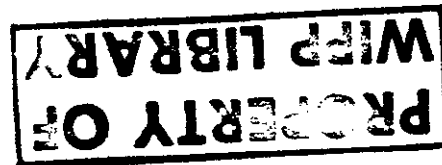




U.S. DEPARTMENT OF ENERGY

DOE-WIPP-86-010



WASTE ISOLATION PILOT PLANT

DESIGN VALIDATION
FINAL REPORT

APPENDICES

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APPENDIX A

DOE STIPULATED AGREEMENT WITH STATE OF NEW MEXICO (PARTIAL)

APPENDIX A

STIPULATED AGREEMENT (PARTIAL)

The Department of Energy (DOE) and the State of New Mexico on July 1, 1981, entered into a Stipulated Agreement to perform certain work to validate the design of the WIPP underground facilities. Proposals for performing this work were identified in two parts: 1) tasks necessary to detail plans and rationale for the proposed design validation assessment, and 2) tasks necessary to prepare a report providing data, analysis and interpretation of the results of design validation assessment. The scope of work associated with these two DOE proposals included in the Stipulated Agreement are given below:

DOE Proposal to Prepare the Plan for Design Validation

1. Assumptions

The following assumption was made to define the tasks necessary to fulfill the requirements of this request.

- a) The plan will primarily focus on the development of test panels for observing rock mechanics behavior.

2. Proposed Work

The tasks to be completed to provide the required plan include:

- a) Review of the current test plans.
- b) Establishment of objectives and needs of the test plan, based on past analysis, material property data, uncertainty in design assumptions, the behavior, time period for test, etc.
- c) Establishment of the rationale behind the test plan.

- d) Establishment of priorities for various components of the test.
- e) Preparation of the steps in design, analysis, monitoring and review of the test program.
- f) Review of the consistency of the proposed plan with the objectives and rationale for the test.
- g) DOE will provide an individual to coordinate communications on test planning and experiment progress with the state.

3. Expected Results

The anticipated results include a more detailed test plan with appropriate technical rationale, and justification to perform to construct a test panel within the non-waste experimental area. The test panel may consist of four rooms separated by pillars. The dimensions of each will be similar to those to be used in the WIPP waste storage area. The results from the test should validate key assumptions for design regarding rock mass behavior. The test results will be of particular interest for predicting long term behavior of room closures.

4. Merits of the Proposed Plan

The proposed plan will provide a defensible, rational plan for the design test panel. The actual tests should significantly enhance the level of confidence and credibility in the resulting design.

5. Schedule

The draft of the proposed plan will be submitted to the State of New Mexico by the end of November 1981. [Revised to the end of October 1982 at a joint meeting on September 21, 1982, between DOE, EEG, et al]

DOE Proposal for the Proposed Report

1. Assumptions

The following assumption was made with regard to the proposal to provide the subject report:

- a) The impact of SPDV Design Validation Experiment results on basic design assumptions will be the focus of this report, and validity of the actual designs in all its aspects will not be emphasized.
- b) If all the tests can not be completed within the present schedule, an interim report summarizing the status of experiments may be provided.

2. Proposed Work

The following tasks will be undertaken as a part of the proposed work.

- a) The experimental data will be obtained and deciphered.
- b) A basic data package will be prepared.
- c) Analysis of data for the rock mechanics parameters will be made.
- d) The results will be evaluated against the basic design assumptions.
- e) An overall evaluation of the impact of any differences between the assumed and observed design parameters will be made.
- f) A report summarizing the above steps will be prepared.



3. Work Not Proposed

The proposed work will not include validation/verification of the designs, since the verification/validation would require further steps being carried out separately such as checking of the design calculations and drawings.

4. Expected Results

Results of the experiments will likely demonstrate the validity of the basic design assumptions regarding rock mechanics parameters. It could also possibly suggest a review of these assumptions and their overall impact on the design development.

5. Schedule

A draft of the proposed topical report will be provided by the end of March 1983*. If significant experimental results are not available prior to that time, an interim status report will be provided, and a draft of the entire report will follow as soon as reasonably possible.

*Revised to the end of March 1983 at a joint meeting on September 21, 1982, between DOE, EEG, et al.

