

DISCUSSION

*B. S. Beattie*¹ (*written discussion*)—(1) Explain why an oil well grade feed-stock bentonite material is superior to a foundry grade or taconite grade clay for toxic leachate containment? (2) Are there clays that accept chemical polymer treatment better than others and why?

G. Alther, J. C. Evans, H.-Y. Fang, and K. Witmer (*authors' closure*)—Oil-well grades have a lower water loss, that is, lower permeability. They have a better cation balance on the surface than foundry grades. They have a higher swelling potential than foundry grades.

*W. Adaska*² (*written discussion*)—You showed that contaminants such as calcium and potassium greatly increase the permeability of soil-bentonite slurry trenches. With cement-bentonite (C-B) slurries, cement which is high in calcium would reduce the swelling of the bentonite-water slurry immediately during mixing operations. Would not this chemical reaction tend to stabilize the permeability of a C-B slurry so that a C-B mix could be designed that would have a long-term stable permeability when exposed to contaminants such as calcium and potassium? Has any testing been done on permeability of C-B slurries exposed to contaminants?

G. Alther, J. C. Evans, H.-Y. Fang, and K. Witmer (*authors' closure*)—Such testing has been done, and your assumptions are correct. Please check the literature of such authors as Christopher Ryan and D. D'Appolonia for more data.

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