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Michigan DEQ Proposes New Cleanup Criteria Rules

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On the last day of August 2017, after a very lengthy process of many years, the Michigan Department of Environmental Quality (DEQ) issued proposed comprehensive cleanup criteria rules pursuant to Part 201 of the Natural Resources and Environmental Protection Act (NREPA). These proposed rules are a sweeping update of Michigan's generic environmental contamination cleanup criteria for groundwater, soil, surface water protection, and volatilization to indoor air that would apply to ongoing and future cleanup projects, leaking underground storage tanks, and "Brownfields" transactions in the state.

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Although there has been substantial informal stakeholder input already, these DEQ rules will now enter the formal public comment process, including public information sessions to be scheduled in the coming weeks. Facilities, developers, municipalities and others potentially regulated by these rules should keep up-to-date on the proposal and consider providing comment.

The schedule for finalizing this rules package is linked to proposed drinking water criterion for 1,4-dioxane which is the subject of an ongoing rulemaking process anticipated to be completed in October 2017 due to a legislative deadline. That criterion will be incorporated into the comprehensive cleanup criteria rule package, and so the formal public comment period on the overall rulemaking will not commence until after the 1,4-dioxane criterion is confirmed.

A link to the DEQ proposed Part 201 rules document (411 pages), showing additions, deletions and recent revisions, can be found here. Some of the more significant and potentially contentious changes proposed include the following:

- The effective date of these new DEQ cleanup criteria is proposed to be six (6) months after promulgation. This window would allow pending No Further Action (NFA) and Closure reports to be evaluated under the previously effective 2013 criteria during this "grace period" unless application of the prior criteria would result in an "unacceptable risk" according to the DEQ Director; resolution of this uncertainty will be important during the public comment process, since there may be skepticism that any cleanup where the criteria have been reduced could be considered by DEQ as no longer protective of public health or the environment.

- The exposure assumptions used by the DEQ in developing these proposed criteria have been attacked from all sides as illogical, unreasonable, and even inconsistent with other regulatory agencies within EPA Region 5. The DEQ's proposed criteria sometimes rely on different studies, populations or time periods which diverge from what the EPA or other agencies use; for instance, the DEQ proposes to assume non-residential worker exposure time of 12 hours per day rather than a typical 8-hour work day. There is also some controversy surrounding proposed DEQ criteria regulating developmental and reproductive toxicants to protect sensitive sub-populations (e.g., children or pregnant women), as well as using acute or single event exposure scenarios. Therefore, watch for specific challenges by environmental groups or the regulated community on this basis where cleanup criteria are proposed to vary significantly from levels promulgated by the EPA or other agencies.

- Hazardous substances without promulgated criteria will be addressed by the DEQ using site-specific criteria, potentially creating uncertainty; although DEQ agreed to delete the proposed provision that the absence of criteria does not mean it has determined the chemical is not a hazardous substance.

Responsible parties may opt for site-specific determinations where new generic cleanup criteria are overly stringent.

- Emerging contaminants PFOS and PFOA are proposed for regulation at the stringent U.S. EPA drinking water health advisory values; i.e., total PFOA and PFOS groundwater concentrations will be compared to drinking water criterion of 0.07 ppb.
- Volatilization to indoor air ("vapor intrusion") has been the subject of much attention by virtually all stakeholders, and remains controversial. The DEQ proposes a new vapor intrusion (VI) tiered approach:
    - Tier 1 values are very conservative screening levels to identify potential vapor sources of concern and need for further evaluation (or not) applicable to both residential and non-residential properties
    - Tier 2 VI generic criteria are for unrestricted residential use facilities
    - Tier 3A criteria are for restricted residential or non-residential scenarios
    - Tier 3B is a site-specific evaluation (including structure size and air exchange rate)
    - This tiered approach to VI may allow responsible parties to make cost/benefit assessments of whether gathering more data for a site is beneficial rather than relying on generic assumptions that may not actually be accurate for their particular site conditions.
- Other vapor intrusion cleanup criteria issues in the proposed rules include:
    - DEQ incorporates the recently expanded U.S. EPA definition of what is a "volatile" compound.
    - Indoor air sample results are not determinative for generic closure, but may be used for interim remediation or as part of Tier 3B line of evidence evaluation (potentially including bioattenuation and modeling).
    - DEQ uses "lateral inclusion zones" as horizontal distance from petroleum contamination (35 feet) and other vapor sources (100 feet), and proposes ITRC guidance approach to vertical separation distances (e.g., groundwater shallower than 3 meters).
    - DEQ proposes use of an attenuation coefficient of 0.03 for calculating subsurface vapor sources likely indoor air impact levels.
    - DEQ proposes that vapor (soil gas) sampling may be the best available information to evaluate soil and groundwater volatilization to indoor air – perhaps most important if health-based value is less than target detection level for soil or groundwater.
    - Certain compounds are identified as having short-term toxicity effects (e.g., acetone, PCE, toluene, TCA), and therefore those values are used to evaluate potential evacuation of an occupied building.
- Future land-use scenarios in DEQ consideration of relevant exposure pathways for Closure or No Further Action determinations is of concern if the DEQ will assume conservatively that potential future land use may always be residential. It will be important to resolve how institutional controls like deed restrictions and ordinances will affect this DEQ evaluation. Similarly, will DEQ require evaluation of potential future building construction for vapor intrusion exposure pathway determinations?
    - The DEQ proposes evaluation of not only hazardous substances known to have been released at a facility, but also derivative byproducts and hazardous substances that may result from reactions or changes associated with the release, thereby expanding remedial investigation scope.
    - The rules propose use of single fraction of organic carbon (foc) value for contaminant migration, but with potential adjustment of criteria with facility-specific soil classification (USDA system) rather than generic sand assumption.
    - Groundwater criteria are generally Safe Drinking Water Act MCLs, but DEQ proposes to use aesthetic ("secondary") characteristics (e.g., odor, taste, color) if more stringent even though arguably not health-based criteria.
    - There are no generic criteria for sediments, since sediment toxicity is a site-specific determination.
    - Surface water criteria are determined under NREPA Part 31 (water resources) rather than establishing generic Part 201 criteria; however, "Waters of the State" is a defined term in Part 31

and referenced in the Part 201 cleanup criteria rules regarding contaminant migration.

- The rules propose using a “toxicity equivalency factor (TEF)” approach to evaluating similar compounds (like PCBs, dioxins/furans).
- The toxicity, exposure and other algorithm factors or variables used in the DEQ’s proposed cleanup criteria are publicly available but not included in the administrative rules themselves.
- There are technical disputes as to the methane criteria reduction proposed by the DEQ and related groundwater solubility assumptions, as well as related flammability and explosivity characteristics and vapor intrusion screening level.
- Various specific hazardous substances criteria are disputed, including TCE, benzo(a)pyrene, TCDD.

Overall, in addition to contaminant-specific cleanup provisions, the regulated community in Michigan should remain attuned to how these proposed DEQ rules may affect not only ongoing cleanups, but also “Brownfields” redevelopment and other real estate transactions. The Barnes & Thornburg environmental remediation, corrective action and voluntary cleanups practitioners will continue to actively monitor and be involved in ongoing stakeholder discussions of these proposed DEQ rules.

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