

FPPA AND CONVO REPORTS

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FEB 14 1989

MEMORANDUM FOR: Mary H. Mace, Contracting Officer
Division of Contracts and Property
Management, ARM

FROM: Joseph O. Bunting, Chief
Engineering Branch
CNWRA Program Manager
Division of High-Level Waste
Management, NMSS

SUBJECT: RESPONSE TO FAST PROBABILISTIC PERFORMANCE ASSESSMENT (FPPA)
AND CONVO EVALUATION AND ENHANCEMENT PLAN REPORTS

We have reviewed the subject reports and agree with the conceptual approach recommended by the Center for the further development of CONVO incorporating the FPPA probabilistic method. Before agreeing on the implementation of the recommended concept, please instruct the Center to outline recommended milestones, schedules and costs in the Year Two EBS Operations Plan, as a part of the five year recommendation for the entire EBS technical program.

Attached are staff comments on the two reports for the Center's consideration in formulating their recommendations.

Original Signed By

Joseph O. Bunting, Chief
Engineering Branch
CNWRA Program Manager
Division of High-Level Waste
Management, NMSS

Enclosure

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If you have any questions on our evaluation and recommendation, please discuss with me.



Kien C. Chang
Engineering Branch, HLEN

Enclosure: As stated

cc: R. Weller D. Brooks
 J. Bradbury J. Buckley
 R. Codell J. Trapp
 P. Brooks

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Comments on "Fast Probabilistic Performance Assessment (FPPA) Methodology Evaluation"

1. Page 1, last paragraph for section 1.1. This paragraph states that "Technical risks are assessed in the report. Nowhere in this report do we find risks addressed".
2. Page 2 §1-2-4. "Recommendation for future Direction". "Recommendation" is not appropriate in "Introduction" chapter.
3. Page 2 §1-2-3. The incorporation of this section in this chapter gives the impression that the authors have predetermined the use of FPPA before completing work discussed in Chapter 2.
4. Page 2 §1-2-4. "Probabilistic Framework Development" is for sensitivity studies. Work on model development should precede this.
5. Page 4 last sentence. Comparison of efficiency is probably more appropriate because in the example used, it is not possible to determine which result is more "accurate". Convergency of results from both methods, namely Monte Carlo and FPPA, does not necessarily imply that the result of one is more representative of the true solution.
6. Chapter 2 evaluates FPPA by comparing it with Monte Carlo Method for efficiency. The latter is never known nor intended to be efficient. It is more meaningful to compare it with other methods which are used for that purpose e.g. Latin Hypercube Method.
7. The FPPA portion of Chapter 3 is not appropriate at this stage of the program since NRC approval must be obtained. However, continuing development of CONVO modules for tuff is relevant.
8. The following factors are not addressed in this report:
 - a. Comparative return in effort on FPPA versus process modeling in addressing uncertainties in waste package (EBS) failure and radionuclide release from the EBS.
 - b. Development cost and schedule for FPPA/CONVO and CONVO code modification.
9. The continuation of the use of BWIP problems to demonstrate FPPA indicates the seriousness of lack of process models for YUCCA Mountain processes.