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## Memorandum

### Air Quality Program

January 17, 2019

To: 460 Rulemaking Stakeholders

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Subject: Establishing the Small Quantity Emission Rate as the De Minimis Emission Value

Chapter 173-460 WAC, Controls for New Sources of Toxic Air Pollution Sources, established the list of toxic air pollutants and the following:

- Acceptable source impact level (ASIL) – an emissions level requiring a refined modeling evaluation.
- Small quantity emission rate (SQER) – a screening level for emissions that does not require dispersion modeling. Set at a conservative level to protect public health and the environment.
- De minimis emission value – trivial level of emissions below which an air quality permit is not required. Set 20 times lower than the SQER (5 percent). The 20 times lower level reflects consistency with the criteria pollutant emission exemption levels in WAC 173-400-110 (5). These levels were set 20 times lower than the prevention of significant deterioration (PSD) significant emission rates.

## History of rule

The air toxics rule has evolved since its adoption in 1991 through revisions in 1994, 1998, and 2009. The rule before the 2009 revisions did not provide TAP-specific SQERs; it included a SQER emission rate table (Section 080) and ASIL values for class A TAPs and class B TAPs. The 2009 rulemaking revised the basis for including a chemical as a TAP, established de minimis emission values, and consolidated the ASIL, SQER, and de minimis emission values into one table.

## Current de minimis structure

- 460 supplements the air quality permitting process in WAC 173-400-110. (WAC 173-460-040(1))
- Establishes levels that don't require regulation
- Requires an air quality permit when a single TAP is greater than de minimis value before control (WAC 173-460-040 (1))
- Requires tBACT (toxics best available control technology) when permitting triggered. (WAC 173-460-040 (3)(a))
- Sets de minimis emission values at one twentieth of the SQER except for:
  - Criteria pollutants – value reflects criteria pollutant de minimis values in WAC 173-400-110 (5)
  - Dimethyl and diethyl mercury – same value for ASIL, SQER, and de minimis (WAC 173-460-150)

## Current SQER structure

- Reflects a conservative estimate of emissions that protect human health and the environment
- Screening tool for permit efficiency
- An increase in any TAP after application of tBACT must be less than the SQER or dispersion modeling required to document ASIL not exceeded. Second tier review required when modeled concentration exceeds an ASIL.

## Use of de minimis emission values

Agencies that use the de minimis emission values:

- Benton Regional Clean Air Agency
- Ecology
- Northwest Clean Air Agency
- Olympic Regional Clean Air Agency
- Yakima Regional Clean Air Agency

Agencies that use the small quantity emission rates:

- Puget Sound Clean Air Agency<sup>1</sup>
- Southwest Clean Air Agency<sup>2</sup>
- Spokane Regional Clean Air Agency<sup>3</sup>

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<sup>1</sup> [Regulation 1, Article 6, Section 6.01 \(a\), p. 2](#) adopts Chapter 173-460 WAC by reference except for the de minimis emission values in Section 150. [Regulation III, Article 2, Section 2.07](#) (c) (1) (A), p 2-3., requires each TAP emission to be below SQER, use an EPA dispersion model for concentrations below ASIL, or submit a tier 2 review for concentrations above an ASIL.

<sup>2</sup> The Southwest Clean Air Agency implements the [1998 version of Chapter 173-460 WAC](#). Section 080 (2)(e) on page 8 provides a small quantity emission rate table but no de minimis values.

<sup>3</sup> Regulation 1, [Article IV, Exhibit R, 9.b., p. 5](#).

## Selected Rule Provisions

### WAC 173-460-040 New source review.

#### (1) Applicability and exemptions.

- This chapter supplements the new source review requirements of WAC 173-400-110 by adding review requirements for new and modified toxic air pollutant sources.
- An action that is exempt from new source review under WAC 173-400-110 (4) [source categories] or (5) [table of emission exemption levels located below] is exempt under this chapter as well, except that a local air authority may adopt its own list of exemptions in accordance with RCW 70.94.331 (2)(b) to operate in lieu of or in addition to the exemptions in WAC 173-400-110 (4) and (5).
- An action that requires a notice of construction application under WAC 173-400-110 is subject to the review requirements of this chapter, unless the emissions before control equipment of each toxic air pollutant from a new source or the increase in emissions from each modification is less than the applicable de minimis emission threshold for that TAP listed in WAC 173-460-150.

#### (2) New source review of a modification is limited to the emission unit or units proposed to be modified and the TAPs whose emissions would increase as a result of the modification.

#### (3) The permitting authority that is reviewing a notice of construction application for a new or modified toxic air pollutant source must ensure that:

- (a) The new or modified emission units use tBACT for emissions control for the toxic air pollutants with emission increases that trigger the need to submit a notice of construction application; and
- (b) The new or modified emission units comply with WAC 173-460-070 as demonstrated by using the procedures established in WAC 173-460-080 or, failing that, demonstrates compliance by using the additional procedures in WAC 173-460-090 and/or 173-460-100.

### WAC 173-460-050 Requirement to quantify emissions.

#### (2) Small quantity emission rates.

A notice of construction application that relies on SQERs rather than dispersion modeling to demonstrate compliance with WAC 173-460-070 must quantify the increase in emissions of each TAP emitted by the new or modified emission units after application of tBACT. The quantification must contain sufficient detail to demonstrate to the satisfaction of the permitting authority that the increase in emissions is less than the applicable small quantity emission rates listed in WAC 173-460-150.

### WAC 173-460-060 Control technology requirements.

#### (1) Except as provided for in WAC 173-460-040, a person shall not establish, operate, or cause to be established or operated any new or modified toxic air pollutant source which is likely to increase TAP emissions without installing and operating tBACT.

#### (2) A notice of construction application for a new or modified toxic air pollutant source must demonstrate that the new or modified emission units will employ tBACT for all TAPs for which the increase in emissions will exceed de minimis emission values as found in WAC 173-460-150. ...

**WAC 173-460-080 First tier review.**

- (1) A notice of construction application for a new or modified toxic air pollutant source must include an acceptable source impact level analysis [ambient impact requirement in WAC 173-460-070] for each TAP emitted by the new or modified emission units with an emission increase greater than the de minimis emission level specified in WAC 173-460-150. The permitting authority may complete this analysis.
- (2) The acceptable source impact analysis requirement of WAC 173-460-070 can be satisfied for any TAP using either dispersion modeling or the small quantity emission rate.
  - (a) Dispersion modeling. ...
  - (b) Small quantity emission rates. An applicant may show for any TAP that the increase in emissions of that TAP, after application of tBACT, is less than the small quantity emission rate listed for that TAP in WAC 173-460-150.

**WAC 173-400-110 New source review (NSR) for sources and portable sources.**

- (4) Emission unit and activity exemptions.
- (5) Exemptions based on emissions.

Table 110(5) Exemption levels

<b>POLLUTANT</b>	<b>LEVEL (TONS PER YEAR)</b>
Carbon monoxide	5.0
Lead	0.005
Nitrogen oxides	2.0
PM-10	0.75
PM-2.5	0.5
Total suspended particulates	1.25
Sulfur dioxide	2.0
Volatile organic compounds, total	2.0
Ozone depleting substances, total	1.0
Toxic air pollutants	The de minimis emission rate specified for each TAP in WAC 173-460-150.