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December 8, 2005
Contract No. NRC-02-02-012
Account No. 20.06002.01.302

U.S. Nuclear Regulatory Commission
ATTN: Dr. James Rubenstone
Office of Nuclear Material Safety and Safeguards
Division of High-Level Waste Repository Safety
Two White Flint North
11545 Rockville Pike
Mail Stop T-7J5
Washington, DC 20555

Subject: Submittal of Intermediate Milestone: Gas Segregation in Dikes and Sills
(IM 06002.01.302.610, formerly IM 06002.01.302.540)

Dear Dr. Rubenstone:

The enclosed paper and Form 390A are being submitted for NRC programmatic review. Following NRC approval, this paper will be submitted for publication in the *Bulletin of Volcanology*.

Drs. Thierry Menand and Jeremy Phillips are contractors to the CNWRA. They are evaluating potential consequences of volcanic disruption of the potential Yucca Mountain Repository. The information discussed in this paper summarizes recent experimental results performed at the University of Bristol on behalf of the CNWRA. This investigation was undertaken to examine processes that might affect gas segregation in magma-filled drifts intersected by dikes.

Please advise me of the result of your programmatic review. If you have any questions regarding this paper, please contact me at (210) 522-5247.

Sincerely,



John A. Stamatakos
Manager, Geology & Geophysics

/slo

Enclosures: Paper
NRC Form 390A

cc:	NRC W. Reamer E. Whitt D. Demarco B. Meehan V. Whipple L. Kokajko E. Collins B. Hill	T. McCartin J. Guttman M. Bailey A. Campbell K. Stablein J. Trapp J. Gwo	CNWRA W. Patrick B. Sagar T. Menand J.C. Phillips N. Franklin	CNWRA Dirs/EMs (letter only) Record Copy B, IQS L. Gutierrez
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Gas Segregation in Dikes and Sills

2. AUTHOR(s)
T. Menand and J.C. Phillips (Contractors)

3. NAME OF CONFERENCE, LOCATION, AND DATE(s)
N/A

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6. CONTRACTOR NAME AND COMPLETE MAILING ADDRESS (Include ZIP code)
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