

567—105.209(455H) Risk evaluation/response action.

105.209(1) *Purpose; notice of proceeding without department review of assessment.* The purpose of risk evaluation/response action is to utilize information from the site assessment as a basis for:

a. Determining whether current exposures result in excessive risks, based on evaluation against appropriate background, statewide, or site-specific standards.

b. Determining whether future exposures may result in excessive risks, based on evaluation against appropriate background, statewide, or site-specific standards. This will likely include:

(1) Evaluation of potential changes in usage, e.g., installation of a new well, change in land use, or other activities, that result in unacceptable, potential exposures not evaluated as current exposures, and

(2) Evaluation of exposure concerns related to the movement of contamination such that potential exposures might arise that are not considered under current exposure assumptions, e.g., groundwater plume migration creating a potential for future contamination of existing wells or creating newly contaminated areas in which new well installation may result in unacceptable exposures.

c. Proposing an appropriate and acceptable response action or strategy to address the identified, unacceptable exposures or potential exposures.

d. Establishing the test criteria to be applied under 567—105.210(455H) for determining final compliance with the selected standard. In some cases this may consist of proving that standards are currently met; in other cases it may result in an assessment of whether the response action succeeds in bringing about compliance with a selected standard.

The risk evaluation/response action is intended only for application to the specific contaminants and situations for which the site is enrolled. Participants choosing to proceed to the risk evaluation/response action phase without seeking review of the site assessment report shall give prior notice to the department of their intentions. The notice shall include the information required in 105.208(2), a general description of the site assessment results, a schedule for submission of the risk evaluation/response action document, and the reasons for not requesting department review and approval of the site assessment report.

105.209(2) *Risk evaluation/response action document submission.* A risk evaluation/response action document shall be submitted for review and approval by the department. When considered in conjunction with the site assessment report, these documents shall present a complete picture of the site from its characterization, through the evaluation of risk, to the development of a strategy to address the situation. An effort shall be made to ensure that the reviewer, or other interested parties, can gain an understanding of the existing situation and proposed actions. The risk evaluation/response action document shall include a summary of findings regarding present risks and potential future risks; a pathway-specific identification of the standards to be applied, including the supporting rationale, if appropriate; a discussion of the proposed response actions, including remedial actions to be taken and institutional or technological controls to be implemented; and a discussion of the proposed verification strategy. Any modeling used for purposes of assessing future risk or establishing site-specific standards shall be presented in sufficient detail to permit evaluation of the results by the department.

105.209(3) *Department review and approval.* It is recommended that the risk evaluation/response action be submitted for review and approval prior to proceeding with implementation of the response action. The final, department-approved document shall be the basis for assessing subsequent activities at the site. Parties choosing to proceed with response actions without prior review and approval by the department proceed at their own risk and may not assume the response action implemented will result in a no further action certificate.

a. Parties choosing to implement a response action without prior review and approval by the department shall submit to the department a proposed risk evaluation/response action document accompanied by an explanation of the reason(s) for proceeding without prior approval. Documentation shall also include a schedule for implementation, a description of construction or other activities to be undertaken, and date for submission of the final report demonstrating compliance, as described in 567—105.210(455H).

b. The department shall provide opportunity to comment on proposed response actions to any party that is potentially impacted by off-site migration of contaminants for which notification is required in accordance with 105.208(6). The department shall consider reasonable comments from potentially

impacted parties in determining whether to approve or disapprove a proposed response action or site closure.

105.209(4) *Risk evaluation.* The risk evaluation/response action document shall identify all locations or areas, and associated exposure pathways, where exposure currently exceeds a statewide standard or where a statewide standard may be exceeded in the future, due to either a change in exposure-related usage or contaminant migration. Current and future exposure pathways shall be evaluated and presented separately. This evaluation shall not be limited to exposure pathways for which the department has formulated risk-based values in 567—105.205(455H) or 567—105.206(455H) but should include any pathway related to the situation for which the site is enrolled, for which a no further action certificate is sought, or for which an unacceptable risk may now or in the future exist, including but not limited to high concentrations of volatile compounds in proximity to a confined space, high concentrations of solvents in proximity to a water distribution line, or environmental concerns unrelated to human health.

a. In a case where a background standard is to be applied and there is no violation of a statewide standard, it will be necessary to identify only locations or areas where the background standard is exceeded.

b. A risk evaluation may be appropriately abbreviated from the preceding description based on the specific details of the contamination and the proposed response action.

105.209(5) *Establishing cleanup standards.* The risk evaluation/response action document shall identify the cleanup standards to be applied in accordance with 567—105.204(455H), 567—105.205(455H), or 567—105.206(455H), outlining respectively the background, statewide, or site-specific standards. These standards may be applied in any combination to address specific components of the contamination problem for which the site is enrolled. If cleanup standards other than those specifically formulated under the statewide standard (567—105.205(455H)) are to be applied, then the rationale behind the determination of such standards shall be justified, in the document, to the department's satisfaction.

105.209(6) *The use of models.* Models may be necessary in order to evaluate potential future exposures and may be used to develop target levels.

a. Standard models. Standard models may be used to predict future contaminant concentrations at potential points of exposure to contaminants or at other locations used for determining compliance when such models are appropriate, as determined by the department. Applicable Tier 2 models approved for use in accordance with 567—Chapter 135 for underground storage tanks (USTs) and applicable Tier 2 models provided in ASTM standards are acceptable standard models. Models that provide a two-dimensional representation of groundwater flow will not be considered to be appropriate when significant three-dimensional components to groundwater flow are anticipated. Default values for input parameters for ASTM and UST Tier 2 models, as provided in applicable ASTM standards and approved for use in accordance with 567—Chapter 135, may be utilized without approval by the department. The department shall maintain a guidance document that includes a list of other chemical-specific default values for all chemicals having statewide standards.

b. Site-specific models. Site-specific models may be used to predict future contaminant concentrations at potential points of exposure to contaminants or at other locations used for determining compliance when such models are appropriate, as determined by the department. Site-specific models may include standard models with site-specific input parameters or models utilizing more sophisticated analytical techniques. A site-specific groundwater model shall have proven reliability and be able to simulate, as needed:

- (1) A fixed contaminant source,
 - (2) Groundwater and contaminant flow in three dimensions,
 - (3) Groundwater and contaminant flow through as many distinct geologic layers as necessary for the site in question,
 - (4) Effects of pumping,
 - (5) Effects of groundwater recharge and discharge,
 - (6) Impacts of hydrologic boundaries,
 - (7) Contaminant advection, dispersion and chemical reactions, as appropriate for the site in question,
- and
- (8) Other site-specific variables as appropriate.

Default values for input parameters approved for standard models will be approved for use in site-specific models. Otherwise, input parameters used in site-specific models are subject to the department's approval.

105.209(7) *Response action.* The risk evaluation/response action document shall include a proposal for a response action or strategy to achieve and maintain compliance with the selected standard(s). This may consist of activities designed to remove or treat contaminants; prevent exposure to unacceptable levels of contamination through technological controls, institutional controls or monitoring; or a combination thereof. If the response action involves the use of a standard that is less stringent than the statewide standard, it will be necessary to implement institutional controls to prevent the type of exposure on which the statewide standard is based unless otherwise authorized by the department. It is the intent of the department to permit the participant to identify and carry out those options by which this may be accomplished, insofar as the department deems the selected options to be reasonable, protective of the public health and safety and the environment, and consistent with provisions of this rule.

105.209(8) *Free product and gross contamination.*

a. Contaminants presented as free product and gross contamination shall not be addressed through the implementation of institutional or technological controls. For purposes of this rule, gross contamination will be considered to be contamination present at concentrations in excess of a standard by an amount sufficient to reasonably expect that institutional or technological controls will not be adequately protective of the public health and safety and the environment.

b. If treatment or removal of free product or gross contamination is not feasible, the participant may request a waiver of this subrule, subject to all provisions of Iowa law related to waivers.

105.209(9) *Compliance verification strategy.* The risk evaluation/response action document shall outline a strategy for determining whether the relevant standards are met by the site and will continue to be met in the future. For response strategies that call for longer-term monitoring, standard-based values shall be identified that, if exceeded, would indicate a failure of the response action and necessitate the development and implementation of a new response action. The terms under which monitoring may cease may be proposed. The proposed strategy shall be consistent with 567—105.210(455H) related to demonstration of compliance and shall indicate the standard to be applied and the point of compliance at which it is to be applied, consistent with 567—105.204(455H), 567—105.205(455H), and 567—105.206(455H).

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