NYE County NWRPO -Technical Data Report

RID No.	Transmitter	Org.	Receiver	Org.	Key word1	Title/Description
7290	Gilmore	Nye County NWRPO	QARC	Nye	vent	professional paper titled "Water, Vapor, and Salt Dynamics in a Hot Repository" submitted to the Fall 2006 Materials Research Society Meeting (Symposium NN)

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Doc. Date 7/16/2007	**General Doc. Type** Publication		**Keyword2** MULTIFLUX
Entry Date 8/2/2007	**Detailed Doc. Type** Professional Paper		**Keyword3** THERMOHYDR

Data Originator Preparer
D. Bahrami, G. Danko; J. Walton

Title of Data
Professional paper, "Water, Vapor, and Salt Dynamics in a Hot Repository", Fall 2006 Materials Research Symposium. Davood Bahrami and George Danko, University of Nevada, Reno; John Walton, University of Texas at El Paso.

Description of Data
The purpose of this paper is to report the results of a new model study examining the high temperature waste disposal concept at yucca Mountain using MULTIFLUX, an integrated in-drift- and mountain-scale thermal-hydrologic model. The work was performed by Dr. George Danko, Professor, University of Nevada, Reno, under contract to Nye County, Nevada. Davood Bahrami participated in the numerical modeling work and the preparation of the report. The record package also includes the review documentation

Data Collection Method
MULTIFLUX, a fully coupled, hydrothermal ventilation model and software code was 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)
Location   MULTIFLUX was configured to simulate ventilation in the Department of Energy's conceptual repository design, according to the BSC (Bechtel SAIC Company), 2004b, "Multiscale Thermohydrologic Model ," prepared by Bechtel SAIC Company, LLC. ANL-EBS-MD-000049 REV 01. Yucca Mountain Project, Las Vegas, Nevada.

Data Collection Period(s)
4/06 to 12/06

Data Source(s)
The calculations are based on the input configuration for the conceptual repository design and the input data used by BSC, 2004b. "Multiscale Thermohydrologic Model ," prepared by BSC, LLC. ANL-EBS-MD-000049 REV 01. Yucca Mountain Project, Las Vegas, Nevada.

Supporting Data: "Coupled Hydrothermal-Ventilation Studies for Yucca Mountain", Annual Report for period April 2002 through March 2003 (RID 6033); "Coupled, Multi-ScaleThermohydrologic-Ventilation Modeling with MULTIFLUX" (RID 6216); "Heat and Moisture Flow Simulation with MULTIFLUX" (RID 6216); "Coupled Hydrothermal-Ventilation Studies for Yucca Mountain", Annual Report for period April 2004 through March 2005 (RID 6929).

Data Censoring
none

Data Processing
Numerical Transport Code Functionalization (NTCF) procedure 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-3.2 Rev. 2, QAP-3.1 Rev. 1

Frequency of Transmittal
one time only

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Direct Questions About Data To-   NWRPO QA Records Center