



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SEP 28 1982

Mr. Kenneth L. Ferguson, Manager
Technology Marketing
Water Reactor Nuclear Technology Division
Westinghouse Electric Corporation
Nuclear Center
Northern Pike
Monroeville, PA 15146

Mr. Bruce B. Rytkenen
Manager, Contract Negotiations
Contracts Department
Electric Power Research Institute
3412 Hillview Avenue
Palo Alto, CA 94303

Gentlemen:

Letter Contract No. NRC-04-82-020, EPRI/W/NRC Transient Prototypical Steam Generator (MB-2) Research Testing Program.

1. Pending negotiation of formal Contract No. NRC-04-82-020, and contingent upon your acceptance of the terms and conditions of this letter as provided below, Westinghouse Electric Corporation (Contractor) is authorized and directed effective September 30, 1982, to initiate work entitled "Transient Prototypical Steam Generator (MB-2) Research Testing Program" in accordance with the Statement of Work as delineated in Attachment I of this Letter Contract.
2. Pending negotiation of a definitive contract, the applicable terms and conditions of this Letter Contract with the Nuclear Regulatory Commission (Commission) and the Electric Power Research Institute (Institute) shall be those delineated in Attachment II. It is anticipated that the said definitive contract will provide for compensation to the Contractor on a cost sharing basis. In addition, it is agreed that in the event that a definitive contract cannot be agreed upon between the parties, that the Contractor will be reimbursed for his actual costs in accordance with the cost principles in Federal Procurement Regulations 1-15.2, as in effect on the effective date of this Letter Contract. In the event of failure to reach agreement on a definitive contract, the maximum liability to the Commission and the Institute will be \$230,000.00.
3. In performance of this contract work, the Contractor is authorized to incur costs and commitments not to exceed ~~\$889,336.00~~ ^{\$506,666.00} to cover estimated costs of performance. The funds presently authorized for expenditure

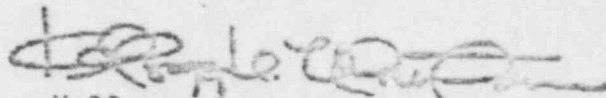
1,700,000.00 *llh*
include ~~\$230,000.00~~ of Commission funding, \$0.00 of Institute funding, and ~~\$159,999.69~~ of Contractor funding. It is anticipated that the total estimated cost for performance of this work under the definitive contract will not exceed \$1,600,000.00. A cost share ratio of 37.5% by the Commission, 37.5% by the Institute, and 25% by the Contractor will govern total expenditure of funds under both this Letter Contract and the definitive contract.

4. In the event that said definitive contract is not executed by the parties by November 30, 1982 (or by any subsequent date mutually agreed upon in writing) this Letter Contract will expire on the stated date, as the case may be.

Your acceptance of the above terms is requested by your acknowledgement and return of four (4) copies of this letter before September 30, 1982.

If you need further information, please call Levi Baisden, Contract Negotiator, on (301) 492-4289.

Sincerely,



Kellogg V. Morton, Chief
Research Contracts Branch
Division of Contracts
Office of Administration

Attachments: As stated

cc: Bruce D. Braga
Contracts Department, EPRI

ACCEPTED:

Electric Power Research Institute

By: Bruce B. Rydman

Title: _____

Date: September 29, 1982

PROVIDE ALL INFORMATION REQUESTED

FACSIMILE USE REQUEST

DATE: 9/30/82

TO: Gene Baudier

FROM: Ken Ferguson

COMPANY: US NRC

NUMBER OF PAGES BEING SENT: 11
(Include this page)

Phone Number of Receiving Equipment: 301-492-9520

Type of Machine: _____

Automatic: _____ Manual: _____

Verification Number: 301-492-4297

WESTINGHOUSE AUTOMATIC FACSIMILE EQUIPMENT NUMBERS:

	<u>Box 4200</u>	<u>Xerox 485</u>	<u>Rapifax 100</u>	<u>Verification</u>
W NUCLEAR CENTER	373-5744	373-5512	373-5738	373-4930
HALL OFFICE BLDG	374-2452	374-2460	374-2459	374-2449
PENN CENTER	273-7883	273-7882	NA	273-7005
FOREST HILLS			244-3401	
OM 286	327-6235 (Model Y100)	NA	NA	327-6235

PLEASE RETURN ORIGINAL TO:
(Please include Box Number)

Ken Ferguson
Box 310

SEP 28 1962

Received AM

9/29

Mr. Kenneth L. Ferguson, Manager ✓
Technology Marketing
Water Reactor Nuclear Technology Division
Westinghouse Electric Corporation
Nuclear Center
Northern Pike
Piquette, PA 15145

Dr. Bruce S. Ryttonen
Manager, Contract Negotiations
Contracts Department
Electric Power Research Institute
3412 Hillview Avenue
Palo Alto, CA 94303

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In performance of this contract work, the Contractor is authorized to incur costs and commitments not to exceed \$230,000.00 to cover estimated costs of performance. This letter is hereby authorized for signature.

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include \$200,000.00 of Commission funding, \$0.00 of Institute funding, and \$400,000.00 of Contractor funding. It is anticipated that the total estimated cost for performance of this work under the definitive contract will not exceed \$1,600,000.00. A cost share ratio of 37.5% by the Commission, 37.5% by the Institute, and 25% by the Contractor will govern total expenditure of funds under both this Letter Contract and the definitive contract.

- 4. In the event that said definitive contract is not executed by the parties by November 30, 1982 (or by any subsequent date mutually agreed upon in writing) this Letter Contract will expire on the stated date, at the case may be.

Your acceptance of the above terms is requested by your acknowledgment and return of four (4) copies of this letter before September 30, 1982.

If you need further information, please call Levi Raisden, Contract Negotiator, on (301) 492-4219.

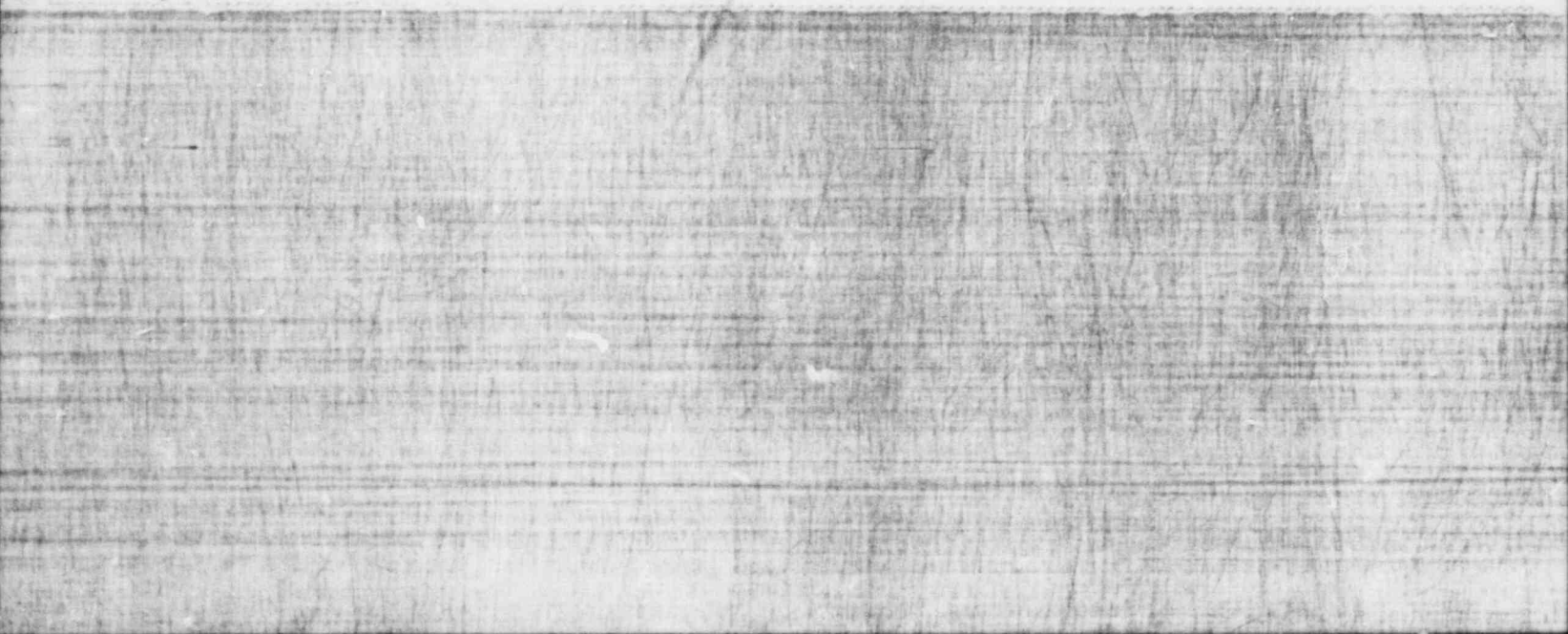
Sincerely,

Original Signed By
KELLOGG V. MORTON

Kellogg V. Morton, Chief
Research Contracts Branch
Division of Contracts
Office of Administration

Attachments: As stated

cc: Bruce D. Dragg
Contracts Department, EPRI



ACCEPTED:

Westinghouse Electric Corporation

By: *[Signature]*

Title: VICE PRESIDENT

Date: 9/24/82

5. Perform trail runs to familiarize with system performance
6. Validate shutdown tests

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SUBTASK G Test Program Performance

1. Prepare and issue final test prospectus
2. Perform test runs specified for:
 - a. Loss of feedwater tests
 - b. Two-phase primary flow tests
 - c. Steam line break tests
 - d. Steam generator tube rupture tests
 - e. Feed line break tests
 - f. Steam line rupture tests with simultaneous small break on the primary side
 - g. Optional tests (as applicable within program constraints)
3. Verify test acceptability
4. Document tests as outlined in subtask 7
 - a. Day-of-test reports
 - b. Test Summary reports

SUBTASK 7 Test Definition, Evaluation, and Documentation

Data Requirements and Test Definition (Prior to Tests)

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Identify specific data to be obtained from each test.

Identify required instruments to collect such data.

Perform stress analysis for all transients to establish limits of operation of facility.

Analyze PWR transients with calculational models to determine required test parameters and instrument ranges.

Establish expected accuracy of measured data.

Develop conclusion on appropriate testing considering data requirements.

Finalize test matrix including sponsor concurrence.*

- a. Perform five loss of feedwater tests.
- b. Perform four steam generator tube rupture tests.
- c. Perform five two-phase heat transfer tests.
- d. Perform two feed line break tests.
- e. Perform two steam line rupture tests (Tests 4.1 and 4.4).
- f. Perform two steam line rupture tests with a simultaneous small break on the primary side.

*The final test matrix will be subject to the results of the scaling study in Subtask 2, and to review by the Program Management Group (PMG).

8. Establish test acceptability limits on key parameters for each tests.
9. Establish data reduction methods.
10. Issue Task Plan

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B: Test Evaluation and Documentation (Following Tests)

1. Following each test:
 - a. Reduce raw data to engineering units.
 - b. Perform preliminary evaluation of results.
 - c. Verify acceptability of test.
 - d. Perform error analysis to estimate uncertainty in reduced data.
 - e. Issue day-of-test report and data tape.
2. Develop conclusions and recommendations on subsequent testing considering results achieved.
3. Document and transmit to PMS summary reports, including selected data plots and a summary of each test.
4. Perform developmental work outlined in the task plan. The results of analysis activity will be reviewed periodically with all concerned parties.
5. Prepare data and evaluation report outlines.

6. Prepare draft and final data reports.
7. Prepare draft and final evaluation reports.

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