



Department of Energy

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QA: N/A

APR 26 2002

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TRANSMITTAL OF REPORTS ADDRESSING KEY TECHNICAL ISSUES (KTI)

This letter transmits one hard copy (enclosure 1) and one CD (enclosure 2) of the KTI Letter Report, *The Use of Polystyrene Microspheres as Tracer Surrogates for Inorganic Groundwater Colloids*. This report provides the information required by Radionuclide Transport KTI agreement 3.08. As discussed with your staff, the information is in a different document than the Analysis and Model Report in the agreement.

This report presents recent results of laboratory experiments and analyses to address the suitability of using carboxylate-modified latex (CML) microspheres as analogs for naturally occurring inorganic colloids. The CML microspheres were used as colloid tracers in the field tests at the C-Wells Complex, and are being used at the Alluvial Testing Complex. Laboratory experiments were conducted using CML microspheres and silica colloids in columns filled with both volcanic tuff and alluvium under saturated conditions. Results from the experiments indicate that CML microspheres would be conservative analogs for silica colloids in fractured tuff; and that for saturated alluvium, colloid transport parameters derived from field tests need to be adjusted before being used in parameter validation of saturated zone colloid transport models.

Please direct any questions concerning this letter and its enclosures to Timothy C. Gunter at (702) 794-1343, or Drew H. Coleman at (702) 794-5537.


Joseph D. Ziegler
Acting Assistant Manager, Office of
Licensing and Regulatory Compliance

OL&RC:TCG-1032

Enclosures:

1. Hard Copy of *The Use of Polystyrene Microspheres as Tracer Surrogates for Inorganic Groundwater Colloids*
2. CD Copy of Enclosure 1

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