

August 7, 2006

Ms. Dolores Lineback, Project Manager  
U.S. Department of Energy/NNSA/SSA  
P.O. Box 5400  
Albuquerque, NM 87185-5400

SUBJECT: PAR STUDY PEER REVIEW

JOB CODE: J3137

Dear Ms. Lineback:

We request a proposal for performance of the attached statement of work (SOW) under Job Code J3137 for the Nuclear Regulatory Commission (NRC), Office of Nuclear Security and Incident Response (NSIR), Division of Preparedness and Response (DPR). The enclosed SOW details the required work and should be used as the basis for proposal preparation.

### **Cost Proposal**

Use NRC Form 189, "DOE Laboratory Project and Cost Proposal for NRC Work" for cost proposals for basic work orders. The form includes instructions for completion.

Also submit a spending plan as part of your cost proposal. Guidance for completion of the plan is contained in the instructions portion of NRC Form 189.

### **Technical Proposal Content**

At a minimum, the technical proposal must contain the following:

- A discussion to substantiate the laboratory's understanding of the scope of the work.
- A discussion of the laboratory's technical approach to meet the project's objective.
- A discussion of the experience and capabilities of key personnel and the laboratory in performing similar work.
- Identification of key personnel and the number of staff hours that will be committed to complete work (Resumes for key personnel must be included.).
- Identification of administrative support personnel and/or facilities needed to assist professional personnel in completing the work.
- A discussion of any potential organizational conflict-of-interest issues.
- A discussion of anticipated problem areas or deviations from the NRC's SOW.

A DOE-approved proposal must be submitted within 21 calendar days from receipt of the request for proposal (RFP).

This RFP is not an authorization to start work.

The original proposal and two copies should be sent to U.S. Nuclear Regulatory Commission, Attn: R. L. Sullivan, Office of Nuclear Security and Incident Response, Division of Preparedness and Response, Mail Stop O-6H2, Washington, D.C. 20555-0001.

Questions concerning this request should be addressed to Randy Sullivan on (301) 415-1123. Thank you for your assistance in this matter.

Sincerely,

***/RA/ Eric W. Weiss for:***

Nader L. Mamish, Director  
Division of Preparedness and Response  
Office of Nuclear Security and Incident Response

Enclosures:

1. Statement of Work  
cc: Sandia National Laboratories  
Org 6414, Mail Stop 0742  
P.O. Box 5800  
Albuquerque, NM 87185-0736  
ATTN: Ms. Barbara Meloche

A DOE-approved proposal must be submitted within 21 calendar days from receipt of the request for proposal (RFP).

This RFP is not an authorization to start work.

The original proposal and two copies should be sent to U.S. Nuclear Regulatory Commission, Attn: Don A. Johnson, Office of Nuclear Security and Incident Response, Division of Preparedness and Response, Mail Stop O-6H2, Washington, D.C. 20555-0001.

Questions concerning this request should be addressed to Randy Sullivan on (301) 415-1123. Thank you for your assistance in this matter.

Sincerely,

**/RA/ Eric W. Weiss for:**

Nader L. Mamish, Director  
Division of Preparedness and Response  
Office of Nuclear Security and Incident Response

Enclosures:

1. Statement of Work  
cc: Sandia National Laboratories  
Org 6414, Mail Stop 0742  
P.O. Box 5800  
Albuquerque, NM 87185-0736  
ATTN: Ms. Barbara Meloche

DISTRIBUTION:

R. Sullivan, NSIR/DPR  
K. Brock, NSIR/DPR  
E Weiss, NSIR/DPR  
N. Mamish, NSIR/DPR  
DPR Reading File

SISP Review Complete by: Randy L. Sullivan

**ADAMS Accession Number: ML062160355**

OFFICE	NSIR/DPR	NSIR/DPR	BC:NSIR/DPR	DD:NSIR/DPR
NAME	RSullivan *	KBrock *	EWeiss	NMamish
DATE	08/4/06	08/4/06	08/7/06	08/7/06

**OFFICIAL RECORD COPY**

## SCOPE OF WORK FOR OPTIONAL TASK 11 TO THE PAR STUDY

PROJECT TITLE: PAR Study Peer Review

Reference: JOB CODE: J3137

### Introduction

In 2004, the staff initiated a project with Sandia National Labs to review the NRC Protective Action Recommendation (PAR) guidance, contained in Supplement 3 of NUREG 0654, "Criteria for Protective Action Recommendations for Severe Accidents," to assure that it continues to reflect our current state of knowledge with regard to evacuation and sheltering. The project (known as the PAR Study) involves analysis of the relative merit of various new PAR regimens when compared to the existing guidance. The results are documented in a series of pre-decisional letter reports, that are undergoing internal review. Sandia National Laboratories (SNL) is being requested to develop and manage an external peer review.

### Objective

The objective of this request for proposal is to obtain the services of experts external to NRC and the Government Laboratory system to review the PAR Study. The purpose of the peer review is to critically assess the study to improve its technical adequacy through the efforts of recognized experts. It is expected that reviewers will endorse the study in writing, following the resolution of applicable comments.

### Tasks

#### 11.1 Identify and Obtain the Services of Appropriate Experts

SNL will obtain the services of individual experts for review of the PAR Study. It would be acceptable for such arrangements to be obtained from organizations as long as the other requirements of this Scope of Work can be met. The following areas of expertise shall be addressed by the review team:

- Calculation of public exposure from radiological plumes
- Sociology of public response to emergencies
- Nuclear reactor accident radiological source term analysis
- Knowledge of public protective action implementation

The criteria for selecting reviewers shall be developed and provided to NRC for approval. In general, appropriate peer review standards include the following:

- a. It is expected that a small number of peer reviewers (about 2-3) can accomplish the review. Peer reviewers will be selected on the basis of their technical expertise and experience and the disciplines germane to the PAR Study.

Enclosure

- b. Peer reviewers shall not have participated directly in the development of The PAR Study. Peer reviewers are expected to disclose prior technical/policy positions they may have taken on the issues at hand. It is expected that peer reviewers will provide a technical review not biased by an advocacy perspective (either pro or con).
- c. If requested, peer reviewers are expected to disclose their sources of personal and institutional funding (private or public sectors).
- d. Peer reviews are conducted in an open manner except for security related work. However, if applicable, peer reviewers should agree to protect the pre-decisional nature of the pre-publication results. NRC Office of Nuclear Research, OFFICE INSTRUCTION NO. PRM-010, Revision 0, Appendix B "Non-disclosure Agreement for Peer Review of RES Documents/Products," provides an example of a suitable non-disclosure agreement. A similar SNL agreement shall be implemented for all peer reviewers.

## 11.2 Review Draft PAR Study Letter Reports

The peer review group will be given the PAR Study scope of work and the PAR Study letter reports. They will be provided the bibliography and be allowed access to the documents referenced.

The peer review group will review the PAR Study and focus on areas of the study germane to their area of expertise. The objective of the review is to improve the accuracy of the study and identify areas for improvement. However, the study shall be reviewed as implementing the scope of work, rather than how the scope of work could be improved. The adequacy of the techniques implemented should be judged in context of the study's objectives. For example, there are many codes for estimating offsite doses, but MACSS2 is used in the PAR Study. Reviewers should determine if MACSS2 was used appropriately, rather than identify other dose calculation tools that could have been used. Another example is that the PAR Study is a national level study and does not use site specific data. It is intended that the conclusions be amenable to site specific implementation. Reviewers should determine if the study accurately represents national level issues in a manner that can be translated into site specific implementation, rather than recommend that multiple individual site specific studies be performed.

The accidents that would require implementation of PARs are very unlikely events that may never occur. The emergency preparedness (EP) planning basis requires that a spectrum of accidents be considered in the design of emergency response. Uncertainty is inherent in technical work, and in many cases individual studies do not produce conclusive evidence. The PAR Study assesses the likely outcome of unlikely events and there is a level of uncertainty. However, general trends were used to predict outcomes in a more systematic manner than the that used for the guidance under review. The PAR Study is intended to be an evolutionary improvement rather than a definitive assessment. This perspective should be considered by the reviewers as they provide advice on reasonable judgments that can be made from the technical results.

In addition to the general review of the study, the reviewers should consider the following:

- Does the technique of the PAR Study reflect the relative merits of the various PAR regimens?
- Can the conclusions be translated into site-specific implementation guides?
- Do the conclusions represent an accurate assessment of the analyses?

#### 11.3 Document Review Findings

Each member of the peer review group will provide comments relevant to the assessment of the work performed, document areas for improvement in the PAR study letter reports, as well as areas of agreement. These will be submitted to SNL and when appropriate forwarded to NRC. The members will be available to discuss their review findings via a teleconference

#### 11.4 Resolution of Review Findings

Each member of the peer review group will be available for as many as two teleconferences to discuss resolution of their findings.

#### 11.5 Documentation of Peer Review

The peer review efforts will be documented in a letter report. Comments that are not resolved and the reasons for disagreement will also be documented in the letter report. Pending resolution of relevant comments, the members are expected to endorse the PAR Study. The peer review effort will also be documented in the PAR Study final report, but that is addressed in task 10.

NRC encourages the publication of the scientific results from NRC-sponsored programs in refereed scientific and engineering journals, as appropriate. If any of the reviewers propose to publish in the open literature or present the information at meetings prior to the publication of the PAR Study, approval of the proposed article or presentation should be obtained from the NRC. The NRC project manager shall either approve the material as submitted, approve it subject to NRC-suggested revisions, or disapprove it. In any event, the NRC project manager may disapprove or delay presentation or publication of papers on information that is subject to Commission approval that has not been ruled upon or that has been disapproved. (Additional information regarding the publication of NRC-sponsored research is contained in NRC Handbook 3.8.)