Division of Air Pollution Control

Response to Comments
Draft Rule Language Comment Period

Rule: 3745-114-01 Toxic Air Contaminants

Agency Contact for this Package

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Ohio EPA provided a 30 day comment period which ended on October 24th, 2014**.** This document summarizes the comments and questions received at the public hearing and/or during the associated comment period.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. The name of the commenter follows the comment in parentheses.

General/Overall Concerns

Comment 1: **[Smith Aldridge, Inc.] Smith Aldridge would like to propose the removal of anhydrous ammonia (CAS 07664-4-7) from the list of toxic contaminants in 3745-114-0)…more appropriate to regulate it as a nuisance under 3745-15-07 than to list it as a toxic air contaminant.**

Response 1: Thank you for your comment.

The Toxic Air Contaminants rule (OAC rule 3745-114-01) is designed to identify compounds that must be evaluated when a facility plans to install or modify a source of air pollution. These pollutants are evaluated utilizing Ohio EPA's screening tool, "Review of New Sources of Air Toxics Emissions, Option A", also known as The Air Toxics Policy.

The purpose of this evaluation is to help ensure that the emission of the proposed compound is not likely to cause adverse health and welfare effects if the source were modified or built.

Ohio EPA recognizes that ammonia and ammonia compounds are extremely odiferous. These compounds can be recognized by smell at concentrations typically many times below exposure levels that could cause adverse health effects.

Although small concentrations don't cause adverse health effects, larger concentrations do. Therefore, Ohio EPA believes it is still appropriate to regulate these compounds through the use of OAC rule 3745-114-01.

Comment 2: **[D. Thompson] DAPC has made a practice of using the phrase "maximum acceptable ground level concentration (MAGLC)" as if it were a term of art, with a meaning different from what the public would normally understand from the conjunction of those words in that sequence, but in fact it is not defined under ORC 3704.01, and moreover, the phrase is not generally recognized within the environmental or regulatory communities, and consequently the words must be construed according to their common meaning as prescribed by ORC 1.42: "Words and phrases shall be read in context and construed according to the rules of grammar and common usage. Words and phrases that have acquired a technical or particular meaning, whether by legislative definition or otherwise, shall be construed accordingly." "MAGLC" is unknown except to those with a direct involvement with Division of Air Pollution Control. If you google it, you'll find nothing with a toxicological or air pollution context except for single entry on www.acronymattic.com which says "Our 'Attic' has 1 unverified meanings for maglc," and in fact the term is as likely to mislead as to inform, even for a technically sophisticated audience. Specifically, the incautious reader may interpret the words "maximum acceptable ground level concentration" to mean "maximum acceptable ground level concentration," *i.e.* to mean what the words say, and by that interpretation, be led to infer that his wellbeing is protected, which may not be the case (since the increase allowed by the MAGLC is overlaid on an unknown and possibly large**

pre-existing concentration). I request that DAPC interpret the phrase according to common usage, throughout, as required by ORC 1.42.

Response 2: Thank you for your comment, however, the comment is not germane to the specific rule that is out for comment, OAC rule 3745-114-01. The comment refers to the use of Ohio EPA's screening tool, "Review of New Sources of Air Toxics Emissions, Option A", also known as The Air Toxics Policy. Although the MAGLC term is used in the Air Toxics Policy, it is not used in OAC rule 3745-114-01. At this time we are only asking for comments concerning the rule, not the Air Toxic Policy.

Comment 3: **[D. Thompson] By use of the phrase "beyond the facility's boundary" the text of 3704(F) requires that the normal "ambient air" modeling convention be disregarded. That is to say, the air on company property from which the public is not excluded by physical or administrative barriers is excluded from modeling for compliance determination, despite being "ambient air" by usual definitions. I request that in the course of Air Toxics review, all ambient concentrations be modeled, and the results made available to the public, for informational purposes, on the same basis as the strictly off-premise concentrations.**

Response 3: Thank you for your comment, however, the comment is not germane to the specific rule that is out for comment, OAC rule 3745-114-01.

Comment 4: **[D. Thompson] "Option A" provides a formula for hours of operation adjustment of the MAGLC, *viz.***
MAGLC = 4 x TLV / XY, to as high as TLV / 10
where X = number of hours per day, and Y = number of days per week. **How is the adjustment computed if the number of hours of operation are not the same for every day the source is active? One would think this equation would serve:**
MAGLC = 4 x TLV / Weekly hours of operation; or
= TLV / 10 for weekly hours less than 40
But one would be wrong, because an equation is not a "real" equation unless it contains algebraic variables. The correct answer(s) are "unknowable" or "beyond human comprehension" or "it'll never happen anyway"

or something wholly unintelligible that includes the phrase "politically correct." Leastwise, that's my surmise based on an earlier quest for clarification. Again – can this simple question be given a simple answer?

Response 4: Thank you for your comment, however, the comment is not germane to the specific rule that is out for comment, OAC rule 3745-114-01.

Comment 5: **[D. Thompson] When the Adobe version of "Option A" is retrieved from the Ohio EPA website (at http://epa.ohio.gov/dapc/atu.aspx) the Adobe reader gives the message "Cannot create or find the font 'WPMathB'" and the rendering of the equation for hours of operation is garbled. A WordPerfect version is claimed to be present, but clicking gives a "not found" message. Non-antique versions of those two documents should be made available. Also EG70 has a font problem**

Response 5: Thank you for your comment, however, the comment is not germane to the specific rule that is out for comment, OAC rule 3745-114-01. When apprised of this issue by Ohio EPA staff the internet site was fixed immediately to correct these problems. Thank you for the information.

Comment 6: **[D. Thompson] Radionuclides. The ACGIH booklet includes TLV guidelines for the ionizing radiation emitted by sources of alpha, beta, gamma and neutron emissions, just as it does for particulate and gaseous emissions with non-radiological toxic effects. Clearly, since the radiological hazards are conveyed by gaseous and particulate matter dispersed through the air in the same manner as chemical hazards, Ohio EPA has no logical basis for excluding this category from its policy. Thresholds are needed, analogous to the 1 ton/year threshold. They may be expressed, for instance in millicuries per year, with appropriate weighting factors to account for differing biological effectiveness of different categories of emitter.**
Examples of processes that may be covered by this standard are combustion of wood or other plant-derived material grown during the era of atmospheric testing of atoms bombs, and radionuclide-bearing frack water. Although the radionuclides in the frack water may be

naturally occurring, the exposure to the public would not occur but for the industrial activity, and an argument for non-exemption could easily be raised on that basis. Note that 3704.011(A)(3) specifically says that radionuclides are non-exempt, with no distinction being made between natural and man-made.

Response 6: Thank you for your comment. Radionuclides are listed by U.S. EPA as a regulated Hazardous Air Pollutant. Therefore, these compounds were not exempt from the OAC rule 3745-114-01 list. Primacy for the regulation for radionuclides resides within the Ohio Department of Health, Radiation Protection.

Comment 7: **[D. Thompson] The ACGIH® booklet is copyrighted, and the expectation of the American Conference of Governmental Industrial Hygienists is that ACGIH® and TLV® always have the ® symbol attached. Ohio EPA thumbs its nose at ACGIH® in this regard. If I have failed to observe the proper convention, it's due to press of time.**

Response 7: Thank you for your comment, however, the comment is not germane to the specific rule that is out for comment, OAC rule 3745-114-01.

Comment 8: **[D. Thompson] Is the Air Toxics concept consistent with PAL (Plantwide Applicability Limits)? If PAL allows a source to be installed without review, it looks like the Air Toxics Policy is being undermined, at least at first blush. Under ORC 3704.03(F)(2)(a) it says "No installation permit shall be required for activities that are subject to and in compliance with a plant-wide applicability limit issued by the director in accordance with rules adopted under this section."**

Response 8: Thank you for your comment, however, the comment is not germane to the specific rule that is out for comment, OAC rule 3745-114-01.

Comment 9: **[D. Thompson] Pesticides seem to be given a blanket exclusion, on the grounds of regulation by other entities than DAPC. I question whether emissions from pesticide manufacturing plants, as well as off-premise drift during application, as well as volatilization after application, are sufficiently well regulated to justify this exclusion.**

Response 9: Pesticide distribution, usage, application, and operatory licensing is not controlled in the State of Ohio by Ohio EPA. The application of pesticides (as well as fungicides, rodenticides, and herbicides, etc.) is not regulated by Ohio EPA through the air permit program. Therefore, these compounds are removed from consideration in OAC rule 3745-114-01. The Director retains authority to consider any new point-source emitter of these compounds.

Comment 10: **[D. Thompson] Unjustifiably exempt_Exempt by statute, but not really. The pollutants and processes exempted under (F)(4)(f)(i) are only of an advisory character and the Director may propose rules that place those pollutants and processes within the scope of the Air Toxics Policy, based on current understanding of the public's exposure to risk. This is borne out by the following paragraphs:**
(F)(4)(f)(ii):
(ii) Notwithstanding division (F)(4)(f)(i) of this section, the director may require an individual air contaminant source that is within one of the source categories identified in division (F)(4)(f)(i) of this section to submit information in an application for a permit to install a new or modified source in order to determine the source's conformity to the document if the director has information to conclude that the particular new or modified source will potentially cause an increase in ground level concentration beyond the facility's boundary that exceeds the maximum acceptable ground level concentration as set forth in the document.
(F)(4)(f)(iii):
(iii) The director may adopt rules in accordance with Chapter 119. of the Revised Code that are consistent with the purposes of this chapter and that add to or delete from the source category exemptions established in division (F)(4)(f)(i) of this section.
Thus, the director refrains from regulating those supposedly "exempt" processes and pollutants not due to legal necessity or toxicological judgment, but due to other considerations that have not been disclosed to the public. The Director should reveal his reasons, to prevent the public from concluding that he ignores those pollutants simply because he can get away with it. Two particularly prominent examples of ignored, but toxicologically significant pollutants are formaldehyde from combustion of fossil fuels, and crystalline silica from all sources.

Response 10: In this case, the commentor is referring to three paragraphs found in ORC 3704.03, paragraphs (F)(4)(f)(i), (F)(4)(f)(ii) and (F)(4)(f)(iii). In these three paragraphs, the legislature instructed the director not to do an Air Toxic Policy analysis when processing installation permits for certain source types and for certain compounds.

The source types and compounds listed in paragraph (F)(4)(f)(i) are source types and compounds that the Director has evaluated many times in the past and has determined to easily pass the Air Toxic Policy. The source types and compounds were excluded from the normal Air Toxic Policy review in order to minimize unnecessary work. However, the Director recognized that there may be rare time were a project with one of these source types/compounds could exceed the Air Toxic Policy. That is why the Director has the ability to ask for the Air Toxic Policy information for a particular project as discussed in paragraph (F)(4)(f)(ii).

The commentor is correct in that, under paragraph (F)(4)(f)(ii), the director has the ability to require the permit applicant to submit information that the director can use to verify that the Air Toxic Policy is meet for the paragraph (F)(4)(f)(i) exempted sources/compounds. The director would use this ability if there were concerns about a particular source/compound for a particular project. The changes proposed to OAC rule 3745-114-01 do not affect the director's ability to use the (F)(4)(f)(ii) option.

The commentor is also correct in that, under paragraph (F)(4)(f)(iii), the director has the ability to adopt rules that add to or delete from the Air Toxic Policy exempted sources/compounds found in paragraph (F)(4)(f)(i). The changes proposed to OAC rule 3745-114-01 do not affect his/her ability to use the (F)(4)(f)(iii) option.

At this point, the Director has not seen the need to write rules that relate to these paragraphs. Instead, the Director is relying on the ORC text to guide permit writers on how the Air Toxic Policy should be applied.

In addition to the commentor's discussion on the text of the ORC, the commentor also discussed his concerns that some compounds either should or should not be contained in the OAC 3745-114-01 rule. The commentor is concerned that the Director has not provided the public with information

concerning his decision for either including or excluding certain compounds from the OAC rule 3745-114-01 list.

The Director has actually developed a detailed analysis for each compound that was either put on the list or excluded from the list. This information can be found at http://www.epa.ohio.gov/dapc/DAPCrules.aspx#112742674-interested-party-review .

Comment 11: **[D. Thompson] Crystalline silicaCommon sand, used for brickmaking, glassmaking, foundry casting, sandblasting and hundreds of other purposes, is widely prevalent in the workplace and a common cause of disability, due to its destructive effects on the lungs. The U. S. Occupational Safety and Health Administration (OSHA) in 2013 proposed dropping the workplace exposure limit in 29 CFR 1910 Subpart Z by about a half. Potentially very dustiferous in the fracking context. Storage/transfer facilities being built. I intend to say more on this.**

Response 11: Thank you for your comment. The Director evaluated crystalline silica to determine if it should be listed as one of the OAC rule 3745-114-01 compounds. Based on this analysis, it was determined that crystalline silica did not need to be listed.

Comment 12: **[D. Thompson] Formaldehyde Ubiquitous in combustion exhaust. Is a potential sensitizing agent, i.e. a person who becomes hypersensitized no longer is adequately protected by the workplace limit. I intend to say more on this.**

Response 12: Thank you for your comment. The Director evaluated formaldehyde to determine if it should be listed as one of the OAC rule 3745-114-01 compounds. Based on this analysis, it was determined that formaldehyde should be listed.

Since formaldehyde is a listed compound, new sources of formaldehyde will need to be evaluated by using the Air Toxic Policy. The exception to this evaluation is in the case where the source is listed in ORC 3704.03(F)(4)(f)(i). If the formaldehyde is emitted from one of the listed sources, then formaldehyde would only be analyzed with the Air Toxic Policy if the Director felt that the resulting compounds were

likely to exceed the Air Toxic Policy. See the response to Question 10 above.

Comment 13: **[D. Thompson] During the 1990's, the Ohio EPA offered two Air Toxics Policies, one with carcinogen-specific limits and one without. They were, if memory serves, referred to as "the draft policy" and "Option B" respectively, although my recollection of the content of Option B matches that of what is currently labelled as "Option A," so either my recollection is faulty in that regard, or the policy has been relabeled. The District Office or Local Air Authority made the choice of which policy to apply. The DAPC Central Office generally tried to harmonize the modeling techniques of the DO/LAA's, although an exception was made in this regard, apparently out of a wish to preserve DAPC's prerogatives in regard to arbitrary and capricious behavior. At any rate, the "draft" policy with carcinogens has disappeared from view. It was generally thought that limits for specific chemicals based on carcinogenic Unit Risk Value and (if memory serves) 1 x 10-6 lifetime risk were more stringent than those based on TLV®, although one exception was known, i.e. beryllium. For beryllium, the question was asked of the Air Toxics Unit which would control, the TLV® or URV-based limit, and the bizarre response was given that the URV-based, i.e. less stringent limit would, implying that the ability to cause cancer made a pollutant more appealing and desirable. At any rate, disappearance of the draft policy made DAPC less stringent in regard to Air Toxics , with no explanation of why the policy shift was made. The superior rigor of a policy that accounts for carcinogenicity is particularly apparent when one considers the ease of additivity of carcinogenic risk, i.e. you just add the lifetime risk of all the carcinogens present, regardless of whether there is a common target organ. The presumption is that their effects are independent of each other. One may argue that ACGIH® gives its TLV®s enough stringency to reflect whatever carcinogenic potential a substance has, but in fact you lose additivity unless there's a common target organ, and DAPC doesn't even do that kind of additivity, because it's so insanely complicated by their standards, apparently. This comment can be condensed to a simple question: why does DAPC feel that**

carcinogenicity is not significant within the context of implementing ORC 3704?

Response 13: Thank you for your comment. OAC rule 3745-114-01 is designed and defined as a first-level screening tool to ensure no unacceptable additional exposure to the public results from new or modified sources of the listed air toxics compounds. In cases where potentially highly toxic compounds will be emitted from new or modified sources, the Director can and does use other available data or methods to determine if the resulting ambient concentrations will be protective of public health and welfare. In these cases, carcinogenic or other data can be evaluated or other more detailed exposure methods like risk assessments can be used.

Comment 14: **[D. Thompson] Modeling topics –Additivity based on common target organ OSHA industrial hygiene inspectors are able to do summation of mixtures of pollutants based on common target organs, as identified in a technical appendix of their Field Operations Manual. E.g. exposures (i.e. fractions of allowables) to carbon monoxide and methylene chloride are additive, because they both impair the oxygen-carrying capacity of the hemoglobin. In practice, the inspectors rarely carry out calculations like that, but it would be reasonable for DAPC to search the literature for common-target organ combinations that could actually be encountered, with any degree of likelihood, and to publish those combinations as an appendix to Engineering Guide 70.**

Response 14: Thank you for your comment. The "additivity" of toxicological effect based upon target organ(s) is routinely used during advanced risk or hazard assessments conducted by the Division of Air Pollution Control. This level of detail is not required for the screening level evaluation prescribed by Option A. See answer #13.

Comment 15: **[D. Thompson] Additivity of the same substance, different MAGLC's. The same pollutant within the same facility may have more than one MAGLC, because of being subject to different hours-of-operation. For instance, toluene-soaked wiping rags may have an implicit hours of operation limitation, when the peak**

emission rate is considered in combination with a gallon/shift limit on allowable usage. Say there's also spray painting with different expected hours of operation and consequently a different MAGLC for the toluene solvent. Then, for the purpose of determination of compliance with Air Toxics, you must figure out the additivity of toluene(spray) with toluene(wipe). It's quite simple actually. Due to the linearity of the dispersion models, you can model emission rate reduced by MAGLC (a unitless quantity), instead of grams/second, with either a 2-D or 3-D model. Then the results of modeling will be unitless fraction of the allowable level, instead of milligrams per cubic meter. Simple though the approach is, it might be overlooked if not mentioned in, for instance, the EG69 modeling guidance document. There are some other aspects of modeling peculiar to the air toxics context that would appropriately be addressed in EG69. I suggest that it be reopened for this purpose.

Response 15: Thank you for your comment, however, the comment is not germane to the specific rule that is out for comment, OAC rule 3745-114-01.

Comment 16: **[D. Thompson] Guidance for speciation, e.g. chromium, hexavalent vs. trivalent, is needed.**

Response 16: Thank you for your comment. The Air Toxics Unit within DAPC provides the latest guidance available regarding the speciation of chromium compounds, as provided by U.S. EPA or other sources. Consultation is available for any person requesting individual answers regarding the rule or Option A from Ohio EPA DAPC.

End of Response to Comments