NYE County NWRPO -Technical Data Report

RID No.	Transmitter	Org.	Receiver	Org.	Key word1	Title/Description
4635	Hammermeister	Nye	QARC	Nye	AVYM	An Evaluation of Some Assumptions in the 1997 Death Valley Regional Groundwater Flow System Model Using Analyses of Groundwater Flow in the Amargosa Valley and Yucca Mountain Areas, Nye County, Nevada, June 2001,

1

Doc. Date 6/1/2001 **General Doc. Type** QA Program Doc **Keyword2** DVRFS

Entry Date 11/21/2001 **Detailed Doc. Type** Technical Report **Keyword3** Transient and

Data Originator Preparer
Multimedia Environmental Technology, Inc.

Title of Data
An Evaluation of Some Assumptions in the 1997 Death Valley Regional Groundwater Flow System Model Using Analyses of Groundwater Flow in Amargosa Valley and Yucca Mountain Areas, Nye County, Nevada. NWRPO-2001-02.

Description of Data
This record contains a hard copy and an electronic file of the subject report. It describes methods and results for the the following: 1. The extraction and testing the model for the Amargosa Valley/Yucca Mountain (AVYM) area from the larger DOE Death Valley Regional Groundwater Flow System (DVRFS) model. 2. An evaluation of 50 years of water level data to determine evidence for a steady state or transient flow system. 3. An evaluation of the effect of alluvial channel width and hydraulic conductivity contrasts between alluvium and surrounding sediments on simulated vs. measured hydraulic heads using both steady state and transient state modeling modes.

Data Collection Method
MODFLOWP was used to conduct transient and steady state simulations on the AVYM model that was extracted directly from the larger DVRFS groundwater model. Alluvial channel width and hydraulic conductivity were varied to determine the sensitivity of hydraulic head outputs to these parameters.

Data Location(s)
The area modeled consisted of the Amargosa Valley/Yucca Mountain (AVYM) region.

Data Collection Period(s)
1947 -1997

Data Source(s)
Fifty years of AVYM water level data were obtained from state and federal sources to evaluate evidence for transient or steady state conditions. The grid, hydraulic parameters, and conditions (including input and output files) of the DVRFS were provided by the U.S. Geological Survey in digital format. U.S. Geological Survey reports on MODFLOWP and the DVRFS model including: 1. Hill, M.C. 1992. A Computer Program (MODFLOWP) for Estimating Parameters in a Transient Three-Dimensional, Groundwater Flow Model Using Non-Linear Regression. Open File Report 91-484. Denver, CO. U.S. Geological Survey. 2. D'Agnese, F.A.; Faunt, C.C.; Turner, A.K.; Hill, M.C. 1997. Hydrogeological Evaluation and Numerical Simulation of the Death Valley Regional Groundwater Flow System, Nevada and California, Using Geoscientific Information Systems. Water Resources Investigations Report 96-4300. Denver, CO., U.S. Geological Survey.

Data Censoring
None

Data Processing
Data processing is described in detail in reports listed under "Data Sources".

Data Limitations
Differences between transient simulation results and average water levels may in part be due to errors in average water level data and/or errors in calibrated apparent transmissivity values assigned to major aquifers. Reasons for water level errors may include: 1. Different data sets were used for the 5 decades of data compared. 2. Water levels were measured in different aquifers and at various depths within each aquifer. 3. Data in some cases are from different groundwater basins. 4. Data used were not checked against original citations. 5. Exact coordinates were not available for many wells.

Governing QA Docs.
QAP-3.1, QAP-3.2

Frequency of Transmittal
One time only

NYE County NWRPO -Technical Data Report

RID No.	Transmitter	Org.	Receiver	Org.	Key word1	Title/Description

Direct Questions About Data To- Nye County QA Records Center