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Ecology 460 Rulemaking Stakeholder Meeting Summary

March 11, 2019
1 to 3 pm

Documents distributed to the air toxics rulemaking email list to support this meeting:

- Updated draft table: ASIL, SQER, and de minimis emission values (3-4-2019) (PDF)
- Recommendations memorandum (3-4-2019) (PDF)
- Version 2 draft rule language (3-5-2019) (PDF)
- Updated annotated spread sheet: ASIL, SQER, and de minimis emission values (3-7-2019) (Excel)

Participants

In person
Ecology: Elena Guilfoil, Gary Palcisko, Jason Alberich, Kelsey Holbrook, Stephanie Ogle
Olympic Region Clean Air Agency: Lauren Whybrew, Jennifer DeMay
Western States Petroleum Association (WSPA): Alan Newman

Conference line
Spokane Regional Clean Air Agency: John Conklin
Northwest Pulp and Paper Association (NWPPA): Kathryn VanNatta
Yakima: Jean Mendoza
Puget Sound Clean Air Agency: Maggie Corbin
Northwest Clean Air Agency: Agata MacIntyre, Crystal Rau
Consultant: Bryan Rumberg
Ecology: Ryan Vicente

Agenda

Note: we missed including this chemical as a TAP in our earlier lists so it will be on the proposed list:

Common name	CAS	Proposed averaging period	Proposed ASIL ($\mu g/m^3$)	Proposed SQER (lb/averaging period)	Proposed de minimis (lb/averaging period)
1-Bromopropane	106-94-5	24-hr	1.0E+02	7.4	0.37

Reviewed draft tables (WAC 173-460-150)

- PDF table
  - The PDF table lists the TAPS and the new draft values.
  - The table includes the SQER and de minimis values. These are not included in the ASIL spreadsheet.
  - At the end of the table are a series of notes that are intended to reflect all of the changes to the table and the basis for each change.

  - Sometimes a chemical has multiple common names. The name that we will use in our proposed rule will reflect the name in the current rule rather than the name in our table. I will try to correct the name in the PDF/spreadsheet so you will know which name will appear in the rule.

Reviewed notes on table: WAC 173-460-150 Draft Table of ASIL, SQER and de minimis emission values. (found at end of table)

Additions to the notes at the end of the table

- Consistent with the 2009 WAC 173-460-150 table, scientific notation is used on all values with exponents greater than +04 or less than -04. The exception is that scientific notation is also used to denote 2-significant digits for a value that ends in "0" (for example 10 = 1.0E+01).

- Deviation from cancer-risk hierarchy. Revised the values for 3 diisocyanates to reflect OEHHA's new values to be more protective of non-cancer hazards:
  - Toluene diisocyanates (2,4- & 2,6-) CAS 26471-62-5
  - Toluene-2,4-diisocyanate CAS 584-84-9
  - Toluene-2,6-diisocyanate CAS 91-08-7

- Deviations from hierarchy. We based the ASIL for isopropyl alcohol on the 1-hour chronic reference exposure level rather than the 24-hour acute level because it was lower, more protective. The existing ASIL also reflects this deviation from the hierarchy so the proposed ASIL is unchanged from the existing ASIL.

Notes provided in table

- Excluded chemicals. The table continues the 2009 decision to exclude acetone, malathion, kerosene, fuel oil No. 2, JP-4, and JP-7. Similarly, JP-5 and JP-8 will not be added to the list (ATSDR developed MRLs for these fuels in 2017). Refer to the 3-4-2019 Recommendations Memorandum for more information.

- PAHs. We calculated ASILs for carcinogenic PAHs based on OEHHA unit risk factors for all PAHs except benzo(a)pyrene. We applied the EPA URF because it is the most recent value. Toxic equivalence of mixtures will not be calculated. See 3-4-2019 Recommendations Memorandum for more information.

- Converting ATSDR minimum risk levels (MRLs) from ppb to micrograms per cubic meter ($\mu g/m^3$). For ASILs based on ATSDR MRLs with concentration units in ppb, we

converted to µg/m^3 assuming a temperature of 20 C at 1 atmosphere pressure. See 3-4-2019 Recommendations Memorandum for more information.

- 2-significant digits. ASILs, SQERs, and de minimis values are rounded to 2-significant digits. Note that this practice will yield some de minimis values that are not exactly equal to the SQER/20.

- PBDEs. The table clarifies that the polybrominated diphenyl ethers (PBDEs) (CAS ----) of concern are those containing less than 10 bromine atoms. We removed pentabromodiphenyl ether and tetrabromodiphenyl ether because the new ASIL more broadly covers "lower brominated" PBDEs.

- Deleted chemicals. Seven existing TAPs were removed from the list:
    - ammonium sulfate (CAS 7783-20-2) – based on review of petition from Far West Agribusiness Association
    - chromic acid aerosol mist (CAS 18540-29-9) – redundant with Chromium (VI) & compounds (CAS 18540-29-9)
    - chromic acid (CAS 11115-74-5) – replaced by Chromic (VI) Acid (CAS7738-94-5)
    - 5-nitro-o-anisidine (CAS 99-59-2) – delisted by California
    - dibromochloromethane (CAS 124-48-1) – delisted by California
    - pentabromodiphenyl ether (CAS 32534-81-9) – replaced by broader "polybrominated diphenyl ethers (PBDEs) [Containing < 10 bromine atoms]" listing
    - tetrabromodiphenyl ether (CAS 40088-47-9) – replaced by broader "polybrominated diphenyl ethers (PBDEs) [Containing < 10 bromine atoms]" listing

  See 2-14-2019 Recommendations Memorandum for more information.

- Dimethyl and diethyl mercury. Previously, we set the ASIL for these chemicals at a level that any amount of increase would trigger a review. We revised the ASILs for these chemicals after consideration of available toxicity information.

- Criteria pollutant de minimis emission values. The de minimis emission values for the criteria pollutants nitrogen dioxide, sulfur dioxide, carbon monoxide, and lead and compounds (NOS) use the existing values with the application of two significant digits to maintain consistency with the threshold values in WAC 173-400-110(5). See 2-14-2019 Recommendations Memorandum for more information.

- Toxicity equivalence. We removed the scaled factors for toxicity equivalence and applied the California OEHHA unit risk factor (URF). See 3-4-2019 Recommendations Memorandum for more information.

- Note: I deleted bullet on STP (standard temperature and pressure) because it was redundant with the second bulleted item on page 2.

Reviewed draft ASIL table 3-7-2019 (spreadsheet)

- The annotated spreadsheet includes the ASIL values updated from the 7-26-2018 version
- Explains the basis for each value.
- The first column notes a reason for a change from the draft ASIL table dated 7-26-2018.

Discussed the isocyanate change

- Affects 3 existing TAPS: Toluene diisocyanates (2,4- & 2,6-), Toluene-2,4-diisocyanate, Toluene-2,6-diisocyanate
- See discussion on the back page of the meeting agenda
- California OEHHA established a more protective value for chronic exposure rather than the cancer-related value so this changes the averaging time from year (cancer) to 24-hour consistent with ASILs based on chronic noncancer reference values (Hierarchy 2).
- SQER and de minimis values will also be significantly lower and based on a 24-hour averaging period.

SQER

- We will be using option 2 modeling values that reflect several point and volume sources.
- We will ask permitting agencies to collect data so in the future we can evaluate whether the SQER parameters remain appropriate.
- The flagpole height (or "receptors above ground") value was mistakenly set at 1.6 meters instead of 1.5 meters. Changing this value did not adjust the SQER modeling result.

De minimis

- We will establish the de minimis emission values by applying the current rule structure:
    - All TAP except criteria pollutants: divide the SQER by 20
    - Criteria pollutants (carbon monoxide, lead and compounds, nitrogen dioxide, and sulfur dioxide): maintain existing de minimis values.

  "Ecology recognizes the policy rationale behind the de minimis values in WAC 173-400-110, and believes these are more appropriately applied to WAC 173-460 to ensure consistency between the two rule provisions. Ecology therefore applied the existing WAC 173-400-110(5) exemption levels for NO2, CO, SO2, and lead to their corresponding toxic air pollutant de minimis levels.

  De minimis thresholds in WAC 173-400-110 are reported in tons per year. De minimis in Chapter 173-460 WAC are reported as pounds per the averaging time for the ASIL. Since CO, NO2, and SO2 have ASILs with 1-hr averaging time, the 460 de minimis values are equal to the WAC 173-400-110 de minimis thresholds (converted to pounds per year) divided by 8760 hours / year."[1]

[1] Department of Ecology. Concise Explanatory Statement and Responsiveness Summary for the Adoption of WAC 173-400-110, General Regulations for Air Pollution Sources, Chapter 173-460 WAC, and Controls for New Sources of Toxic Air Pollutants. May 19, 2009. Publication 09-02-008.

Criteria pollutants	De minimis using SQER/20	Existing de minimis (2-significant digits)
Carbon monoxide	2.1	~~1.14~~ 1.1
Lead and compounds	0.68	10
Nitrogen dioxide	0.044	~~0.457~~ 0.46
Sulfur dioxide	0.061	~~0.457~~ 0.46

- We will ask permitting agencies to collect permit information on de minimis emissions of toxic air pollutants to see what the actual impact would be if we applied a different de minimis emission value (such as SQER/10).

Toxicity equivalence

- Would apply to mixtures of dioxin-like compounds and carcinogenic PAHs
- We are not including this concept because it would require establishing a multi-step process that conflicts with the rulemaking goal of maintaining one look-up table with one value for each TAP in the table.

Chemicals not listed as a TAP

- These chemicals met the 2009 listing criteria: acetone, malathion, kerosene, and 4 different kerosene-based jet fuels. In addition, OEHHA added 2 jet fuel products in the past 10 years.
- We do not intend to include these chemicals because to avoid unintended consequences of their regulation. We may evaluate regulation of these chemicals or mixtures in subsequent phases of rulemaking.
- Note after meeting: After further review, we decided to include malathion as a TAP because the TAP list includes other insecticides.

2-significant digits in the table

- Table in WAC 173-460-150 will reflect the use of 2-significant digits.
- Some de minimis emission values will not be exactly 20 times lower due to this rounding.

Other rule changes

- Revise WAC 173-460-040 and 080 to reflect the use of 2-signficant digits.