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Leslie A. Peeters  
Repository Projects Branch  
Division of Waste Management  
U.S. Nuclear Regulatory Commission  
7915 Eastern Avenue  
Silver Spring, MD 20910

Dear Ms. Peeters:

Enclosed you will find the final program plan for FIN A-1165, Task 2, "Monitor and Review Performance Aspects of DOE, Other National, and International Waste Management Programs." I have incorporated the changes that we discussed on the telephone yesterday.

Please feel free to call me or Bob Cranwell if you have any questions.

Sincerely,

*Regina Hunter*

Regina L. Hunter  
Waste Management Systems  
Division 6431

Enc.

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## Program Plan

Task: Monitor and Review Performance Aspects of DOE,  
Other National, and International Waste  
Management Programs

### 1. Abstract

In coordination with NRC, this task will monitor recent and ongoing non-NRC research and development programs for models, codes, and performance assessment techniques. The agencies to be monitored are DOE, EPA, their contractors, and other major national and international programs.

The major product of this task will be informal reports on performance assessment documents. The reports will advise the NRC about the technical quality, sufficiency, and relationship to the NRC program of the reviewed documents. Through these reports, NRC will be kept informed as to what other programs are doing so that NRC can avoid duplication if possible, benefit from data and insights others may have, and provide DOE direction.

### 2. Background

This task represents a continuing effort for NRC in coordinating information on non-NRC programs to assist in the licensing process. The information acquired under this task can serve to give some direction to NRC programs to assure that all data and techniques required for performance assessment are available for site evaluation.

### 3. Work to be Performed

In coordination with NRC, SNLA will monitor recent and ongoing non-NRC research and development programs for models, codes and performance assessment techniques. SNLA will review reports, models, codes, and assessment techniques identified from each program. This will be accomplished by routing appropriate reports, documentation, etc. to staff members or on-site, long-term subcontractors with expertise in a given area. Usually at least two individuals will review a given document. The comments of each reviewer will be included to assure a well balanced and complete evaluation of the projects. The review will not attempt to comment on the internal integration of DOE or other programs. NRC is mainly interested in a review of performance assessment products and a description of the performance assessment program. To facilitate this process, Sandia will participate in, recommend, and sponsor program review meetings and trips to visit field sites and contractor facilities in coordination with NRC.

An important element of the review process is a determination of where each part of every program fits into the overall effort to provide tools for integrated performance assessment, regulatory development, guidance for site characterization, and licensing. The nuclear waste disposal process in geologic media has been broken down into five broad areas:

- waste form/package
- engineered repository design
- site and media characterization
- transportation (with direct bearing on interfacing with other areas)
- performance assessment

The review will identify areas where NRC and non-NRC programs

- 1) may require additional work to interface effectively (e.g., problems in adapting DOE data for use with NRC codes or models),
- 2) may require further work to resolve conflicting or contradictory program results,
- 3) indicate significant unnecessary duplication of effort,
- 4) may require new research efforts to cover previously neglected areas which could be important,
- 5) may cause difficulties in timing of other programs or of the licensing effort as a whole,
- 6) may require validation work (e.g., NRC may need to independently validate DOE models, data, etc.).

Computer codes, models, and assessment techniques, both completed and under development in non-NRC funded efforts, will be evaluated to determine their applicability, technical quality, sufficiency and relationship to the NRC program.

Reports from the NMSS contract, FIN B-6985-1, for "Benchmarking of Computer Codes and Licensing Assistance" will be used to assist Sandia in evaluating non-NRC developed codes and models.

SNLA will prepare informal reports on non-NRC funded programs and submit them to the NRC PM. SNLA will not critique the DOE performance assessment work being carried out at its own facility. However, for completeness, this work will be included in the overview and description portions of the reports.

The progress of Task 2 will be reported on a monthly basis to the NMSS Project Manager in the form of monthly letter reports.

#### 4. Costs

Cost information is given in Item 17, Schedule 189 for NRC FIN A-1165. The cost for each review will be agreed upon in advance by the NRC PM and the SNLA Principal Investigator.