United States Nuclear Regulatory Commission Official Hearing Exhibit
In the Matter of: Progress Energy Florida, Inc.
(Levy County Nuclear Power Plant, Units 1 and 2)
ASLBP #: 09-879-04-COL-BD01
Docket #: 05200029 | 05200030
Exhibit #: INT005-00-BD01 Identified: 10/31/2012
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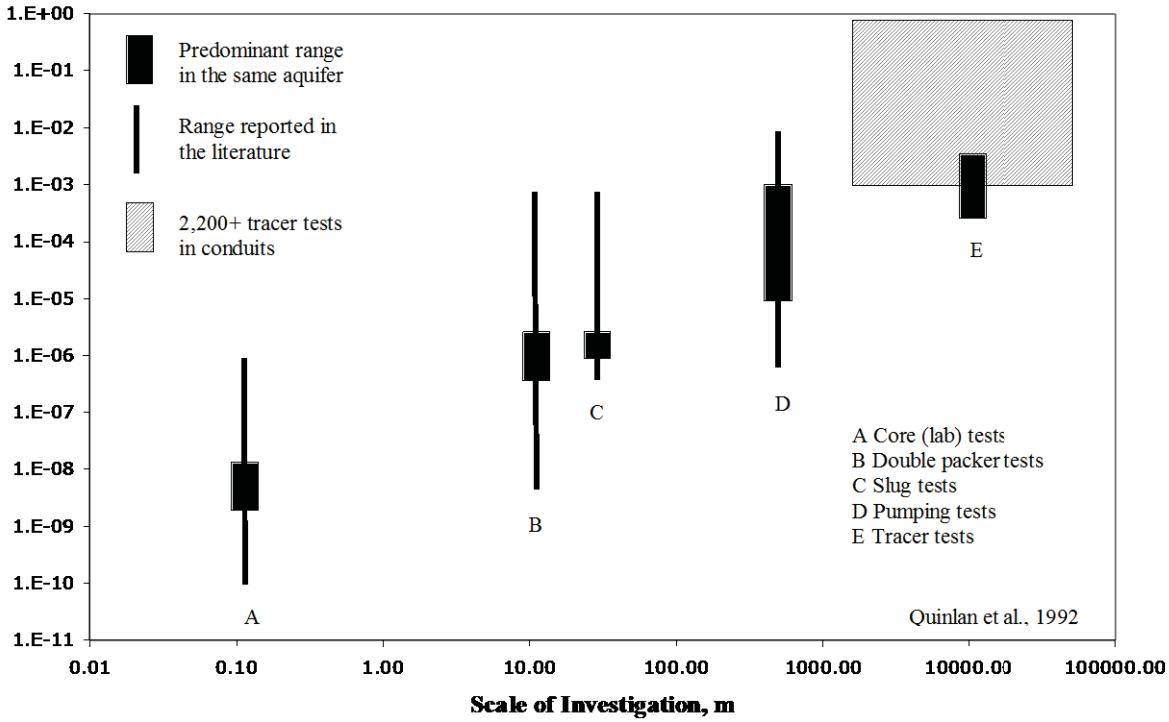
Rejected: Stricken:
Other:

Figure 2. Range of K Values in Carbonates



Notes explaining Figure 2

Such a scaling effect causes values obtained using a porous medium method smaller than values obtained empirically. Since hydraulic conductivity is used in numerical modeling it is a critical value. In Figure 2 note that the largest value is for tracer tests. The y-axis is in units of velocity (meters per second, m/s). The same units are used for hydraulic conductivity and velocity (m/s). To reconcile using both on the graph, as is done, involves the equation $V=ki/n_e$ where v is velocity, k hydraulic conductivity, i hydraulic gradient and n_e effective porosity. In most cases when effective porosity and hydraulic gradient are calculated they are close to or are the same order of magnitude. When that is the case v would approximately equal k.