



AGENCY FOR NUCLEAR PROJECTS
NUCLEAR WASTE PROJECT OFFICE

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January 10, 1995

Malcolm Knapp, Director
Division of Waste Management
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Dr. Knapp:

Enclosed is a copy of a special report by Y.V. Dublyanski, J.S. Szymanski, C.A. Hill and C.B. Archambeau, entitled "The Origin of Calcite-Silica Deposits at Trench 14 and Busted Butte and Methodologies Used to Determine Their Origin." which we have recently received from Technology and Resource Assessment Corporation as part of their contract work with the State of Nevada. We have read this report and supporting documents with interest and, in view of its contents, felt that your office should be aware of the criticisms of the DOE site characterization program contained in this review and specifically the technical criticisms of the DOE characterization of the calcite-silica deposits at Trench-14 and Busted Butte. It should also be pointed out that this report contains a number of other reviews and reports as appendices that address these and other technical issues that are of importance in the assessment of Yucca Mountain suitability as a repository site. We therefore expect that this report may be of use to the NRC in its independent evaluations of the scientific evidence.

In view of these and similar studies, the State of Nevada considers the scientific issues connected with the origins of the Trench-14, Busted Butte and the deeper veins observed at and near the Yucca Mountain site to be unresolved. Specifically, the proposition that these veins are of pedogenic (meteoric) origin and not epithermal from upwelling water has not been demonstrated and, in fact, there appears to be considerable evidence, both old and new, that the opposite may be true. Thus, we consider the origins of these veins a contentious scientific issue. Consequently, we find that the DOE conclusion that they are "most likely" of

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pedogenic origin, and a closed issue not requiring further study, to be unwarranted. Much of the technical basis for our position is contained in the enclosed report and we would be interested in any comments you might have regarding the technical issues addressed.

Sincerely,



Carl A. Johnson,
Administrator of Technical Programs

CAJ/mjj

cc: Martin Steindler
Chairman, Advisory Committee on Nuclear Waste
Nuclear Regulatory Commission

Rec'd with letter cd.
1/10/95

TRAC *Technology and Resource Assessment Corporation*

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REVIEW OF THE DOE REPORT: "THE ORIGIN OF CALCITE-SILICA DEPOSITS AT TRENCH 14 AND BUSTED BUTTE AND METHODOLOGIES USED TO DETERMINE THEIR ORIGIN"

**SPECIAL REPORT No.18
CONTRACT No. 94/96.0003**

**SPECIAL REPORT Submitted to the
Nuclear Waste Project Office
State of Nevada**

November, 1994

Authored by:

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