



Department of Energy

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U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

NNWSI PROJECT/NRC PERFORMANCE ASSESSMENT TECHNICAL MEETING

An agenda for the subject meeting, scheduled for October 1-3, 1985, is enclosed. We believe the agenda reflects the discussions during the August 15 conference call between representatives of the NRC and NNWSI Project staffs. During that call, it was agreed that a three-day meeting, rather than the four days originally envisioned, will be sufficient.

Please contact J. W. Braithwaite of Sandia National Laboratories regarding the enclosed agenda.

for Don F. Wickhull
Donald L. Vieth, Director
Waste Management Project Office

WMPO:JSS-1672

Enclosure:
As stated

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NRC AND NNWSI PROJECT PERFORMANCE ASSESSMENT
TECHNICAL MEETING

First Day

- 8:00 Welcomes, introduction of those in attendance
- 8:10 I. Introduction to NNWSI Project performance assessment (NNWSI)
- 8:40 II. Site-scale flow (NNWSI)
- 10:40 Break
- 11:00 III. Waste
- 12:00 Lunch
- 1:00 IV. Assessment of the total repository system (NNWSI)
- 3:00 Break
- 3:15 V. Code development and certification (NNWSI presentation followed by dialogue)
- 4:30 Adjournment

Second Day

- 8:00 VI. NRC views on the role of performance assessment (NRC)
- VII. Methods for constructing a cumulative complementary distribution function (NRC presentation followed by dialogue)
- VIII. Performance allocation (NRC presentation followed by dialogue)
- 12:00 Lunch
- 1:00 IX. Special topic 1: Guidance and sensitivity studies (NNWSI presentation followed by dialogue)
- 2:15 X. Special topic 2: Environmental studies (NNWSI presentation followed by dialogue)
- 2:30 XI. Discussion of topics held for discussion (dialogue)
- 3:15 Break
- 3:30 XII. Presentation of preliminary calculations (NNWSI presentation followed by dialogue)
- 5:30 Adjournment

Third Day

- 8:00 XIII. Formulation of topics for future workshops (dialogue)
- 10:00 XIV. Preparation of meeting summary (separate meetings of participants)
- 11:15 XV. Reconvene to finalize summary
- 12:30 Adjournment

NRC AND NNWSI PROJECT PERFORMANCE ASSESSMENT
TECHNICAL MEETING

First Day

Welcomes, introduction of those in attendance 8:00

I. Introduction to NNWSI Project performance assessment (NNWSI) 8:10

[This presentation briefly previews the following four agenda items by explaining their purposes. It then discusses topics that will be useful in understanding the NNWSI plans; these topics include the tasks that the NNWSI performance assessment must do, the way that work fits into the overall plans of the project through the NNWSI issues hierarchy, and the general schedule that governs the work.]

II. Site-scale flow (NNWSI) 8:40

[This presentation has two purposes: (1) it furnishes background information for understanding the site-specific issues that the NNWSI performance assessment must deal with, and (2) it explains the conceptual model of Yucca Mountain from the specific viewpoint of performance assessment. In filling the second purpose it will not review the details of the conceptual model; those details are covered at hydrology workshops. Among the topics to be covered are flow in the unsaturated and saturated zones, a brief review of the data and studies that have led to the current understanding, a description of the mathematical formulation currently considered appropriate for performance assessment, brief descriptions of the available computational tools, discussion of areas of study that will require special attention, and plans for future modeling. Extended dialogue with the meeting participants is not the goal of this presentation; the participants will be asked to make note of topics on which they desire extended discussion, and time will be allotted on the second day for those discussions.]

Break 10:40

III. Waste-package release and near-field performance (NNWSI) 11:00

[This presentation has two purposes: (1) it furnishes background information for understanding the site-specific issues that the NNWSI performance assessment must deal with, and (2) it explains the concepts that performance assessment will use in determining the proper way to describe the near-field behavior of the repository. Topics to be presented include descriptions of the task and of the tools available for predicting the behavior, discussion of areas of study that will require special attention, and plans for modeling. Extended dialogue with the meeting participants is not the goal of this presentation; the participants will be asked to make note of topics on which they desire extended discussion, and time will be allotted on the second day for those discussions.]

First Day (Cont'd)

Lunch 12:00

IV. Assessment of the total repository system (NNWSI) 1:00

[This section explains how NNWSI intends to assess the postclosure performance of the repository as a whole, drawing on the more detailed studies summarized in the two preceding presentations. Topics to be presented include the mathematical formulation underlying the modeling and a description of the task to be done, a brief description of the available calculational tools, discussion of areas of study that may require special attention, and plans for modeling. Scenario development and analysis will also be discussed. Extended dialogue with the meeting participants is not the goal of this presentation; the participants will be asked to make note of topics on which they desire extended discussion, and time will be allotted on the second day for those discussions.]

Break 3:00

V. Code development and certification (NNWSI presentation followed by dialogue) 3:15

[This presentation will describe the need for special codes and the physical processes that the NNWSI special codes will treat. It will discuss the general topics of verification and validation of computer codes and the special quality assurance needs of the codes. The participants will be encouraged to discuss these topics.]

Adjournment 4:30

Second Day

VI. NRC views on the role of performance assessment (NRC) 8:00

[Topics to be covered in this presentation include plans for future technical papers, the level of detail and thoroughness to be required of license applicants, the formulation of a list of issues to be settled during the licensing process (if such a list is to be the basis for working with performance assessment).]

VII. Methods for constructing a cumulative complementary distribution function (NRC presentation followed by dialogue)

VIII. Performance allocation (NRC presentation followed by dialogue)

Lunch 12:00

IX. Special topic 1: Guidance and sensitivity studies (NNWSI presentation followed by dialogue) 1:00

[The NNWSI will present discussions of the general topic of guidance furnished by performance assessment to design and site characterization, a summary of the first NNWSI effort to use sensitivity analysis to guide site characterization (the data-priority study), and a brief review of tools for sensitivity analyses. A dialogue on these points will be encouraged.]

X. Special topic 2: Environmental studies (NNWSI presentation followed by dialogue) 2:15

[This brief discussion will cover the expected role of performance in predicting environmental effects for NEPA documents and the possible role in predicting them for the SAR.]

XI. Discussion of topics held for discussion (dialogue) 2:30

[The participants will discuss the topics noted for further discussion during agenda item II, III, and IV.]

Break 3:15

XII. Presentation of preliminary calculations (NNWSI presentation followed by dialogue) 3:30

[The NNWSI Project will review selected parts of the set of preliminary calculations by Sinnock, Lin, and Brannen. The presentation has two purposes: (1) to present important concepts obtained from an early attempt to bound the post-closure behavior of a repository at Yucca Mountain and (2) to allow meaningful discussion of the fundamental issues underlying bounding calculations in general. About one hour of presentation and one hour of dialogue is expected.]

Adjournment 5:30

Third Day

XIII. Formulation of topics for future workshops (dialogue) 8:00

[An important outcome of this general, introductory meeting will be a list of the topics on which future, more-detailed dialogues between the NRC and the NNWSI Project are desirable.]

XIV. Preparation of summary (separate meetings of participants) 10:00

XV. Reconvene to finalize summary 11:15

Adjournment 12:30