NYE County NWRPO -Technical Data Report

RID No.	Transmitter	Org.	Receiver	Org.	Key word1	Title/Description
6033	Hammermeister	Nye	QARC	Nye	ventilation	Coupled Hydrothermal-Ventilation Studies for Yucca Mountain Annual Report for April 2002 - March 2003, NWRPO-2003-05, December 2003, Grant No. DE-FC28-02RW12163 (includes review documentation)

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Doc. Date 12/1/2003 **General Doc. Type** Report **Keyword2** modeling

Entry Date 1/14/2004 **Detailed Doc. Type** Annual Report **Keyword3** Multiflux

Data Originator Preparer
George Danko

Title of Data
Coupled Hydrothermal-Ventilation Studies for Yucca Mountain Annual Report for April 2002 - March 2003, NWRPO-2003-05, December 2003

Description of Data
This report summarizes the results of the coupled ventilation-hydrothermal studies conducted to support the evaluation of the design and performance of the Department of Energy's proposed high level radioactive waste repository at Yucca Mountain, Nevada. This work was performed during the period of April 15, 2002 through March 31, 2003, by Dr. George Danko, Professor, University of Nevada, Reno under contract to Nye County, Nevada. Dr. John Walton, Professor, University of Texas at El Paso, also under contract to Nye County, provided an independent numerical code verification test problem and results; and performed technical review of the work.

Data Collection Method
MULTIFLUX, a fully coupled, hydrothermal ventilation model and software code has been developed and used to model the flow of heat, moisture, and air in a conceptual design of a high-level underground nuclear waste repository at Yucca Mountain, NV.

Data Location(s)
MULTIFLUX was configured to simulate ventilation in the Department of Energy's conceptual repository design, according to the BSC (Bechtel SAIC Company), 2002, "Ventilation Model Report," (ANL-EBS-MD-000030 REV 01D). The output data from MULTIFLUX simulation was collected at University of Nevada, Reno.

Data Collection Period(s)
4/15/02 to 3/31/03

Data Source(s)
The calculations are based on the input configuration for the conceptual repository design and the input data used by BSC (Bechtel SAIC Company). 2002. "Ventilation Model Report". ANL-EBS-MD-000030 REV 01D draft. Las Vegas, Nevada: Bechtel SAIC Company, ACC.

Data Censoring
N/A

Data Processing
A procedure (Numerical Transport Code Functionalization) is used in MULTIFLUX to develop a model for the representation of the computational results of the porous media numerical transport code (NUFT). Typically, 4 to 6 NUFT runs are used for a MULTIFLUX model calculation with three complete iterations. The NUFT results are post-processed using the NTCF modeling technique used in MULTIFLUX.

Data Limitations
Assumptions are stated in the description of each numerical modeling task included in the report. The use of results must be limited to the conditions stated in the report. The results must be used within the scope of the assumptions.

Governing QA Docs.
QAP-3.1 Rev. 0, QAP-3.2 Rev. 1

Frequency of Transmittal
One time only

Direct Questions About Data To-
Nye County QA Records Center