

Air Toxics *Program Changes*

Regulatory Reinvention for the Air Program

By S. Lee Johnson



In 2011, pursuant to Governor Snyder's Executive Order 2011-5, the Office of Regulatory Reinvention convened an Environmental Advisory Rules Committee to produce recommendations for changes to all of Michigan's environmental regulations. The committee presented its report and recommendations, including recommended changes to many environmental regulatory programs, in December 2011.

Subsequently, the Michigan Department of Environmental Quality (MDEQ) convened an Air Toxics Workgroup to review the recommendations with regard to the state's Air Toxics Program, which regulates emissions of more than 1,200 potentially harmful air contaminants, and other issues that might be identified by the workgroup or the Air Quality Division to ensure the rules are "updated, streamlined, protective of public health and not excessively burdensome."¹ The workgroup, comprised of 16 members including toxicologists, engineers, attorneys, MDEQ representatives, the regulated community, and the Michigan Environmental Council, presented its final report and recommendations for specific changes to the Air Toxics Program on October 1, 2013.

Michigan's air permit program

Each year, the MDEQ Air Quality Division issues hundreds of permits to air emission sources both large and small throughout Michigan. These permits, which are preconditions to and required whenever a source of emissions is constructed, modified, or relocated, contain limitations and requirements designed to ensure that air quality and public health are protected. The division's Air Toxics Program² is one of the key regulatory programs implemented through these permits because it is designed to protect public health from potentially harmful air contaminants. The MDEQ is currently considering the first significant revisions to its Air Toxics Program since 1998.

A two-pronged approach for protecting human health and the environment

In Michigan, every air contaminant is considered to be potentially toxic with the exception of a few dozen chemicals that have been exempted by regulation. The regulations require emission sources to satisfy two separate and independent requirements: a technology-based standard and a health-based standard.

First, any emission unit must employ the “best available control technology for toxics” (or “T-BACT”) to control emissions, with limited exceptions.³ T-BACT is defined as the “maximum degree of emission reduction which the [MDEQ] determines is reasonably achievable for each process that emits toxic air contaminants, taking into account energy, environmental, and economic impacts and other costs.”⁴ This requirement ensures that all emissions of toxic air contaminants are minimized, even if the potential threat to public health from a given source is very minor.

Second, the owner or operator of any emission unit must be able to demonstrate that the emissions remaining after the use of controls will not threaten public health.⁵ The Air Quality Division maintains a list of screening levels for both carcinogens and non-carcinogenic air contaminants. These screening levels are established based on the latest toxicological information and are designed to ensure that the public is not exposed to harmful pollution levels. A facility owner can sometimes demonstrate that emissions will not result in a predicted ambient air impact that exceeds a screening level based on algorithms and matrices found in the rules, but most often this demonstration requires the use of computer air dispersion models.

The regulations provide an additional backstop in case technology-based and health-based standards are not adequately protective. If, on a case-by-case basis, the division determines that the maximum allowable emission rate permitted after applying the standards for both T-BACT and health-based screening levels is not adequate to protect human health or the environment, the division may establish a more stringent emission limit after considering all relevant scientific information.⁶

Proposed changes to the Air Toxics Program

In its final report, the workgroup recommended six changes to improve the Air Toxics Program:

- (1) Exempt from the requirement to use T-BACT those sources already required to use emission controls for volatile organic compounds. This change was unanimously supported by the workgroup.
- (2) Clarify key terms defining changes that do not result in a meaningful change in emissions and, therefore, are exempt from further review. This recommendation, which was not unanimously supported by all workgroup members, would define a “meaningful change” as a change in emissions that increase the “hazard potential” of the emission by 10 percent or greater. The hazard potential is calculated based

on the potential to emit each toxic air contaminant and the relevant screening level for each contaminant. Likewise, a “meaningful increase in the quantity of emissions” will mean an increase in the potential to emit that is 10 percent or greater.

- (3) Exempt certain clean fuel projects from Air Toxics Program requirements. This change, which was unanimously supported by the workgroup, would exempt engines, turbines, boilers, and process heaters burning solely natural gas, diesel fuel, or biodiesel up to 100 mmBtu/hour, provided the effective stack height is at least 1.5 times the building height and certain other requirements are met.
- (4) Modify the definition of a toxic air contaminant. Currently, the Air Quality Division maintains a list of nearly 1,250 toxic air contaminants. The revisions would limit the definition of toxic air contaminant to include only carcinogens and any other chemical with a health-based screening level at or below the 75th percentile level of the current distribution of screening levels. Two chemicals, perfluorooctane sul-

FAST FACTS

A three-year effort to revise and streamline regulations for toxic air contaminants is reaching a climax.

Several reforms are being considered, including a proposal to reduce the number of chemicals subject to review.

Regulators would retain the authority to limit emissions on a case-by-case basis.

fonate and perfluorotanoic acid, would be specifically listed as toxic air contaminants because they are emerging contaminants of concern. The effect of these changes would be to reduce the current list of toxic air contaminants to approximately 750 chemicals. This proposed revision is the most controversial and is discussed further below.

- (5) Modify the standards for setting screening levels by (a) adding a new rule setting procedures for establishing standards for acute toxicity, (b) eliminating the use of a default screening level when there is inadequate data, and (c) using a default annual averaging time for certain screening levels instead of a default 24-hour averaging time. Two workgroup members opposed (b) and (c).
- (6) Clarify when and how the division may determine on a case-by-case basis that a more stringent emission limit than would otherwise be required under the Air Toxics Program is necessary to adequately protect human health or the environment. The changes would clarify that such a determination must be based on relevant environmental data, land use, exposure scenarios, reasonably anticipated



environmental impacts, and exposures from the new or modified emission units. A new provision would also authorize the division to determine whether an emission rate limitation is needed for a non-toxic air contaminant to ensure that air emissions do not cause injurious effect to human health. This proposal was unanimously supported by the workgroup.⁷

Reducing the number of toxic air contaminants subject to routine review

As noted previously, the workgroup recommendation that has been the subject of the most discussion is the recommendation to change the definition of toxic air contaminant. Although the defined term is “toxic” air contaminant, the present definition does not include any requirement that a chemical have harmful effects before it is regulated. In fact, *every* chemical in a facility’s emissions is regulated except for 41 specific substances that have been excluded by regulation. Accordingly, an applicant for a permit to install (and the Air Quality Division in reviewing that application) may be required to address every potential chemical in the emissions under the Air Toxics Program, including chemicals known to be harmless.

A 50-state survey by division staff included in the workgroup report found that a majority of states either have no air toxics program at all or limit their review to the same 189 pollutants and categories of pollutants regulated by the U.S. Environmental Protection Agency under the Clean Air Act Hazardous Air Pollutants Program. Only eight other states mandate review of virtually every chemical, like Michigan does. The remaining states—approximately 15—focus regulatory resources on a more targeted list of pollutants.

The removal of those chemicals the Air Quality Division has found to be least likely to be harmful will reduce the division’s current list of approximately 1,250 chemicals that must be reviewed when issuing air permits to approximately 750. The workgroup and the division hope that focusing efforts on those chemicals posing a realistic threat of harm rather than reviewing every

chemical will save many hours of staff time and allow permits to be processed more efficiently.

No chemicals would be permanently removed from regulation; if new scientific information proves a chemical is more harmful than currently known, resulting in a reduction in its health-based screening level, it would again be subject to regulation as a toxic air contaminant. Additionally, the division would still retain the authority to impose restrictions on non-toxic air contaminants on a case-by-case basis when necessary to ensure that air emissions do not cause injurious effects to human health.

Effect of the proposed changes

The proposed regulatory changes will improve the Air Toxics Program by allowing the division and permit applicants to focus their efforts on emissions presenting the greatest risk without spending unnecessary time and resources analyzing emissions of air contaminants least likely to cause harm based on the division’s 20 years of experience implementing the program. This should result in faster, more efficient permit processing so new projects and business expansions can get started more quickly and with less expense. At the same time, the proposed revisions retain and clarify the Air Quality Division’s authority to ensure that public health and the environment are protected on a case-by-case basis if the need arises.

Rulemaking process

The workgroup’s recommendations were presented to the division on October 1, 2013. The workgroup is now in the process of preparing proposed regulations to implement these recommendations for public review and comment this year. For more information or to review and comment on the proposed rule revisions, visit <http://www.michigan.gov/deq>. ■



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ENDNOTES

1. DEQ, *Air Toxics Workgroup* <http://www.michigan.gov/deq/0,4561,7-135-6132_6828-293104-,00.html> [accessed May 16, 2014].
2. The Air Toxics Program was established by regulation in 1992 and last amended in 1998. See 1998 AAC, R 336.1224–336.1232.
3. 1994 AC, R 336.1224.
4. 1994 AC, R 336.1102(a).
5. 1994 AC, R 336.1225–336.1226.
6. 1994 AC, R 336.1228.
7. See MDEQ Air Quality Division, *Final Report of the Michigan Air Toxics Workgroup* (January 31, 2014), available at <http://www.michigan.gov/documents/deq/deq-aqd-toxics-atw-final-report_434442_7.pdf> [accessed May 16, 2014].