## PART 5. RESPONSE ACTIVITIES

**R 299.5501 Rescinded.**

**R 299.5503 Rescinded.**

**R 299.5505 Rescinded.**

**R 299.5507 Rescinded.**

**R 299.5509 Rescinded.**

**R 299.5511 Rescinded.**

**R 299.5513 Rescinded.**

**R 299.5515 Rescinded.**

**R 299.5517 Rescinded.**

**R 299.5519 Rescinded.**

**R 299.5520 Objective; response activities generally; affirmative obligations; requirement to diligently pursue; access; penalties; loss of complete status; cost recovery.**

**Rule 520.** (1) The principal objective of all response activities is to ensure that timely and adequate measures are taken to prevent, minimize, or mitigate injury or unacceptable risk to the public health, safety, or welfare or to the environment.

(2) In selecting an appropriate response activity, a person shall first assess whether interim response activity is appropriate before remedial action, consistent with the terms of R 299.5526. A person who has an affirmative obligation to conduct a response activity shall conduct response activity in a manner and according to a schedule which is responsive to known and reasonably anticipated threats to the public health, safety, or welfare or to the environment.

(3) A person's responsibility to comply with the act and these rules exists independent of the department's knowledge of a facility or of its approval of any response activity proposed or taken at a facility. An owner or operator who is liable and who has knowledge that his or her property is a facility has an affirmative obligation to comply with section 20114(1) of the act and with section 20107a of the act. Unless a response activity that addresses the facility is complete upon transfer, a former owner or operator of property that is a facility continues to have the affirmative obligation under section 20114(1)(g) of the act if all of the following conditions apply:

(a) He or she owned or operated the property on or after June 5, 1995.

(b) He or she had knowledge at that time that the property was a facility.

(c) He or she is liable.

(4) If a person is subject to an administrative order or agreement or judicial decree entered prior to the effective date of these amendatory rules and new or modified language in these amendatory rules, including defined terms, changes the interpretation of that document, then the terms of the administrative order or agreement or judicial decree shall control, unless that document is modified with the consent of the parties and, if required, the court.

(5) Any evaluation of whether response activity was diligently pursued, in the context of determining compliance with section 20114 of the act, shall include all of the following considerations:

(a) Whether an emergency situation existed, to which the liable person responded appropriately and in good faith, based on his or her knowledge at the time.

(b) Whether effective interim response activities were employed.

(c) Whether injury or unacceptable exposures were prevented, minimized, or mitigated. This consideration shall include evaluation of the presence of wellhead protection zones that may be affected by the facility.

(d) Whether a determination of the nature and extent of contamination occurred at an appropriate pace based on a person's knowledge at the time.

(e) Whether off-property migration of hazardous substances, if any, was addressed in a timely manner after the person obtained knowledge of the condition.

(f) Whether a response activity was identified and implemented within a reasonable time frame, given the relevant pathways of exposure and the hazardous substances of concern.

(6) The obligation of a person to conduct response activity under section 20114 of the act or seek access under this rule does not create or provide a right of access to another person's property.

(7) Except as provided in subrule (8) of this rule, a person who has not secured access nor petitioned the circuit court for access within 1 year of the effective date of this amendatory rule, or 1 year of having reason to believe that access to another person's property is necessary to comply with section 20114 of the act, whichever is later, is subject to penalties under the act.

(8) If reasonable inferences from information available to a person who is subject to section 20114 of the act support a conclusion that the need for

response activity is urgent, a person shall secure access or petition the court for access in a reasonable period of time shorter than 1 year, considering the exigencies of the situation. Any of the following conditions result in an urgent need for access:

(a) Actual or probable contamination of a private or public water supply.

(b) The presence of direct contact hazards that are an attractive nuisance.

(c) Risk of fire or explosion.

(9) If any response activity is not adequately documented, including meeting requirements for quality assurance and quality control of data, then a person who is liable may be required to conduct additional response activity in order to demonstrate that the response activity is complete or satisfactory.

(10) Nothing in these rules precludes a person from conducting response activity for which he or she is not liable.

(11) Any of the following conditions nullifies, without a specific determination or action by the department, the conclusion that a response activity is complete, unless the lapse or violation is corrected to the satisfaction of the department, or, for response activity implemented without facility-specific department approval, within a reasonable time after discovery, as gauged by the risk posed by the condition to the public health, safety, or welfare, or to the environment, but in no case longer than 90 days after discovery:

(a) Unknown conditions, that is, discovery of a condition that was present on the property at the time the response activity was conducted, but was unknown or undetected, and requires additional response activity.

(b) Remedy failure, that is, failure of the response activity to comply with applicable cleanup criteria identified in the interim response activity plan or remedial action plan, if any, or with performance standards established for those components of the response activity that are associated with long-term performance, if any.

(c) Failure by the person who completed the response activity to maintain a reliable mechanism for ongoing compliance with any applicable requirement of section 20120b(3)(a) to (e) of the act, or to comply with a legally enforceable agreement with the department, if one exists.

(d) Any financial assurance mechanism required by section 20120b(3)(e) of the act is no longer adequate or cannot be verified or accessed by the department.

(12) The department may determine that a response activity is not complete by finding that it is not effective and reliable, as those terms are described in R 299.5603, because the response activity repeatedly fails, notwithstanding repeated cures within the 90 day period provided in subrule (11) of this rule.

(13) A person who asserts that response activity is complete shall have the burden of demonstrating that he or she has satisfied the applicable requirements of R 299.5101(e) and the act. Nothing in these rules shall impair the department’s authority to dispute an assertion that response activity is complete or to request information relevant to that assertion.

(14) A person seeking to recover response activity costs under section 20126a(1)(b) of the act may establish that a response activity is consistent with

the rules relating to the selection and implementation of response activity costs by documenting that the work was in substantial compliance with R 299.5520 to R 299.5542 and R 299.5701 to R 299.5750, as applicable to the response activity undertaken. A person is not required to conduct the full range of response activity covered by R 299.5520 to R 299.5542 to establish that a specific response activity was conducted in substantial compliance with the rules. Written department approval of a specific response activity may be used as evidence that the response activity is consistent with R 299.5520 to R 299.5542 and R 299.5701 to R 299.5750, as applicable to the response activity undertaken.

**R 299.5522 Notice to department and neighboring property owners; special conditions for notice required of permittees under part 615 of the act and by easement holders; community outreach.**

**Rule 522.** (1) A person who is subject to section 20107a of the act shall provide notice to the department as provided in R 299.51017.

(2) A person who is subject to section 20114 of the act and who has reason to believe that 1 or more hazardous substances is emanating from, or has emanated from, and is present beyond a boundary of his or her property at a concentration in excess of criteria developed by the department under section 20120a(1)(a) and (17) of the act shall provide notice to the department and affected property owners as provided in this rule, unless the release in question is a permitted release. Notice shall also be made if hazardous substances emanating from his or her property enter any surface waters of the state in concentrations that exceed generic GSI criteria established under R 299.5716. The requirement to notify shall be based on reasonable inferences that can be made from available data about the facility, including, but not limited to, data gathered through investigation undertaken to comply with section 20114(1)(a) of the act. If, during the course of a remedial investigation or other response activity, information is gained which shows that additional properties have been affected, or are likely to be affected, by migrating contamination at a concentration in excess of a cleanup criterion developed by the department under section 20120a(1)(a) of the act, then notice shall be provided to the department and the affected property owner about each affected property. A single notice to the department may be provided to address multiple affected properties.

(3) If a person who is subject to this rule has provided notice under R 299.51017(1) or section 21309a of the act, then notice does not have to be made under this rule for the same affected property.

(4) The notice required by this rule shall be made, in writing, to the department and to owner of any property affected by migrating contamination within 45 days of the time that a person who is subject to section 20114 of the act has reason to believe that there is a condition that is subject to the notice provision, or within 9 months of the effective date of this rule, whichever is later. The notice shall include all of the following, as appropriate to the circumstances in question:

(a) The name and location of the property that is the source of the release at the facility.

(b) The name, address, and telephone number of a contact person for the facility.

(c) The address and property tax identification number, if available, or other location information for each property onto which contamination has migrated or is likely to have migrated.

(d) A summary of the information which shows that contamination is emanating from, or has emanated from, and is present beyond the boundary of the source property at a concentration which exceeds that allowed by section 20120a(1)(a) of the act. This summary shall identify the environmental media affected, specific hazardous substances, and the concentrations of those hazardous substances in all affected environmental media at the property boundary and in any sample locations beyond the property boundary. The summary shall also describe the basis for the conclusion that the contamination is emanating, has emanated, or is present beyond the boundary of the source property, including whether the conclusion is based on groundwater analytical data or fate and transport modeling, both, or neither.

(e) If the person making notice has reason to believe that a migrating hazardous substance has affected, or is likely to affect, a private or public water supply, then that water supply shall be identified in the notice.

(5) A person who holds a permit for an oil and gas well under part 615 of the act and is subject to section 20114 of the act shall give notice, as called for in subrules (2) and (4) of this rule, to the department and to the owner of the surface rights of the property if a release from the oil and gas exploration or production activities results in hazardous substance concentrations in excess of criteria developed by the department under section 20120a(1)(a) or (17) of the act on property where a well or related surface activity exists. Such notice shall be in addition to notice, as called for in subrule (2) of this rule, about migration of contamination beyond the boundary of property where the well or related surface activity is located.

(6) A person who holds an easement and is subject to section 20114 of the act shall provide notice, as called for in subrules (2) and (4) of this rule, to the department and to the grantor of the easement, or the grantor’s successor in interest, if any, if there is a release from the easement holder’s activities that results in hazardous substance concentrations in excess of criteria developed by the department under section 20120a(1)(a) or (17) of the act on property where the easement exists. Such notice shall be in addition to notice, as called for in subrule (2) of this rule, about migration of contamination beyond the boundary of the property where the easement exists.

(7) In making a determination whether there is significant public interest in a remedial action under section 20120d(3) of the act or in any other response activity being conducted with department knowledge, the department shall consider at least all of the following:

(a) Whether the response activity addresses a bioaccumulative chemical of concern, as that term is defined in R 323.1043(l).

(b) Whether hazardous substances migrated beyond the boundaries of the source property before or during response activities to address the facility.

(c) Whether the remedial action being proposed potentially impacts surrounding properties or residents in the area.

(d) Whether a neighboring property owner or resident or a local government official has communicated to the department that the category of response activity proposed or land use upon which the remedial action was based is inconsistent with local zoning, other local ordinance, or, in the case of property that is not zoned, the proposed reasonably foreseeable use is inconsistent or incompatible with surrounding land uses.

(8) Nothing in these rules prevents the department from conducting community outreach efforts at any time during a response activity or in any way more extensively than that required by section 20120d of the act.

**R 299.5524 Land or resource use restrictions; disclosure under section 20116 of act of continuing obligations.**

**Rule 524.** (1) All land or resource use restriction documents, other than local ordinances, shall be filed with the register of deeds for the county in which the facility is located, and a copy of the land or resource restrictions, with proof of filing, provided to the department and the clerk of the local unit of government in which the facility is located, as a condition of establishing that the response activity is complete. A restrictive covenant, notice of approved environmental remediation, notice of aesthetic impact, or other property-specific institutional control other than a local ordinance is valid as a part of response activity only when filed by the property owner or with the written permission of the property owner.

(2) Restrictive covenants and notices described in this rule shall be in a format approved by the department and made available on the department's internet web site, with modifications to reflect the facts applicable to each facility. Notices of approved environmental remediation for response activity that was not individually reviewed and approved by the department on a facility-specific basis shall be in a department approved format that provides substantially the same information as the format for activity approved on a facility-specific basis, but shall state that the response activity was approved by operation of rule, and that the department has not conducted a facility-specific review of the adequacy of the response activity or determined that the response activity is adequate or complete.

(3) A restrictive covenant used to impose land or resource use restrictions for response activity in a category provided for in section 20120a(1)(f) to (j) or (2) of the act shall conform to the requirements of section 20120b(4) of the act.

(4) A notice of approved environmental remediation shall be used in conjunction with response activity that meets generic cleanup criteria in a category other than residential, or for property that is not zoned, as provided in R 299.5532(8)(b). The notice of approved environmental remediation shall state that the property use is restricted to commercial, recreational, or industrial use,

or a combination of those uses, as appropriate to the facility in question and that a change from that land use or uses may necessitate further evaluation of potential risks to the public health, safety, or welfare or to the environment. A notice of approved environmental remediation shall also include provisions for both of the following:

(a) Grant to the department the right to enter the property at reasonable times for the purpose of determining and monitoring compliance with the land or resource use restrictions, inspecting the operation and maintenance of any remedial action measures, and inspecting records related to the remedial action.

(b) Allow the state to enforce the land use restriction by legal action in a court of appropriate jurisdiction.

(5) A notice of aesthetic impact may be used as a preapproved institutional control in place of a restrictive covenant when the only cleanup criteria exceeded at the facility are criteria based on aesthetic impacts and the department has approved the response activity on a facility-specific basis.

(6) A person who records with the register of deeds a certification, as allowed by section 20116(2) of the act, that all response activity required by a department-approved remedial action plan has been completed shall include in that certification a description of all elements of the response activity that are required to continue after completion, including compliance with land or resource use restrictions, operation and maintenance, monitoring, and financial assurance, as applicable to the facility.

**R 299.5526 Scope and applicability of interim response activities generally; specific requirements for persons subject to section 20114 of act; documentation requirements; department approval required.**

**Rule 526.** (1) An interim response may be undertaken once a person has knowledge that a property is a facility. All of the following factors shall be considered, if relevant to the facility, in determining the appropriateness of an interim response activity:

(a) Actual or probable threats to the public health, safety, or welfare or to the environment, and the severity of that threat.

(b) Actual or probable environmental contamination of drinking water supplies or sensitive ecosystems. This factor shall include identification of any wellhead protection zones in the vicinity of the facility and evaluation of the impact of the facility on any such zones.

(c) The presence of hazardous substances in abandoned or discarded containers.

(d) The likelihood that weather conditions will cause hazardous substances to migrate or be released.

(e) The likelihood that planned demolition activities will cause hazardous substances to migrate or be released.

(f) The threat of fire or explosion.

(g) The likelihood that source control measures implemented immediately will effectively prevent, minimize, or mitigate injury to the public health, safety, or welfare or to the environment.

(h) The feasibility of implementing a given response activity independent of other response activities.

(i) Whether taking interim response activity will speed completion of a remedial action.

(j) Whether the interim response will accomplish significant risk reduction.

(2) Interim response activities may include, but are not limited to, any of the following:

(a) Fences, warning signs, or other security or facility control precautions where humans or animals have access to the release or threat of release.

(b) Drainage controls where precipitation or runoff from other sources can enter the release area and spread hazardous substances.

(c) Stabilization of berms, dikes, or impoundments where needed to maintain their integrity.

(d) Capping or covering of contaminated soils or sludges where needed to prevent the migration of hazardous substances into the environment or to mitigate unacceptable exposure.

(e) Using chemicals or other materials to retard the spread of a release or mitigate its effects.

(f) Removal of contaminated soils from drainage or other areas to reduce the spread of hazardous substances.

(g) Removal of drums, barrels, tanks, or other bulk storage containers that contain hazardous substances where it will reduce the likelihood of any of the following:

(i) Spillage.

(ii) Leakage.

(iii) Fire or explosion.

(h) Groundwater control, treatment, or removal systems.

(i) Provision of an alternate water service where it will reduce the risk to humans or animals from contaminated water.

(j) Temporary evacuation where necessary to protect the public health, safety, or welfare where imminent and substantial endangerment has been identified.

(k) Demolition.

(l) Actions to repair or restore property improvements, such as landscaping and fences, that are damaged or destroyed as a result of response activity.

(m) Measures necessary to prevent or mitigate damage to utility lines or other public infrastructure.

(n) Other interim response activity judged by the department to be technically sound and necessary to stop or prevent the release at the source, reduce or eliminate any threat of fire or explosion, or prevent any direct contact hazards.

(3) Any person may, if they have appropriate legal access, conduct an interim response activity at a facility if circumstances warrant such action to prevent, minimize, or mitigate injury to the public health, safety, or welfare or to the environment. The department may, after considering the factors in R 299.5526(1), require a person who is liable to undertake interim response activity

if sections 20114(1)(h) or 20119 of the act apply or if the response activity is being done pursuant to an existing administrative order or agreement or judicial decree. A person who has not been required by the department to undertake interim response activity may conduct that activity without department approval, subject to the exceptions in subrule (8) of this rule, or may seek department approval at any time for interim response activity that the person undertakes.

(4) A person who is subject to section 20114 of the act shall undertake or provide for the specific interim response activities which are described in this subrule if applicable to the circumstances in question. The required action shall be initiated immediately upon obtaining information reasonably supporting the conclusion that a condition exists which necessitates interim response activity and shall continue as necessary to mitigate or eliminate threats to the public health, safety, or welfare or to the environment. The obligation of a person to respond under this subrule is not limited by his or her property boundaries if contamination for which that person is liable has migrated. Interim response activities are presumptively determined to be necessary by the department at a facility to protect the public health, safety, and welfare and the environment in all of the following circumstances:

(a) If hazardous substances have contaminated groundwater or surface water which serves as a water supply source, and if the contamination poses an unacceptable risk to the public health, safety, or welfare, then the person who is subject to section 20114 of the act shall assure that all persons whose water supplies are contaminated or immediately threatened by contamination have alternate water service. Alternate water service provided under this rule shall be approved by the department. If the department or a local health department has issued an advisory against the use of a water supply for any purpose, and that advisory is related to the release being responded to, then the alternate water service provided under this subrule shall address all unacceptable exposures identified in the advisory. This subrule shall not apply to a person who has received a written determination from the department that it is infeasible to provide temporary alternate water service.

(b) If there is a threat of fire or explosion at the source or anywhere on the facility where contamination has come to be located, then the person who is subject to section 20114 of the act shall immediately notify local fire officials, in addition to any other action undertaken in response to the threat of fire or explosion. The person who provides notice to local fire officials under this subrule shall maintain records of the contact made, including the name of the person contacted and the date and time that contact was made if not done in writing.

(c) If there is free phase liquid hazardous substance present at the facility, then the person who is subject to section 20114 of the act shall immediately implement source control measures to remove reasonably recoverable free phase liquid on an ongoing basis to reduce the potential for increasing environmental damage.

(d) If there is a release to surface water, either directly or through venting groundwater, that is acutely toxic.

(e) If there is surficial contamination that is acutely toxic to humans or wildlife.

(5) If a person who is planning to conduct or has conducted an interim response activity requests or is required to have the department's approval, then he or she shall submit an interim response work plan describing response activity to be performed or an implementation report that describes interim response activity that has been undertaken, whichever is appropriate. The department shall approve an interim response work plan or implementation report if it contains all of the following, and the documentation required by subrule (6) or (7) of this rule, if applicable, and the department determines that the action complies with part 201 and these rules with regard to interim response activity:

(a) A description of the objectives of the response activity and how they were or will be achieved.

(b) A legal description of the specific parcel of property addressed by the interim response activity.

(c) A detailed description of the response activity undertaken, including all data that is relevant to the conclusions drawn. Information supplied under this subdivision shall include sufficient documentation of the nature and extent of contamination to support any conclusions about the effectiveness of the response activity.

(d) If the interim response activity is a subset of a remedial action that is being planned, then a description of the relationship of the interim response to the remedial action.

(e) A schedule for implementation of the proposed activity, if department approval is sought for a work plan before implementation of the interim response activity.

(6) A person who wishes to establish that an interim response activity intended to meet applicable cleanup criteria provided for under section 20120a(1)(a) to (e) of the act is complete for 1 or more environmental media in all or a portion of the facility shall maintain documentation that substantially complies with subrule (5) of this rule and also includes all of the following:

(a) Clarification that the response activity is intended to satisfy particular land use-based cleanup criteria.

(b) Demonstration that the cleanup criteria selected are appropriate to the facility, including documentation of land use, zoning, activity patterns anticipated at the facility, and other factors that affect the appropriateness of the selected category.

(c) If subrule (8) of this rule applies, then the person shall secure and maintain documentation of the department's approval of that aspect of the interim response activity.

(d) The date on which the interim response activity is complete.

(e) A description of the condition of the facility at the conclusion of the interim response activity, including both of the following:

(i) Identification of areas known to be contaminated but not addressed by the interim response.

(ii) A discussion of how relevant pathways have been addressed and why other exposure pathways are not relevant or were not addressed in the area that was the subject of the interim response.

(7) A person who wishes to establish that an interim response activity intended to meet applicable cleanup criteria provided for under section 20120a(1)(f) to (j) or (2) of the act is complete for 1 or more environmental media in all or a portion of the facility shall maintain documentation that substantially complies with subrule (5) of this rule and also includes all of the following:

(a) Clarification that the response activity is intended to satisfy particular land use-based cleanup criteria.

(b) Demonstration that the cleanup criteria selected are appropriate to the facility, including documentation of land use, zoning, activity patterns anticipated at the facility, and other factors that affect the appropriateness of the selected category.

(c) Documentation of the department's approval of all of the following:

(i) The selected cleanup category.

(ii) The applicable provisions in section 20120b(3)(a) to (e) of the act.

(iii) Any of the components of the response activity in subrule (8) of this rule, if applicable.

(d) The date on which the interim response activity is complete.

(e) A description of the condition of the facility at the conclusion of the interim response activity, including both of the following:

(i) Identification of areas known to be contaminated but not addressed by the interim response.

(ii) A discussion of how relevant pathways have been addressed and why other exposure pathways are not relevant or were not addressed in the area that was the subject of the interim response.

(8) An interim response that includes any of the following components will not be considered complete, consistent with, or in compliance with, this rule unless the department has approved that component of the interim response:

(a) The interim response activity relies on an institutional control in any form that is not a preapproved institutional control in place of a restrictive covenant to achieve land or resource use restrictions.

(b) The response to aquifer contamination that is part of the interim response is the final action intended to be taken to address aquifer contamination and that action requires a waiver of R 299.5705(5) or R 299.5705(6) under section 20118 of the act.

(c) The interim response activity addresses venting groundwater and a mixing zone determination is required to establish that the conditions in question are protective of the public health, safety, and welfare and the environment.

(9) The department may authorize a mixing zone that is based on compliance with a mixing zone determination issued under section 20120a(15) of the act as part of an interim response if information is provided which supports a conclusion that the discharge is protective of the public health, safety, and welfare and the environment. A person who receives authorization for a mixing

zone under this rule shall acknowledge in writing any conditions the department may impose regarding that authorization.

**R 299.5528 Purpose and scope of remedial investigation generally; certain facility characterization distinguished; department approval.**

**Rule 528.** (1) The purpose of a remedial investigation is to assess site conditions in order to select an appropriate remedial action, if one is required, that adequately addresses those conditions. The remedial investigation identifies the source or sources of any contamination and defines the nature and extent of contamination originating from that source. Defining the nature and extent of contamination includes identifying contamination that may have migrated beyond the boundary of the source property in excess of applicable generic residential cleanup criteria. A remedial investigation work plan or report prepared under this rule shall be consistent with this part and sufficient to support determinations under parts 6 and 7 of these rules, R 299.5526(6) or (7), if applicable, R 299.5532, R 299.5534, R 299.5536, section 20118(5) and (6) of the act, if applicable, and sections 20120a and 20120b of the act.

(2) Prior department approval of a remedial investigation is required only as noted in section 20114(2) of the act and for a remedial investigation requested by the department pursuant to section 20114(1)(h) of the act or under the terms of an administrative order or agreement or judicial decree. Any person preparing a remedial investigation work plan or report may request department approval. The department shall approve remedial investigation work plans or reports for work done in phases if all of the following conditions are satisfied:

(a) Anticipated subsequent phases of investigation are described in sufficient detail so that the department can determine that the phase being proposed or reported on is appropriately defined.

(b) The remedial investigation described in the work plan or report complies with the requirements of this rule for the scope it is intended to address.

(c) If conducting the remedial investigation in phases will not prevent the remedial investigation from being completed in a timely fashion.

(3) A remedial investigation work plan prepared or remedial investigation conducted under part 201 of the act shall address the factors described in this subrule, as appropriate to the facility. If a likely category of remedial action, as set forth in section 20120a of the act, has been identified at the time that the remedial investigation is planned, then the scope of the remedial investigation may be guided by that remedial action objective. A subsequent change in remedial action objective may necessitate additional remedial investigation. The information that shall be provided in a remedial investigation, as appropriate to the facility, is as follows:

(a) Definition of the nature and extent of contamination at the facility. At a minimum, areas known or likely to have been used for hazardous substance storage, handling, transfer, transport, and disposal shall be investigated.

(b) Risks to the public health, safety, and welfare and to the environment and natural resources, including the identification of any water wells and wellhead

protection zones in the vicinity of the facility and an evaluation of the impact of the facility on any such wells or zones.

(c) Relevant exposure pathways.

(d) All of the following with respect to hazardous substances that are present:

(i) Amount.

(ii) Concentration.

(iii) Hazardous properties.

(iv) Environmental fate.

(v) Bioaccumulative properties.

(vi) Persistence.

(vii) Mobility.

(viii) Physical state.

(e) All of the following with respect to the physical setting of the facility:

(i) Geology.

(ii) Hydrology.

(iii) Hydrogeology.

(iv) Depth to saturated zone.

(v) Hydrologic gradients.

(vi) Proximity to aquifers.

(vii) Proximity to surface water.

(viii) Proximity to floodplains.

(ix) Proximity to wetlands.

(f) Current and potential groundwater use.

(g) Source identification and evaluation.

(h) Whether hazardous substances at the facility can be reused or recycled.

(i) The likelihood of future releases if the hazardous substances remain at the facility.

(j) The extent to which natural or human-made barriers currently contain the hazardous substances and the adequacy of the barriers.

(k) The impact of any planned demolition activities on conditions at the facility.

(l) The extent to which hazardous substances have migrated or are expected to migrate from the area of release, including the potential for hazardous substances to migrate along preferential pathways.

(m) An evaluation of injury to, destruction of, or loss of natural resources related to the release.

(n) Contribution of the hazardous substances at the facility to contamination of the air, land, or water.

(o) Legally applicable or relevant and appropriate state and federal requirements.

(p) Sampling design and rationale for parameter selection.

(q) A description of monitoring well construction.

(r) A description of, and rationale for, any geophysical techniques used in the investigation. The data from geophysical testing shall be made available to the department on request.

(s) Sample collection and preparation procedures.

(t) Identification of the laboratory or laboratories responsible for sample analysis.

(u) Laboratory methods used to generate all remedial investigation data, quality assurance and quality control data that document the accuracy and precision of the reported data shall be made available to the department on request.

(v) A description of any statistical methods used to evaluate laboratory data relative to cleanup criteria and a discussion of the reasons why the statistical methods that were used are appropriate to the circumstances.

(w) Other matters appropriate to the facility. Department requests for information under this subdivision shall be limited to factors not adequately addressed by information required by other subdivisions of this subrule and shall be accompanied by an explanation of the need for such additional information.

(4) If the work has been completed, then the person may seek the department's approval by submitting a remedial investigation report that describes activity that has been completed and how it meets the requirements of this rule and R 299.5526(5)(c)(i) or R 299.5532, as applicable.

(5) Facility evaluation activities are not considered a remedial investigation if they are not intended to support preparation of a feasibility study, an interim response activity designed to achieve cleanup criteria, or a remedial action plan. Examples of facility evaluation that are not required to include all the elements of remedial investigation are property evaluation to support a baseline environmental assessment and focused evaluation to support an interim response that is not intended to achieve specific cleanup criteria. Facility or property evaluation activities conducted to meet these more limited goals shall be sufficient to support the objectives they are designed to meet.

**R 299.5530 Feasibility study; department approval.**

**Rule 530.** (1) The department may require that a person who is liable conduct a feasibility study at a facility where remedial action is to be undertaken, if both of the following conditions are satisfied:

(a) More than 1 remedial action alternative is practical.

(b) A feasibility study will provide information and comparisons that contribute to more effective remedy selection process, considering the requirements of R 299.5601 and R 299.5603.

(2) Any person who has not been required by the department to undertake a feasibility study may seek department approval for a feasibility study he or she elects to undertake. A person may seek department approval of a feasibility study that has been completed or a work plan that is proposed. If the work has been completed, then the person may seek the department's approval by submitting a feasibility study report that describes work that has been completed.

(3) A feasibility study shall evaluate a range of alternatives that reflects the practical options, the level of complexity of the contamination problem, and the remedial action that is needed to address the problem. A feasibility study

submitted to the department for approval shall include development of alternative final remedies in each of the following categories that is practical and relevant for the facility:

(a) Alternatives for treatment, disposal, waste minimization, recycling, or destruction at an off-site facility.

(b) Alternatives for treatment, disposal, waste minimization, recycling, or destruction at an on-site facility.

(c) Alternatives that provide for a reduction in risk that is sufficient to meet appropriate land use-based cleanup criteria allowed for under section 20120a of the act and part 7 of these rules.

(d) No action alternative, only if a no action alternative can satisfy the requirements of the act and these rules.

(4) An initial screening of alternatives to narrow the list of potential remedies for detailed evaluation in the feasibility study shall be conducted using all of the following broad criteria:

(a) The effectiveness in achieving an appropriate land use-based cleanup, consistent with the requirements of sections 20118, 20120a, and 20120b of the act, R 299.5526 or R 299.5532, and part 7 of these rules.

(b) Cost of the remedial action.

(c) The time required to achieve remedial objectives.

(d) Acceptable engineering practices based on all of the following criteria:

(i) Feasibility for the location and conditions of release.

(ii) Applicability to the problem.

(iii) Reliability.

(5) The feasibility study shall include a detailed evaluation of the alternatives that remain after initial screening is conducted. The detailed analysis of each alternative shall, as appropriate, include all of the following:

(a) Assessment of the effectiveness of the alternative in protecting the public health, safety, and welfare and the environment and in responding to the remedy selection factors identified in R 299.5601 and R 299.5603.

(b) Refinement and specification of alternatives in detail.

(c) Detailed cost estimation, including operation and maintenance costs, over time, of implementing the final remedy.

(d) Evaluation in terms of engineering implementation, reliability, and constructability.

(e) Evaluation of technical feasibility.

(f) Analysis of whether recycling, reuse, waste minimization, waste biodegradation, waste destruction, or other advanced, innovative, or alternative technologies are appropriate.

(g) An analysis of any adverse environmental impacts, methods of mitigation, and costs of mitigation, including those adverse impacts which may result from planned demolition activities.

(h) Analysis of the risks and impacts remaining after implementation of the remedy.

(i) Analysis of the extent to which the alternative attains a degree of cleanup or control of hazardous substances that complies with legally applicable or

relevant and appropriate requirements, rules, criteria, limitations, and standards of state and federal environmental law.

(6) An evaluation that is less comprehensive and detailed than called for in this rule may, if appropriate, be approved by the department as an interim response activity.

**R 299.5532 Remedial action plan; required documentation; approval of cleanup category; department approval required for certain remedial action elements.**

**Rule 532.** (1) A remedial action shall be performed by a person when the department requests one under section 20114(1)(h) of the act or when the objective of a response activity, including response activity undertaken to comply with section 20114(1)(g) of the act, is to address all releases of hazardous substances in all environmental media at a facility consistent with sections 20118, 20120a and 20120b of the act, except as provided in R 299.5534 and R 299.5536. Response activity will be considered a remedial action only if it complies with sections 20118, 20120a, 20120b of the act and these rules.

(2) A person may secure department approval under section 20120a of the act for a remedial action in the cleanup categories provided for in section 20120a(1)(a) to (e) of the act, except as provided in subrule (5) of this rule, by preparing and implementing a remedial action plan (RAP) that complies with subrules (6) to (11)(k) and (15) of this rule or an equivalent closure report and submitting the notice described in subdivision (a) of this subrule. Remedial actions in the categories of cleanup provided for in section 20120a(1)(f) to (j) or section 20120a(2) of the act shall be complete only after facility-specific department approval of a RAP or closure report.

(a) A person who wishes to establish that a remedial action in the cleanup categories provided for in section 20120a(1)(b) to (e) of the act is approved by operation of this rule without facility-specific department review of the RAP or closure report shall, in order to satisfy the requirement of section 20120b(7) of the act regarding department approval, submit to the department a notice that includes all of the following:

(i) The address, if one is available, and legal description of the property addressed by the remedial action.

(ii) The name, address, and telephone number of a contact person for the person who implemented the response activity.

(iii) The category or categories of cleanup criteria applicable to the remedial action.

(iv) The name and chemical abstract service numbers of the hazardous substances that were present as a result of the release at the facility at the completion of the response activity.

(v) A copy of the land or resource use restrictions imposed as part of the remedial action, if a copy of those restrictions has not previously been provided to the department pursuant to R 299.5524.

(vi) A statement that the notice is being provided pursuant to this rule and that the person submitting the notice is not seeking department review or approval of the remedial action.

The department may specify a form on which this notice shall be given. If the department requires a form, it shall be made available on the department's internet web site.

(3) Any person may submit a RAP to the department for approval before initiating a remedial action. If the remedial action is being performed at the department's request under section 20114(1)(h) of the act, then a RAP is required to be submitted for approval.

(4) A RAP may describe activities that are proposed to be undertaken to comply with the requirements of part 201 of the act and these rules, or it may describe activities that have already been undertaken, or both. If the RAP is for work that has already been implemented, the RAP shall be subtitled "closure report."

(5) A remedial action that includes 1 or more of the following elements will not be considered in compliance with this rule, regardless of the cleanup category proposed or implemented, unless the department has approved that element of the remedial action on a facility-specific basis:

(a) The remedial action relies on an institutional control in any form that is not a preapproved institutional control to achieve land or resource use restrictions.

(b) The remedial action addresses aquifer contamination and that action requires a waiver of R 299.5705(5) or R 299.5705(6) under section 20118 of the act.

(c) The remedial action relies on a mixing zone determination to establish that discharge of venting groundwater from the facility is protective of the public health, safety, and welfare and the environment.

(6) A RAP shall describe how the remedial action will meet the requirements of the act and these rules.

(7) A RAP shall identify which of the pathways, risks, and conditions in this rule are relevant for the facility and include an analysis of source control measures, as required by section 20118(8) of the act. All of the following are potential exposure pathways which shall be considered to determine if they are relevant:

(i) Risks due to hazardous substances in groundwater as a result of use of that groundwater for drinking water.

(ii) Risks due to hazardous substances in groundwater as a result of dermal contact with that groundwater.

(iii) Risks due to hazardous substances in groundwater as a result of those hazardous substances venting to surface water.

(iv) Risks due to hazardous substances in groundwater as a result of volatilization of those substances to indoor air.

(v) Risks due to hazardous substances in soil as a result of direct contact with soil.

(vi) Risks due to hazardous substances in soil as a result of the inhalation of the substances being emitted to and dispersed in ambient air.

(vii) Risks due to hazardous substances in soil as a result of the leaching of the substances to drinking water.

(viii) Risks due to hazardous substances in soil as a result of the leaching of the substances to groundwater and subsequent dermal contact with the groundwater.

(ix) Risks due to hazardous substances in soil as a result of the leaching of the substances to groundwater and the subsequent venting of the groundwater to surface water.

(x) Risks due to hazardous substances in soil as a result of the direct transport of those substances to surface water as a result of erosion, runoff, or other similar means.

(xi) Risks due to hazardous substances in soil as a result of volatilization of those substances to indoor air.

(xii) Risks due to hazardous substances in surface water sediments when considering the factors identified in R 299.5730.

(xiii) Risks due to free-phase liquids and abandoned or discarded hazardous substances that have not yet been dispersed in the environment.

(xiv) Risks due to hazardous substances when considering acute toxic effects, physical hazards, and other hazards not accounted for in the development of generic cleanup criteria.

(xv) Risks due to hazardous substances when considering impacts on terrestrial flora and fauna, on the food chain, and on the aesthetic characteristics of the affected environmental media, consistent with the requirements of R 299.5728.

(8) A person who proposes or implements a remedial action shall document that the cleanup criteria in the RAP are appropriate to the facility, considering land use, activity patterns anticipated at the facility, and other factors that affect the appropriateness of the criteria for a facility. This documentation shall include identification of any wellhead protection zone that may be affected by the facility.

(a) A RAP shall identify the category or categories of cleanup criteria that are being proposed or relied upon. If a remedial action plan is based on criteria allowed for under section 20120a(1)(a) to (e) of the act, then the remedial action documentation shall include a statement confirming that the expected activity patterns at facility are consistent with the exposure assumptions used to calculate the applicable generic criteria.

(b) A RAP that relies on cleanup criteria allowed for under section 20120a(1)(b) to (e) or (2) of the act shall include documentation of the current zoning of the property and any legal nonconforming uses that are relevant to the RAP. In addition to the documentation of current zoning, the RAP shall include a statement confirming that the use contemplated is permitted in the current zoning category and that uses inconsistent with the exposure scenarios used to calculate the applicable cleanup criteria are not allowed. If the property is not zoned, then the RAP shall include documentation of the reasonably foreseeable future use of the property and natural resources in question. If the property is

not zoned, then the remedial action shall be considered a site-specific remedial action under section 20120a(2) of the act; however, if the necessary land use restrictions can be accomplished in such cases through the procedure specified in section 20120b(2) of the act, then the procedures specified in section 20120b(3) and (4) of the act shall not apply. A RAP for property that is not zoned may rely on generic cleanup criteria developed under section 20120a(1)(a) to (e) of the act as site-specific criteria if the RAP includes documentation that the intended use of the property is a reasonably foreseeable future use and that the exposures associated with the intended uses are consistent with those used to calculate the generic criteria employed in the RAP.

(9) If the department has evidence that a generic cleanup criterion developed under section 20120a(1)(a) to (e) of the act is not protective of the public health, safety, or welfare or the environment at a given facility because of facility-specific conditions, then the department may establish additional requirements for response activity to address the facility-specific conditions, pursuant to R 299.5728. A person implementing a remedial action without department approval shall undertake a reasonable inquiry to determine if there are any facility-specific conditions, such as those described in R 299.5728, that result in a generic cleanup criterion not being protective. If his or her inquiry shows that such a condition exists, then that person shall modify the remedial action to account for the conditions.

(10) For a RAP which addresses releases at or from a facility that have impacted or are reasonably likely to impact the Great Lakes, the RAP shall, in addition to attaining compliance with the requirements of R 299.5716, consider the requirements of the Great Lakes water quality agreement of 1978, as amended by protocol signed November 18, 1987, and the Great Lakes toxic substances control agreement of 1986. The RAP shall document the analysis conducted to comply with this subrule.

(11) A RAP shall include the following, if relevant to the facility and conditions addressed by the RAP. If any of the following elements or conditions is not relevant to the facility, then the RAP shall briefly state why the element is not relevant:

(a) A discussion of statistical methods, if any, used to evaluate data or for any other purpose in the remedial action, including the reasons why the statistical methods that were used are appropriate to the circumstances.

(b) An evaluation of the impact on environmental conditions at the facility as a result of demolition if any structures are planned to be demolished before or as part of the remedial action.

(c) If the proposed remedial action does not comply with R 299.5705(5) or R 299.5705(6), or both, then a request that the department make a finding under section 20118(5) and (6) of the act that the remedial action is protective. The request shall be accompanied by information that demonstrates how 1 or more of the criteria in section 20118(6) of the act are satisfied by the remedial action.

(d) If venting groundwater is entering, or will in the future enter, surface waters of the state at levels that exceed generic criteria established under R 299.5716, then the RAP shall include a request for approval of that discharge,

unless authorization has previously been obtained for the discharge of venting groundwater through approval by the department of an interim response activity or under part 31 of the act or some other action is proposed to address venting groundwater. A RAP which addresses venting groundwater shall include information required by the department to determine whether the discharge of venting groundwater complies with the requirements of part 31 of the act and rules promulgated under part 31 of the act. The information shall be submitted with a certification statement and the signature of an appropriate person. The certification statement shall state "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this request and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information." If venting in excess of the generic groundwater surface water interface criteria established under R 299.5716 has not yet occurred, and a mixing zone determination will be sought to authorize the anticipated discharge, the mixing zone determination request shall be submitted in a timely manner. If venting groundwater was approved by the department before the submittal of a RAP, through an interim response activity plan, or an authorization granted under part 31 of the act, documentation of that approval shall be included in the RAP. If new information about the venting groundwater is provided or identified by the department as a result of the RAP submittal and that information shows that the mixing zone determination made as part of an interim response approval is not protective, then the department may revise the mixing zone determination.

(e) A RAP that addresses venting groundwater containing concentrations of hazardous substances that do not exceed the generic criteria established under R 299.5716 shall identify and describe the venting groundwater conditions and describe the basis for the conclusion that the hazardous substance concentrations in venting groundwater do not and will not exceed the generic criteria established under R 299.5716.

(f) A description of environmental monitoring activities to be undertaken during the remedial action, if such activities are appropriate during implementation of the remedial action to address risks associated with construction or other implementation activities. If a monitoring plan is established to assure compliance with part 55 of the act during the movement or temporary storage of contaminated soils, then that monitoring plan may be based on allowable air concentrations that reflect the risk associated with the short-term nature of the activity, if such concentrations have been approved by the department under part 55 of the act and rules promulgated under part 55.

(g) A schedule for implementation of the RAP. If a conceptual plan for operation and maintenance or monitoring is submitted with a RAP when department approval is sought, then the schedule shall include the date when a detailed plan that satisfies the requirements of R 299.5538 or R 299.5540, as appropriate, will be submitted for department approval. The schedule shall provide for timely abandonment, in a manner that is satisfactory to the

department, of all monitoring wells, piezometers, boreholes, and other installations that present potential for contaminant migration.

(h) If the RAP is based on criteria other than the generic residential category under section 20120a(1)(a) of the act, then the RAP shall provide all of the following with respect to each recorded or readily evident easement that exists on property covered by the RAP:

(i) The name and address of the easement holder.

(ii) The nature of the easement, and, in particular, whether the easement gives exclusive rights to the property to the easement holder.

(iii) A copy of any notice that has been provided to the easement holder under R 299.51013(6).

(iv) Documentation that the easement holder consents to the imposition of any land or resource use restriction other than a local ordinance that affects the easement.

(i) If the RAP is based on criteria other than the generic residential category under section 20120a(1)(a) of the act, then the RAP shall provide an explanation of any land use or resource use restrictions to be imposed, in 1 or more of the categories in paragraphs (i) to (vii) of this subdivision, and how the restrictions will be effective in preventing or controlling unacceptable exposures, if restrictions are required under section 20120a(16) of the act.

(i) If the land use or resource use restrictions are to be accomplished through a restrictive covenant, then a proposed restrictive covenant for each property where a restrictive covenant is required shall be included in the RAP, together with a written statement from the owner or owners of the property that he or she consents to the placement of the restrictive covenant upon approval by the department of the RAP or closure report. The restrictive covenant shall conform to the requirements of section 20120b(4)(a) to (f) of the act.

(ii) If the land use restrictions are to be accomplished through a notice of approved environmental remediation, then a proposed notice of approved environmental remediation for each property where a notice of approved environmental remediation is required shall be included in the RAP, together with a written statement from the owner or owners of the property that he or she consents to the recordation of the notice of approved environmental remediation. If the RAP is submitted for department approval, the owner’s or operator’s consent may be conditioned upon approval by the department of the RAP or closure report.

(iii) If the land or resource use restrictions are to be accomplished through an institutional control in the form of an ordinance that has already been enacted by a local unit of government, then a copy of the existing ordinance shall be included in the RAP.

(v) If the RAP proposes to rely on an institutional control in the form of an ordinance that has not yet been enacted by a local unit of government, then a draft ordinance shall be included in the plan. When a draft ordinance is part of a RAP, then written confirmation that the local unit of government is willing to enact an ordinance substantially like the ordinance presented in the RAP shall also be included in the plan.

(vi) If the land use restrictions are to be accomplished through an institutional control in the form of a notice of aesthetic impact, then a proposed notice of aesthetic impact for each property where one is required shall be included in the RAP, together with a written statement from the owner or owners of the property that he or she consents to the recordation of the notice of aesthetic impact. The owner's or operator's consent may be conditioned upon approval by the department of the RAP or closure report.

(vii) If another form of institutional control is proposed, then a copy of the proposed institutional control or a draft of the proposed institutional control shall be included in the RAP.

(j) A monitoring plan that complies with R 299.5540, if monitoring is required to confirm the effectiveness or integrity of the remedial action. The monitoring plan in a RAP that is submitted for department approval may be a conceptual plan, if the conceptual plan provides sufficient detail to allow the department to judge the adequacy of the monitoring being proposed, and to reasonably estimate monitoring costs that need to be covered by a financial assurance mechanism, if one is required.

(k) An operation and maintenance plan that complies with R 299.5538, if any element of the RAP requires operation and maintenance. The operation and maintenance plan in a RAP that is submitted for department approval may be a conceptual plan, if the conceptual plan provides sufficient detail to allow the department to judge the adequacy of the actions being proposed, and to reasonably estimate any operation and maintenance costs that need to be covered by a financial assurance mechanism, if one is required.

(l) If the remedial action is based on criteria allowed for under section 20120a(1)(f) to (j) or (2) of the act, then the RAP shall include an explanation of whether permanent markers are proposed to be installed to describe restricted areas of the facility and the nature of any restrictions, and the rationale for the proposal. If permanent markers are proposed, then the design and construction of the marker and the language describing the restrictions shall be included in the RAP.

(m) If the remedial action is based on criteria provided for in section 20120a(1)(f) to (j) or (2) of the act, a proposed financial assurance mechanism to cover monitoring, operation and maintenance, and other costs necessary to assure the effectiveness and integrity of the remedial action or an explanation of why a financial assurance is not proposed. The cost of activities covered by the financial assurance mechanism shall be documented on the basis of an annual estimate of maximum costs for the activity as if they were to be conducted by a person under contract to the state. Costs shall not be based on activities being conducted by employees of the person proposing the remedial action. A financial assurance mechanism shall be provided if the cost of monitoring, operation and maintenance, and other activities necessary to assure the effectiveness and integrity are more than an average of $2,500.00 per year in year 2001 dollars. Any adjustment in the $2,500.00 threshold to account for inflation shall be determined in a manner that is acceptable to the department. The financial assurance mechanism shall provide sufficient funds to conduct any

task for which a financial mechanism is required under this subrule, but is not required to cover an alternative remedial action in the event of remedy failure. The financial assurance mechanism shall be in an amount and form that allows the department to immediately contract for the response activities for which financial assurance is required in the event that the person conducting response activity fails to implement the required tasks. An acceptable financial assurance shall be in one of the following forms:

(i) Letter of credit.

(ii) Environmental escrow.

(iii) Trust fund.

(iv) Certificate of deposit.

(v) Performance bond.

(vi) Another form that is acceptable to the department and satisfies the requirements of this subrule.

The department shall make available upon request standard documents for each of the forms identified in subdivisions (i) to (v) of this subrule.

(n) If the remedial action is based on criteria provided for in section 20120a(1)(f) to (j) or (2) of the act, a proposed legally enforceable agreement for performance of those elements listed in section 20120b(3)(a) to (e) of the act that are necessary to assure the effectiveness and integrity of the completed remedial action.

(12) A restrictive covenant, notice of approved environmental remediation, or notice of aesthetic impact that is documented to have been submitted to the register of deeds for recording within the time prescribed in section 20120b of the act will be considered to have met the required deadline for recording the document, if the document was prepared in a form acceptable for recording, and was submitted along with any fees or other materials required by the register of deeds.

(13) The department's approval of a RAP in a cleanup category provided for in section 20120a(1)(f) to (j) or (2) of the act shall not take effect until all of the following have occurred:

(a) An acceptable, detailed operation and maintenance plan or monitoring plan, if either is required, is submitted according to the schedule set forth in the RAP and approved by the department.

(b) An approved financial assurance mechanism, if one is required, is in place.

(c) A legally binding agreement has been signed by all parties to the agreement and been provided to the department.

(14) The department's approval of a RAP in a cleanup category allowed for under section 20120a(1)(f) to (j) or (2) of the act shall be void if provisions for any of the following that are part of a RAP lapse or are not complied with:

(a) Land or resource use restrictions.

(b) Monitoring.

(c) Operation and maintenance.

(d) Permanent markers.

(e) Financial assurance.

The approval shall be void from the time of lapse or noncompliance unless the lapse or noncompliance is corrected to the satisfaction of the department.

(15) At any time before completion, a RAP shall be promptly modified to address a change in circumstances that would result in the remedial action no longer being protective or reliable, including, but not limited to, either of the following:

(a) Unanticipated facility conditions.

(b) Changes in any element described in subrules (5) to (11) of this rule.

(16) If a RAP was approved by the department, any changes in that RAP shall be submitted to the department for approval. The department shall review and approve proposed modifications to the RAP if they are consistent with part 201 of the act and parts 5, 6, and 7 of these rules.

(17) Upon request, the department shall issue a certification of completion in accordance with section 20114(5) of the act when a remedial action is complete.

**R 299.5534 Unremediated release defined; affidavit; additional response activity required; penalties.**

**Rule 534.** (1) A remedial action plan (RAP) shall address all environmental contamination at a facility unless the RAP precisely describes the contamination to be excluded and is accompanied by an affidavit from the person submitting the RAP stating that he or she is not liable for 1 or more unremediated releases at the facility identified in the RAP and that he or she can demonstrate divisibility of harm and apportionment of liability as required by section 20129 of the act for the unremediated releases. For purposes of this rule, “unremediated release” means a release for which response activity has not been implemented that satisfies the remedial action requirements of part 201 of the act and these rules.

(2) The affidavit described in subrule (1) of this rule shall contain, or provide as an attachment, information that explains and supports the basis for the conclusion that the person submitting the RAP is not liable for the contamination proposed to be omitted from the RAP. The affidavit or attachment shall also fully document the demonstration of divisibility of harm and apportionment of liability under section 20129 of the act. If the affidavit described in this subrule is provided, then the RAP may omit actions to address the unremediated releases.

(3) If the department approves a RAP that excludes unremediated releases, relying on representations about liability that are set forth in the affidavit of the person seeking approval, the ability of the department to subsequently review the liability of the person seeking approval of the RAP is not limited or affected by reliance on the affidavit or approval of the RAP. Upon review of the affidavit, supporting materials, and other information available to the department at any time, the department may determine that there is reason to believe that the person submitting a RAP is liable for the contamination proposed to be omitted from the RAP or that he or she has not met the burden of demonstrating divisibility of harm and apportionment of liability under section 20129 of the act.

(4) A person who implements a RAP that does not address the entire facility after following the procedure set forth in this rule, but who is later found to be liable, or to have failed to establish divisibility of harm or apportionment of liability

shall promptly undertake remedial action to address that portion of the facility not covered by the RAP.

(5) If a person who is liable undertakes a remedial action that he or she knows will not, when complete, comprehensively address all contamination at a facility at the time the remedial action is undertaken, except as provided in this rule for unremediated releases, then the person is subject to fines and penalties as provided for under the act for failure to diligently pursue response activity under section 20114(1)(g) of the act.

(6) Response activity undertaken by a person who is liable that does not comprehensively address all contamination at a facility, except unremediated releases addressed through the procedure set forth in this rule, is considered an interim response and not a remedial action.

**R 299.5536 Scope of remedial action plans generally; provisions in administrative agreements dependent on degree of cleanup achieved by remedial action.**

**Rule 536.** (1) In addition to the general requirements of R 299.5532 that a remedial action plan (RAP) address all environmental contamination at a facility, all of the following principles apply when defining the area to be addressed in a RAP:

(a) Proper definition of the area to be addressed depends on having completed appropriate characterization. This requires that areas used for hazardous substance storage, handling, transfer, transport, and disposal be identified to the extent practical from available information and inquiry that is reasonable under the circumstances. Areas of known and likely hazardous substance release, based on such information and inquiry, shall then be evaluated to determine the nature and extent of environmental contamination associated with the releases.

(b) An unremediated release, as that term is used in R 299.5534 may be excluded from a RAP as provided for in that rule.

(c) The minimum area ordinarily covered in a RAP will be the property or contiguous contaminated properties owned or operated by the person proposing the remedial action, plus, when a person who is liable is conducting the remedial action, the extent of migration of environmental contamination beyond that person's property boundary. A facility is not necessarily coextensive with the area covered by RAP, and may be smaller.

(d) If there is more than 1 facility at a property or contiguous properties owned or operated by the person who is proposing the remedial action, then all facilities that are in reasonable proximity to one another shall be addressed in a single RAP. If there is more than 1 facility at a property or contiguous properties, then a release may be addressed in a separate RAP only if appropriate facility characterization demonstrates that environmental contamination from that facility is not, and will not become, commingled with environmental contamination from another facility, or otherwise approved by the department.

(e) If there is more than 1 facility at a property under common ownership, then the facilities shall not be addressed in more than 1 RAP if such an approach

would make it impractical or unreasonably difficult to evaluate the appropriateness of the remedial action, or result in the need to define land or resource use restrictions in areas too small to be properly managed or in a pattern that makes compliance with the land or resource use restrictions impractical.

(f) If there is more than 1 facility at a property or contiguous properties under common ownership, then the facilities shall not be addressed in more than 1 RAP to avoid financial assurance requirements.

(2) Only areas of a property where appropriate site characterization has been conducted shall be included in a RAP. Any limitations in this regard shall be explicitly reflected in the restrictive covenant, notice of approved environmental remediation, or similar land or resource use restriction document associated with the remedial action. This subrule does not prohibit including, in a land or resource use restriction document, 1 or more areas where appropriate facility characterization activities have not been conducted, but the limitations of the characterization and the presumptive nature of the restrictions shall be reflected in the land or resource use restriction document as provided in this subrule.

**R 299.5538 Operation and maintenance; department approval.**

**Rule 538.** (1) Operation and maintenance shall be implemented as part of any response activity if necessary to achieve remedial objectives, assure the integrity and effectiveness of the response activity, or both. Operation and maintenance is not required if a complete interim response activity or a remedial action complies with criteria provided for in section 20120a(1)(b) to (e) of the act, unless it is necessary to assure compliance with criteria that apply outside the boundary of the property that is the source of the release.

(2) An operation and maintenance plan shall include all of the following as appropriate to the response activity:

(a) Name, phone number, and address of the person who is responsible for operation and maintenance.

(b) Operation and maintenance activities and schedule.

(c) A discussion of critical systems reliability, including options for repair or redundancy.

(d) Design and construction plans.

(e) Equipment diagrams, specifications, operating manuals, and manufacturers' guidelines.

(f) Emergency plan, including emergency contact phone numbers.

(g) A contingency plan that addresses response to failure of any critical system component.

(h) Other information required to determine the adequacy of the operation and maintenance plan. Department requests for information under this subdivision shall be limited to factors not adequately addressed by information required by other subdivisions of this rule and shall be accompanied by an explanation of the need for the additional information.

(3) Prior department approval of an operation and maintenance plan is required only as described in section 20114(2) of the act, for operation and maintenance plans submitted in response to a department request under section 20114(1)(h) of the act, and for operation and maintenance plans that are part of a remedial action in a category allowed for under section 20120a(1)(f) to (j) or (2) of the act.

(4) A person may seek department approval of an operation and maintenance plan in cases not covered by subrule (3) of this rule by submitting the plan to the department.

**R 299.5540 Monitoring; department approval.**

**Rule 540.** (1) Environmental monitoring shall be undertaken as part of any response activity if necessary to judge the effectiveness of the response activity.

(a) Environmental monitoring is not required if a complete interim response activity or a remedial action complies with criteria provided for in section 20120a(1)(a) to (e) of the act, unless it is necessary to assure compliance with criteria that apply outside the boundary of the property that is the source of the release.

(2) A monitoring plan or report submitted shall address all of the following, as appropriate to the facility:

(a) The effectiveness of the response activities in protecting the public health, safety, and welfare and the environment. A response activity that includes measures to limit or control migration of hazardous substances shall include a plan and schedule for determining whether that objective is achieved.

(b) The effectiveness of the response activities in minimizing, mitigating, treating, or removing environmental contamination at a facility.

(c) Location of monitoring points for collection of environmental data.

(d) Environmental media to be monitored, such as soil, air, water, sediment, or biota.

(e) Monitoring schedule.

(f) Monitoring methodology, including sample collection procedures.

(g) Substances and conditions to be monitored.

(h) Laboratory methodology, including the name of the laboratory responsible for analysis of monitoring samples, and whether target detection limits were achieved for the monitoring samples. Quality assurance and quality control samples that document the accuracy and precision of the monitoring samples shall be made available to the department on request.

(i) Quality assurance and quality control plan.

(j) Data presentation and evaluation plan.

(k) Contingency plan to address ineffective monitoring.

(l) Operation and maintenance plan for monitoring equipment.

(m) An explanation of the way in which monitoring data will be used to demonstrate effectiveness of the response activities.

(n) Other elements required to determine the adequacy of the monitoring plan. Department requests for information under this subdivision shall be limited to factors not adequately addressed by information required by other

subdivisions of this rule and shall be accompanied by an explanation of the need for the additional information.

(3) Prior department approval of a monitoring plan is required only as noted in section 20114(2) of the act, for monitoring plans submitted in response to a department request under section 20114(1)(h) of the act, and for monitoring plans that are part of a remedial action in a category allowed for under section 20120a(1)(f) to (j) or (2) of the act.

(4) A person may seek department approval of a monitoring plan in cases not covered by subrule (3) of this rule by submitting the plan to the department.

(5) In addition to environmental monitoring, a monitoring plan shall address compliance with land or resource use restrictions and integrity of exposure controls in the following manner:

(a) For response activity that is intended to comply with cleanup criteria provided for in section 20120a(1)(a) to (e) of the act, ongoing documentation of compliance with land use restrictions is not required as part of the monitoring plan when the response activity is complete.

(b) For response activity that is intended to comply with cleanup criteria provided for in section 20120a(1)(f) to (j) or (2) of the act, ongoing documentation of the integrity of any exposure control mechanisms and compliance with land or resource use restrictions shall be prepared and maintained.

**R 299.5542 Relocation of soil; notification of department under section 20120c of the act.**

**Rule 542.** (1) Section 20120c of the act applies only to soil, excluding sediments generated by nonremedial, maintenance dredging activities, and except as further described in the following provisions:

(a) Section 20120c of the act applies to solid waste, as that term is defined in part 115 of the act, if either of the following conditions is satisfied:

(i) That waste is present as contaminant in soil, but the mixture of soil and solid waste is predominantly natural soil and no other applicable law or regulation requires more restrictive handling of the mixed material. Such a mixture of soil and solid waste is “other wastes regulated by statute” as that term is used in section 11506(1)(l) of the act.

(ii) The solid waste was disposed of before 1978 outside of a landfill or other authorized disposal area. For the purpose of this rule, solid waste may be considered disposed of before 1978 after appropriate inquiry. Appropriate inquiry shall include a review of reasonably available information including aerial photos, interviews with property owners, and a review of government records, after which it cannot be reasonably determined or inferred that the disposal occurred after 1978.

(b) Section 20120c of the act is not applicable to contaminated soil that is hazardous waste under part 111 of the act. Relocation of soil that is hazardous waste shall be done in accordance with part 111 of the act and the rules promulgated under that part.

(c) Except as provided in subdivision (a) of this subrule, section 20120c of the act is not applicable to soil mixed with significant amounts of garbage or rubbish as those terms are defined in part 115 of the act.

(d) Section 20120c of the act is not applicable to any of the following:

(i) Human body wastes.

(ii) Septage.

(iii) Sewage sludge.

(iv) Organic waste generated in the production of livestock or poultry.

(v) Liquid wastes.

(e) Except as provided in subrule (1)(a)(ii) of this rule, section 20120c of the act is not applicable to any of the following:

(i) Stamp sand.

(ii) Foundry sand.

(iii) Cement kiln dust.

(iv) Coal and wood ashes.

(v) Paper mill sludge.

(vi) Slag.

(f) For the purposes of evaluating compliance with part 115 of the act, soil that is lawfully relocated under section 20120c of the act and this rule is “other wastes regulated by statute” as that term is used in section 11506(1)(l) of the act.

(2) The requirements of section 20120c of the act apply to soil at a facility if hazardous substance concentrations in that soil exceed 1 or more residential cleanup criteria established by the department under section 20120a(1)(a) of the act, including those criteria that protect an aquifer from the impact of a hazardous substance leaching from soil into the aquifer, regardless of whether an aquifer is present at the facility. The person who is arranging for relocation of soil is responsible for determining that there will be no adverse impact on the public health, safety, or welfare or the environment as a result of the soil being relocated.

(3) Soil covered by section 20120c of the act may be relocated from a facility to an off-site location if 1 or more of the following conditions are satisfied:

(a) The soil is removed from a facility and taken to an off-site location for disposal, treatment, or recycling in compliance with all applicable laws and regulations. Prior department permission is not required under section 20120c(5) of the act for disposal off-site in accordance with parts 111 and 115 of the act and the rules promulgated under those parts.

(b) The facility or the off-site location is subject to a remedial action plan or an interim response activity plan that was intended to meet specific cleanup criteria and that plan was previously approved by the department as being consistent with the categorical cleanup criteria developed under section 20120a(1)(f) to (j) or (2) of the act and prior written department approval is obtained. The department shall use cleanup criteria developed under section 20120a(1) or (2) of the act, and that are applicable at the off-site location, to determine whether the soil will pose an unacceptable risk at the off-site location.

(c) The off-site location is a facility, subdivision (b) of this subrule is not applicable, and all of the following additional conditions are satisfied:

(i) The soil removed from the facility does not contain concentrations of hazardous substances that exceed the generic cleanup criteria developed under section 20120a(1)(a) to (e) of the act which are applicable to the off-site location.

(ii) The off-site location is similarly contaminated, considering the general nature, concentration, and mobility of hazardous substances at the location to which the soil will be moved.

(iii) Notice has been given to the department as required by section 20120c(6) of the act.

(iv) Except as provided in subrule (6) of this rule, the off-site location is owned by the person who owns the facility from which the soil is removed.

(4) Soil covered by section 20120c of the act may be relocated within a facility that is subject to a remedial action plan or a plan for interim response activity that is designed to meet specific cleanup criteria if either of those plans was approved by the department and all of the following conditions are satisfied:

(a) If the facility is subject to a remedial action plan approved by the department based on the categorical cleanup criteria developed under section 20120a(1)(f) to (j) or (2) of the act, and prior written approval is obtained from the department for relocation of soils. The department, in issuing an approval, shall determine that relocation of the soil will not interfere with the integrity and effectiveness of the remedial action addressed by the remedial action plan, and that unacceptable exposures will not occur as a result of the relocation of soil at the facility.

(b) If subdivision (a) of this subrule does not apply, and if the facility is subject to a remedial action plan based on cleanup criteria developed under section 20120a(1)(a) to (e) of the act, if the person proposing to relocate the soil assures that the same degree of control required for application of the criteria under the remedial action plan is provided for the relocated contaminated soil, and if notice has been given to the department as required by section 20120c(6) of the act.

(c) Notwithstanding this subrule, an owner or operator of a facility may temporarily relocate soil within the facility that is subject to a remedial action plan for the purposes of implementing response activity or utility construction or repair or similar activity, if the response activity, utility construction or repair or similar activity is completed in a timely fashion and if the short-term hazards associated with the contaminated soil are appropriately controlled.

(5) For facilities not subject to a remedial action plan approved by the department, soil may be relocated within similarly contaminated areas of the facility if the relocation is consistent with the requirements of section 20107a(1) of the act. For purposes of this subrule, the exceptions to section 20107a of the act that are set forth in section 20107a(4) and (5) of the act are not applicable.

(6) Soil may be relocated under section 20120c of the act to a location that is not owned by the person arranging for the relocation of soil if the relocation is explicitly authorized by department approval of a remedial action plan or interim response activity plan, if that plan is designed to meet criteria, for the property where the soil is being moved. A remedial action plan or interim response plan being reviewed by the department under this rule can be denied if the soil

relocation is inconsistent with the reasonably foreseeable future use of the property.

(7) Relocation of soil within a facility or to an off-site location shall not result in the creation of nuisance conditions, including, but not limited to, fugitive dust.

(8) Except as explicitly provided in this rule, section 20120c of the act shall not be used to circumvent the requirements of part 115 of the act for the licensing and regulation of solid waste disposal areas.

(9) Section 20120c of the act shall not be used as the basis for or considered an authorization for open water disposal of soil or sediments.

## PART 6. SELECTION OF REMEDIAL ACTION

### 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.

**R 299.5605 Rescinded.**

**R 299.5607 Administrative record.**

**Rule 607.** (1) The department shall compile an administrative record of the decision process leading to the selection or approval of any remedial action. The administrative record shall contain all of the following information, as applicable:

(a) Remedial investigation data.

(b) The feasibility study and potential alternative actions.

(c) Public comments received, if any, and an explanation of how significant concerns are to be addressed.

(d) For remedial actions that have been completed in accordance with a department-approved remedial action plan, documentation prepared under section 20114(5) of the act, if applicable.

(e) For remedial action plans that include a demonstration prepared under section 20118(5) and (6) of the act, that demonstration and the department's determination about the adequacy of the demonstration.

(f) Other information appropriate to the facility.

(2) If neither a remedial investigation nor a feasibility study was conducted for a facility subject to the requirements of section 20120d of the act, then the department shall include in the administrative record an explanation of the basis for the decision.

(3) The department shall prepare a summary document that explains its decision regarding a remedial action plan which is subject to the requirements of section 20120d of the act.