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BILL



ANALYSIS

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Senate Bill 1090 (as introduced 4-24-12)
Sponsor: Senator Tom Casperson
Committee: Natural Resources, Environment and Great Lakes

Date Completed: 4-26-12

CONTENT

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

- **Include an ecological demonstration and 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 allowed currently, and establish standards for an ecological and modeling demonstration.**
- **Prohibit response activity beyond evaluations from being required if venting groundwater had 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 were unachievable.**
- **Provide that natural attenuation of hazardous substances would be an acceptable form of remediation.**
- **Prescribe conditions for a groundwater contamination plume that entered a sewer that discharged to surface water.**
- **Provide that the bill would apply retroactively, and allow the modification of a judgment, order, consent judgment or order, or agreement entered before the bill took effect.**

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

Demonstration of Compliance

A person may 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 would refer to surface water quality standards or variances in this provision.

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

The bill would allow biological criteria also to be used as site-specific criteria. If biological criteria were used, sentinel wells would have to be used as needed to determine if the criteria could 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 would have to be performed in connection with this determination.

Under the bill, a person also could 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 could be used only if it were requested by a person performing response activities with respect to venting groundwater.
- An ecological demonstration.
- A modeling demonstration.

Whole effluent toxicity testing could 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" would not include any of the following:

- Groundwater.
- Hyporheic 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 would allow an ecological demonstration to be used to demonstrate compliance if it met the following standards:

- The boundaries of the area where the groundwater plume vented to surface water were documented as provided in Part 201.

- Sampling data for the area, when compared to other reasonably proximate areas of that surface water body, did not show an impairment of existing or designated uses for that water body caused by, or contributed to by, the venting plume; or did not show that the plume would 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 showed an impairment of those uses.
- Sampling data for the area did not show exceedances of applicable criteria in the surface water body caused by, or contributed to by, the venting plume.
- The sampling data could be data on benthic organisms, fish, and the water column of the surface water, and could be in the form of an in situ bioassay or a biological community assessment.
- Sentinel monitoring in on-land wells was performed as needed to show that the groundwater plume was not likely to migrate to the surface water body and vent in the future in a mass amount and rate that would 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

A modeling demonstration could be used to show compliance if it met all of the following standards:

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

Relevant Pathways

The bill would rescind R 299.5716. Among other things, this rule requires the pathway addressed by GSI criteria to be considered a relevant pathway when a remedial

investigation or application of best professional judgment leads to the conclusion that a hazardous substance in groundwater is reasonably expected to vent to surface water in concentrations that exceed the generic GSI criteria. The rule also prescribes the factors that must be considered in determining whether the pathway is relevant.

The bill would reenact this language in Part 201, but would add to the prescribed factors whether a sewer that had an outfall to surface water had openings in the portion of the sewer where the sewer and the groundwater contaminant plume intersected that allowed the contaminant plume to migrate into the sewer. If it could be demonstrated that the sewer was sufficiently tight to prevent inflow to the sewer where the plume intersected it or if the sewer were 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 would not be relevant and would not apply.

For purposes of determining the relevance of a pathway, both of the following would apply:

- GSI monitoring wells would not be required in order to make a determination if other information were sufficient to make a judgment that the pathway was not relevant.
- Fate and transport modeling could 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 certain circumstances. Upon completion of remedial actions that satisfy the cleanup criteria, the person may submit to the DEQ a no further action report. These response activities include the following:

- Evaluation activities associated with a response activity providing for venting groundwater using GSI monitoring wells or alternative monitoring points.
- Response activities that rely on GSI monitoring wells to demonstrate compliance.

- Except as otherwise provided, response activities that rely on monitoring from alternative monitoring points to demonstrate compliance if the person submits to the DEQ a notice of alternative points at least 30 days in advance that contains substantiating evidence that the points comply with Part 201.

The bill would delete the reference to GSI monitoring wells with regard to evaluation activities. In addition to the alternative monitoring points, evaluation activities could use an ecological demonstration, a modeling demonstration, or any combination of those methods. If a person who was liable under Section 20126 decided not to take additional response activities to address the GSI pathway based on any of those methods or a determination that venting groundwater had no effect or only a de minimus effect on a surface water body, the person would have to notify the DEQ and request approval. A notification and request for approval could not be considered an admission of liability.

(Section 20126 provides that the following people are liable under Part 201:

- The owner or operator of a facility, if the owner or operator is responsible for an activity causing a release or threat of release.
- The owner or operator of a facility at the time of disposal of a hazardous substance, if the owner or operator is responsible for an activity causing a release or threat of release.
- A facility owner or operator who becomes an owner or operator on or after June 5, 1995, unless the person has a baseline environmental assessment (BEA) conducted within a prescribed time period and provides a BEA to the DEQ and subsequent purchaser or transferee.
- A person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged for transport for disposal or treatment, of a hazardous substance owned or possessed by that person, by any other person, at a facility owned or operated by another person and containing the hazardous substance.
- A person who accepts or accepted any hazardous substance for transport to a facility selected by that person.

-- The estate or trust of any liable person.)

In addition, the bill would include among the response activities allowed without prior DEQ approval response activities implemented by a person who was not liable that relied 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 would refer to response activities that relied on an ecological or modeling demonstration, or a combination of these methods.

A person also would have to proceed under Section 20114b to undertake response activities that relied on monitoring from alternative monitoring points, relied on an ecological or modeling demonstration, or used 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, including that they allow for venting groundwater to be sampled before mixing with surface water. Under the bill, the alternative monitoring points would have to allow for the venting groundwater to be sampled at the GSI. Devices used for sampling at alternative points could be beyond the water's edge and on top of or into the sediments, at the GSI.

Currently, the alternative points also must 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 would delete this standard.

Under the standards, the potential fate and transport mechanisms for groundwater contaminants, including any chemical, physical, or biological processes that result in the reduction of hazardous substance concentrations between the monitoring wells and the alternative monitoring points must be identified. The bill would delete this requirement.

Under the bill, if alternative monitoring points or an ecological or modeling demonstration or a combination of these methods were used for the response activity and sentinel wells were installed, a contingency plan for potential additional response activity could be required.

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. If compliance with a mixing zone-based GSI criterion is to be determined with data from the alternative points, the plan also must include documentation that it is possible to accurately estimate the volume of venting groundwater.

Under the bill, these requirements also would apply if a person intended to use mixing zone-based or site-specific criteria in conjunction with an ecological or modeling demonstration or a combination of methods. The bill would refer to documentation that it is possible to *reasonably* estimate the volume of venting groundwater, as well as the rate.

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

Exceedance of GSI Criterion

Rule 299.5617 requires a person to take certain actions if there is an exceedance of an applicable GSI criterion based on acute toxicity at a compliance monitoring point applicable at a particular facility. The required actions include notifying the DEQ within seven days, commencing response activity to address the exceedance, and submitting a response activity schedule to the Department. The DEQ may approve a schedule or direct reasonable modifications to it, and may grant extensions for required actions and activities if the person is acting in good faith and site conditions inhibit progress or completion. The bill would enact similar language in Part 201.

Effect on Surface Water Body

Under the bill, response activity beyond evaluations could not be required if venting groundwater had no effect or only a de minimis effect on a surface water body. A person evaluating a venting plume who determined that the plume had no effect or a de minimis effect would have to notify the DEQ of the determination. The DEQ could disapprove the determination within 90 days after receiving it. If the Department did not notify the person of its disapproval within that time period, the person's determination would be final.

Technical Impracticability Waiver

The bill would allow a person to file a technical impracticability waiver request with the DEQ if the person had controlled the source of groundwater contamination and demonstrated that compliance with GSI criteria under Part 201 was unachievable. The waiver would have to document the reasons why compliance was unachievable. The DEQ would have to respond to the request within 180 days with an approval, request for additional information, or denial that provided 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 would be an acceptable form of remediation and could be relied upon in lieu of any active remediation of the groundwater. Natural attenuation could occur by way of dispersion, diffusion, sorption, degradation, transformative reactions, and other methods.

Permit Requirement

The bill would prohibit a permit from being required under Part 31 for any venting groundwater contamination plume that was addressed under Section 20120e (the section the bill would amend).

Wetlands

The bill would require wetlands 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 were entering a sewer that discharged to surface water, and the GSI pathway were relevant, the following provisions would apply.

If the groundwater entered a storm sewer that was owned or operated by an entity that was 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 would be subject to regulation by the entity's ordinance regarding illicit discharges. The regulation of the contaminated groundwater, however, could not prevent the use of other provisions to determine the need for response activity under Part 201.

In addition, all of the following would apply:

- The compliance monitoring point could be a groundwater monitoring well, if proposed by the person performing the response action, or that person could choose another point for measuring compliance.
- A mixing zone could be applied that accounted for the mixing that occurred in the receiving surface water into which the sewer system discharged.
- Attenuation that occurred in the sewer system before the outfall to surface water would have to be considered.
- The compliance point would be at the sewer system outfall to surface water, which would have to account for any applicable mixing zone for the outfall.
- Monitoring to determine compliance could be performed at a location where the contaminated groundwater entered 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 could be considered and could result in a determination that the migration into the sewer was de minimis and would not require any response activity in addition to the evaluation that led to the determination.

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

Denial of Response Activity Plan

Part 201 contains provisions regarding the DEQ's denial of a response activity plan that contains a proposal for alternative monitoring points, including a person's right to appeal the DEQ's decision as a scientific or technical dispute. Under the bill, these provisions would apply to a plan containing a

proposal for alternative monitoring points, an ecological demonstration, a modeling demonstration, or a combination of these methods.

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 could pursue, alter, or terminate the response activity based on any provision of Section 20120e subject to any necessary entry or approval by the court. The DEQ could not oppose use of any provision of the section as grounds 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 could modify the plan and pursue, alter, or terminate response activity based on any provision of Section 20120e.

Admission of Liability

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

MCL 324.20120e

Legislative Analyst: Julie Cassidy

FISCAL IMPACT

The bill would likely have little long-term impact on the State's finances. In the short-term, new guidelines and changes in rules could result in some costs to the DEQ as

transitions were made, but these costs would be borne by existing DEQ resources. Once the changes were implemented by the DEQ, the bill would likely result in little or no additional costs to the Department.

Fiscal Analyst: Josh Sefton

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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.