



Department of Energy
Washington, DC 20585

SEP 17 1993

Mr. Joseph J. Holonich, Director
Repository Licensing & Quality Assurance
Project Directorate
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Reference: Ltr, Shelor to Linehan, dtd 4/30/91

Dear Mr. Holonich:

Enclosed is an Office of Civilian Radioactive Waste Management technical report, "Report on the Origin of Calcite-Silica Deposits at Trench 14 and Busted Butte and Methodologies Used to Determine Their Origin," issued by the Yucca Mountain Site Characterization Project Office (YMPO). The report is a Working Paper as defined on pages 2-4 of the YMPO Technical Support Documentation Management Plan (TSDMP), Revision 0. The TSDMP was provided to the U.S. Nuclear Regulatory Commission (NRC) in a letter dated April 30, 1991. The report is provided to you for your information.

The Working Paper presents: (1) the scientific methodology used to address questions about the origin of calcium carbonate/amorphous silica deposits in surface exposures at Trench 14 and in the sand ramps on the west slope of Busted Butte, and (2) our results and conclusions obtained upon application of the described methodology. The Working Paper documents about nine years of site characterization work conducted by the U.S. Department of Energy (DOE) to investigate the origin of these deposits.

Appendix C-1 of the Working Paper identifies the quality assurance controls on the work reported. A data qualification exercise was not done. The DOE has not determined what existing data, if any, from this report would be used to establish and support a potential licensing position(s). Site characterization work continues, and data from underground access via the Exploratory Studies Facility or drill core has the potential to confirm the conclusions made in this report. A subsequent letter with a copy of the references used as the basis for this report will be sent to you shortly under separate cover.

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If you have any questions, please contact Mr. Chris Einberg of my office at (202) 586-8869.

Sincerely,



Dwight E. Shelor
Associate Director for
Systems and Compliance
Office of Civilian Radioactive
Waste Management

Enclosure: *W. Shelf*
Calcite-Silica Working Paper

cc: w/enclosure
C. Gertz, YMPO
T. J. Hickey, Nevada Legislative Committee
R. Loux, State of Nevada
D. Bechtel, Las Vegas, NV
Eureka County, NV
Lander County, Battle Mountain, NV
P. Niedzielski-Eichner, Nye County, NV
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F. Mariani, White Pine County, NV
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J. Pitts, Lincoln County, NV
J. Hayes, Esmeralda County, NV
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