

Illinois EPA's Responses to IPCB's August 28, 2014 Prefiled Questions

- 1) The Agency's proposed definition of "Class I groundwater quality standards" refers to 35 Ill. Adm. Code 620.210 (Class I: Potable Resource Groundwater). Please Clarify whether the proposed definition should refer to 35 Ill. Adm. Code 620.410 (Groundwater Quality Standards for Class I: Potable Resource Groundwater).

Agency Response: The proposed definition of "Class I groundwater quality standards" should refer to 35 Ill. Adm. Code 620.410.

- 2) In the Agency's proposed definition of "volatile chemicals," please explain the rationale for using Henry's Law Constant of greater than 1.0×10^{-2} instead of 1.9×10^{-2} as used in the TACO regulations at 35 Ill. Adm. Code 742.200.

Agency Response: The proposed definition of "volatile chemicals" should use Henry's Law Constant of greater than 1.9×10^{-2} .

- 3) In Section 1600.300(a), the Agency proposes to clarify that the requirements of Part 1600, Subpart C establish the "minimum" requirements for the content, submission for review, distribution, and implementation of notices, contact lists, fact sheets, and community relations plans (CRPs), and the establishment and maintenance of document repositories. Please comment on whether the proposed clarification would subject parties authorized to provide notice pursuant to Section 1600.100 to any additional obligations beyond what is currently required under Part 1600.

Agency Response: The Agency's proposed amendments would not subject parties authorized to provide notice in accordance with Section 1600.100 to any notification obligations beyond those included in Part 1600. The Agency proposed adding the word "minimum" to the final sentence of Section 1600.300(a) for consistency with the opening sentence of that Section, which reads "[t]he purpose of this Subpart C is to establish the minimum standards and requirements for the development and implementation of community relations activities. . ."

- 4) The Agency's proposed Sections 1600.310(a)(2) and 1600.315(a)(2) require public notification only if "[m]easured offsite groundwater contamination from volatile chemicals poses a threat of indoor inhalation exposure above the appropriate Tier 1 remediation objectives for the current use(s)..." Please clarify whether the proposed language should parallel the proposed language at Sections 1600.310(a)(4) and 1600.315(a)(4) by indicating that the offsite groundwater contamination is "from the site where the release occurred".

Agency Response: The proposed language in Sections 1600.310(a)(2) and 1600.315(a)(2) should parallel the proposed language in Sections 1600.310(a)(4) and 1600.315(a)(4). To that end, the Agency proposes the following language (changes from the Agency's original proposal are designated by double underline):

Section 1600.310 Notices and Community Relations Plans for Limited Community Relations Activities

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- a) Authorized parties must comply with community relations requirements in this Section if:
 - 2) Measured offsite groundwater contamination from volatile chemicals from the site where the release occurred poses a threat of indoor inhalation exposure above the appropriate Tier 1 remediation objectives for the current use(s) at five or fewer offsite properties;

Section 1600.315 Notices, Fact Sheet and Community Relations Plans for Expanded Community Relations Activities

- a) Authorized parties must comply with the community relations requirements in this Section if:
 - 2) Measured offsite groundwater contamination from volatile chemicals from the site where the release occurred poses a threat of indoor inhalation exposure above the appropriate Tier 1 remediation objectives for the current use(s) at more than five offsite properties.
- 5) The Agency's proposed regulations require the use of only measured offsite groundwater contamination (Sections 1600.310(a)(2), 1600.315(a)(2)) and measured offsite soil gas contamination (Sections 1600.310(a)(4), 1500.315(a)(4)) to trigger public notification requirements because contamination predicted by modeling may not be reliable. Please clarify whether access to measured offsite groundwater or soil gas contamination is always available. If not, please comment on whether the rules should allow use of modeled offsite groundwater or soil gas contamination as an alternative.

Agency Response: The access necessary to determine whether offsite groundwater or soil gas contamination exists is not always available. However, the Agency does not believe that lateral modeling of groundwater contamination to determine the extent of the threat of exposure to groundwater contamination via the indoor inhalation exposure route is an appropriate substitute for measured data. In addition, horizontal modeling of soil gas contamination is not scientifically sound.

The Agency's proposed amendments do not abrogate the requirement that an authorized party must provide notice to affected or potentially affected persons of threats of exposure to groundwater contamination via the ingestion exposure route based on the modeled extent of groundwater contamination. However, the Agency is concerned that lateral modeling of groundwater contamination to determine the threat of indoor inhalation exposure is not sufficiently reliable. Applying any model to predict contaminant transport requires relying on a set of conservative assumptions that may not fully represent actual site conditions. The vertical J&E model is used to determine the threat of exposure to contaminants of concern via the indoor inhalation exposure route. If Part 1600 were to require application of a horizontal or lateral groundwater migration model prior to the use of the vertical

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J&E model, the results would be faulty. Indeed, double modeling compounds any errors in the set of assumptions being applied in each model. Because the Agency may only require notice based on credible, scientific information, the Agency does not believe it would be appropriate to require an authorized party to provide notice based on more than one modeled result.

The Agency does not propose requiring authorized parties to provide notice based on modeled offsite soil gas contamination for two reasons. First, the Tiered Approach to Corrective Action Objectives rules, 35 Ill. Adm. Code 742, et seq., which sets forth the remediation objectives relevant to Part 1600, do not contain a model to predict the horizontal transport of soil gas contamination (e.g. movement of volatile chemicals from one site to another through the void spaces in soil). Second, the Agency is unaware of any such model, let alone a model that has been field tested and accepted by U.S. EPA or any other environmental regulatory authority. Because the Agency is not aware of any appropriate model that may be used to accurately determine the extent of horizontal transport of soil gas contamination and the Agency may only require an authorized party to provide such notice based on credible, scientific information, the Agency does not believe requiring notice based on modeled soil gas contamination would be appropriate.

- 6) The proposed changes to Sections 1600.310(b)(3)(C) and 1600.315(b)(3)(C) remove the obligation of an authorized party to inform affected or potentially affected parties through a fact sheet of any precautionary measures that should be taken to avoid or reduce potential public health impacts. Instead, the Agency's proposal requires the fact sheet to include "[a] description of the appropriate actions that affected or potentially affected should take to evaluate the potential for threats to human health via a completed exposure pathway."

The Agency explains at page 8 of its Statement of Reasons that this proposed revision "will clarify that water well sampling and gas sampling do not, in isolation, avoid or reduce the potential public health impacts. Rather, such testing enables the owner or occupant to determine if a threat to human health exists and, thereafter, take any steps he or she feels are needed to address those concerns." Please comment on whether it would be helpful to the affected or potentially affected parties to be aware of any precautionary measures that they should take to avoid or reduce potential public health impacts posed by specific contaminants of concern.

Agency Response: The Agency believes that it would be helpful to affected or potentially affected persons to be aware of precautionary measures they could take to avoid or reduce potential public health impacts posed by specific contaminants of concern. The Agency's intent in proposing these amendments was not to eliminate the need to notify affected or potentially affected persons of necessary precautionary measures. Rather, the Agency sought to clarify that sampling (i) is not a precautionary measure that avoids or reduces potential public health impacts and (ii) is a prerequisite to taking precautionary steps to avoid or reduce public health impacts.

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During the development of these amendments, the Agency considered language that would (i) clarify that precautionary measures may, in some circumstances, follow a determination that a threat to human health exists and (ii) outline possible precautionary measures that may be available to affected or potentially affected persons. However, the Agency elected not to propose such language for two reasons. First, the Agency was concerned that such language may be unnecessarily prescriptive in light of the unique issues presented at individual sites. Second, the Agency believed that an authorized party's need to include a description of precautionary measures in a fact sheet could be addressed on a case-by-case basis in consultation with that authorized party. However, the Agency would like to clarify that it believes such information may be necessary and proposes the following revisions to Sections 1600.310(b)(3)(C) and 1600.315(b)(3)(C) (changes from the Agency's original proposal are designated by double underline):

Section 1600.310 Notices and Community Relations Plans for Limited Community Relations Activities

- b) An authorized party within the limits set forth in subsection (a) of this Section must develop a notice and ~~community relations plan~~ (CRP) consisting of a contact list and fact sheet in accordance with this subsection (b).
- 3) The authorized party must develop a fact sheet for the release and response action. The fact sheet must be distributed in accordance with Section 1600.335 of this Part to the contact list as derived from subsection (b)(2) of this Section. The fact sheet must be written clearly and concisely in non-technical, non-legal terminology. The fact sheet and any required updates must contain, at a minimum, the following information to the extent available:
 - C) A description of the appropriate actions that any precautionary measures affected or potentially affected parties should take to evaluate the potential for threats to human health via a completed exposure pathway avoid or reduce potential public health impacts, including potable water supply well sampling, soil gas sampling and any other actions, as well as any precautionary measures necessary to avoid or reduce public health impacts, if and analysis recommendations, as appropriate.

Section 1600.315 Notices, Fact Sheet and Community Relations Plans for Expanded Community Relations Activities

- b) An authorized party exceeding the limits set forth in subsection (a) of this Section must develop a notice and a CRP ~~community relations~~

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~~plan~~ and fact sheet in accordance with this subsection (b). Appendix A of this Part contains the outline of a model CRP community relations plan that may be appropriate for a site subject to this Section.

- 3) Along with the development of a notice and CRP in accordance with subsections (b)(1) and (b)(2) of this Section, the authorized party must develop and distribute a fact sheet for the release and response action. The fact sheet must be distributed in accordance with Section 1600.335 of this Part to the contact list as derived from subsection (b)(2)(D) ~~(b)(1)(D)~~ of this Section. The fact sheet must be written clearly and concisely in non-technical, non-legal terminology. If a significant portion of the population surrounding the site where the release occurred is non-English speaking, the fact sheet and any update(s) to the fact sheet must be produced and distributed in both English and another any other predominant language(s) spoken in the affected area. The fact sheet and any required updates must contain, at a minimum, the following information to the extent available:

C) A description of the appropriate actions that any precautionary measures affected or potentially affected parties should take to evaluate the potential for threats to human health via a completed exposure pathway ~~avoid or reduce potential public health impacts~~, including potable water supply well sampling, soil gas sampling and any other actions, as well as any precautionary measures necessary to avoid or reduce public health impacts, if ~~and analysis recommendations, as~~ appropriate.

The Agency believes these revisions address the necessity of informing affected or potentially affected persons of precautionary measures needed to address public health impacts while maintaining the flexibility necessary to ensure fact sheets may properly address the unique issues of presented at each site.

- 7) In some proposed sections, the term “parties” is replaced by “persons” regarding those affected, potentially affected, or interested. See, e.g. proposed Section 1600.310(b)(3)(G). However, the term “parties” is retained in other sections, including Section 1600.310(b)(3)(C). Please clarify the Agency’s intent and comment on whether the term “parties” must be replaced by “persons” in other sections of Part 1600.

Agency Response: The Agency proposes replacing the term “parties” with “persons” in some sections to delineate between authorized parties, who are providing notice under Part 1600, and affected or potentially affected persons, who receive the notice because of their inclusion on a contact list generated in

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accordance with Part 1600. Accordingly, the word "persons" should replace the word "parties" in Sections 1600.310(b)(3)(C), 1600.315(b)(3)(C), and 1600.Appendix A(2).