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BILL



ANALYSIS

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Senate Bill 1090 (as enacted)

PUBLIC ACT 190 of 2012

Sponsor: Senator Tom Casperson

Senate Committee: Natural Resources, Environment and Great Lakes

House Committee: Natural Resources, Tourism, and Outdoor Recreation

Date Completed: 11-5-12

CONTENT

The bill amended Part 201 (Environmental Remediation) of the Natural Resources and Environmental Protection Act to do the following:

- **Include an ecological demonstration and a modeling demonstration among the methods a person may use to demonstrate compliance with Part 201 requirements for a response activity providing for venting groundwater.**
- **Revise the standards for compliance methods already allowed, and establish standards for ecological and modeling demonstrations.**
- **Prohibit response activity beyond evaluations from being required if venting groundwater has no effect or only a de minimis effect on a surface water body.**
- **Allow a person to file a technical impracticability waiver request with the Department of Environmental Quality (DEQ), if compliance with GSI criteria is unachievable.**
- **Provide that natural attenuation of hazardous substances is an acceptable form of remediation.**
- **Prescribe conditions for a groundwater contamination plume that enters a sewer that discharges to surface water.**
- **Provide that the bill applies retroactively, and allow the modification of a judgment, order, consent judgment or order, or agreement entered before the bill took effect.**

The bill also rescinded an administrative rule pertaining to the cleanup criteria for contaminated groundwater, and enacted several of the rule's provisions in Part 201.

The bill took effect on June 20, 2012.

Demonstration of Compliance

The Act allows a person to demonstrate compliance with Part 201 requirements for a response activity providing for venting groundwater by meeting any of the following, singly or in combination:

- Generic groundwater surface water interface (GSI) criteria, which are the water quality standards for surface waters developed by the DEQ pursuant to Part 31 (Water Resources Protection).
- Mixing zone-based GSI criteria established under Part 201.
- Site-specific criteria established under Section 20120b.

(Section 20120b requires the DEQ to approve site-specific criteria in a response activity if, in comparison to generic criteria, they would better reflect best available information concerning the toxicity or exposure risk posed by the hazardous substance or other factors.)

With regard to the generic criteria, the use of surface water quality standards must be allowable in any of the cleanup categories of residential, nonresidential, limited residential, and limited nonresidential. The bill refers to surface water quality standards or variances.

The bill requires the mixing zone-based criteria to be consistent with Part 31. The use of these criteria must be allowable for criteria based on chronic-based or acute-based surface water quality criteria.

The bill allows biological criteria also to be used as site-specific criteria. If biological criteria are used, sentinel wells must be used as needed to determine if the criteria might be exceeded due to future increased mass loading to the surface water from the venting plume. Numerical analyses of the samples from the sentinel wells must be performed in connection with this determination.

Under the bill, a person also may demonstrate compliance by meeting any of the following:

- A variance from the surface water quality standards as approved by the DEQ under Part 31, which may be used only if it is requested by a person performing response activities with respect to venting groundwater.
- An ecological demonstration.
- A modeling demonstration.

The bill provides that whole effluent toxicity testing may not be required or be a criterion or be the basis for any criteria for venting groundwater except for samples taken at the GSI.

The bill specifies that "surface water" does not include any of the following:

- Groundwater.
- Hyorheic zone water.
- Water in enclosed sewers.
- Water in drainage ways and ponds used solely for wastewater or storm water conveyance, treatment, or control.
- Water in subgrade utility runs and utility lines and permeable fill in and around them.

Ecological Demonstration

The bill allows an ecological demonstration to be used to demonstrate compliance if it meets the following standards.

The boundaries of the area where the groundwater plume vents to surface water must be documented as provided in Part 201.

Sampling data for the area, when compared to other reasonably proximate areas of that surface water body, cannot show an impairment of existing or designated uses for that water body caused by, or contributed to by, the venting plume; or show that the plume will cause or contribute to impairment of existing or designated uses in a situation where the area of the surface water immediately outside the venting area of the plume shows an impairment of those uses.

Sampling data for the area cannot show exceedances of applicable criteria in the surface water body caused by, or contributed to by, the venting plume.

The sampling data may be data on benthic organisms, fish, and the water column of the surface water, and may be in the form of an in situ bioassay or a biological community assessment.

Sentinel monitoring in on-land wells must be performed as needed to show that the groundwater plume is not likely to migrate to the surface water body and vent in the future in a mass amount and rate that will impair the existing or designated uses for that water body, or cause or contribute to exceedances of surface water quality standards in the water body.

Modeling Demonstration

The bill allows a modeling demonstration to be used to show compliance if it meets all of the following standards:

- The modeling methodology is generally recognized as a means to model venting groundwater plumes or is an innovative method that is scientifically justifiable.
- The results of the modeling show that the venting plume at the GSI complies with the applicable criteria or supports the ecological demonstration, as applicable.
- The model is supported by site-specific information and appropriate field measurements.

Contingency Plan

Under the bill, if alternative monitoring points (described below) or an ecological or modeling demonstration or a combination of these methods is used for the response

activity and sentinel wells are installed, a contingency plan for potential additional response activity may be required.

Relevant Pathways

The bill rescinded R 299.5716. Among other things, this rule required the pathway addressed by GSI criteria to be considered a relevant pathway when a remedial investigation or application of best professional judgment led to the conclusion that a hazardous substance in groundwater was reasonably expected to vent to surface water in concentrations that exceeded the generic GSI criteria. The rule also prescribed the factors that had to be considered in determining whether the pathway was relevant.

The bill enacted this language in Part 201, but added to the prescribed factors whether a sewer that has an outfall to surface water has openings in the portion of the sewer where the sewer and the groundwater contaminant plume intersect that allow the contaminant plume to migrate into the sewer. If it can be demonstrated that the sewer is sufficiently tight to prevent inflow to the sewer where the plume intersects it or if the sewer is otherwise impervious, based on accepted industry standards, to prevent inflow from groundwater into the sewer at that location, the GSI pathway with respect to the sewer is not relevant and does not apply.

The bill also provides that, for purposes of determining the relevance of a pathway, both of the following apply:

- GSI monitoring wells are not required in order to make a determination if other information is sufficient to make a judgment that the pathway is not relevant.
- Fate and transport modeling may be used, if appropriate, to support a professional judgment.

Response Activities without Prior Approval

Under Part 201, a person may proceed to undertake certain response activities without prior approval by the DEQ under particular circumstances. Upon completion of remedial actions that satisfy the cleanup criteria, the person may submit to the DEQ a no further action report.

Previously, these response activities included evaluation activities associated with a response activity providing for venting groundwater using GSI monitoring wells or alternative monitoring points. The bill deleted the reference to GSI monitoring wells, and allows an evaluation to use alternative monitoring points, an ecological demonstration, a modeling demonstration, or any combination of those methods. If a person who is liable under Section 20126 decides not to take additional response activities to address the GSI pathway based on any of those methods or a determination that venting groundwater has no effect or only a de minimus effect on a surface water body, the person must notify the DEQ and request approval. A notification and request for approval may not be considered an admission of liability. (Section 20126 describes the people who are liable under Part 201.)

In addition, the bill includes among the response activities allowed without prior DEQ approval response activities implemented by a person who is not liable that rely on a modeling demonstration and/or an ecological demonstration to demonstrate compliance.

Response Activities with Prior Approval

Under Section 20114b, a person undertaking response activity may submit to the DEQ a response activity plan that includes a request for Department approval of one or more aspects of response activity. The DEQ must approve the plan, approve it with conditions, or deny it within a prescribed time frame.

A person must proceed under Section 20114b to undertake response activities that rely on monitoring from alternative monitoring points to demonstrate compliance with generic GSI criteria if one or more of the following conditions apply:

- The venting groundwater contains a bioaccumulative chemical of concern as identified in the water quality standards for surface waters under Part 31 and for which the person is liable under Part 201.
- The venting groundwater is entering a surface water body protected for specified coldwater fisheries.

- The venting groundwater is entering a surface water body designated as an outstanding State resource water or outstanding international resource water in the Part 31 standards.

In addition to alternative monitoring points, the bill refers to response activities that rely on an ecological or modeling demonstration, or a combination of these methods.

The bill also requires a person to proceed under Section 20114b to undertake response activities that rely on monitoring from alternative monitoring points, rely on an ecological or modeling demonstration, or use mixing zone-based GSI criteria, or any combination of these, as applicable, to demonstrate compliance with a variance from the Part 31 standards, mixing zone-based criteria, site-specific criteria, or an ecological or modeling demonstration.

Alternative Monitoring Points

Part 201 allows the use of alternative monitoring points to demonstrate compliance if they meet certain standards. Previously, these included a requirement that the monitoring points allowed for venting groundwater to be sampled before mixing with surface water. Under the bill, the alternative monitoring points must allow for the venting groundwater to be sampled at the GSI. Devices used for sampling at alternative points may be beyond the water's edge and on top of or into the sediments, at the GSI.

Previously, the alternative points also had to allow for reliable, representative monitoring of groundwater quality at the GSI, taking into account all of the following:

- Temporal and spatial variability of hazardous substance concentrations in groundwater in the plume.
- Seasonal or periodic changes in groundwater flow.
- Other natural or human-made features that affect groundwater flow.

The bill deleted this standard.

The bill also deleted a requirement that the potential fate and transport mechanisms for groundwater contaminants, including any chemical, physical, or biological processes that resulted in the reduction of hazardous

substance concentrations between the monitoring wells and the alternative monitoring points, be identified.

Mixing Zone-Based & Site-Specific Criteria

If a person intends to use mixing zone-based GSI criteria or site-specific criteria in conjunction with alternative monitoring points, the person must submit to the DEQ a response activity plan that includes a demonstration of compliance with the applicable standards.

Under the bill, this requirement also applies if a person intends to use mixing zone-based or site-specific criteria in conjunction with an ecological or modeling demonstration or a combination of methods. If compliance with a mixing zone-based GSI criterion is to be determined with data from the alternative points, the response activity plan also must include documentation that it is possible to reasonably estimate the volume and rate of venting groundwater. (Previously, the Act required documentation that it was possible to accurately estimate the volume of venting groundwater.)

In addition, the bill requires the plan to include a site-specific monitoring plan that takes into account the basis for the site-specific or mixing zone criterion.

Exceedance of GSI Criterion

Rule 299.5716 required a person to take certain actions if there were an exceedance of an applicable GSI criterion based on acute toxicity at a compliance monitoring point applicable at a particular facility. The required actions included notifying the DEQ within seven days, commencing response activity to address the exceedance, and submitting a response activity schedule to the Department. The DEQ could approve a schedule or direct reasonable modifications to it, and could grant extensions for required actions and activities if the person were acting in good faith and site conditions inhibited progress or completion. The bill enacted similar language in Part 201.

Effect on Surface Water Body

Under the bill, response activity beyond evaluations may not be required if venting groundwater has no effect or only a de minimis effect on a surface water body. A

person evaluating a venting plume who determines that the plume has no effect or a de minimis effect must notify the DEQ of the determination. The DEQ may disapprove the determination within 90 days after receiving it. If the Department does not notify the person of its disapproval within that time period, the person's determination is final.

Technical Impracticability Waiver

The bill allows a person to file a technical impracticability waiver request with the DEQ if the person has controlled the source of groundwater contamination and demonstrates that compliance with GSI criteria under Part 201 is unachievable. The waiver must document the reasons why compliance is unachievable. The DEQ must respond to the request within 180 days with an approval, request for additional information, or denial that provides a detailed description of the reasons for it.

Natural Attenuation

Under the bill, natural attenuation of hazardous substances in venting groundwater upgradient of the GSI is an acceptable form of remediation and may be relied upon in lieu of any active remediation of the groundwater. Natural attenuation may occur by way of dispersion, diffusion, sorption, degradation, transformative reactions, and other methods.

Permit Requirement

The bill prohibits a permit from being required under Part 31 for any venting groundwater contamination plume that is addressed under Section 20120e (the section the bill amended).

Wetland

The bill requires wetland to be protected for the groundwater surface water pathway to the extent that particular designated uses specific to that wetland would otherwise be impaired by a groundwater contamination plume venting to surface water in the wetland.

Plume Entering a Sewer

Under the bill, if a groundwater contamination plume is entering a sewer

that discharges to surface water, and the GSI pathway is relevant, the following provisions apply.

If the groundwater enters a storm sewer that is owned or operated by an entity that is subject to Federal municipal separate storm sewer regulations and a Part 31 permit for the discharges from the system, the contaminated groundwater entering the sewer is subject to regulation by the entity's ordinance regarding illicit discharges. The regulation of the contaminated groundwater, however, may not prevent the use of other provisions to determine the need for response activity under Part 201.

In addition, all of the following apply:

- The compliance monitoring point may be a groundwater monitoring well, if proposed by the person performing the response action, or that person may choose another point for measuring compliance.
- A mixing zone may be applied that accounts for the mixing that occurs in the receiving surface water into which the sewer system discharges.
- Attenuation that occurs in the sewer system before the outfall to surface water must be considered.
- The compliance point is at the sewer system outfall to surface water, which must account for any applicable mixing zone for the outfall.
- Monitoring to determine compliance may be performed at a location where the contaminated groundwater enters the sewer or downstream from that location but upstream of the sewer outfall at the surface water, if practicable and representative.
- The contaminant mass flow, and the rate and amount of groundwater flow, into the sewer may be considered and may result in a determination that the migration into the sewer is de minimis and does not require any response activity in addition to the evaluation that led to the determination.

All of the second set of factors may be considered and applied to determine if an illicit discharge is occurring and how to regulate it.

Denial of Response Activity Plan

Under the bill, if the DEQ denies a response activity plan that contains a proposal for alternative monitoring points, an ecological demonstration, a modeling demonstration, or a combination of these methods, the Department must state the reasons for the denial, including the scientific and technical basis for it. Previously, this provision applied only to a plan containing a proposal for alternative monitoring points.

Admission of Liability

Under the bill, a person who undertakes response activity to determine the relevance of a pathway, or who takes action in response to an exceedance of an applicable criterion based on acute toxicity, may not be considered to be making an admission of liability by undertaking those response activities or taking those actions.

Retroactivity

The bill states, "This section is intended to allow a person to demonstrate compliance with requirements under this part for a response activity involving venting groundwater, and, for this purpose, this section shall be given retroactive application and shall be available for use by such person."

A person performing response activity involving venting groundwater under any judgment, consent judgment, order, consent order, or agreement that was entered before the bill took effect may pursue, alter, or terminate the response activity based on any provision of Section 20120e subject to any necessary entry or approval by the court in a case of a judgment, consent judgment, or court order or any necessary amendment procedure to amend an agreement. The DEQ may not oppose use of any provision of the section as grounds to amend an agreement or for a court to modify or terminate response activity obligations involving venting groundwater under a judgment, consent judgment, or court order.

A person performing response activity involving venting groundwater under any remedial action plan, interim response plan designed to meet criteria, interim response action plan, or response activity plan that was approved by the DEQ before the bill's

effective date, may submit to the Department for approval an amended plan that pursues, alters, or terminates response activity based on any provision of Section 20120e. The DEQ may not oppose use of any provision of Section 20120e in approving an amended plan.

MCL 324.20120e

Legislative Analyst: Julie Cassidy

FISCAL IMPACT

The bill will likely have little long-term impact on the State's finances. In the short-term, new guidelines and changes in rules might result in some costs to the DEQ as transitions are made, but these costs will be borne by existing DEQ resources. Once the changes are implemented by the DEQ, the bill will likely result in little or no additional costs to the Department.

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This analysis was prepared by nonpartisan Senate staff for use by the Senate in its deliberations and does not constitute an official statement of legislative intent.