

FEB 13 1985

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ZRosztoczy

Mr. Gregory J. Ogeka, Chief
Administrative Branch
Brookhaven Area Office
Building 464
Upton, New York 11973

Dear Mr. Ogeka:

Subject: BNL Technical Assistance to the Division of Safety Technology,
NRR, NRC, "Review of the Probabilistic Risk Assessment for the
Shoreham Nuclear Power Plant" (FIN A-3740)

The enclosed NRC Form 173, Standard Order for DOE Work, is hereby submitted
in accordance with Section III.B.2 of the DOE/NRC Memorandum of Understanding
dated February 24, 1978.

Funding authorization in the amount of \$50,000 to immediately begin work on
the subject project was provided to you on September 6, 1983, \$120,000 on
December 6, 1983, \$100,000 on May 31, 1984, and \$14,000 was provided on
September 17, 1984. The purpose of this letter is to provide FY 85 funds
in the amount of \$10,000 and to modify your proposal dated October 4, 1983.
Please submit a revised NRC Form 189 without attachments which reflects
these changes and the changes indicated by NRC Orders 20-84-455 and
20-85-191. The revised NRC Form 189 should be submitted to:

Ms. Jayne Halvorsen, Program Assistant
Division of Safety Technology, NRR
U.S. Nuclear Regulatory Commission
Washington, DC 20555

If you have any questions concerning the acceptance of this order, please
contact Ms. J. Halvorsen on FTS 492-7932.

Sincerely,

ORIGINAL SIGNED BY

8507130405 850426
PDR FOIA
BELAIR85-199 PDR

Themis P. Speis, Director
Division of Safety Technology
Office of Nuclear Reactor Regulation

Enclosure: NRC Form 173

cc: R. Barber, HQ-DOE
H. C. Grahn, BNL
H. J. Rauch, DOE-CHOO

AD/T:DST
MFarr
2/11/85

OFFICE	RRAB: DST EChow m	RRAB: DST ABuslik ab	RRAB: DST ATHadani	AD/T: DST FRowsome	PA: DST JHalvorsen	NRR TDiGaloma	D: DST TSpéis
SURNAME	EChow m	ABuslik ab	ATHadani	FRowsome	JHalvorsen	TDiGaloma	TSpéis
DATE	2/4/85	2/4/85	2/4/85	2/4/85	2/6/85	2/12/85	2/12/85

Modification to FIN A-3740

1. Add to Work Requirements:

Task 5: Line Breaks in Reactor Building

Estimated Level of Effort: 1 staff month
Estimated Completion Date: 2/28/85

Perform a study to determine the core-vulnerable frequencies due to breaks in HPCI/RCIC/RWCU and other lines in the reactor building. The study will include consideration of breaks in both large diameter piping and also those smaller lines identified in 10 CFR 50, Appendix A, Criterion 55. A sensitivity analysis will be performed in which it is assumed the isolation valves will fail to close under blowdown conditions because of lack of qualification for these conditions. The following considerations will be included in the study:

- (1) Determination of the break initiating frequency.
- (2) Determination of the mitigating systems available for each break.
- (3) Impact on the mitigating systems of the environmental conditions due to a break, including flooding.
- (4) Operator recovery actions.

2. Add to Reporting Requirements

Task 5
Final Report 2/28/85

3. Revise Level of Effort and Period of Performance to read as follows:

The overall level of effort is estimated to be 30.8 staff months over a 17 month period.

20-85-246

STANDARD ORDER FOR DOE WORK

DATE

FEB 13 1985

ISSUED TO: (DOE Office)

Brookhaven Area Office

ISSUED BY: (NRC Office)

Office of Nuclear Reactor
Regulation, DST

ACCOUNTING CITATION

APPROPRIATION SYMBOL

31X0200 205

B&R NUMBER

20-19-40-41-5

FIN NUMBER

A-3740-5

PERFORMING ORGANIZATION AND LOCATION

Brookhaven National Laboratory
Upton, New York

WORK PERIOD - THIS ORDER

FIXED ☒ESTIMATED ☐

FIN TITLE

Review of PRA for the Shoreham Nuclear Power Plant

FROM:
9/13/83TO:
12/21/85

OBLIGATION AVAILABILITY PROVIDED BY:

A. THIS ORDER

\$10,000

B. TOTAL OF ORDERS PLACED PRIOR TO THIS DATE WITH THE PERFORMING ORGANIZATION UNDER THE
SAME "APPROPRIATION SYMBOL" AND THE FIRST FOUR DIGITS OF THE "B&R NUMBER" CITED ABOVE.

\$3,223,000

C. TOTAL ORDERS TO DATE

(TOTAL A & B)

\$3,233,000

D. AMOUNT INCLUDED IN "C" APPLICABLE TO THE "FIN NUMBER" CITED IN THIS ORDER.

\$10,000

FINANCIAL FLEXIBILITY:

- ☒ FUNDS WILL NOT BE REPROGRAMMED BETWEEN FINIS. LINE D CONSTITUTES A LIMITATION ON OBLIGATIONS AUTHORIZED
☐ FUNDS MAY BE REPROGRAMMED NOT TO EXCEED $\pm 10\%$ OF FIN LEVEL UP TO \$50K. LINE C CONSTITUTES A LIMITATION ON
OBLIGATIONS AUTHORIZED.

STANDARD TERMS AND CONDITIONS (see NRC Manual Chapter 1102, Appendix Part 4) ARE PART OF THIS ORDER UNLESS OTHERWISE NOTED

ATTACHMENTS:

THE FOLLOWING ATTACHMENTS ARE HEREBY MADE A PART OF THIS
ORDER:

- ☒ STATEMENT OF WORK (modification)
☐ ADDITIONAL TERMS AND CONDITIONS
☐ OTHER

- ☒ FEE RECOVERABLE WORK
☐ NON-FEE RECOVERABLE WORK

SECURITY:

- ☐ WORK ON THIS ORDER INVOLVES CLASSIFIED
INFORMATION. NRC FORM 187 IS ATTACHED
☐ WORK ON THIS ORDER INVOLVES UNCLASSIFIED
SAFEGUARDS, PROPRIETARY, OR OTHER SENSITIVE
INFORMATION
☒ WORK ON THIS ORDER IS UNCLASSIFIED AND NOT SENSITIVE

REMARKS (Reference the proposal by number and date, and indicate if the attached statement of work modifies the DOE proposal)

This order modifies the BNL proposal dated October 4, 1983; provides \$10,000 for work on the project; and requests a revised NRC Form 189 without attachments which reflects these changes and those of Work Orders 20-84-455 and 20-85-191. Submit the Form 189 to J. Halvorsen, DST/NRR and M. Kaltman, PPAS/NRR.

After acceptance, please send to the NRC Office of Resource Management, ATTN: D. Dandois, and provide a copy to the Office of Nuclear Reactor Regulation, ATTN: K. McGrath.

ISSUING AUTHORITY

ACCEPTING ORGANIZATION

SIGNATURE

Themis P. Speis, Director

2-12-85

SIGNATURE

TITLE

Division of Safety Technology

TITLE

DATE

111
111
111
111

BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC.

Upton, Long Island, New York 11973

(516) 282- 3317
FTS 666/

Office of the Director

February 12, 1985

Mr. David Schweller, Manager
Brookhaven Area Office
U. S. Department of Energy
Upton, New York 11973

Dear Mr. Schweller:

Enclosed is one copy of a proposal without attachments to the Nuclear Regulatory Commission entitled, "Review of Probabilistic Risk Assessment for the Shoreham Nuclear Power Plant," FIN A-3740, being submitted for your review and approval. The proposal is being submitted in response to a request from NRC dated January 23, 1985. Two copies have been sent to Mr. R. W. Barber, Department of Energy, one copy has been sent to Mr. M. Kaltman, Nuclear Regulatory Commission, and two copies have been sent to:

Ms. Jayne Halvorsen, Program Assistant
Division of Safety Technology
Office of Nuclear Reactor Regulation
Mail Stop 278
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

The total cost of this program is \$302,000. The funds obligated to date are \$284,000.

This proposal has been prepared in accordance with the modification to FIN attached to the aforementioned letter. If there are any questions regarding the document, please call the principal investigator or Mr. A. J. Romano, FTS 666-4024, Department Administrator for the Department of Nuclear Energy.

Sincerely yours,

H. C. Grahn

H. C. Grahn
Assistant Director
for Financial Planning

Enclosures

cc: R. W. Barber (2)
J. Halvorsen (2) ✓
M. Kaltman

File 49

January 30, 1985

 NEW

REVISION NO

NRC FORM 189
(1-84)

PROJECT AND BUDGET PROPOSAL FOR NRC WORK

A-3740


DATE









January 30, 1985

PROJECT TITLE

Review of Probabilistic Risk Assessment for the Shoreham
Nuclear Power Plant

DOE PROPOSING ORGANIZATION

Associated Universities, Inc.
Brookhaven National LaboratoryFORECAST MILESTONE CHART Scheduled to Start -  - Completed (Shown in Quarter Year)
PROVIDE ESTIMATED DOLLAR COST FOR EACH TASK FOR EACH FISCAL YEAR

TASK		FY 1983				FY 1984				FY 1985				FY 1986				FY			
		1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Task 1	SCHEDULE																				
	COST		14K				197K				8K										
Task 2	SCHEDULE																				
	COST						20K														
Task 3	SCHEDULE																				
	COST										45K										
Task 4	SCHEDULE																				
	COST										18K										
	SCHEDULE																				
	COST																				
TOTAL ESTIMATED PROJECT COST			14K				217K				71K										

PROJECT DESCRIPTION: (Provide narrative descriptions of the following topics in the order listed. Attach on plain paper to this NRC Form 189. If an item is not applicable, so state.)

1. OBJECTIVE OF PROPOSED WORK
2. SUMMARY OF PRIOR EFFORTS
3. WORK TO BE PERFORMED AND EXPECTED RESULTS
4. DESCRIPTION OF ANY FOLLOW-ON EFFORTS
5. RELATIONSHIP TO OTHER PROJECTS
6. REPORTING REQUIREMENTS AND SCHEDULE
7. SUBCONTRACTOR INFORMATION
8. LIST NEW CAPITAL EQUIPMENT REQUIRED (include all ADP equipment)
9. DESCRIBE SPECIAL FACILITIES REQUIRED
10. CONFLICT OF INTEREST INFORMATION
11. EXPECTED CLASSIFICATION OR SENSITIVITY (e.g. safeguards, proprietary, other)

SEE NRC MANUAL CHAPTER 1102 FOR ADDITIONAL INFORMATION

APPROVAL AUTHORITY-SIGNATURE

DATE

1/31/85