

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE

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2. AMENDMENT/MODIFICATION NO.

20

3. EFFECTIVE DATE

JUL 08 1990

4. REQUISITION/PURCHASE REQ. NO.

RES-86-106 dated 10/2/89

5. PROJECT NO. (If applicable)

6. ISSUED BY

CODE

U.S. Nuclear Regulatory Commission
Division of Contracts & Property Management
Washington, D.C. 20555

7. ADMINISTERED BY (If other than Item 6)

CODE

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

Battelle Columbus Laboratories
Columbus Division
505 King Avenue
Columbus, Ohio 43201-2693

(/)

9A. AMENDMENT OF SOLICITATION NO.

9B. DATED (SEE ITEM 11)

10A. MODIFICATION OF CONTRACT/ORDER NO.

X

NRC-04-86-106

10B. DATED (SEE ITEM 13)

7/10/86

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 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)

B&R No. 0601921010 FIN No. D16580 Amount \$21,773.00

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

VI. 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)

X FAR Changes Clause 52.243-2

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.)

(Please see the following page.)

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)

WILLIAM E. JONES
CONTRACTING OFFICER

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

Sharon Bell

15B. SIGNATURE (Type or print)

William E. Jones
(Signature of Contracting Officer)

15C. DATE SIGNED

7/6/90

16B. UNITED STATES OF AMERICA

BY Sharon Bell
(Signature of Contracting Officer)

16C. DATE SIGNED

6/28/90

The purposes of this modification are to:

1. Modify the contract Statement of Work to provide for the following:
 - a. Contractor's participation in ACRS and Office of Nuclear Regulatory Research meetings.
 - b. Additional efforts under Subtask 1.3.
2. Increase the contract ceiling by \$113,960.00 (\$21,773.00 + \$92,187.00);
3. Increase the NRC obligated funds by \$21,773.00; and
4. Extend the contract period of performance.

Therefore, the following changes to the contract are hereby made:

1. Section C - Description/Specification/Work Statement, is modified as shown on Enclosure 1 to this modification. As a result, Battelle Columbus Laboratories' Proposal No. 723-U-3277X dated March 17, 1989 (as revised during telecon of April 25, 1990 with Gloria Miller) and Proposal No. 732-U-4026X dated January 19, 1990, are hereby accepted and incorporated herein by reference.
2. Section G - Contract Administration Data, Subsection G.1, Consideration, paragraph nos. 1., 2., 3., 5.A., and 5.B. are modified to read as follows:
 - "1. It is estimated that the total cost to the NRC for its share of the cost for full performance of this contract will be \$1,800,430.00. Of this amount, \$1,661,958.00 represents the estimated reimbursable costs and \$138,472.00 represents the fixed fee."
 - "2. Total funds currently available for payment and obligated to this contract by NRC are \$1,800,430.00. Of this amount \$1,661,958.00 represents the estimated reimbursable costs and \$138,472.00 represents the fixed fee."
 - "3. It is estimated that amount currently obligated will cover performance through July 30, 1990."
- "5.A. It is estimated that the total cost which will be funded by all of the IPIRG participants together, for full performance of the IPIRG program (exclusive of option) will be \$5,594,319.00, of which the sum of \$5,184,149.00 represents the estimated reimbursable costs and of which \$410,170.00 represents the fixed fee."

"5.B. Total funds presently available for payment and obligated to this contract by IPIRG industrial and international participants are \$3,699,970.00, of which \$3,419,174.00 represents reimbursable costs, and of which \$280,796.00 represents the fixed fee.

Total funds presently available by all IPIRG participants, including the NRC are \$5,500,400.00 which consists of \$3,699,970.00 as shown in this paragraph and NRC funding of \$1,800,430.00 as shown in paragraph 6.1.2 above."

3. Section F.3 - Duration of Contract Period, the first sentence is revised to read as follows:

"This contract shall commence on July 10, 1986 and continue to July 30, 1990."

All other terms and conditions under the contract remain the same.

ENCLOSURE 1

STATEMENT OF WORK FOR
MODIFYING THE
INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP PROGRAM
CONTRACT NUMBER NRC-04-86-106

(1) Additional Instrumentation for Strain and Deflection Measurements

Background. The existing Statement of Work for Subtask 1.3 calls for measuring strains and deflections near the cracked section in the pipe test loop. However, with the discovery that the stress analysis computer codes are not as reliable as thought originally, it is important to increase the strain and deflection measurements taken both near and remote from the cracked section.

Work to be Performed.

- o Add an array of strain gages to the straight pipe sections on both sides of the cracked section so that the bending moment gradient can be determined.
- o Add a 3-d deflection measurement assembly to determine the deflections in each plane at a location remote from the cracked section. The exact location for these measurements shall be based on results from the stress analyses of the pipe loop.
- o Report the strain and deflection data for each Subtask 1.3 experiment in the associated Data Record Book.

(2) Crack Speed Instrumentation

Background. It has become apparent that determining crack speed from the existing crack opening displacement gages is not likely to be satisfactory. Although these data are not essential to the success of the overall program, they are of sufficient interest to warrant the addition of instrumentation better suited to determining crack speed than the COD measurements.

Work to be Performed.

- o Add instrumentation to provide an improved method for determining crack speed during the pipe fracture experiments. The exact instrumentation to be added shall be specified in Battelle's proposal. However, it is anticipated that either "crack wires" or strain gage arrays will be used for this purpose.
- o Report the crack speed data for each Subtask 1.3 experiment in the associated Data Record Book.

A. The contractor shall perform the following services:

- (1) host and participate in a meeting of the ACRS Metal Components Subcommittee on March 15 - 16, 1989, and
- (2) host and participate in the Office of Nuclear Regulatory Research Mid-year Project Review meeting on March 17, 1989.

Battelle's responsibilities in hosting the meetings include providing a suitable meeting room, audio-visual facilities, and, if necessary, copying materials brought by the other meeting participants. Battelle's responsibilities in participating in the meetings include preparing presentations on the IPIRG research and other NRC funded piping research conducted by Battelle, conducting a tour of the IPIRG test facility at West Jefferson, Ohio, and presenting the IPIRG research to the NRC/RES management during the mid-year project review meeting.

B. A separate subtask in Task 4.0 shall be established for accumulating costs associated with these meetings. The costs shall be billed to the NRC only.