

QUALITY ASSURANCE TASK PLAN NUMBER 6

SUBTASK 1.5 UPDATE

TECHNICAL REPORT NUMBER 8

THE USE OF ENVIRONMENTAL TRACERS FOR THE ESTIMATION OF RECHARGE: A SUMMARY

WATER, WASTE AND LAND, INC.

APRIL, 1987

APPROVED:
(TASK MANAGER)

Tom Sniff

DATE: 5-12-87

APPROVED:
(SUBCONTRACTOR MANAGEMENT)

Lyle A Davis

DATE: 5/12/87

APPROVED:
(NWC QA DIRECTOR)

DATE:

APPROVED:
(NWC PROJECT MANAGER)

DATE:

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WATER, WASTE AND LAND, INC.
NEVADA NUCLEAR WASTE STORAGE INVESTIGATIONS
TASK DESCRIPTION SUMMARY #3

1.0 TASK TITLE: Analysis of Data Available for the Evaluation of Flow and Transport at Yucca Mountain

2.0 OBJECTIVES:

The primary objective of this report is to review methods used to develop the existing data base for Yucca Mountain. Results will be obtained and the data will be statistically analyzed for comparison with published DOE parameters.

3.0 TECHNICAL APPROACH:

Much of the data which will be used in this task is maintained in a computerized data base as part of Subtask 1.2. These data will be subjected to various statistical analyses to obtain estimates independent of those provided by DOE regarding statistical distributions of matrix hydraulic conductivity, matrix porosity, etc. In addition, in those cases where sufficient data are available for analyses, we will perform independent data analyses to estimate the parameters of interest. This will provide an independent assessment of techniques which have been used by the DOE.

4.0 PRODUCT DESCRIPTION:

The product which will be delivered will consist of a Technical Report which describes the results of the analyses of data. It will include a complete description of the methods used and will compare those methods with those utilized by the DOE in their analyses, if that information is available. In addition, the report will provide recommendations regarding the collection of additional data and will attempt to provide some indication of the levels of uncertainty which currently exist with regard to existing data.

5.0 TASK ASSIGNMENTS:

Thomas Sniff has been assigned primary responsibility for this task. He will be in charge of reviewing the data base and managing the data analyses which will be performed. He will also be responsible for writing the draft report. Managerial and Quality Assurance activities will be coordinated by Lyle Davis, NNWSI Project Manager. Prior to issuance, the draft report will be reviewed by Dr. David McWhorter, NNWSI Project Director.

6.0 MANPOWER RESOURCES:

The following summarizes our estimates of manpower resources required to complete the proposed task:

<u>Title</u>	<u>Name</u>	<u>Hours</u>
Project Director	David B. McWhorter	8
Sr. Engineer	Lyle Davis	40
Engineer	Thomas Sniff	100
Clerical	Donna Loomis	20
Draftsman	Rodney Grebb	20

7.0 SCHEDULE:

This report is currently scheduled to be issued as part of the May 31, 1987, report update for Subtask 1.5. However, to insure that two other reports scheduled for release at that time (Recharge Review as outlined in TDS Number 1 and Tracer Review as outlined in TDS Number 2) are completed on time, it is anticipated that this report will be issued later than May 31. The schedule for the report is summarized in the following:

May 20, 1987 Complete data analyses

May 31, 1987 First draft of final report completed

June 5, 1987 Senior Engineer review of draft report

June 8, 1987 Second draft of final report completed

June 10, 1987 Project director review of report

June 15, 1987 Final Draft Report issued to NWC for review and submission to the NRC.

8.0 QUALITY ASSURANCE TASK PLAN:

This section of the Task Description Summary (TDS) is dedicated to a description of Quality Assurance (QA) activities envisioned during performance of this task. It is essentially a modification of the QA Task Plan format specified previously by NWC and includes only those items which are not specifically covered in the previous sections. This task has been designated as QA Task Plan Number 7.

8.1 QA APPLICABILITY

This task has been assigned a QA level of 1. This QA level was assigned based on the assumption that the technical reports issued under Subtask 1.5 may be used as the bases for various decisions regarding site characterization. QA records for this task will include:

1. Task Description Summary (including QA Task Plan)
2. Calculation, spread sheets, and graphics used in the analyses
4. Initial Draft Report
5. Check-list of QA activity
6. Draft Final Report
7. NWC/NRC Comments Regarding Draft Final Report
8. Final Report
9. Completed Record of Report/Analysis Review Form

8.2 DATA AND DOCUMENTATION HANDLING PROCEDURES

Records of the data include the original document, a hard copy of the original data, a hard copy of the data as it appears in the data base, and magnetic media containing the data base. Files containing the hard copies of the data, as well as the magnetic media and original documents remain at the offices of Water, Waste and Land, Inc.

8.3 DATA REDUCTION, VALIDATION, AND REPORTING PROCEDURES

A computerized data base is available as part of the Subtask 1.2 work. This data base has been subjected to Level 1 QA procedures. It will not be necessary, therefore, to review the quality of the data contained in that data base. Additional data which has been received since the last update of our 1.2 report will be added to the data base in a manner consistent with the QA procedures for Subtask 1.2. In addition, any other data which is deemed pertinent to this specific task will be placed in a computerized data base for future reference. After completion of entry, the data base will be printed and

checked the original publication from which the data were obtained. A complete listing of the data base which is not a part of the Subtask 1.2 data base will be included as part of the final report.

8.4 PERFORMANCE AUDITS

A performance audit will be performed when the first draft of the technical report is completed.

8.5 ASSESSMENT PROCEDURES FOR DATA/REPORT ACCEPTABILITY

The draft technical report will undergo management review for adequacy of the topic coverage and overall responsiveness to contractual requirements.

8.6 CORRECTIVE ACTION

Should corrective action be indicated by any of the QA procedures and reviews, personnel responsible for a given task will be responsible for determining the nature of the corrective action, subject to both management and QA review. All corrective action will be documented.

8.7 QA REPORTS TO MANAGEMENT

The QA file will be available for management review at the end of the performance audit and at the completion of the task. A task plan will be provided. In addition, QA activities related to this task will be listed in monthly and annual summary QA reports.

8.8 TASK PLAN REVIEW AND APPROVAL

Level 1 and 1-A task plans shall be reviewed and approved prior to issuance by: Task Manager, Subcontractor Management, NWC QA Director, and NWC Project Manager. Approval signatures and dates appear on the following page.