

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

BPA NO.
DR-04-06-047, T002

1. CONTRACT ID CODE

PAGE 1 OF PAGES 1

2. AMENDMENT/MODIFICATION NO.
M001

3. EFFECTIVE DATE
DEC 26 2007

4. REQUISITION/PURCHASE REQ. NO.

5. PROJECT NO.(if applicable)

6. ISSUED BY
U.S. Nuclear Regulatory Commission
Div. of Contracts
Attn:
Mail Stop T-7-I-2
Washington, DC 20555

CODE 3100

7. ADMINISTERED BY (if other than Item 6)
U.S. Nuclear Regulatory Commission
Div. of Contracts
Mail Stop T-7-I-2
Washington, DC 20555

CODE 3100

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)

INFORMATION SYSTEMS LABORATORIES, INC
ISL
ATTN: DR. JAMES F. MEYER

11140 ROCKVILLE PIKE, SUITE 500

ROCKVILLE MD 20852

(X)

9A. AMENDMENT OF SOLICITATION NO.

9B. DATED (SEE ITEM 11)

10A. MODIFICATION OF CONTRACT/ORDER NO.
GS23F0060L DR-04-06-047, T002

10B. DATED (SEE ITEM 13)
08-29-2006

CODE 107928806

FACILITY CODE

X

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 52.243-3 Changes--Time & Materials or Labor Hours

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 ² copies to the issuing office.

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

Refer to page 2 for the details of this modification.

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, Senior V.P.

16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)

Donald A. King

15B. CONTRACTOR/OFFEROR

(Signature of person authorized to sign)

15C. DATE SIGNED

12/26/06

16B. UNITED STATES OF AMERICA

BY

(Signature of Contracting Officer)

16C. DATE SIGNED

12/18/06

The purpose of this within-scope change modification is to (1) incorporate the attached Statement of Work at no additional cost to the Government. This within-scope change under task 2 for the TRACE Theory manual chapters and sections deletes the requirement for the secondary side TURB, HEATR and adds the primary side Core POWER and CHAN components and (2) under task 2 for the TRACE USERS Manual and chapters section deletes the requirement for secondary side TURB, HEATR , and CONTAN components and adds the primary side CHAN component.

Previous Obligated Amount:	\$250,000.00
Increased/Decreased Amount:	\$0.00
Total Obligated Amount:	\$250,000.00

All other terms and conditions remain the same including the estimated ceiling amount of \$323,440.00.

**STATEMENT OF WORK
DR-04-06-047 TASK ORDER NO. 2
Modification No. 1**

TITLE: Content Development and Technical Editing of TRACE Code Documentation in Support of TRACE V5.0 Assessment Activities

I. BACKGROUND

Over the past 8 years, the USNRC has undergone a major code development effort to consolidate the capabilities of four separate legacy thermal-hydraulics codes into one code - TRACE. One major aspect of code development has been the maintenance and development of the code documentation. The TRACE documentation set currently under active development is composed of three separate documents:

- 1) User's Manual
- 2) Theory Manual
- 3) Developmental Assessment Manual

These manuals tend to be very large (500 to 1000 pages) and difficult to maintain. Each manual is comprised of 1 or more actual volumes. This is done as a way to group information in a conceptually consistent manner, hopefully making it easier to digest and navigate for the user. This also makes it easier to maintain.

Code documentation is currently written and maintained in Adobe Framemaker 7.1 on a Windows PC. FrameMaker is widely recognized as the leading tool for working with very large technical documents. Each volume is maintained as a Framemaker book. Individual chapters are based on a standard set of templates developed by NRC staff to bring a consistent look and feel to each document. The documents are kept in a Subversion revision control system such that individual developers or editorial staff may check out and modify individual files at any time. The benefit here is that a complete version history is maintained in case we need to roll back to a previous revision.

As TRACE nears its first major release, it will be necessary to ensure that all code documentation is of high quality. This implies that the documents in question must be easy to modify (for developers), easy to understand (for users), and the information they contain at any point in time must accurately reflect the current code version. Our intent is to eventually publish these manuals as NUREG/BR documents. The following statement of work is focused on the preparation of content and editing of our documentation set as we prepare them for eventual publication and release alongside a planned major code release at the end of calendar year 2006.

II. OBJECTIVE

The objective of this work is to assist the NRC in the preparation of the TRACE Theory Manual, Users Manual, and Developmental Assessment Manual for the final V5.0. Specifically, the contractor shall be responsible for:

- 1) converting chapters of the Theory Manual developed in Word to Framemaker. This will involve retyping equations and re-importing figures saved as separate files.

Task 2: TRACE Theory Manual and Users Manual Content Development

The contractor shall develop accurate, well-written content for the following documentation chapters:

Theory Manual:

- SEPD Component Theory
- JETP Component Theory
- Core Power Component Theory
- CHAN Component Theory

Users Manual:

- SEPD Component Description
- JETP Component Description
- CHAN Component Description

The contractor may use, as a starting point, content developed for and documented in the various software quality assurance (SQA) reports associated with each topical area. For each component description in the User's Manual, the content should address each unique modeling feature of the component and how it may be applied in the preparation of an input model. Interesting or otherwise unexpected interactions between features and their consequences shall also be documented.

Each section shall be reviewed by a separate knowledgeable engineer within the contractor's organization (and suggested changes incorporated into the document, if appropriate) prior to submittal. All suggested changes by the reviewer not incorporated shall be documented and submitted to the NRC along with the manual content.

When creating figures, the contractor shall strive to use Framemaker's own drawing facilities, whenever possible. When the quality of such an approach would suffer (the determination of which is subject to review by NRC), it is acceptable to use an external vector format drawing tool for simple line drawings and bitmap drawing tools for scanned images or other more complex images. If an external package is used, then the files shall be saved and submitted to NRC in that drawing package's native format as well as one or more of the following: encapsulated postscript (.eps), frame vector file (.fmv), Windows metafile (.wmf or .emf), and scalable vector graphics (.svg), JPEG (.jpg), TIFF format (.tif), or Portable Network Graphics (.png) (with an 8-bit color depth). All externally created figures shall be imported as linked files on disk as opposed to simply cutting and pasting the figures from Word or other editing software.

All equations shall be entered using Framemaker's built-in equation editor. This will allow NRC to edit them in the future, should the need arise.

The contractor shall use, as the starting point for all document preparation either existing manual chapters, if available, or established Framemaker templates (and

follow document preparation rules documented therein).

If changes to the underlying style of any document must be made to accommodate the terms of this SOW, then those changes shall be made first to the corresponding FrameMaker template and then imported into the specific chapter being modified. Any such changes must be coordinated with NRC first because these types of changes have the potential to impact every chapter that uses the template in question.

Enough time shall be left at the end of the task to make the necessary changes as a result of NRC review. For planning purposes, the contractor should expect a turnaround time of 2 weeks by NRC staff from the time the document is submitted for final review.

Upon completion of this work, the contractor shall supply the NRC with a set of modified FrameMaker document files for the Theory and User Manuals along with the electronic copies of all external image files.

Level of Effort: 12 staff months

Completion Date: 8 months after start of contract

IV. REPORTING REQUIREMENTS

1. Monthly Letter Status Report (MLSR)

A MLSR is to be submitted to the NRC Project Manager by the 20th of the month following the month to be reported with copies provided to the following:

Office of Nuclear Regulatory Research Technical Monitor (Stephen Bajorek, Mail Stop T-10 K08)

Division Management Analyst, (Janine Dehn, Mail Stop T-10E50)

Division of Contracts, Office of Administration - an electronic copy only to Joyce Fields, email address jaf1@nrc.gov and to Beverly Anker, email address bfa@nrc.gov.

The MLSR will identify the title of the project, the job code, the Principal Investigator, the period of performance, the reporting period, summarize each month's technical progress, list monthly spending, total spending to date, and the remaining funds. Any administrative or technical difficulties which may affect the schedule or costs of the project shall be immediately brought to the attention of the NRC project manager.

V. DELIVERABLES AND DELIVERY SCHEDULE

1. Updated TRACE Theory Manual chapters or sections in Framemaker format are to be developed and provided to the staff by January 19, 2007.
2. Updated TRACE Users Manual chapters or sections in Framemaker format are to be developed and provided to the staff by April 20, 2007.

VI. MEETINGS AND TRAVEL REQUIREMENTS

None.

VII. LEVEL OF EFFORT

The total level of effort is estimated at 4.0 staff-months at the Senior Engineer level, 8.0 staff-months at the Engineer level and 4.0 staff months at the Administrative Assistant level.

VIII. PERIOD OF PERFORMANCE

The period of performance of this task order is August 10, 2006 through May 15, 2007.

IX. TECHNICAL DIRECTION

Technical direction will be provided by the Project Manager (William Macon) and the Technical Monitor (Christopher Murray), who can be reached at:

Mail Stop: (T-10 K08)
U. S. Nuclear Regulatory Commission
Washington DC 20555-0001
Phone: (301) 415-6745
Fax: (301) 415-5160
Email: (cjm4@nrc.gov)

X. PUBLICATIONS

RES encourages the publication of the scientific results from RES-sponsored programs in refereed scientific and engineering journals as appropriate. If the contractor proposes to publish in the open literature or present the information at a meeting in addition to submitting the required technical reports, approval of the proposed paper or presentation should be obtained from the NRC Project Manager prior to expending effort on the writing of the paper or presentation. When the writing is completed, the NRC Project Manager shall either approve the material as submitted, approve it subject to NRC-suggested revisions, or disapprove it. In any event, the NRC Project Manager may disapprove or delay publication or presentation of papers on information that is subject to Commission approval that has not been ruled upon or which has been disapproved. Additional information regarding the publication of NRC sponsored research is contained in NRC Management Directives 3.8, "Unclassified Contractor and Grantee Publications in the NUREG Series," and 3.9, "NRC Staff and Contractor Speeches, Papers, and Journal Articles on Regulatory and Technical Subjects."

If the paper or presentation is in addition to the required technical reports and the NRC Project Manager determines that it will benefit the NRC project, the Project Manager may authorize payment of publishing and/or travel costs, if any, from the project funds. If the Project Manager determines that the paper or presentation would not benefit the NRC project, the costs associated with the publication or presentation will be borne by the contractor. For any publications or presentations falling into this category, the NRC reserves the right to require that such publication or presentation will not identify the NRC's sponsorship of the work.

NEW STANDARDS FOR CONTRACTORS WHO PREPARE NUREG-SERIES MANUSCRIPTS

The U.S. Nuclear Regulatory Commission (NRC) is capturing its official records electronically. These records will be saved electronically in the Agency-wide Documents Access and Management System, known as ADAMS. The NRC is currently scanning each final NUREG-series publication from the printed copy. Therefore, submit your final manuscript that has been approved by your NRC Project Manager in both electronic and camera-ready copy.

All format guidance, as specified in NUREG-0650, Revision 2, will remain the same with one exception. You will no longer be required to include the NUREG-series designator on the bottom of each page of the manuscript. The NRC will assign this designator when we send the camera-ready copy to the printer and will place the designator on the cover, title page, and spine. The designator for each report will no longer be assigned when the decision to prepare a publication is made. The NRC's Publishing Services Branch will inform the NRC Project Officer for the publication of the assigned designator when the final manuscript is sent to the printer.

For the electronic manuscript, prepare the text in WordPerfect 8, and use any of the following file types for charts, spreadsheets, and the like.

File Types to be Used for NUREG-Series Publications	
File Type	File Extension
WordPerfect®	.wpd
Microsoft® PowerPoint®	.ppt
Corel® QuattroPro®	.wb3
Corel® Presentations	.shw
Lotus® 1-2-3	.wk4
Portable Document Format	.pdf

This list is subject to change if new software packages come into common use at NRC or by our licensees or other stakeholders that participate in the electronic submission process. If a portion of your manuscript is from another source and you cannot obtain an acceptable electronic file type for this portion (e.g., an appendix from an old publication), the NRC can, if necessary, create a tagged image file format (file extension.tif) for that portion of your report.

Note that you should continue to submit original photographs, which will be scanned, since digitized photographs do not print well.

If you chose to publish a compact disk (CD) of your publication, place on the CD copies of the manuscript in both (1) a portable document format (PDF); (2) a WordPerfect 8/9 file format, and (3) an Adobe Acrobat Reader, or, alternatively, print instructions for obtaining a free copy of Adobe Acrobat Reader on the back cover insert of the jewel box.

Describe any technical support effort that is proposed to be performed by a subcontractor or consultant. Identify the level of effort, by task, of any proposed subcontractor or consultant and provide an explanation of the need for subcontracting that portion of the effort. Note that "pass through" contracting is not allowed under the requirements of the DOE/NRC Memorandum of Understanding. For the purposes of this effort, a "pass through" contract is generally defined as subcontracting 50 percent or more of the technical effort. For any subcontract or consultant effort, describe the following:

- the necessity of subcontracting,
- the tasks and sub-tasks the subcontractor or consultant will perform,
- the level of effort proposed for the subcontract effort,
- the conflict of interest considerations to be taken into account,
- the status and expected time frame for selection,
- the method of selection of the subcontractor or consultant.

XVII. LICENSE FEE RECOVERY

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