

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

BPA NO

1 CONTRACT ID CODE

PAGE

OF PA

1

2 AMENDMENT/MODIFICATION NO

3. EFFECTIVE DATE

4. REQUISITION/PURCHASE REQ NO

5 PROJECT NO (If applicable)

5

MAR 10 2004

6 ISSUED BY

CODE

7. ADMINISTERED BY (If other than Item 6)

CODE

U.S. Nuclear Regulatory Commission
Division of Contracts
Attn: T-7-I-2
Contract Management Center 2
Washington DC 20555

U.S. Nuclear Regulatory Commission
Div of Contracts
Two White Flint North - MS T-7-I-2
Washington, DC 20555

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

(X) 9A AMENDMENT OF SOLICITATION NO

Applied Programming Technology, Inc.
ATTN: Mr. Kenneth Jones, President
84 Long View Drive
Bloomsburg, PA 17815

9B DATED (SEE ITEM 11)

10A MODIFICATION OF CONTRACT/ORDER NO
NRC-04-03-057

10B DATED (SEE ITEM 13)

CODE

FACILITY CODE

X 04-23-2003

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 of 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)

(SEE BELOW)

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

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) 52.217-9 Option to Extend the Term of the Contract

X 52.243-2 Changes - Cost Reimbursement Alternate 1

E. IMPORTANT: Contractor is not, X 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.)

(see page 2 for Modification No. 5)

Accounting Codes:

\$300,000: JCN Y6667, B&R No. 46015110205, BOC 252A, 31X0200.460 (RES-C04-347 & 353);

\$109,000: JCNs 46060401710, BOC 252A, 31X0200.460

(Breakdown for \$109,000: Croatia JCN F6978 \$15,000 (RES-C04-348);

Czech Republic JCN F6979 \$20,000 (RES-C04-349);

Italy JCN F6980 \$25,000 (RES-C04-350);

Taiwan JCN F6981 \$15,000 (RES-C04-351); and

Turkey JCN F6982 \$34,000 (RES-C04-352).

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)

Kenneth R Jones, President

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

Robert Webber, Contracting Officer

15B CONTRACTOR/OFFEROR

15C. DATE SIGNED

Signature of person authorized to sign

3/10/04

16B UNITED STATES OF AMERICA

16C DATE SIGNED

BY Signature of Contracting Officer

3/10/04

STANDARD FORM 30 (REV 10-83)

TEMPLATE - ADM001

ADM002

This modification is issued to (1) exercise Option Year 1 under the subject contract in accordance with the attached revised Statement of Work for the option period (ATTACHMENT 1) and incorporate the contractor's proposal dated 2/20/04, (2) increase the contract ceiling by \$409,937.19 from \$345,020.82 to \$754,958.01, (3) increase the obligated amount under the contract by \$409,000 from \$345,020.82 to \$754,020.82, and (4) extend the period of performance of the contract. Accordingly, the contract is hereby modified as follows:

- (1) Section B.3, Consideration and Obligation-Cost Plus Fixed Fee (JUN 1988), paragraphs (c), (d), and (e) are deleted in their entirety and the following paragraphs are substituted in lieu thereof:

- "c. The amount obligated by the Government with respect to this contract is \$754,020.82, of which the sum of \$685,481.99 represents the estimated reimbursable costs, and of which \$68,538.83 represents the fixed fee.
- d. It is estimated that the amount currently allotted will cover performance through twelve (12) months from the effective date of Modification No. 5.
- e. The total estimated cost to the Government for full performance of this contract for the base period may be increased by \$409,937.19 for Option Year 1, of which the sum of \$372,670.17 represents the estimated reimbursable costs, and \$37,267.02 represents the fixed fee."

2. Section F.6, Duration of Contract Period (MAR 1987) Alternate 2 (MAR 1987), the paragraph is deleted in its entirety and the following paragraph is substituted in lieu thereof:

"This contract shall commence on April 23, 2003 and expire on February 28, 2005. The term of this contract may be extended at the option of the Government for an additional one (1) year option."

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

Total FY2003 Obligations:	\$287,925.20
Total FY 2004 Obligations:	\$409,000.00
Cumulative Total of NRC Obligations:	\$754,020.82

This modification obligates \$409,000 in FY2004 funds.

All other terms and conditions remain the same.

## STATEMENT OF WORK

### BACKGROUND

The SNAP (Symbolic Nuclear Analysis Package) is a graphical user interface system designed to support NRC nuclear analysis codes. SNAP is becoming very important in performing aspects of file translation and model editing for TRACE (TRAC, RELAP Advanced Computational Engine, RELAP5, CONTAIN and eventually other analysis codes. The use of SNAP by analysts will greatly improve the quality and speed of nuclear analysis by simplifying input model editing tasks, simplifying visualization tasks and by simplifying analysis file organization and other file handling issues that often cause confusion for the analysts.

SNAP communicates with TRACE, in part, through a special file format known as "TPR." The TPR (Thermal-hydraulic Portable Restart) file format is used by TRACE (formerly known as (TRAC-M) to save snapshots of the model state during the numerical simulation. This modification is requested to provide extended support for TRACE developers with regard to the inter-operability of SNAP and TRACE.

The SNAP Model Editor tool is undergoing user testing inside the USNRC and via external users. During this testing process desirable features are being identified for the model editor. Several "critical" user interface features are identified here for inclusion into the SNAP Model Editor.

### OBJECTIVES

1. To provide support to the TRACE developers through support of the TRACE TPR file format and through more direct support of the TRACE code.
2. To enhance the SNAP Model Editor with user requested features necessary to improve the ease of use of the TRACE code.

### SCOPE OF WORK

Modify the following tasks:

Task 13      Applications Testing and Distribution

Task 13.b: The work level under this task is increased due to extensive changes to the TRACE TPR (note additional work in Task 14). The TPR specification changes required more thorough and considerably larger testing suite than was originally envisioned.

Task 13.c: The TPR modification being added under Task 14 require extensive changes to the SNAP TRACE plugin. Code manual changes need to be made to reflect the modification to the SNAP TRACE plugin.

Task 14      Maintain TRACE TPR and Support Ongoing TRACE Development

Additional work has been added to account for more extensive changes to the TPR format. The most notable change is to the central "catalogs" present in the TPR file format. These catalogs are to be removed and the block position information contained in the catalogs is to be generated on-the-fly by both the TRACE and the SNAP TRACE plugins. This requires considerable rewrite of the TRACE TPR file handling system as well as a rewrite of the SNAP TPR file handling system. Changes to the TRACE TPR code must be properly tested and coordinated with the TRACE code developers following their code testing procedures. Additional SNAP code testing is accounted for in Task 13 of this contract.

REPORTING REQUIREMENTS

The reporting requirements are unchanged.

DELIVERABLES AND DELIVERY SCHEDULE

- |                             |                   |
|-----------------------------|-------------------|
| 1. SRS and SDID for Task 10 | May 31, 2005      |
| 2. SRS and SDID for Task 11 | July 31, 2005     |
| 3. SRS and SDID for Task 12 | December 31, 2004 |

MEETINGS AND TRAVEL REQUIREMENTS

The travel requirements are unchanged.

PERIOD OF PERFORMANCE

Period of performance is from April 23, 2003 through February 28, 2005.