

## Cleanup Criteria

### Section XXXX. Cleanup criteria.

(1) The department may establish cleanup criteria and approve of response activities in the categories listed in this subsection. The cleanup category proposed shall be the option of the person implementing the response activity, subject to department approval, considering the appropriateness of the categorical criteria to the facility. The categories are as follows:

- (a) Residential.
- (b) Restricted residential.
- (c) Restricted nonresidential.

(2) The department may approve a response activity based on site-specific cleanup criteria that satisfy the applicable requirements of this part. The department shall utilize only reasonable and relevant exposure pathways and reasonable maximum exposures in determining the adequacy of site-specific criteria. The department may approve site-specific parameters that are based on representative characteristics of the site. If two or more hazardous substances are present and known to result in toxicological interaction, then the interactive effects shall be considered by developing cleanup criteria based on the cumulative risk at the site such that the risk and hazard levels described in subsection (4) are met. Cumulative criteria are criteria that consider toxicological interaction.

(3) The department shall develop cleanup criteria pursuant to subsection (1) based on human health risk assessment assumptions determined by the department to appropriately characterize patterns of reasonable maximum human exposure associated with certain land uses. The department shall utilize only reasonable and relevant exposure pathways in determining these assumptions. The department shall specify site characteristics that determine the applicability of criteria derived for these categories.

(4) If a hazardous substance poses a carcinogenic risk to humans, the cleanup criteria derived to be protective of cancer risk under this section shall be the 95% upper bound on the calculated risk of 1 additional cancer above the background cancer rate per 100,000 individuals using the exposure assumptions established under subsection (3) for the appropriate category. If the hazardous substance poses a risk of an adverse health effect other than cancer, cleanup criteria shall be derived using appropriate human health risk assessment methods for that adverse health effect and the exposure assumptions established under subsection (3) for the appropriate category. A hazard quotient of 1.0 shall be used to derive noncancer cleanup criteria. For the noncarcinogenic effects of a hazardous substance present in soils, the intake shall be assumed to be 100% of the protective level, unless chemical- and site-specific data are available to demonstrate that a different source contribution is appropriate. If a hazardous substance poses a risk of both cancer and 1 or more adverse health effects other than cancer, cleanup criteria shall be derived under this section for the most sensitive effect.

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(5) The toxicity values for the cleanup criteria that are based on or incorporate the inhalation route of exposure shall be the initial threshold screening levels for noncarcinogenic hazardous substances and the inhalation unit risk factor for carcinogenic hazardous substances developed by the department under the authority of Part 55 Air Pollution Control of this act, or if they are unavailable, other inhalation toxicity endpoints determined to be appropriate by the department.

(6) If a cleanup criterion derived under subsection (4) for groundwater in an aquifer differs from either: (a) the state drinking water standard established pursuant to section 5 of the safe drinking water act, Act No. 399 of the Public Acts of 1976, being section 325.1005 of the Michigan Compiled Laws, (b) the secondary maximum contaminant level established by the United States environmental protection agency, or (c) the criterion for an adverse aesthetic characteristic, the cleanup criterion shall be the lowest of these applicable values unless the department determines that compliance with this rule is not necessary because the use of the aquifer is reliably restricted pursuant to section XXXX (controlled risk categories). The criterion for an adverse aesthetic characteristic shall be represented by a taste or odor threshold concentration or concentration below which appearance or other aesthetic characteristics of groundwater in an aquifer are not adversely affected by a hazardous substance, singly or in combination with other hazardous substances. The taste or odor threshold concentration or concentration affecting appearance shall be determined according to methods approved by the United States environmental protection agency or other methods approved by the department. The point of exposure shall be presumed to be any point in the affected aquifer.

(7) The department shall not approve of a response activity in categories set forth in subsection (1)(b) to (c), unless the person proposing the response activity documents that the current zoning of the property is consistent with the categorical criteria being proposed, or that the governing zoning authority intends to change the zoning designation so that the proposed criteria are consistent with the new zoning designation, or the current property use is a legal nonconforming use. The department shall not grant final approval for a response activity that relies on a change in zoning designation until a final determination of that zoning change has been made by the local unit of government. The department may approve of a response activity that achieves categorical criteria that is based on greater exposure potential than the criteria applicable to current zoning. In addition, the response activity shall include documentation that the current property use is consistent with the current zoning or is a legal nonconforming use. Abandoned or inactive property shall be considered on the basis of zoning classifications as described above.

(8) Cleanup criteria from 1 or more categories in subsection (1) may be applied at a facility, if all relevant requirements are satisfied for application of a pertinent criterion. Additionally, the department may select or approve response activities that address more than 1 facility in a single plan or report.

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(9) Except as provided in subsections XXXX of this part, compliance with the residential category in subsection (1)(a) shall be based on R 299.5710 and R299.5716 of the Michigan administrative code and criteria described as follows. In lieu of R 299.5709, R 299.5712, R 299.5714, R 299.5720, R 299.5724, and R 299.5726 of the Michigan administrative code, criteria will be developed as provided in subsections XXXX of this part. *Note: revision of this subsection may be required to ensure consistency with other sections of the program redesign.*

(10) The need for soil remediation to protect an aquifer from hazardous substances in soil shall be determined by R 299.5722 of the Michigan administrative code, considering the vulnerability of the aquifer or aquifers potentially affected if the soil remains at the facility. Migration of hazardous substances in soil to an aquifer is a pertinent pathway if appropriately based on consideration of site-specific factors.

(11) The department may approve the use of biological or mathematical modeling methods or other scientific methods developed or identified as appropriate by the United States environmental protection agency to evaluate or identify reasonable and relevant exposure assumptions or toxicity values of hazardous substances if the department determines all of the following:

- (a) The use of the model or method is reliable, scientifically valid and best represents the available information.
- (b) That application of the model or methods results in a cleanup criterion that more accurately reflects the risk posed by the hazardous substance.
- (c) That data of sufficient quantity and quality are available for a specified hazardous substance to allow the scientifically valid application of the model or method.

(12) If the cleanup criterion for a hazardous substance determined by R 299.5707 of the Michigan administrative code is greater than a cleanup criterion developed for a category pursuant to subsection (1), the criterion determined pursuant to R 299.5707 of the Michigan administrative code shall be the cleanup criterion for that hazardous substance in that category.

(13) In determining the adequacy of a land-use based response activity to address sites contaminated by polychlorinated biphenyls, the department shall not require response activity in addition to that which is subject to and complies with applicable federal regulations and policies that implement the toxic substances control act, Public Law 94-469, 15 U.S.C. 2601 to 2629, 2641 to 2656, 2661 to 2671, and 2681 to 2692.

(14) Response activity to address the release of uncontaminated mineral oil satisfies subsection (6) of this part for groundwater or R 299.5718 for soil under the Michigan administrative code if all visible traces of mineral oil are removed from groundwater and soil.

(15) The department shall approve the use of probabilistic or statistical methods or other scientific methods of evaluating environmental data when determining compliance with

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a pertinent cleanup criterion if the methods are determined by the department to be reliable, scientifically valid, and best represent actual site conditions and exposure potential.

(16) If a response activity allows for venting groundwater, the discharge shall comply with requirements of part 31 and the rules promulgated under that part or an alternative method established by rule. If the discharge of venting groundwater is provided for in a response activity that is approved by the department, a permit for the discharge is not required. As used in this subsection, "venting groundwater" means groundwater that is entering a surface water of the state from a facility.

(17) A response activity plan shall provide for response activity to meet the residential categorical criteria, or provide for activity and use limitations pursuant to section XXXX (*controlled risk categories*).

(18) A response activity that relies on cleanup criteria developed pursuant to subsection (1) shall also consider other factors necessary to protect the public health, safety, and welfare, and the environment as specified by the department, if the department determines based on data and existing information that such considerations are relevant to a specific facility. These factors include, but are not limited to, the protection of surface water quality and consideration of ecological risks if pertinent to the facility based on the requirements of R 299.5728 and R 299.5730 of the Michigan administrative code.

(19) On an annual basis, the department shall electronically post on its internet web page a notice that informs interested parties of a priority list of hazardous substance assessments that the department will develop or review within the subsequent calendar year. The department shall review no fewer than 10 hazardous substances per calendar year, or as allowed by the department's resources, with no hazardous substance being reviewed more frequently than once every 3 years. A draft toxicological assessment and draft cleanup criteria shall be prepared by the department for each hazardous substance and shall be released for a 45 day public review and comment period. At the time that the toxicological assessment and cleanup criteria are published on the department's internet web page as final, the department shall respond in writing to significant comments, data, studies or other documents submitted to the department in response to the public review and comment period. Prioritization of hazardous substances for annual review shall consider:

- (a) Potential public health impact.
- (b) The department's statutory, regulatory or program-specific implementation needs.
- (c) Availability of new scientific information or methodology that may significantly alter an existing toxicological assessment.
- (d) Availability of other scientific assessment documents that could serve as the basis for the department's toxicological assessment.

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(20) The following special considerations must be addressed when risk assessments are conducted or site-specific criteria are developed for certain hazardous substances.

(a) All polychlorinated dibenzodioxins and dibenzofurans and dioxin-like polychlorinated biphenyls shall be considered as 1 hazardous substance and environmental concentrations expressed as an equivalent concentration of 2,3,7,8-tetrachlorodibenzo-p-dioxin based upon the relative potency and concentration of the congeners identified at the facility. All other classes of hazardous substances that have documented dioxin-like activity and have toxicity equivalent factors or other relative potency factors recognized by United States environmental protection agency shall be considered as one hazardous substance and environmental concentrations calculated on the basis of the relative potencies and congener-specific concentrations present at the facility.

(b) The carcinogenic polycyclic aromatic hydrocarbons shall be considered as 1 hazardous substance, expressed as an equivalent concentration of benzo(a)pyrene based upon its concentration at the facility and its relative potency as indicated in guidance from the United States environmental protection agency. Other groups of hazardous substances identified by the United States environmental protection agency and having established relative potency factors shall have criteria developed and risk assessments conducted based on relative potencies.

(c) The department may calculate cleanup criteria using exposure assumptions other than those in the equations shown in other subsections of this part or those shown in part 7 of the Michigan administrative code if either of the following conditions is satisfied:

(i) A hazardous substance causes an adverse effect in a sensitive subpopulation that is not adequately protected or represented by the default exposure assumptions. The adverse effects may include but are not limited to developmental or reproductive effects.

(ii) The toxicokinetics of a hazardous substance are not best represented by the average daily dose when accounting for the most sensitive effect.

(21) If a calculated soil cleanup criterion developed under subsection XXXX (soil criteria) of this part or R 299.5722 of the Michigan administrative code is greater than the soil saturation concentration for that hazardous substance, then the soil saturation concentration shall be the cleanup criterion for that pathway unless a site-specific soil saturation concentration is developed per subsection (2) of this part.

*(XX) Note: placeholder to broadly acknowledge language inconsistencies between promulgated Part 201/213 rules and those of the proposed program redesign, inclusive of, but not limited to, terminology such as remedial action plan, generic criteria and industrial and commercial criteria.*