



The purpose of this modification is to (1) revise Section C.1 under the subject contract to incorporate the within-scope work to the subject contract as referenced in the attached Statement of Work and the contractor's proposal dated 1/15/01 is incorporated herein, (2) increase the contract ceiling amount by \$99,970.00 from \$527,982.01 to \$627,952.01 (3) increase the obligated amount by \$99,970.00 from \$527,982.01 to \$627,952.01, and (4) revise Section D to include additional travel as referenced in the attached Statement of Work. Accordingly, the contract is hereby modified as follows:

1. Section B.3, CONSIDERATION AND OBLIGATION--COST PLUS FIXED FEE (JUNE 1988) ALTERNATE I (JUNE 1991), paragraphs a, c, and d are deleted in their entirety and the following paragraphs are substituted in lieu thereof:
  - "a. The total estimated cost to the Government for full performance of this contract is \$627,952.01, of which the sum of \$581,437.23 represents the estimated reimbursable costs, and of which \$46,514.78 represents the fixed fee."
  - "c. The amount currently obligated by the Government with respect to this contract is \$627,952.01.
  - d. It is estimated that the amount currently allotted will cover performance through 9/30/2001."

All other terms and conditions under this contract remain unchanged.

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

Total FY 1997 Obligation Amount:	\$150,000.00
Total FY 1998 Obligation Amount:	\$125,000.00
Total FY 1999 Obligation Amount:	\$100,000.00
Total FY 2000 Obligation Amount:	\$152,982.01
Total FY 2001 Obligation Amount:	\$ 99,970.00

Cumulative Total of NRC Obligations: \$627,952.01

This modification obligates NRC FY 2001 funds in the amount of \$99,970.00.

## SCOPE OF WORK

### Scope of Work

Section C.1, paragraph C, Scope of Work and Requirements, is modified to include the following:

1. Task 3 is deleted entirely.
2. The FY 2000 budget originally committed to Task 3 is redirected to Tasks 6 and 8, which are revised by items 3 and 4 of this modification.
3. The contractor shall expand the work being performed under Task 6 (Re-evaluation of Charpy Embrittlement Equation) as follows:
  - Finalize documentation on development of a new embrittlement trend curve and provide as a letter report.
  - Assist NRC Staff in the development of a NUREG describing the technical basis for Revision 3 to Regulatory Guide 1.99.
4. Work originally described in Modification No. 8 to this contract that was planned for completion in FY 2000 was not completed by M&CS for two reasons: (a) due to unanticipated complexities associated with the development of the new embrittlement trend curve, and (b) due to unanticipated delays in provision of NRC staff comments to M&CS. Consequently, the work described in Modification No. 8 for Task 8 is now planned for completion in FY 2001. For reference, this work is described below.

#### Task 8 Work Described Originally in Modification No. 8

- Analyze the validity of using small numbers of Charpy transition temperature shifts from the surveillance program to back-calculate a heat and plant-specific chemistry for regulatory purposes. Provide the technical justification for a statistically-based surveillance program screening criterion to identify and treat large deviations from embrittlement model predictions at specific plants.
- Provide technical justification based on the revised Charpy Embrittlement Equation for the continued use or abandonment of the "Ratio" procedure as outlined currently in Regulatory Guide 1.99 (Rev 2).
- Provide technical expertise to NRC PRA staff to ensure that the uncertainty analysis performed in this task is conducted in a manner consistent with that needed for input to the on-going probabilistic risk assessment of pressurized thermal shock.

### PERIOD OF PERFORMANCE

Date of Modification No. 9 through 9/30/2001.