



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

006893

NOV 21 2001

Purdue Research Foundation
ATTN: Mr. Thomas B. Wright
1063 Hovde Hall, Purdue University
West Lafayette, IN 47907-1063

Dear Mr. Wright:

SUBJECT: MODIFICATION NO. 6 TO TASK ORDER NO. 9
UNDER CONTRACT NO. NRC-04-97-046

This letter definitizes Modification No. 6 to Task Order No. 9. This modification extends the period of performance, at no additional cost to the Government, through January 15, 2002. Accordingly, the period of performance for Task Order No. 9 is from 08/04/99 through 01/15/02. Also, this task order shall be performed in accordance with the enclosed, modified pages of the Statement of Work that include new, estimated completion dates for Tasks 5, 7 and 9 under this effort.

The Contractor shall not incur costs for this task order which exceed the obligated amount of \$250,604. **All other terms and conditions, including the ceiling of \$250,604, remain unchanged.** No FY02 funds are obligated with this modification.

Please indicate your acceptance of Modification No. 6 to Task Order No. 9 by having an official, authorized to bind your organization, execute three (3) copies of this document in the space provided and return two (2) copies to the Contract Specialist, Ms. Amy Siller, at the address listed below. You should retain the third copy for your records.

U.S. Nuclear Regulatory Commission
ADM/DCPM/CMB1, Mail Stop T-7-I-2
Washington, DC 20555

If you have any questions concerning this action, please contact Ms. Siller at (301) 415-6747.

Sincerely,

Mary H. Mace, Contracting Officer
Contract Management Branch 1
Division of Contracts and Property Management
Office of Administration

Enclosure:
As stated

NOV 26 2001

ADM 02

TEMPLATE-ADM 001

ACCEPTED: MODIFICATION NO. 6 TO TASK ORDER NO. 9


NAME

Eric E. Fulkerson
Sr. Contract Manager

TITLE

NOV 28 2008

DATE

Modification (No. 6) to The Statement of Work for Task Order #9, "BWR Model Development and Assessment," under Contract # NRC-04-97-046 and Job Code W6749, Thermal-Hydraulic Research"

Additional Work Requirements (12/1/00 - 1/15/02)

This is a no-cost extension to extend the estimated completion dates of the following Tasks 5, 7, and 9 to January 15, 2002.

Task 5. Provide Technical Assistance to NRC

This task provides technical assistance to NRC by performing additional calculations, making presentations, reviewing technical reports, providing references, and attending meetings as requested by the NRC Technical Monitor.

Estimate Level of Effort: 0.5 staff-month (for this performance period)
Estimated Completion Date: January 15, 2002 (new date)

Task 7. Analyze THTF Steady-State Boil-Off Tests for Model Improvement

This task consists of two elements. The first element is to recalculate the THTF boil-off tests, 3.09.10J and 3.09.10L, in two steps. First, use the same input model as for Task 1 to run the latest version of TRAC-M. Second, use an expanded input model (using the new features of double-sided heat transfer and level tracking for CHAN, PIPE, and VESSEL components) to run the latest version of TRAC-M.

The second element of the task is to conduct a comprehensive literature survey to identify and recommend best-estimate interfacial drag models for rod bundles for a wide range of conditions applicable to the current and advanced LWR designs. In addition, determine and recommend the best approach to model the effect of grid-spacers above the two-phase mixture level. "If" the interfacial drag models recommended are different from those in the latest version of TRAC-M, NRC will provide technical guidance to the University of Maryland to install the new models in a test version of TRAC-M. As part of the second element, this test version of TRAC-M will then be used to calculate the same THTF tests to assess the new models installed.

Deliverables: a letter report to describe the findings of this task in both text and electronic format, input decks in electronic format, and test data in electronic format.

Estimated Level of Effort: 3 staff-months
Estimated Completion Date: January 15, 2002 (new date)

Task 9. Recalculate TRAC-M Calculations for GE Level Swell Tests

This task consists of two elements. The first element is to use the latest version of TRAC-M to calculate Tests 5702-16 and 5803-2 from the GE large vessel blowdown and level swell test series.

The second element of this task is to use the latest TRAC-M with one-dimensional core models to calculate three additional GE large-vessel blowdown and level swell tests (Tests 5801-13, 5801-19, and 5803-1). In addition, use the latest TRAC-M with one-dimensional core models to

calculate a GE small-vessel blowdown and level swell test (to be selected).

These calculations will provide a broad base to assess the interfacial drag and heat transfer models, and flashing and level tracking features in the latest version of TRAC-M.

Deliverables: a letter report in both text and electronic format, input decks in electronic format, and test data assessed in electronic format

Estimated Level of Effort: 3 staff-months

Estimated Completion Date: January 15, 2002 (new date)