Coupled THM Model and Simulation of the Yucca Mountain and F	
Journal	Advanced Materials Research (Volumes 33 - 3
Volume	Advances in Fracture and Materials Behavior
Edited by	Wei Yang, Mamtimin Geni, Tiejun Wang and Z
Pages	639-644
DOI	10.4028/www.scientific.net/AMR.33-37.639
Citation	Xiao Yan Liu et al., 2008, Advanced Materials
Online since	March, 2008
Authors	Xiao Yan Liu, Cheng Yuan Zhang, Quan Shen
Keywords	DECOVALEX, THM Coupled Simulation
Abstract	Task_D of the DECOVALEX_THMC project fo to 10,000 years) in two generic repositories, FI better understand the coupled THM processes set of generic coupled THM governing equatio according to given Task_D model inception ph are introduced into general simulation which m this practical models is developed and used in verified in the 3rd and 4th workshop of DECOV different participant teams which enhances cor
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Advanced Materials Research Vols. 33-37 (2008) pp 639-6
Online available since 2008/Mar/07 at www.scientific.net

doi:10.4028/www.scientific.net/AMR.33-37.639

Coupled THM Model and Simul
FEBEX Case Study within DE

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Keywords: DECOVALEX; THM coupled simulat

Abstract. Task_D of the DECOVALEX_THMC
coupled processes(up to 10,000 years) in two gen
Project type for comparison. To better understand
the system behavior, we have introduced a set of
on these equations, we develop simplified models
request. Boiling model and empirical bentor
simulation which makes model more practical.
models is developed and used in two BMT case s
verified in the 3rd and 4th workshop of DECOV
with results of different participant teams which
processes.

Introduction

This paper presents coupled thermal-hydrologi
results for DECOVALEX-THMC, Task_D, con
Mechanics, the Chinese Academy of Sciences
involve analysis of coupled THM processes in tw

① Task_D THM1: A generic repository locat
tunnels are backfilled with buffer material (FEBE

② Task_D THM2: A generic repository locat
in open gas-filled tunnels (Yucca Mountain type).

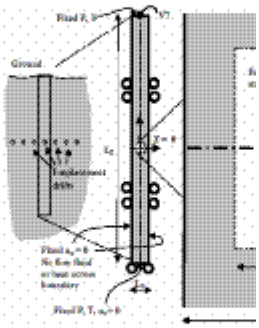

Fig.1 Schematic general model geometry, bounda

The geometry chosen for the two repository s
Fig.1). To better understand the coupling THM pr
we introduced a rigorous treatment of the th
unsaturated porous media[4]. Each of the thre
independent continuum with four constituents