NYE County NWRPO -Technical Data Report

RID No.	Transmitter	Org.	Receiver	Org.	Key word1	Title/Description
4865	Hammermeister	Nye	QARC	Nye	AVYM	Nye County Nuclear Waste Repository Project Office ISIP: Preliminary Evaluation of a Modified Conceptual Design of a Naturally-Ventilated Repository, February 2002, NWRPO-2002-02, prepared by Multimedia Environmental Technology, Inc.

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Doc. Date 2/1/2002 **General Doc. Type** Report **Keyword2** DVRFS

Entry Date 3/7/2002 **Detailed Doc. Type** Technical Report **Keyword3** Transient and

Data Originator Preparer
Multimedia Environmental Technology, Inc.

Title of Data
Nye County Nuclear Waste Repository Project Office Independent Scientific Investigations Program: Preliminary Evaluation of a Modified Conceptual Design of a Naturally Ventilated Repository. February 2002. NWRPO-2002-02.

Description of Data
This record contains a hard copy and an electronic file of the subject report. It describes the following: 1. The major components of a permanently ventilated repository (PVR). 2. The numerical model setup and required input parameters. 3. The results of simulations to evaluate several alternative conceptual designs for the PVR. 4. Proposed future work.

Data Collection Method
Atmospheric TOUGH2 (A-TOUGH2) was used to simulate the temperatures and moistures resulting from variations in the PVR conceptual design. A brief description of the theory and documentation for A-TOUGH2, together with verification and validation runs, is presented in Appendix A of the subject report.

Data Location(s)
The area modeled overlays the 2001 DOE conceptual baseline footprint design for the repository.

Data Collection Period(s)
2000 - 2002

Data Source(s)
Input data was obtained from numerous DOE 2000 and 2001 documents referenced in the subject report. Simplifications were made and averages were calculated for some of the material properties to facilitate computations.
Supporting conceptual design and modeling studies include 1996 and 1998 Nye County annual reports (RIDs 499 and 1222) and the following U.S. patent documents: 1. Montazer, P. 1996. Methods and Apparatus for Generating Electrical Energy from Nuclear Waste while Enhancing Safety. U.S. Patent Office, Application Number 769868. 2. Montazer, P. 1998. Methods and Apparatus for Generating Electrical Energy from Nuclear Waste while Enhancing Safety. U.S. Patent Office, Patent Number 5771265.

Data Censoring
None

Data Processing
Data processing is described in part in the following report: Pruess, K.; Oldenburg, C.; Moridis, G. 1999. TOUGH2 User's Guide, Version 2.0. LBNL-43134, Berkeley, CA. Lawrence Berkeley National Laboratories. 198 pp.

Data Limitations
The preliminary modeling results presented in the subject report do not provide conclusive estimates of the magnitude of the operating temperature and the footprint area of the repository. However, they do provide an indication of the feasibility of the concept of the PVR in lowering the operating temperatures and reducing the footprint size.

Governing QA Docs.
QAP-3.1 and 3.2

Frequency of Transmittal
One time only

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Direct Questions About Data To- Nye County QA Records Center