

CARLSON  ENVIRONMENTAL

December 15, 2008

Illinois Pollution Control Board
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Chicago, Illinois 60601

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STATE OF ILLINOIS
Pollution Control Board

RE:Case No: R2009-009

Case Type: Rulemaking

Media Type: Land

County: Statewide

Case Name: In the Matter of: Proposed Amendments to Tiered Approach to Corrective Action Objectives (35 Ill Adm. Code 742)

Board Member: Johnson, T.E.

Hearing Officer: McGill, R.

Status: Board Order

Dear Mr. McGill:

- 1) If I have soil and ground water issues on my site, in addition to evaluating indoor inhalation on my site as per the proposed TACO rules, would I also have to evaluate potential off-site lateral migration of measured impacts via Equation R-26 to assess the potential for (ground water component of) indoor inhalation exceedances on my neighbor's property as well? As an alternative, could I install monitoring wells along our shared property boundary to measure actual ground water concentrations? If either approach results in potential off-site exceedances of the ground water component of indoor inhalation, what will I be required to do (neighbor notification, ELUC requiring installation, operation, and maintenance of a building control technology, etc.)? If an ELUC is required on my neighbor's property and he is reluctant to comply, can I still get my NFR? Is it reasonable to assume that only ground water (not soil) transport onto adjoining properties will require evaluation?
- 2) p. 9 of Gary King's Nov. 14, 2008 pre-filed testimony says, "Building-specific default values for the following parameters... The same default values must be used for the same parameters when performing Tier 2 calculations. The actual values of these parameters do not have a great impact on the remediation objectives; however, the default values are based on a conservative representation of the type of buildings that are or may be present at the site in the future. Without these conservative values, restrictions would be required on the minimum size of a building that can be constructed over the contaminated area." I understand the Illinois EPA's institutional control-related challenge, but take issue with the defaults not having a great impact on the remediation objectives. In our preliminary analysis, we are finding that the building dimensions can significantly alter the Tier 2 remediation objectives. Our clients are industrial users, and instead of 65 feet x 65 feet x 10 feet tall (the default assumptions), tend to have buildings that are 500 ft x 500 ft x 25 ft tall, and this does have a dramatic effect on the Tier 2 indoor inhalation remediation objectives. In putting together our SRP reports, we will run the Tier 2 calculations using the building dimension defaults. If there are no exceedances, the outcome is

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straightforward. However, if the Tier 2 remediation objectives using the default building dimensions predict an exceedance, our inclination is to also run the Tier 2 calculations using the existing building-specific dimensions, and present both outcomes. If no exceedances are predicted using the building-specific dimensions, is there a proposed institutional control option that would allow us to avoid putting in a (unnecessary) building control technology until the existing building is demolished and a future building is constructed? For example, perhaps our NFR has a condition that requires a building control technology or max. size for future construction (when the existing building is torn down). Somehow the Illinois EPA's approval letter/NFR will acknowledge that the current building conditions are acceptable. Surely no one thinks it's a good idea to install an unnecessary mitigation system (based on modeling) in an existing building just to get an NFR. Obviously if our Tier 2 calculation with building-specific inputs indicates a problem, we would have to install a building control technology. We recognize that Tier 3 does allow for use of building-specific dimensions, however, are finding that inclusion of the advection component in the modeling has a profound effect on the Tier 3 remediation objectives. In some instances, it overwhelms the benefits of the larger building. In general, it is not intuitive that a larger building is more prone to cause or promote the advection phenomenon.

- 3) p. 15 of Gary King's pre-filed testimony notes that when comparing the calculated soil gas remediation objective to soil gas samples from the site, Section 742.717(k) instructs site evaluators to use soil gas data collected at a depth at least 3 feet below the ground surface..." Does this contradict 742.717(k) where it discusses the need for soil gas samples to have been obtained from a depth of 5 feet?
- 4) p. 18 of Gary King's pre-filed testimony says, "It is possible to calculate a Tier 2 soil remediation objective more stringent than the Tier 1 soil remediation objective for the indoor inhalation pathway; in such cases, the Tier 1 remediation objective applies." This seems to contradict 742.717(l).

Respectfully submitted,

CARLSON ENVIRONMENTAL, INC.



Gail Artrip, P.E.
Project Director