

May 2009

**Summary of Criteria Relevant to Selecting a Remedial Alternative Generally
and
Criteria Relevant to Gelman
Consent Judgment Modification**

Excerpt from the Gelman Consent Judgment:

§XXIV This Consent Judgment may not be modified unless such modification is in writing, signed by all Parties, and approved and entered by the court. Remedial Plans, work plans, or other submissions made pursuant to this Consent Judgment may be modified by mutual agreement of the parties

Excerpts from Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended:

§324.20102a

Sec. 20102a. (1) Notwithstanding any other provision of this part, the following actions shall be governed by the provisions of this part that were in effect on May 1, 1995:

(a) Any judicial action or claim in bankruptcy that was initiated by any person on or before May 1, 1995 under this part.

(b) An administrative order that was issued on or before May 1, 1995 pursuant to section 20119.

(c) An enforceable agreement with the state entered into on or before May 1, 1995 by any person under this part.

(2) For purposes of this section, the provisions of this part that were in effect on May 1, 1995 are hereby incorporated by reference.

(3) Notwithstanding subsection (1), upon request of a person implementing response activity, the department shall approve changes in a plan for response activity to be consistent with sections 20118 and 20120a.

§324.20118 Response activity; purposes of remedial action; alternatives; referred remedial actions; approval of plan; conditions; record; analysis of source control measures; liability; aquifer monitoring plan; innovative cleanup technologies.

Sec. 20118. (1) The department may take response activity or approve of response activity proposed by a person that is consistent with this part and the rules promulgated under this part relating to the selection and implementation of response activity that the department concludes is necessary and appropriate to protect the public health, safety, or welfare, or the environment.

(2) Remedial action undertaken under subsection (1) at a minimum shall accomplish all of the following:

(a) Assure the protection of the public health, safety, and welfare, and the environment.

(b) Except as otherwise provided in subsections (5) and (6), attain a degree of cleanup and control of hazardous substances that complies with all applicable or relevant and appropriate requirements, rules, criteria, limitations, and standards of state and federal environmental law.

(c) Except as otherwise provided in subsections (5) and (6), be consistent with any cleanup criteria incorporated in rules promulgated under this part.

(3) The cost effectiveness of alternative means of complying with this section shall be considered by the department only in selecting among alternatives that meet all of the criteria of subsection (2).

(4) Remedial actions that permanently and significantly reduce the volume, toxicity, or mobility of the hazardous substances are to be preferred.

(5) The department may select or approve of a remedial action plan meeting the criteria provided for in section 20120a that does not attain a degree of control or cleanup of hazardous substances that complies with R 299.5705(5) or R 299.5705(6) of the Michigan administrative code, or both, if the department makes a finding that the remedial action is protective of the public health, safety, and welfare, and the environment. Notwithstanding any other provision of this subsection, the department shall not approve of a remedial action plan that does not attain a degree of control or cleanup of hazardous substances that complies with R 299.5705(5) or R 299.5705(6) of the Michigan administrative code if the remedial action plan is being implemented by a person who is liable under section 20126 and the release was grossly negligent or intentional, unless attaining that degree of control is technically infeasible, or the adverse environmental impact of implementing a remedial action to satisfy the rule would exceed the environmental benefit of that remedial action.

(6) A remedial action plan may be selected or approved pursuant to subsection (5) with regard to R 299.5705(5) or R 299.5705(6), or both, of the Michigan administrative code, if the department determines, based on the administrative record, that 1 or more of the following conditions are satisfied:

(a) Compliance with R 299.5705(5) or R 299.5705(6), or both, of the Michigan administrative code is technically impractical

(b) The remedial action selected or approved will, within a reasonable period of time, attain a standard of performance that is equivalent to that required under R 299.5705(5) or R 299.5705(6) of the Michigan administrative code.

(c) The adverse environmental impact of implementing a remedial action to satisfy R 299.5705(5) or R 299.5705(6), or both, of the Michigan administrative code would exceed the environmental benefit of the remedial action.

(d) The remedial action provides for the reduction of hazardous substance concentrations in the aquifer through a naturally occurring process that is documented to occur at the facility and both of the following conditions are met:

(i) It has been demonstrated that there will be no adverse impact on the environment as the result of migration of the hazardous substances during the remedial action, except for that part of the aquifer specified in and approved by the department in the remedial action plan.

(ii) The remedial action includes enforceable land use restrictions or other institutional controls necessary to prevent unacceptable risk from exposure to the hazardous substances, as defined by the cleanup criteria approved as part of the remedial action plan.

(7) If the department approves of a remedial action plan pursuant, in part, to subsections (5) and (6), the administrative record for the facility shall include a complete explanation of the basis of the department's decision under subsections (5) and (6). In addition, the intent of and the basis for the exercise of authority provided for in subsections (5) and (6) shall be part of an analysis of the recommended alternatives if 1 is required pursuant to R 299.5605(1)(a) of the Michigan administrative code.

(8) A remedial action plan approved by the department shall include an analysis of source control measures already implemented or proposed, or both. A remedial action plan may incorporate by reference an analysis of source control measures provided in a feasibility study.

(9) Any liability a person may have under this part shall be unaffected by a decision of the department pursuant to subsection (5), (6), or (7), including liability for natural resources damages pursuant to section 20126a(1)(c).

(10) An aquifer monitoring plan shall be part of all remedial action plans that address aquifer contamination. The aquifer monitoring plan shall include all of the following:

(a) Information addressed by R 299.5519(2)(a) to (j) of the Michigan administrative code.

(b) Identification of points of compliance for judging the effectiveness of the remedial action.

(c) Identification of points of compliance if standards based on section 20120a(1)(a) are required to be met as part of the remedial action.

(11) The department may determine that a monitoring plan is not required pursuant to subsection (10) if the person conducting the remedial action demonstrates that the horizontal and vertical extent of hazardous substance concentrations in the aquifer above those allowed by the criteria based on section 20120a(1)(a) will not significantly increase in the absence of active removal of those hazardous substances from the aquifer. The department's determination pursuant to this subsection shall be based on the administrative record and include an explanation of the basis for the determination.

(12) The department shall encourage the use of innovative cleanup technologies. Before July 1, 1995, the department shall undertake 3 pilot projects to demonstrate innovative cleanup technologies at facilities where money from the fund is used.

History: 1994, Act 451, Eff. Mar. 30, 1995;—Am. 1995, Act 71, Imd. Eff. June 5, 1995.

§324.20120a Cleanup criteria.

Sec. 20120a. (1) The department may establish cleanup criteria and approve of remedial actions in the categories listed in this subsection. The cleanup category proposed shall be the option of the person proposing the remedial action, subject to department approval, considering the appropriateness of the categorical criteria to the facility. The categories are as follows:

(a) Residential.

(b) Commercial.

(c) Recreational.

(d) Industrial.

(e) Other land use based categories established by the department.

(f) Limited residential.

(g) Limited commercial.

(h) Limited recreational.

(i) Limited industrial.

(j) Other limited categories established by the department.

(2) The department may approve a remedial action plan based on site specific criteria that satisfy the applicable requirements of this part and the rules promulgated under this part. The department shall utilize only reasonable and relevant exposure pathways in determining the adequacy of a site specific criterion. Additionally, the department may approve a remedial action plan for a designated area-wide zone encompassing more than 1 facility, and may consolidate remedial actions for more than 1 facility.

(3) The department shall develop cleanup criteria pursuant to subsection (1) based on generic human health risk assessment assumptions determined by the department to appropriately characterize patterns of human exposure associated with certain land uses. The department shall utilize only reasonable and relevant exposure pathways in determining these assumptions. The department may prescribe more than 1 generic set of exposure assumptions within each category described in subsection (1). If the department prescribes more than 1 generic set of exposure assumptions within a category, each set of exposure assumptions creates a subcategory within a category described in subsection (1). The department shall specify site characteristics that determine the applicability of criteria derived for these categories or subcategories.

(4) If a hazardous substance poses a carcinogenic risk to humans, the cleanup criteria derived for 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 generic set of exposure assumptions established under subsection (3) for the appropriate category or subcategory. 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 generic set of exposure assumptions established under subsection (3) for the appropriate category or subcategory. 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 compound 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.

(5) 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, or (b) criteria for adverse aesthetic characteristics derived pursuant to R 299.5709 of the Michigan administrative code, the cleanup criterion shall be the more stringent of (a) or (b) unless the department determines that compliance with this rule is not necessary because the use of the aquifer is reliably restricted pursuant to section 20120b(4) or (5).

(6) The department shall not approve of a remedial action plan in categories set forth in subsection (1)(b) to (j), unless the person proposing the plan 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 remedial action plan 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 remedial action that achieves categorical criteria that is based on greater exposure potential than the criteria applicable to current zoning. In addition, the remedial action plan 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.

(7) 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.

(8) Except as provided in subsection (4) and subsections (9) to (13), compliance with the residential category in subsection (1)(a) shall be based on R 299.5709 through R 299.5711(4), R 299.5711(6) through R 299.5715 and R 299.5727 of the Michigan administrative code. R 299.5711(5), R 299.5723, and R 299.5725 of the Michigan administrative code shall not apply for calculations of residential criteria under subsection (1)(a).

(9) The need for soil remediation to protect an aquifer from hazardous substances in soil shall be determined by R 299.5711(2) 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 appropriate based on consideration of site specific factors.

(10) The department may establish cleanup criteria for a hazardous substance using a biologically based model developed or identified as appropriate by the United States environmental protection agency if the department determines all of the following:

(a) That application of the model results in a criterion that more accurately reflects the risk posed.

(b) That data of sufficient quantity and quality are available for a specified hazardous substance to allow the scientifically valid application of the model.

(c) The United States environmental protection agency has determined that application of the model is appropriate for the hazardous substance in question.

(11) 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.

(12) 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.

(13) Response activity to address the release of uncontaminated mineral oil satisfies R 299.5709 for groundwater or R 299.5711 for soil under the Michigan administrative code if all visible traces of mineral oil are removed from groundwater and soil.

(14) Approval by the department of a remedial action plan based on 1 or more categorical standard in subsection (1)(a) to (e) shall be granted only if the pertinent criteria are satisfied in the affected media. The department shall approve the use of probabilistic or statistical methods or other scientific methods of evaluating environmental data when determining compliance with 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.

(15) If a remedial action 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 remedial action plan 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.

(16) A remedial action plan shall provide response activity to meet the residential categorical criteria, or provide for acceptable land use or resource use restrictions pursuant to section 20120b.

(17) A remedial action plan that relies on categorical 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 299.5717 of the Michigan administrative code.

(18) The department shall annually evaluate and revise, if appropriate, the cleanup criteria derived under this section. The evaluation shall incorporate knowledge gained through research and studies in the areas of fate and transport and risk assessment. The department shall prepare and submit to the legislature a report detailing revisions made to cleanup criteria under this section.

History: Add. 1995, Act 71, Imd. Eff. June 5, 1995.

Part 201 Administrative Rules.

R 299.5601 Degree of cleanup; compliance with state and federal requirements; cost.

Rule 601. (1) All remedial actions carried out under these rules shall achieve a degree of cleanup that is protective of the public health, safety, and welfare and the environment.

(2) Remedial actions shall meet legally applicable state and federal requirements and shall meet relevant and appropriate state and federal requirements to the extent practical.

(3) The cost of a remedial action shall be a factor only in choosing among alternatives that adequately protect the public health, safety, and welfare and the environment, consistent with the requirements of section 20120a of the act.

R 299.5603 Evaluation of remedial action alternatives.

Rule 603. (1) When the department is selecting or approving a remedial action, or when another person is selecting a remedial action, all of the following shall be considered:

(a) The effectiveness of alternatives in protecting the public health, safety, and welfare and the environment.

(b) The long-term uncertainties associated with the proposed remedial action.

(c) The persistence, toxicity, mobility, and propensity to bioaccumulate of the hazardous substances.

(d) The short and long-term potential for adverse health effects from human exposure.

(e) Costs of remedial action, including long-term maintenance costs, except that costs shall only be considered as specified in R 299.5601(3).

(f) Reliability of the alternatives.

(g) The potential for future remedial action costs if an alternative fails.

(h) The potential threat to human health, safety, and welfare and the environment associated with excavation, transportation, and redisposal or containment.

(i) The ability to monitor remedial performance.

(j) For remedial actions that require the opportunity for public comment under section 20120d of the act, the public's perspective about the extent to which the proposed remedial action effectively addresses requirements specified in Part 201 of the act and these rules.

(2) Evaluation of the factors in subrule (1) of this rule shall consider all factors in balance with one another as necessary to achieve the objectives of part 201 of the act and R 299.5601. No single factor in subrule (1) of this rule shall be considered most important.