

September 3, 1999

Dr. English Percy, Manager  
Geohydrology and Geochemistry Element  
Center for Nuclear Waste Regulatory Analyses  
6220 Culebra Road, Bldg. 189  
San Antonio, Texas 78238-5166

SUBJECT: COMPLETION OF INTERMEDIATE MILESTONE - IM 1402-861-985 - LETTER  
REPORT "WEEDY BROME GRASSES AND THEIR POTENTIAL EFFECT ON  
THE INFILTRATION AND RECHARGE RATES IN THE VICINITY OF YUCCA  
MOUNTAIN, NEVADA"

Dear Dr. Percy:

The U.S. Nuclear Regulatory Commission staff has completed its review of the subject report. It was sent on August 20th, 1999 and was provided well in advance of the September 3rd due date. This product is programmatically and technically acceptable for publication and will be placed in our public document room.

The report is an excellent review of the invasion of non-native grass species in the western United States and at Yucca Mountain. The alien *Bromus* species are recent invaders of the Yucca Mountain region. They were first reported during the 1930's, but their abundance has greatly increased since the 1960's. During its' growing season, *Bromus* strongly competes with native plants for moisture. It tends to reduce the reproduction of deep-rooted native species, and is efficient in repopulating burned areas. Future replacement of native shrubs by *Bromus* could directly increase infiltration and deep percolation at Yucca Mountain and indirectly affect regional groundwater levels. I look forward to the next step, development of a vegetation model to simulate future changes in infiltration and percolation. That model could ultimately refine the abstraction of future infiltration and percolation in our Total-System Performance Assessment code.

If you have any questions, please call me at (301) 415-6615.

Sincerely,

Neil Coleman, Program Element Manager  
Division of Waste Management  
Office of Nuclear Material Safety and Safeguards

cc: J. Linehan  
B. Meehan  
B. Sagar, CNWRA

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