regulatory requirements and clearly identifies areas where additional information is warranted. Where necessary, contractor performs independent calculation to verify applicant's statement discussed in the SAR.

Draft SE Input shall be on time, technically acceptable, with no spelling or grammatical error and in the specified format.

Draft RAI contains technical and regulatory basis.

Revised Draft SE Input and Revised Draft RAI incorporate contain NRC comments.

Revised Draft SE Input and Revised Draft RAI shall be on time with no spelling or grammatical error.

Deliverable

Within six weeks after completion of Task 1, contractor shall provide Draft SE Input and Draft RAI

Within one week after the receipt of NRC comments, contractor shall provide Revised Draft SE Input and Revised Draft RAI

Meetings and Travel

No meeting and travel is require for this for this task

Task 3 Conduct 2nd Site Visit, Final RAI, and Conduct 3rd Site Visit

Requirement

The contractor shall prepare for and participate in a meeting at the RTR facility to observe license renewal related equipment and materials and to discuss the RAI with the license staff and NRC staff. The meeting is expected to occur within two weeks after completion of Task 2. The meeting is intended to ensure that the RAI is understood and the responses will enable the completion of the review of the LRA. The meeting may also be conducted by teleconference call, as determined by the NRC TM. Following the meeting, the contractor shall revise the RAI developed under Task 2 to incorporate NRC staff written comments reflecting clarifications and decisions reached during the site visit and provide the Final RAI.

The contractor shall prepare for and participate in a meeting at the RTR facility to discuss the licensee's responses to the Final RAI. The meeting is expected to occur within four to six weeks after issuance of the Final RAI. This meeting is intended to gage the licensee's response to the RAI to ascertain that the responses will enable the completion of the review of the LRA. The meeting may also be conducted by teleconference call, as determined by the NRC TM.

Standard

The contractor participates in both site visits at UUNRF or participates via teleconference calls, as appropriate.

Final RAI includes all required information needed to complete the SE Input.

Final RAI shall be on time with no spelling or grammatical error.

Deliverable

Within one week after the receipt of NRC comments, contractor shall provide Final RAI.

Meetings and Travel

One, 3-person, 3-day trip (1-day meeting and travel) to UUNRF for discussion of RAI

One, 3-person, 3-day trip (1-day meeting and travel) to UUNRF for discussion of RAI responses

Task 4 Final SE Input

Requirement

The contractor shall review and evaluate the licensee's responses to the Final RAI to determine adequacy and acceptability for the supporting safety conclusions based on the guidance in the "Interim Staff Guidance (ISG) on Streamlined Review Process for License Renewal for Research and Test Reactors." The contractor shall prepare a second revision to the Draft SE Input to incorporate information from the final RAI responses and add any additional recommended safety conclusions. The contractor shall incorporate comments provided by the NRC TM into the second revision of the draft SE Input and provide the final SE Input.

Standard

Final SE Input shall be provided on time, technically acceptable, with no spelling or grammatical errors, and in the specified format.

Deliverable

Within four weeks after receipt of RAI responses from the licensee, the contractor shall provide a revision to the Draft SE Input.

Within three weeks after the receipt of NRC comments, contractor shall provide Final SE Input

Meetings and Travel

No meeting and travel is require for this for this task

Task 5 Related Support

Requirement

If requested, the contractor shall provide up to 120 hours of related support to the NRC staff following delivery of the Final SE Input. This related support may, for example, consist of, responding to questions on the final deliverable, attending meetings with NRC Management, or any hearings, to discuss the results of the application review, and assisting staff in resolution of outstanding issues from these meetings.

The scope of the related support activity and amount of hours to be used shall be agreed upon between the contractor project manager and the NRC TM before starting the activity. The NRC TM will confirm the request, assistance due date, and estimated level of effort for the specific activity by e-mail to the contractor with a carbon copy to the NRC Project Officer.

Standard

The contractor shall participate in related meeting support, if request by the NRC TM.

All information/support provided for these meetings shall be technically correct.

Deliverable

The contractor shall provide support for the preparation of these meetings, including support services for the dry run. All deliverable due dates will be specified by the NRC TM.

Meetings and Travel

One, 3-person, 3-day trip (1-day meeting and travel) to NRC Headquarters in Rockville, Maryland to support the NRC staff in meeting of the type specified in the requirement described above.

5.0 Period of Performance

This Task Order will commence on the November 10, 2009 and will expire on September 30, 2011.

6.0 Deliverables and Report Requirements

Deliverables

All deliverables shall be submitted to the NRC TM electronically with a copy provided to the NRC Project Officer (PO). These deliverables shall be prepared in Microsoft Office Word format, and in Adobe Acrobat file (pdf). The transmittal letter, at a minimum, shall contain the job code number (JCN), contract number, the license renewal application being reviewed, and the contract title. Below is an example of an estimated delivery schedule for review of UUNRF license renewal application. The specific dates for these deliverable will be agreed upon between the NRC TM and the contractor's program manager prior to start of work.

Tasks	Deliverables	Nominal Schedule
LRA Review Plan	Draft Review Plan	Two weeks after completion of site visit
	Final Review Plan	One week after receipt of NRC comments
Revised Draft SE Input and RAIs	Draft SE Input and RAI	Six weeks after completion of Task 1
	Revised Draft SE Input and RAI	One week after receipt of NRC comments
Conduct 2 nd Site Visit, Final RAI, and Conduct 3 rd Site Visit	Final RAI	One week after receipt of NRC comments
Final SE Input	Second revision to the Draft SE Input	Four weeks after receipt of RAI responses from the NRC
	Final SE Input	Three weeks after receipt of NRC comments
Related Support	As requested	As requested
Status Report	Monthly Status Report	15 th of each month

Monthly Status Report

The contractor shall provide an electronic version of the Monthly Status Report to the NRC Project Officer (PO), Technical Monitor (TM), Contracting Officer (CO), NRR Funds Certifying Official and Office of the Chief Financial Officer (OCFO) by the 15th of each month, in a format similar to the sample contained in Attachment 2. The report shall provide the technical and financial status of the effort.

The technical status section of the report shall contain a summary of the work performed during the reporting period, and milestones reached, or if missed, an explanation why; any problems or delays encountered or anticipated with recommendations for resolution; and plans for the next reporting period. The status shall include information on travel during the period to include trip start and end dates, destination, and traveler for each trip.

The financial status section of the report shall include the total contract award amount and funds obligated to date; total costs incurred in the reporting period, broken down by direct and other direct costs, and total cumulative costs incurred to date. The status shall also contain the balance of obligations remaining at the end of the period and balance of funds required to complete the contract. Additionally, if applicable, the report shall address the status of the Contractor Spending Plan (CSP), showing the percentage of project completion and any significant changes in either projected expenditures or percentage of completion. The report should also identify the acquisition cost, description (model number, manufacturer) and acquisition date of any property/equipment acquired for the project during the month with an acquisition cost more than \$500.

If the data in this report indicates a need for additional funding beyond that already obligated, this information may only be used as support to the official request for funding required in accordance with the Limitation of Cost (LOC) Clause (FAR 52.232-20) or the Limitation of Funds (LOF) Clause FAR 52.232-22.

License Fee Recovery Cost Status Report

The work specified in this SOW is not license fee recoverable.

Performance Requirements

The deliverables required under this effort must conform to the standards contained or referenced in this SOW. The table on performance requirements summarizes the performance requirements, deliverables, acceptable standards, surveillance method, incentives and deductions applicable to this effort.

Performance Requirement and Deliverables	Standard	Method of Review	Incentives/Deduction
LRA Review Plan	<p>Review plan covers all required tasks and contains all milestones that must be completed for the final SE input to be accepted by the NRC.</p> <p>No spelling or grammatical errors.</p>	NRC TM will review the plan.	<p>Full Payment for 100% compliance.</p> <p>Items determined to be missing or incorrect will be corrected by contractor. If not incorporated after initial identification by NRC, contractor will add/correct at its own expense.</p>
Provide Draft Safety Evaluation (SE) Input and Request for Additional Information (RAI)	<p>Draft SE Input is in accordance with the review guidance specified in NUREG-1537, includes all information requested in the SOW with place holders as necessary, and incorporates all comments from the NRC TM.</p> <p>Thoroughly researched LRA, regulatory requirements, and regulatory guidance before issuing RAI. RAI will have direct correlation to safety related information and is appropriate for the level of review being conducted.</p> <p>No spelling or grammatical errors</p>	NRC TM will review the Draft SE Input and RAI.	<p>Full payment for 100% compliance.</p> <p>Items determined to be missing or incorrect will be corrected by contractor. If not incorporated after initial identification by NRC, contractor will add/correct at its own expense.</p>
Provide Final SE Input	<p>SE Input is in accordance with the review guidance specified in NUREG-1537, includes all information requested in the SOW and incorporates all comments by the NRC TM. Technical conclusions are properly supported.</p> <p>No spelling or grammatical errors.</p>	NRC TM will review the SE Input.	<p>Full payment for 100% compliance.</p> <p>Items determined to be missing or incorrect will be corrected by contractor. If not incorporated after initial identification by NRC, contractor will add/correct at its own expense.</p>

7.0 Meeting and Travel

For the purpose of preparing a proposal, the contractor shall assume the following meetings and travel:

One, 3-person, 3-day trip (1-day meeting and travel) to the RTR site for familiarization, and general discussion of application

One, 3-person, 3-day trip (1-day meeting and travel) to the RTR site for discussion of RAI

One, 3-person, 3-day trip (1-day meeting and travel) to the RTR site for discussion of RAI responses

One, 3-person, 3-day trip (1-day meeting and travel) to NRC Headquarters in Rockville, Maryland to support the NRC staff in meeting of the type specified in the above description of Task 5.

8.0 NRC-Furnished Materials

NUREG-0544, Revision 4, "NRC Collection of Abbreviations" (ML041050544)

NUREG-1537 Part 1, "Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors, Format and Content" (ML042430055)

NUREG-1537 Part 2, "Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors, Standard Review Plan and Acceptable Criteria" (ML042430048)

"Interim Staff Guidance (ISG) on Streamlined Review Process for License Renewal for Research and Test Reactors" (ML092240244)

The above NUREG documents are available in the NRC's Agencywide Documents Access and Management System (ADAMS) using the number provided at: <http://www.nrc.gov/reading-rm/adams.html>

The LRA for UUNRF, including SAR and TS will be mailed to the contractor after issuance of the task order.