

The Toxics Air Contaminant (TAC) List

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Robert Sills, Toxics Unit Supervisor, MDEQ-Air Quality
Division (517-335-6973; sillsr@michigan.gov)

Current TAC Definition

Established in 1992, along with the “air toxics rules” (Rules 224-232) for New Source Review

Rule 120(f):

"Toxic air contaminant" or "TAC" means **any air contaminant** for which there is no national ambient air quality standard and **which is or may become harmful to public health or the environment when present in the outdoor atmosphere in sufficient quantities and duration**. For the purpose of this definition, all of the following substances shall not be considered to be toxic air contaminants:

(followed by 41 listed exemptions)

Office of Regulatory Reinvention (ORR) Environmental Advisory Rules Committee (ARC), December 23, 2011 Report

Recommendation A-1 (Air Toxics Rules)

Rule 225 should be amended: Limit the number of air toxics to the federal HAPs list

Rationale: current TAC definition is burdensome and more extensive than in some R5 States.

Opposed by James Clift, MEC: "... a company... should have the duty to demonstrate that emission of that toxic chemical will not adversely impact natural resources or public health.

AQD's Air Toxics Workgroup (ATW)

Began meeting on December 3, 2013

Their Charge:

*The Air Toxics Workgroup (ATW) of the Air Quality Division (AQD) will provide meaningful input to the AQD in addressing ORR Recommendation A-1 and other air toxics rule issues as identified by the ATW and AQD members. The ATW will help ensure that the rules are **updated, streamlined, protective of public health and not excessively burdensome**. By August 1, 2013, the ATW shall have recommendations to the AQD.”*
(emphasis added)

ATW and the TAC List Issue

ATW: Diverse representation (6 from industry and consulting; 2 from environmental groups; 1 from academia; 1 from MDCH)

DEQ's initial thoughts for addressing this issue:

- Pursue a solution that is less burdensome, with regulatory certainty
- Regulatory structure for public health protection
- Scientifically defensible rationale; transparent approach
- Strive to develop an ATW “consensus”
- The solution should be durable (lasting)

EPA's HAPs list

187 compounds and groups (originally 189; 2 have been de-listed)

HAPs list includes groups such as glycol ethers, mineral fibers, and POM (potentially hundreds of compounds).

Includes MANY that have not been very relevant to NSR:

- Since 1992: many have never been identified in an emission
- Radionuclides (incl. radon) not regulated by AQD as TACs
- Lead is a criteria pollutant, and is exempt from TAC list
- Some are relatively low toxicity noncarcinogens

Excludes many high toxicity TACs that are in air emissions

ATW Vote on How to Proceed

Where do we go from here?

May 13, 2013 ATW Meeting

Vote: There were some supporters for “HAPs only”, and for “status quo”, but, **relatively greater consensus for “HAPs Plus, with a caveat to add other compounds”**.

Therefore, AQD and the ATW began exploring the potential ways that a defined TAC list could be **developed**.

Key issues, and pros and cons of alternatives approaches, are described in the Discussion Paper on our website.

Approach to Defining a TAC List

Drafted Goal statement:

“The TAC list includes the federal HAPs list and other air toxics that may be reasonably anticipated to occur in NSR permitted air emissions, and which warrant the evaluation of ambient air impacts in PTI applications in order to help ensure public health and environmental protection while promoting regulatory certainty and efficiency.”

“Guiding concepts”:

- List should focus on the more relevant substances
- List should be less burdensome, and provide greater certainty
- DEQ should have a defined mechanism(s) to add to and delete from the list
- Applicant should still identify non-TACs in proposed emissions (R 203(1)(c))
- DEQ can act to protect public health (case-specific) from non-TACs

Approach Options Considered

1. Adopt a list developed by another state / states
2. Develop a “list of lists” (e.g., TLVs, TRI, 112(r))
3. List chemicals meeting specific criteria (e.g., based on hazard, potency, bioaccumulation)
4. Develop a list based on the HAPs and the current list of TACs with SLs (n~1200), with exclusion criteria

Option 4 seemed to best meet the Goal and Guiding Principles.

The subsequent approach drafted was driven by the Goal and Guiding Principles, NOT by a target “number of TACs”.

Recall Slide #5: DEQ’s thoughts for a TAC list.

Draft TAC List Development

Draft Decision Points:

- Include all TACs regulated by AQD as carcinogens (IRSLs + asphalt fumes and carcinogenic PAHs (EPA list))
- Exclude all current TACs with ITSLs based on the “default” value of 0.1 ug/m³.
- Include noncarcinogens with ITSLs, except those with relatively low potency (ITSLs above the 75th percentile of the ITSL distribution, by averaging time)
- Only include the EPA HAPs if they have a SL meeting criteria #1 or #3 (or, if they have appeared in NSR but lack a SL).

The Results

- 18 HAPs have ITSLs, but are excluded due to low potency
- 34 HAPs are excluded because they have never been evaluated in NSR
- 4 HAP groups excluded because they have not been regulated as TACs (lead and radionuclides) or because the individual substances will be listed for clarity (POM and glycol ethers)
- 287 current TACs excluded because they have default ITSLs
- Many current TACs excluded because of relatively low potency (noncarcinogens above the 75th %ile)
- **N ~ 750 TACs**

Draft Proposed TAC List

A spreadsheet of the proposed TAC list is available at the ATW website (see 2nd-to-last slide for the link)

The spreadsheet includes: the basis for listing; if it is a HAP; if it is a carcinogen; the ITSL value and AT.

Notable exclusions:

Noncarcinogenic HAPs with relatively low potency (e.g., methanol; methyl chloroform; ethyl chloride; toluene; methyl methacrylate; phenanthrene; ethylene glycol; MIBK; chlorobenzene; anthracene; several glycol ethers; etc.)

Non-HAPs with current SLs, relatively low potency: propylene glycol; ethyl ether; ethyl alcohol; acetone; chlorobromomethane; isobutane; MEK; butyl benzyl phthalate; DNOP; mineral spirits; many chlorfluorocarbons, silanes, siloxanes, propylene glycol ethers, and petroleum distillates; etc.

Putting it in context

- Over 84,000 chemicals in commerce. Almost all would be TACs in NSR currently.
- Current SL list: ~ 1200 compounds with SLs; continues to grow
- Draft proposed TAC list: ~750 compounds
- Ohio: 303 compounds or classes (same “groups” as with HAPs list; MANY more in total, per Paul Koval, Ohio EPA)
- EPA HAPs: 187 compounds or classes (how many total???)

Certainty and Flexibility

The proposed defined TAC list would provide much greater certainty, and be less burdensome, than the current system.

The ATW has discussed that AQD should solicit public comment on the proposed approach, including:

1. The proposed list, with some basic info on the basis for each listing
2. Availability of AQD's detailed SL Justification documents
3. A process for adding/deleting from the list (via rulemaking; SLOW backstop)
4. Ability for AQD to address case-by-case public health threats from non-TACs in a PTI application (“fast backstop”)

Reflections on How We Got Here

The ATW **may** be able to reach consensus that AQD should have a defined TAC list, **but**, the HAPs list does not seem to serve well.

The AQD and ATW drafted a PROCESS that embodies the thoughts and goals:

- Less burdensome
- Protective of the public health/environment
- More certainty (but with some flexibility to address health threats)
- Attempt to build consensus ATW support
- Founded on a sound rationale; transparent
- A durable solution (hopefully)

This is **one KEY ISSUE** among **many being explored** for streamlining.

Could the TAC list be smaller than ~750?

Potential ways of doing that:

1. Change the decision criteria somehow, so that they are less inclusive

- Any proposal should have a sound rationale, and build ATW consensus
- Concern: ATW ends 8/1/13; 2 meetings remain; then, AQD is in rule drafting phase

2. Utilize chemical “groupings”

- May result in a more *acceptable-sounding* number
- What “groups”? (extreme example: N=2 TACs (organics and inorganics))
- Creates an **illusion** of a smaller list of regulated substances
- **Reduces certainty** in what is a regulated TAC, vs. proposed approach
- May give AQD authority to add SLs for substances if they are in a listed group, without going through the “backstop” process
- Would require AQD to establish 2 lists (a list of “TACs”, and, list of SLs); proposed approach has just one list.

More Information:

Draft ATW Discussion Paper on TAC List Issue (5/13/13)

Potential Defined List of TACs (5/13/13)

... and much more:

<http://www.michigan.gov/deqair>

- select Air Toxics
- select Air Toxics Workgroup

Questions or Comments?

- * Robert Sills, Toxics Unit Supervisor, MDEQ-AQD
- * 517-335-6973
- * sillsr@michigan.gov