

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER:)
)
PROPOSED AMENDMENTS TO) R09-9
TIERED APPROACH TO CORRECTIVE) (Rulemaking-Land)
ACTION OBJECTIVES)
(35 Ill. Adm. Code 742))
)

POST-HEARING COMMENTS OF RAYMOND T. REOTT

Raymond T. Reott hereby submits the following comments in the above rulemaking. These comments supplement the pre-filed testimony I submitted on February 24, 2009, my March 4, 2009 pre-filed questions with the Illinois EPA's responses dated March 11, 2009, and my testimony at the March 17, 2009 hearing.

Each Assumption's Affect on Values

The Illinois EPA's proposal ultimately leaves the Board in the dark about the impact of the assumptions the agency used to formulate the proposed rule. The Illinois EPA bases its proposal on the USEPA Johnson & Ettinger model and uses the model to create the proposed Tier 1 table values for the new indoor air inhalation exposure pathway. The new Tier 1 values represent a tenfold increase in cleanup levels for communities with approved groundwater use restrictions ordinances, i.e. most of the Illinois population. Even USEPA acknowledges that the Johnson & Ettinger model is so conservative that field studies fail to find the predicted levels of contaminants in actual indoor air sampling. (*See* USEPA, Sept. 2005, J. Weaver and F. Tillman, Uncertainty and the Johnson-Ettinger Model for Vapor Intrusion Calculations, p.31; USEPA, Sept. 2005, F. Tillman and J. Weaver, Review of Recent Research on Vapor Intrusion, pp. 17-23). Also, because the model does not reflect actual attenuation present in UST sites, USEPA does not recommend the Johnson & Ettinger model for UST sites, in contrast to this proposed rule which would use that model for Illinois UST sites.

Because of how the Illinois EPA presents the proposed rule, the impact of any individual assumption cannot be predicted. For instance, the impact on the proposed Tier 1 table from the assumptions about the fraction of organic carbon in the soil cannot be determined. Similarly, the agency never explains why the proposed default fraction of organic carbon for this new pathway is lower than the one adopted by the Board years ago in the existing TACO regulations. Likewise, the impact from using the new default soil porosity or from ignoring the distance between the contaminant and the bottom of the building cannot be determined. Therefore, this proposal fails to provide the Board with the essential information needed to understand the consequences of these individual assumptions on the proposed Tier 1 table. Most of the agency's choices in this proposal are conservatively based and unrealistic for the conditions in Illinois and the Board cannot tell how conservative the ultimate numbers are in the Tier 1 tables.

The Board should choose a more open and informative approach. The Illinois EPA should first submit a Tier 1 table using realistic assumptions from Illinois and then apply a conservative factor to those numbers. Instead of hiding the conservative nature of the numbers, the agency should clearly state its chosen safety factor. The current proposed rule fails to identify the safety factor chosen by the agency and the Board should not adopt it.

Notice Burden

In addition, the Board should be aware of pending House Bill 4021 which would base the Right-to-Know notification requirements on the Tier 1 objectives set in this rulemaking. If HB4021 passes and the Board also enacts this proposed rule with its current Tier 1 objectives, these rules will create a new unnecessary notice burden. An unintended consequence will be to force many more public notifications for an overstated risk. Communities with groundwater ordinances would then be subjected to new Right-to-Know notification requirements about risks that everyone agrees are overstated risks. This Right-to-Know notice burden is another cost of establishing overly conservative Tier 1 values and adopting the current proposed rule.

Negative Indoor Air Samples

The Illinois EPA is not proposing using actual indoor air concentrations because of its concern about false positives. However, at the previous hearings, no witness articulated any reason why representative samples with a negative result were not reliable. Further, other states already have adopted indoor air concentration values. States like New Jersey and Minnesota also have issued detailed guidance for taking indoor air samples. The proposed rule should include a provision so that a representative negative indoor air sample should prevail over the predicted values from other samples outside the building.

Assumptions Are Not Representative of Illinois

As I mentioned in my previous testimony, the agency's assumptions about soil geology are not representative of conditions in Illinois. In addition, the assumption of 1089 square feet (33 ft. x 33 ft. x 8 ft) for a residential a structure is far below the average size of a single family home in the Midwest. For example, Michigan cited the average size of a Midwest single family home as 2,095 feet in 1995. (Michigan DEQ Storage Tank Division, Part 213, Risk-Based Screening Levels (RBSLs) for Groundwater and Soil Volatilization to Indoor Air, Operational Memorandum No. 4, Attachment 8, June 12, 1998, p.4, (citing *Characteristics of New Housing: 1995* (US DOC and US HUD, 1996))). Further, the percentage of homes under 1,200 square feet, which includes the agency's assumption of 1089 square feet, is only 11%. *Id.* Because the average size of housing continues to increase and because these values are from 1995, the current average size of a single family home in Illinois likely would be even larger than 2,095 square feet which already is well above the agency's proposed assumption of 1089 square feet. Using a more realistic building size would better represent conditions in Illinois and ultimately provide Tier 1 values that addressed the real risk in Illinois.

