

PROBABILISTIC  
RISK ASSESSMENT  
PROCEDURES GUIDE



A Joint NRC-Industry  
Effort to Prepare  
Guidelines for  
Probabilistic Risk  
Assessment

July 15, 1982

Mr. Levi D. Baisden, Contracting Officer  
Division of Contracts  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

RE: Grant No. NRC-G-04-81-<sup>CCI</sup>~~110~~

Dear Mr. Baisden:

You will find enclosed the description of a no-cost extension and modification to the above designated grant. The description details two functions to be undertaken: (1) a PRA review function and (2) a document on radioactive source terms. This extension is for a two year period starting January 1, 1983. Note that we have a previous request on record, dated May 27, 1982, to extend the grant to December 31, 1982.

Cost estimates for the two functions are included. It should be noted that the figure for ANS staff support to item 2 does not include estimates for editing, typing, copying, collating and distributing drafts of the document or tasks related thereto; it is impossible to estimate the magnitude of this portion of the work at this time.

We look forward to your prompt acceptance of this modification.

Sincerely,

A handwritten signature in cursive script, reading "Marilyn D. Weber".

Mrs. Marilyn D. Weber  
Program Administrator

MDW:kp

cc: O. J. Du Temple  
J. R. Heelan  
L. M. Muntzing  
W. R. Stratton

## GRANT MODIFICATION

The American Nuclear Society hereby applies for a no-cost extension and modification to Grant No. NRC-G-04-81-110. This proposed modification would provide support to accomplish two functions:

1. Perform periodic reviews of the PRA Procedures Guide (NUREG/CR-2300) to determine if modifications are needed and appropriate: (a) to bring it into better conformance with state of the art techniques in risk assessment or (b) to provide descriptions of methods that are more suitable for then-current applications of risk assessment technology. If such changes or additions are needed, determine how and when to develop them.
2. Develop a white paper on the determination and use of accident-related radiological source terms. This paper would serve as a supplement to Chapter 7, Physical Processes of Reactor-Meltdown Accidents, of the PRA Procedures Guide. Source terms developed in the document or by methods presented in the document would be used for analyses of the type suggested in Chapter 7 of the Guide. This function is described in greater detail below.

This proposed extension would be for a period of two years: from January 1, 1983 to December 31, 1984.

ANS proposes to select an individual to act as the project director to accomplish these two functions; this person would possess a detailed knowledge of the PRA Procedures Guide and knowledge of the history and status of the regulatory use of radiological source terms. Furthermore, the person would be capable of and willing to exercise the management of the above two functions.

### A. PRA Review Function

It is expected that the project director will convene a meeting of a few selected individuals (probably from the PRA Steering Committee)

who have expertise in risk assessment and knowledge of the PRA Procedures Guide to critically review the use and usefulness of the Guide every six to nine months. This review committee would include an appropriate representative of the NRC staff. The results of any review will be documented in a letter to the grant officer as designated by the NRC. Any work required to develop modifications or additions to the Guide will be financed by separate arrangements and is not covered under the provisions of this grant modification.

B. White Paper on Radioactive Source Terms

It is anticipated that the project director will work with a steering committee of about twelve individuals to manage the development of the white paper on radioactive source terms. The responsibility of this committee would be to set the scope of the effort, provide overall review of proposed drafts, and select individuals to develop the text of the document. The committee will determine an appropriate schedule for completion of the project along with appropriate intermediate milestones and interface tasks to best take advantage of other work on source terms, consistent with the completion date.

The project director and the steering committee will work together to select a set of peer reviewers. These reviewers will be selected from a broad spectrum of organizations and interests, but will all have expertise in the area for which they will perform the review. Every attempt will be made to gain consensus on each portion of the document.

C. Administrative Support

Administrative support required to fulfill the two functions will be provided by members of ANS Staff. This support will include meeting arrangements, preparation of meeting minutes, preparation and distribution of draft documents, managing and disbursing funds provided under the grant, maintaining records of all significant

activities that take place to fulfill the grant, and other related work that is reasonable to support the accomplishment of the two functions.

D. Cost Estimate

1. PRA Review Function

Costs for the review function will include administrative support as indicated in Paragraph C above and travel expenses for the project director, one representative of ANS Staff, and any committee member requiring this support (none is anticipated). No payment will be made for time spent by a committee member. The following estimate covers the period from October 1, 1982 through December 31, 1984:

ANS Staff Support (including travel)	\$ 8,350
Travel Expenses for project director	4,000
Total	12,350
G&A (11.43%)	1,400
Total	13,750

2. Document on Radioactive Source Terms

Costs for developing a white paper on radioactive source terms will be shared by other organizations, including the Electric Power Research Institute, U.S. Department of Energy, and organizations who will agree to support their representatives. Costs for accomplishing this function will include all administrative support as indicated in Paragraph C above; reasonable consultation fees for the project director to provide management for the

function; and travel for the project director, representatives of ANS Staff as needed, and any individual involved in developing the document who cannot be supported by his organization. Payment from these grant funds will be made for time spent by any other individual only if not covered by other contributions. The following estimate covers the period from July 1, 1982 through December 31, 1983, but excludes payment for engineering time.

ANS Staff Support (including travel)*	\$ 32,200
Travel Expenses for Individuals	
Involved in Developing Document	72,000
Consulting Fees for Project Director	20,000
Total	124,200
G&A (11.45%)	14,200
Total	\$138,400

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\*This figure does not include estimates for editing, typing, collating, copying, and distributing drafts of the document or related tasks.

### 3. Priority Expenditures

Funds remaining under this grant will be used according to the following priority:

- a. Support to complete publication of the PRA Procedures Guide.
- b. Funds will be set aside to cover the full estimated cost of performing the review function (D.1 above).
- c. Support for development of the white paper on radioactive source terms, to the extent possible with remaining funds. If additional funding is required to complete this part of the project, a subsequent request for modification will be made.